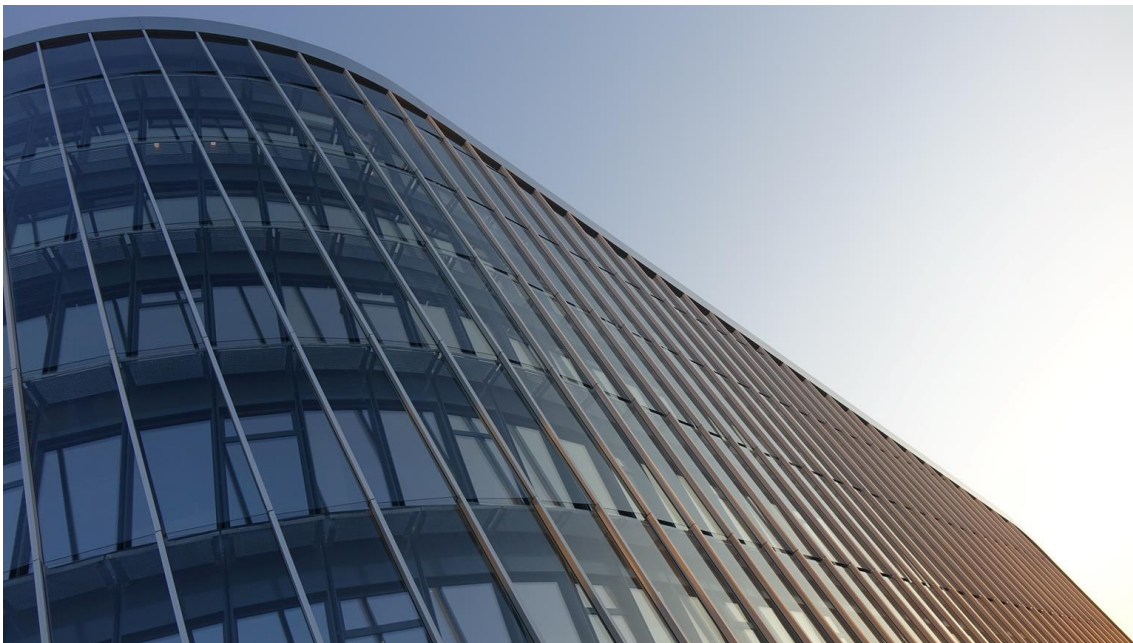




Energy Efficiency Performance-Tracking Platform for Benchmarking Savings and Investments in Buildings

Business Models



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Abbreviations and Acronyms

Acronym	Description
API	Application programming interface
BO	Building owner
BPD	Building Performance Database
DEEP	De-risking Energy Efficiency Platform
EEM	Energy Efficiency Measure
EEFIG	Energy Efficiency Financial Institutions Group
ESCo	Energy Service Company
EU	European Union
EUI	Energy Use Intensity
FI	Financial Institution
GA	Grant Agreement
ICP	Investor Confidence Project
IEA	International Energy Agency
IP	Intellectual Property
LBNL	Lawrence Berkeley National Laboratory
M&V	Measurement and Verification
PaaS	Platform as a Service
PM	Policymaker
ROI	Return on investment
SEFA	Sustainable Energy Finance Association



1 Executive summary

This document is a thorough analysis to determine the optimal business model for the EN-TRACK platform, focusing on its commercial sustainability and value propositions. EN-TRACK aspires to serve as a 'one-stop-shop' for insights into the energy, financial, and performance of buildings.

Utilizing the Business Model and Value Proposition Canvases developed by Osterwalder and Pigneur in 2010, the document structures the development of EN-TRACK's value propositions and suggested business model. This approach ensures a holistic and strategic foundation for the platform's success.

The document includes a detailed financial forecast based on predetermined (in D5.1) growth assumptions and the platform's pricing strategy. This financial analysis provides insights into the economic viability and potential returns associated with the EN-TRACK platform.

The document finally outlines the next steps for the platform's development and present critical recommendations from the analysis. These recommendations guide decision-makers in steering the platform toward sustainable and successful commercialization.

2 Document Scope

This document explores and highlights potential business model strategies within the context of EN-TRACK. It is intended for informational purposes only and does not constitute a commitment or guarantee of execution by Joule Assets. Below are certain contextual remarks for this document.

1. Strategic Guidance:

The information presented in this chapter aims to provide strategic guidance and insights into optimal business models for EN-TRACK. It does not imply an immediate or definitive implementation of the outlined strategies by Joule Assets.

2. Dynamic Business Environment:

The business landscape is dynamic and subject to change based on various factors, including technological advancements. Joule Assets acknowledges the need for flexibility and adaptation to evolving circumstances.

3. Non-binding Nature:

The recommendations in this chapter are non-binding by all partners and should not be construed as commitments to undertake specific actions in the current context. Joule Assets retains the right to assess and adapt its approach to changing circumstances.

4. Risk Considerations:

Any business strategy involves inherent risks, and the methods outlined in this chapter are no exception. Joule Assets encourages thoroughly evaluating potential risks and rewards before making business decisions.

5. Consultation and Due Diligence:

Readers are strongly encouraged to seek professional advice and conduct thorough due diligence before implementing any business model or strategy outlined in this chapter. Joule Assets emphasizes the importance of tailored solutions based on individual circumstances.



6. Future Decision-Making:

Joule Assets reserves the right to make decisions in the future based on a holistic assessment of prevailing conditions, regulatory frameworks, and the overall business landscape. The company is not obligated to follow the strategies outlined in this chapter.

7. Platform Service Readiness:

Joule Assets believes that for this business model to be implemented, the EN-TRACK platform needs to reach a certain service readiness level which has yet to be achieved but which can be achieved by the end of the project (April 2024). This is further explained in chapter 16.

8. This document and its annexes should also be considered for use in future financing efforts and/or potential sale of the platform.

The recommendations provided are part of an exploratory discussion about optimal business model strategies. Joule Assets retains the flexibility to adapt its approach and make decisions based on the best interests of its stakeholders in the ever-evolving business environment. Readers and stakeholders are advised to interpret the contents of this chapter with an understanding of its informational and non-binding nature.

3 Background

Energy efficiency investments, particularly in buildings, have often been highlighted as one of the most cost-effective means for the EU to address climate change, delivering not only energy savings and carbon reductions, but also providing numerous non energy ancillary benefits, such as improving the wellbeing and/or productivity of building occupants. However, progress on building energy efficiency in the EU (and indeed globally) is being held back by numerous barriers, including a lack of standardised data on the performance of buildings and efficiency measures, notably in energy and carbon terms.

This data gap creates risks and barriers to investments in building efficiency upgrades, particularly since energy and carbon savings – not to mention potential maintenance regime improvements, increased wellbeing (and/or productivity) of occupants, and other ancillary benefits – can translate into significant cost savings. In this context, the EU funded EN-TRACK project has an ambitious yet timely objective to provide a new data platform with insights on the performance of thousands of public and private buildings and the efficiency measures applied within them.

EN-TRACK aims to be a 'one-stop-shop' for insights on the energy, financial and other performance of buildings. EN-TRACK builds on the extensive work done under the auspices of the Energy Efficiency Financial Institutions Group (EEFIG) to create the De-Risking Energy Efficiency Platform (DEEP), which contains ex-ante information on thousands of building efficiency projects. EN-TRACK will also leverage other currently available European databases and tools, such as eQuad and EnerInvest. Relevant databases and resources from outside of Europe, notably the Building Performance Database (BPD) developed by the Lawrence Berkeley National Laboratory (LBNL) at the University of California Davis, provide further inputs for EN-TRACK whereas relevant and feasible.



4 Introduction

The purpose of this document is to document the work of task 5.2, Business Model Development. The starting point for this business model development is based on D5.1 and the work done under task 5.1 and documented in D5.1 that identified the scenarios for commercial exploitation. Task 5.2 has involved exploring these scenarios to develop what the consortium perceives as the optimal business model for the EN-TRACK platform.

4.1 Methodology: The business model canvas

To facilitate development of the EN-TRACK value propositions and business model, the Business Model and Value Proposition Canvases created by Osterwalder and Pigneur in 2010 were used as guiding structures.

The Business Model Canvas offers a framework for creating business model strategies and easily communicating them. Commonly used in entrepreneurship and business, this approach has proved valuable in demonstrating project outputs and mapping interactions of users. The organizational structure that separates key concepts such as main partners, activities, resources, cost structures, revenue streams, channels, customer relationships etc. allowed detailed mapping and development of the business model components such as key customer segments.

The Value Proposition Canvas was similarly used as a tool to verify that the EN-TRACK model was well-positioned to meet customer needs and align with customer values.

This deliverable describes each section of the business model and value proposition canvases in detail which, outlines the key parameters for the EN-TRACK business model to succeed in longevity.

5 Ownership and Intellectual Property

The EN-TRACK platform has been developed by CIMNE in different stages, and always under open-source criteria.

The first stage, which includes a large part of the big-data architecture of the platform, was developed prior to the EN-TRACK project and is currently published in open source in the GitHub repository [ENMA](#) ownership of the CIMNE BEE Group under the European Union Public licence (EUPL 1.1).

The second stage, which was developed during the EN-TRACK project and includes the data harmonisation ontology and KPIs calculation modules, is published in open source on the GitHub repository [RETRACK](#) ownership of the CIMNE BEE Group under the Massachusetts Institute of Technology licence (MIT licence). As a permissive licence, it places very few restrictions on reuse and therefore has high licence compatibility. Unlike copyleft software licenses, the MIT License also permits reuse within proprietary software, provided that all copies of the software or its substantial parts include a copy of the MIT License terms and also a copyright notice.



5.1 Operational agreements

The EN-TRACK project was born from the collaboration between different departments of the Government of Catalonia and CIMNE as a technology partner to develop R&D projects, which resulted in the formation of the project consortium and the execution of the project under the European Union Horizon 2020 programme.

The results of EN-TRACK and in particular the effort behind the implementation of the EN-TRACK platform is of great value for both to keep the services active, exploit the results and explore new opportunities.

In this sense, CIMNE and the Government of Catalonia (*Generalitat de Catalunya*) through the Energy Institute of Catalonia (ICAEN) and the Department of Territory agreed under a programme contract that was signed in September 2023 to extend some services of the EN-TRACK platform in the period 2024-2028 under the name SIME (Sistema d'Informació y Monitorització Energètica) of the Generalitat de Catalunya.

6 Customer segments

The EN-TRACK business model has three key customer segments. This chapter details the characteristics of these customer segments, their motivations for using EN-TRACK, and the services offered to them through EN-TRACK.

6.1 Building owners and operators (BO)

BO are considered primary EN-TRACK users given the platform's focus on gathering buildings and measures related data. Within this user category, it is possible to imagine some specific roles or job types and the value they might derive from EN-TRACK, for example:

- Property asset managers & portfolio managers

These individuals can obtain insights from the platform to inform energy related investment and/or operational strategies both in individual buildings and in portfolios of buildings. They can also compare and benchmark the performance of their buildings against similar buildings.

- Energy managers

Energy managers can compare and benchmark the performance of their EEMs against EEMs being carried out in other buildings, deriving insights and recommendations for the deployment of future EEMs.

6.2 Financial institution stakeholders (FI)

EN-TRACK is expected to offer insights and value for FI, but the expectation of EN-TRACK partners is that it is unlikely that senior executives in financial institutions will use the platform directly. Instead, the management staff are more likely to refer to EN-TRACK



as part of their due diligence and internal reporting on investment opportunities, associated risks, etc.

These individuals could include:

- Financial analysts

Financial analysts represent a key user type of the EN-TRACK platform because they currently lack sufficient and consistently reliable data, and data sources, to enable them to complete their analysis and due diligences efficiently and effectively.

For certain data needs, well established processes and data portals exist (credit rating, Know Your Customer, etc.). However, there is currently no robust energy efficiency related data collection and provision to the financial industry. Instead, at best, specific project-related data for energy efficiency investments is being gathered in-house. Performance of energy efficiency projects therefore is usually being assessed by looking at the track record of the implementing entity, and “trusting” their assumptions for the project being proposed. Surrounding elements such as occupancy, energy price and regulatory risk factors cannot be assessed soundly due to this lack of data.

EN-TRACK will fill this gap and thus become a valuable tool facilitating the project analysis and due diligence work of financial analysts.

- Underwriters

An underwriter is a party which evaluates and takes on another party's risk in return for a fee. This fee is often in the form of a commission, interest, or a premium. Underwriters play a critical role in various industries of the financial world, e.g., mortgage industry and insurance industry. What an underwriter concretely does, is to determine the level of risk of an investment or the likelihood that the investment's outcome will differ from the expected outcome for the stakeholders. EN-TRACK will be a valuable tool for underwriters because it will make it determining risk factors in the decision-making process easier, more transparent, and more consistent. It will also become progressively more valuable, and the decisions made over time will be more comparable. The data provided through the EN-TRACK platform could decrease the workload substantially in this process.

- Risk managers

Risk management is an activity of identifying, analysing, and accepting or mitigating uncertainty in investment decisions. This occurs when financial institutions analyse and quantify potential losses for an investment and then make decisions about this investment based on the fund's objectives and tolerance to risk. Risk is attached to return. All investment opportunities involve some degree of risk. Risk is quantifiable both in absolute and in relative terms. A solid understanding of risk and the different forms of risk can help risk managers and investors alike to get a better grasp of the opportunities and trade-offs at hand. To understand these risks, you need data. The EN-TRACK platform will provide risk managers with a solid base for weighing in on the opportunity at hand and analysing whether the risk is tolerable or not.



6.3 Policy makers (PMs)

While not identified in the EN-TRACK Grant Agreement (GA) as a core user group, the partners expect that the platform can provide insights to government / public officials. The following are some examples:

- National ministry officials

Assessing the impact of subsidy and/or technology promotion programmes funded by taxpayers is a highly valuable service sought by ministries. EN-TRACK could help here, by tracking any increase in energy efficiency measure implementation following the introduction of public funding in markets.

- Policy officers / analysts in international organisations (EU, IEA, World Bank, etc.)

EN-TRACK will be able to support tracking of progress towards, for example, objectives under the EU Taxonomy for sustainable activities.

Table 1: Drivers for decision making.

User	Drivers for decision making
Building Owners and Operators (BO)	Operational strategies and how EEMs can support those
	Comparative benchmarking of building energy performance
Financial Institution Stakeholders (FI)	Identifying low-performing building representing an investment opportunity
	The outcomes and returns of EEMs in various settings
	Comparing and benchmarking building energy / EEM investments compared to other investment opportunities
Policy Makers	Assessing the impact of EEM subsidization across national/regional borders
	Assessing the energy/carbon savings of various EEM portfolios within their national context (or a comparable context)
Multiple User Groups (shared drivers)	Targets related to energy use, operating costs, and carbon footprint reductions (all groups)
	Comparative benchmarking of EEM performance (all groups)
	Assessing the cost-effectiveness of EEMs for building portfolios (public or otherwise) (all groups)
	The risks and sensitivity of various EEM portfolios in various settings (all groups)
	Identifying low-performing building representing an investment opportunity (BO and FI)



6.4 Services for building owners

Service 1: Benchmark and compare the performance of buildings before and after projects/EEMs

- Operational strategies;
- Comparative benchmarking of their buildings;
- Comparative benchmarking of EEM performance.

Service 2: Benchmark and compare the financial performance of EEMs

- Costs and Savings that may be associated with their buildings;
- Trends that may impact further investment in EEMs;
- Risks that may impact the performance of EEM investments or their buildings' financial performance.

Service 3: Track the impact of subsidies and incentives on building energy performance or EEM implementation, and track projects certified by ICP or other rating systems

- Grant funding available in their region/sector;
- The EEMs which are frequently grant funded;
- The impact of grant funding/certification on project indicators (such as energy saved, financial performance, impact on valuation etc).

6.5 Services for financial institutions

Service 1: Benchmark and compare the performance of buildings before and after projects/EEMs

- Identifying the characteristics of under-performing buildings that may represent an investment opportunity;
- The outcomes and returns of EEMs in various settings;
- The risks and sensitivity of various EEM portfolios in various settings;
- Assessing the energy/carbon savings of various EEM portfolios.

Service 2: Benchmark and compare the financial performance of EEMs

- Identifying low-performing building typologies/characteristics representing an investment opportunity;
- The costs and savings that may be associated with a building or investment portfolio;
- The risks and sensitivity of various EEM portfolios in various settings;
- Assessing the energy/carbon savings of various EEM portfolios.

Service 3: Track the impact of subsidies and incentives on building energy performance or EEM implementation, and track projects certified by ICP or other rating systems

- The impact of grant funding/certification on project indicators (such as energy saved, financial performance, impact on valuation etc.);
- The impact of grant funding/certification on portfolio performance (particularly



with regards to financial performance).

6.6 Services for policy makers

Service 1: Benchmark and compare the performance of buildings before and after projects/EEMs

- Assessing the cost-effectiveness of EEMs for public buildings;
- Assessing the impact of EEM subsidization across national/regional borders;
- Assessing the energy/carbon savings of various EEM portfolios within their national context (or a representative context).

Service 2: Benchmark and compare the financial performance of EEMs

- Assessing the cost-effectiveness of EEMs for public buildings;
- Assessing the impact of EEM subsidies, where these exist, on EEM financial performance. This include identifying EEMs that need greater subsidization to increase uptake, or EEMs that are already cash-positive and no longer require deep subsidization.
- Assessing the returns of investment portfolios, to better direct monies from public investment funds. This includes looking for portfolios that are highly sensitive to risk or are experiencing diminishing returns, in order to provide public support or warn consumers of the investment risk within these portfolios.

Service 3: Track the impact of subsidies and incentives on building energy performance or EEM implementation, and track projects certified by ICP or other rating systems.

- How the uptake of grant funding/certification affects the uptake and performance of EEMs within their region/sector.
- How the usage of grant funding/certification has successfully improved EEM uptake/performance in other comparable regions.
- How grant funding/certification affects governmental building portfolio performance.

6.7 Customer Segments interfaces

EN-TRACK has two separate interfaces, one “open” interface and one interface which requires a login by the customer. The open interface contains the overall data and benchmarking capabilities, whereas the login interface allows the user to upload data and manage their building portfolios.

For the intents and purposes mentioned in this chapter for the customer segments, the policymaker and the financial institution users are mainly foreseen to use the open interface as they are not likely to upload any data on building portfolios, rather use the available data to assess viability of individual projects.

The building owners will be accessing through the login interface as this user type hold the data which is relevant for this interface and have the interest to manage their building portfolios through EN-TRACK.



6.8 Core Scenarios for The Model

Identified previously in D5.1, the following are the core service scenarios for which the business model and business plan is built.

1. Non-customized high-level services only
2. All high-level services
3. High-level services + non-M&V/NEB benchmarking services (1-3)
4. High-level services + all benchmarking services (1-6)

For further information and detail on these services please refer to D5.1 or the Business Plan Chapter in this document.

7 Customer relationships

7.1 For all customer segments

There are three key customer relationship points that apply to all customer segments which are described in this section.

- Long-term

Relationship Building: Focusing on long-term relationships implies that EN-TRACK prioritizes building enduring customer connections. This involves understanding their evolving needs, challenges, and goals. Rather than pursuing short-term gains, the emphasis is on sustained engagement and mutual growth.

Customer Loyalty: Investing in long-term relationships fosters customer loyalty. When clients perceive a commitment to their success over the long haul, they are more likely to remain loyal to EN-TRACK.

Tailored Solutions: Long-term relationships allow for the development of customized solutions (e.g. EN-TRACK's API solutions). As the understanding of the customer deepens, EN-TRACK can better tailor its offerings to suit their unique requirements, further solidifying the partnership with the three customer segments.

- Close Relationships

Proactive Communication: Close relationships involve proactive communication. Regular check-ins, status updates, and feedback sessions help maintain a strong connection.

Personalized Support: Understanding the customers enables EN-TRACK to provide personalized support. Anticipating their needs and addressing concerns in a personalized manner builds a sense of partnership, making customers feel valued and understood.

Collaborative Approach: A close relationship means a collaborative approach to problem-solving. EN-TRACK actively engages with customers to jointly tackle challenges, fostering a sense of shared responsibility and a stronger bond.



- Work Hard to Retain

Customer Success Initiatives: Working hard to retain customers involves implementing customer success initiatives. This may include dedicated account management, ongoing training, and support services to ensure customers derive maximum value from products or services.

Proactive Issue Resolution: Efforts to retain customers also involve a proactive stance on issue resolution. When problems arise, quick and effective solutions demonstrate commitment to their satisfaction, potentially turning challenges into opportunities to reinforce the relationship.

Value-Added Services: To retain customers, provide value-added services. This could involve regular updates, educational resources, or additional features to enhance the customer experience.

By embodying these characteristics, EN-TRACK not only establishes a strong foundation for customer relationships but also sets itself apart by demonstrating a commitment to the success and satisfaction of customers over the long term.

The customer relationships will likely need to be close and high maintenance in the beginning of the platform's commercialization but there should be aim of making this relationship less intimate as time goes by, by using training materials and interactive guidance which can take the strain off human resources.

7.2 Building Owners

Building owners need more assistance mastering the platform's intricacies and optimizing data entry processes. A robust and user-friendly platform can offer building owners a wealth of insights and control over their property management, energy consumption, and overall operational efficiency.

Building owners need more assistance and need to invest more time and effort in understanding the platform's functionalities and ensuring accurate and comprehensive data entry. This, in turn, leads to more informed decision-making, streamlined operations, and resource optimization for all customer segments.

7.3 Financial Institutions

Financial institutions can significantly benefit from education and sales initiatives highlighting the value of technological solutions within the industry.

With the financial industry rapidly evolving, embracing these solutions is key to staying competitive and efficient. It is essential to provide education on the capabilities of a technological platform, how it integrates with existing systems, and the specific advantages it offers regarding data analytics, risk management, and investment opportunities.

A targeted sales approach can emphasize the potential for increased productivity, reduced operational costs, and valuable insights for strategic decision-making. When education and sales efforts are aligned, financial institutions can fully see the platform's potential and position themselves as forward-thinking, technologically adept entities within the sector.



7.4 Policy makers

Engaging policymakers presents a unique challenge due to the complexity of their roles and the nuanced decision-making processes in public policy. To overcome this challenge, there is a crucial need for comprehensive education on how the platform's outputs can bring significant value to their responsibilities.

Policymakers often deal with vast amounts of data and intricate issues, and a well-structured educational effort can show them how the platform can streamline information, enhance analytical capabilities, and facilitate evidence-based decision-making.

By bridging the gap in understanding, policymakers can better appreciate the benefits the platform brings to their jobs, leading to more informed, data-driven policy choices that align with broader societal goals.

8 Sales channels

Channels are the methods that will be used in order to reach the customer. The key sales channels for EN-TRACK will revolve around the already existing channels for each project partner and the traditional channels in the industry.

- Events, Face to Face

Industry Conferences: Participating in industry conferences provides a platform for direct interaction with potential clients and partners. These events offer opportunities to showcase products or services, engage in face-to-face discussions, and build relationships. It allows EN-TRACK to stay updated on industry trends and demonstrate expertise.

- Current and Future EU Funded Projects, Collaboration Opportunities

Exploiting Synergies: EN-TRACK can tap into collaboration opportunities by aligning the platform and services with ongoing and future EU-funded projects. Collaborating with these projects opens new revenue streams and enhances credibility and visibility in the relevant sectors.

- Outreach to Existing Networks, Email

Inclusion in Newsletters and Webinars: Leveraging existing networks through targeted email outreach, inclusion in newsletters, and participation in webinars can significantly amplify the reach. Newsletters provide a regular touchpoint with potential clients, while webinars offer a platform for in-depth discussions and demonstrations.

- Partner Platforms

Advertisement on Partner Platforms: Collaborating with partner platforms allows EN-TRACK to leverage its audience and credibility. Advertising on these platforms puts the product and services in front of a wider audience, potentially leading to increased brand recognition and customer acquisition.

- National and Industry Associations

Collaboration with Various Associations: Partnering with national and industry associations provides access to their established networks. It can involve joint initiatives, sponsorships, or participation in association events. This collaboration enhances visibility and aligns the brand with reputable entities in the industry.

- Targeted Outreach to City and National Officials



Via Email: Engaging city and national officials through targeted email outreach establishes direct communication channels. This can be instrumental in securing large scale users or partnerships.

These sales channels work together to create a comprehensive and diversified approach to business development. They enable direct interactions with potential clients and partnerships and indirect exposure through collaborations and promotion. The key lies in strategic integration and consistent efforts across these channels to maximize outreach and impact.

9 Value propositions

The Value Proposition Canvas is a strategic tool that is part of the Business Model Canvas, a framework developed by Alexander Osterwalder and Yves Pigneur for designing, analyzing, and innovating business models. The Value Proposition Canvas focuses specifically on understanding the relationship between a company's products or services and the needs and desires of its target customers. It is used to create a clear and compelling value proposition, which is the unique combination of benefits that a company offers to its customers.

The Value Proposition Canvas consists of two main sections:

- Customer Segment (Right side)

Customer Jobs: This section outlines the various jobs or tasks that the customers are trying to do. These can be functional, emotional, or social in nature. Understanding these jobs helps EN-TRACK empathize with its customers' needs and goals.

Pains: Pains represent the specific challenges, problems, and negative aspects that customers encounter while trying to complete their jobs. Identifying these pains helps EN-TRACK understand the hurdles its customers face.

- Value Proposition (Left side)

Products and Services: This section details the specific products, services, or solutions EN-TRACK offers to address the customer's jobs and alleviate their pains.

Gains: Gains represent the benefits and positive outcomes that EN-TRACK delivers to customers.

The key objective of the Value Proposition Canvas is to align the customer segment's needs, pains, and gains with the value proposition's products and services. By doing so, a company can design and refine its value proposition to better meet customer demands and create a competitive advantage in the market.

The Value Proposition Canvas can be used to develop new products or services, improve existing ones, or pivot business models to better serve customer needs. It is a valuable tool for product development, marketing, and business strategy, as it fosters a deep understanding of the customer's perspective and helps create offerings that truly resonate with the target audience.

9.1 Building Owners

Facility managers and building owners are responsible for efficient and smooth operation of physical spaces. They oversee various responsibilities to ensure that buildings and facilities meet their goals. They are tasked with planning, coordinating, and managing



various aspects of a facility, including maintenance, security, space utilization, and environmental sustainability.

Facility managers address day-to-day operational issues, conduct routine inspections, and implement preventive maintenance measures. They are also instrumental in developing and implementing long-term facility management strategies, considering energy efficiency, cost-effectiveness, and regulation compliance.

9.1.1 Customer jobs

Building owners role involves strategic decision-making and proactive engagement to enhance the performance and sustainability of their buildings. They identify available grant funding opportunities to support energy efficiency initiatives, recognizing the importance of external financial support in implementing sustainable solutions.

Building owners keep an eye on industry trends, ensuring they remain informed about technological advancements, regulations, and best practices. This awareness informs their operational strategies, allowing them to adapt and implement measures that align with current standards and expectations. Moreover, building owners actively engage in short- and long-term planning, designing, and implementing initiatives that address immediate needs and contribute to the building's efficiency and environmental impact.

Building owners strive to increase energy savings and reduce the carbon footprint of their properties. Understanding potential risks, they assess energy consumption and building operations vulnerabilities, implementing strategies to ensure resilience. Regular monitoring of building performance is critical to their responsibilities, involving energy analysis and ongoing assessment of the facility's efficiency.

Summary of jobs below:

- Understand trends
- Operational strategies
- Design and implement both short and long term
- Energy planning
- Increase energy savings
- Understand risks
- Monitoring building performance
- Energy analysis
- Future plans for EE improvement
- Monitoring processes
- Improving/assuring comfort levels

9.1.2 Gains

Energy savings stand out as a key goal, with building owners implementing various measures such as energy-efficient technologies, renewable energy sources, and intelligent building systems to optimize energy consumption. Simultaneously, the pursuit of CO₂ savings aligns with broader environmental sustainability initiatives, with building owners investing in eco-friendly practices and technologies to reduce the carbon footprint of their buildings.



Meeting and exceeding industry standards is another objective, ensuring that buildings adhere to regulations and certifications related to energy efficiency and environmental impact. Building owners actively seek to enhance financial performance, implementing cost-effective energy solutions that reduce operational expenses and increase their properties' overall value. Building owners utilize data and analytics to refine their strategies and stay on top of best practices.

Summary of gains below:

- Energy savings
- CO2 Savings
- Living up to standards
- Improved comfort levels
- Increased financial performance of buildings
- Acquiring financing
- Understanding trends
- Understanding effectiveness of strategies

9.1.3 Pains

BO encounter several pain points in pursuing effective energy management and sustainable building practices. One significant challenge is the need for a dedicated energy manager, leaving the responsibility for energy-related decisions dispersed among various roles. This lack of focused expertise can be an obstacle for the development and execution of energy strategies.

The inability to properly analyze and act on the results of energy-related data is a problem. The dispersed data across different systems and platforms further complicates the task, making consolidating information and making good decisions challenging.

The lack of adequate energy management tools and resources compounds these challenges, limiting the capacity to manage, analyze, and act upon the vast amounts of information.

BO may find themselves constrained by a need for more resources, both in terms of personnel and capital, which can slow the implementation of sustainable practices. The need to focus on day-to-day operations is a constraint, diverting attention from long-term energy management strategies and limited capacity to analyze data in-depth adds to the complexity, making it difficult for building owners to get actionable insights and optimize their buildings for energy efficiency.

Summary of pains below:

- No dedicated energy manager
- No capability to properly analyze and take action on the results
- Dispersed data
- Summarizing and processing large quantities of data
- Lack of effective energy management
- Lack of resources
- Struggle to handle and effectively use the vast amounts of information obtained
- Limited capacity to manage



- Need to focus on day to day
- Limited capacity to analyze

9.1.4 Gain creators

BO can derive significant value from a network connecting them with Energy Service Companies (ESCOs) and investors. This network facilitates collaboration and opens paths for partnerships that can lead to innovative energy solutions and financial support for energy efficiency projects.

Due diligence services offered to building owners play a crucial role in decision-making. These services assess potential projects, helping BO make informed choices about technologies and strategies. Benchmarking and analysis tools contribute further value by allowing BO to compare their energy performance against industry standards and identify areas for improvement.

Insights into potential improvements provide valuable guidance for BO, aiming to enhance energy efficiency. Providing handholding, throughout the implementation process ensures that they receive the guidance they need to navigate complex energy management initiatives successfully.

And access to financing is an important value proposition. BO can leverage this access to secure funding for energy efficiency projects, overcoming financial barriers and driving the adoption of sustainable practices. Insights into Energy Efficiency Measures (EEM) performance offers BO a clear understanding of how specific measures contribute to their building's performance.

Summary of gain creators below:

- Network to ESCOs and Investors
- Due diligence services
- Benchmarking and analysis tools
- Insights into potential improvements
- Handholding
- Benchmarking and analysis tools
- Insights into building performance
- Access to financing
- Insights into EEM

9.1.5 Pain relievers

BO face many challenges in managing energy efficiency, and relieving these pain points is EN-TRACK's goal. One key aspect is the recommendations for Energy Efficiency (EE) improvements. By offering tailored suggestions based on best practices and data analysis, BO can overcome the challenge of identifying the most effective strategies for enhancing energy performance.

Furthermore, readily available data and analysis tools streamline the data management and analysis process, eliminating the frustration associated with scattered data. This access to relevant information allows quicker decision-making and helps improve responses to energy-related challenges.

Establishing a centralized data platform is a relief for BO. This aggregates dispersed



data, addressing the pain point of dealing with disparate sources and enabling them to benchmark their buildings against other similar buildings.

Standardized data entry ensures consistency, simplifying the data management process. Easily accessible data, facilitated by user-friendly interfaces, ensures that building owners can quickly retrieve the information they need. Handholding services, in guidance materials and readymade formats, offer continuous support throughout the user journey, addressing the pain points associated with limited capacity and resources.

Summary of pain relievers below:

- Recommendations for EE improvements
- Readily available data and tools
- Centralized data platform
- Analysis and benchmarking tools
- Standardized data entry
- Easily accessible data
- Handholding services
- Network to ESCOs and investors
- Guidance material
- Readymade formats

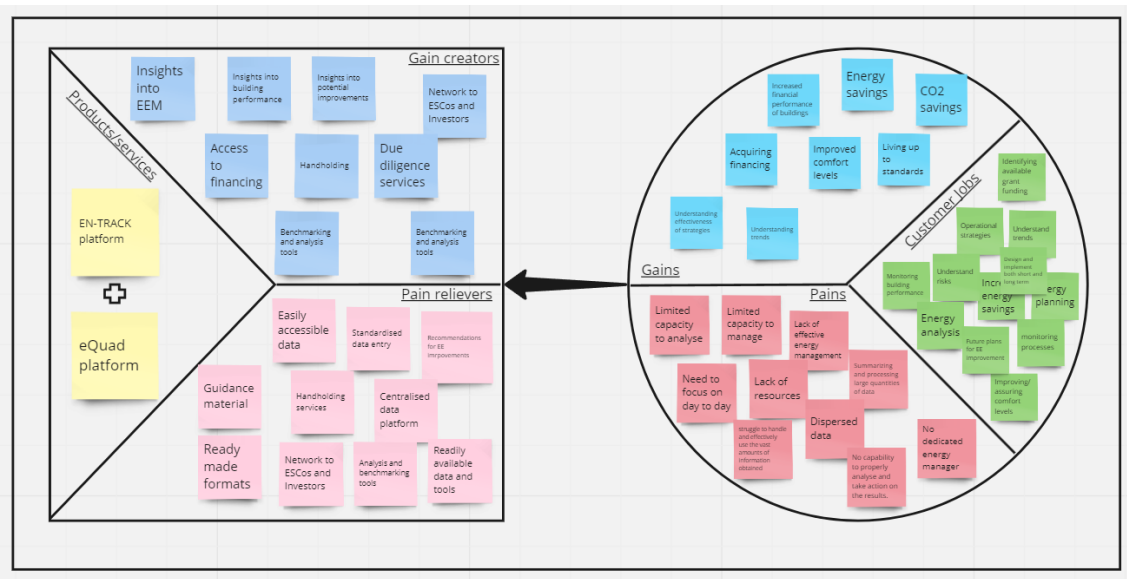


Figure 1: Building Owner's Value Proposition Canvas

9.2 Financial Institutions

FI come in various forms, including banks, credit unions, insurance companies, investment firms, etc. Their primary function is to manage and allocate financial resources efficiently.

Their roles extend beyond transaction facilitation; they are a critical stakeholder in shaping economic trends and managing risks.



9.2.1 Customer jobs

FI analyze and determine risk profiles, a key activity in understanding financial tolerance and laying the foundation for informed decision-making. They are tasked with identifying investment opportunities, requiring a keen understanding of market trends, economic indicators, and financial goals.

Once potential investments are identified, FI have the critical job of analyzing these opportunities and weighing potential returns against associated risks. In risk management, they are tasked with risk mitigation and implementing strategies and instruments to safeguard their investments.

Throughout this process, gaining assurance becomes important, involving thorough research, and an excellent understanding of the chosen projects for financing.

Summary of jobs below:

- Analyzing and determining risk profiles
- Analyzing investment opportunities
- Managing risk mitigation
- Identifying investment opportunities
- Gaining assurance

9.2.2 Gains

FI in buildings investments and energy efficiency mainly strive to achieve CO2 savings, reflecting a commitment to environmental responsibility and a desire to mitigate climate change.

Exploring new investment areas is another objective, as they endeavor to diversify their portfolios and align their financial activities with socially responsible initiatives. Increasing their investment pipeline underscores a desire for a steady influx of viable investment opportunities. FI also aim to gain meaningful details on Energy Efficiency Measures (EEM) performance, and the specifics of how these measures contribute to energy conservation and monetary savings.

Detailed financial performance metrics of EEMs are also valuable, with aiming to understand the economic viability and returns associated with their sustainability investments. Ultimately, they are driven by the pursuit of a positive return on investment (ROI), seeking both financial gains and environmental impact.

Summary of gains below:

- CO2 savings
- Energy Savings
- New investment areas
- Increase in Pipeline
- Details on EEM performance
- Detailed EEM financial performance
- ROI



9.2.3 Pains

There are several obstacles that hinder their ability to make informed decisions and manage their assets effectively. A regularly mentioned challenge is the need for more data, the lack of it leaving them in the dark regarding technology performance, investment opportunities, and potential risks.

There is also a need for more adequate tools for analysis, making it difficult for them to get meaningful insights from the limited data available. Distrust in available data is another pain point, as FI may question the accuracy and reliability of the information at their disposal. The complexity of existing platforms further adds to these challenges, causing confusion and frustration among FI.

Summary of pains below:

- Lack of data
- Lack of tools for analysis
- Distrust in available data
- Complex existing platforms
- Lack of access to existing data

9.2.4 Gain creators

EN-TRACK delivers solutions to help FI achieve their goals. EN-TRACK provides standardized data, ensuring consistency and reliability in the information available to FI, enabling them to make informed decisions confidently. The open interface empowers them with user-friendly tools, streamlining their access to critical information and enhancing their overall experience.

EN-TRACK, with the eQuad integration, fosters valuable connections through client introductions, and creating networking opportunities. The centralized database serves as a hub for streamlined information management, offering financial institutions a competent platform for data exploration. Benchmarking tools are available to them, allowing them to assess their Building's performance against industry standards and optimize their strategies.

Summary of gain creators below:

- Data/facility
- Client introduction
- Data/EEM
- Benchmarking tools
- Investment opportunities
- Data quality assurance
- Centralized database

9.2.5 Pain relievers

A centralized platform for all existing data addresses the issue of scattered information, providing FI with an easily accessible platform for their data sets. Ensuring data source reliability is important to building trust, and EN-TRACK's commitment to verifying and labeling data sources enhances the credibility of the information at FI's disposal.

Incorporating analysis tools directly within the database improves decision-making



processes, eliminating the need for external tools and enhancing efficiency. Also, the ability to filter data empowers financial institutions to focus on the most relevant information, saving time and resources.

Summary of pain relievers below:

- Data source reliability
- User friendly platform
- Providing data quality labels
- Providing analysis tools within the database
- Filtering data

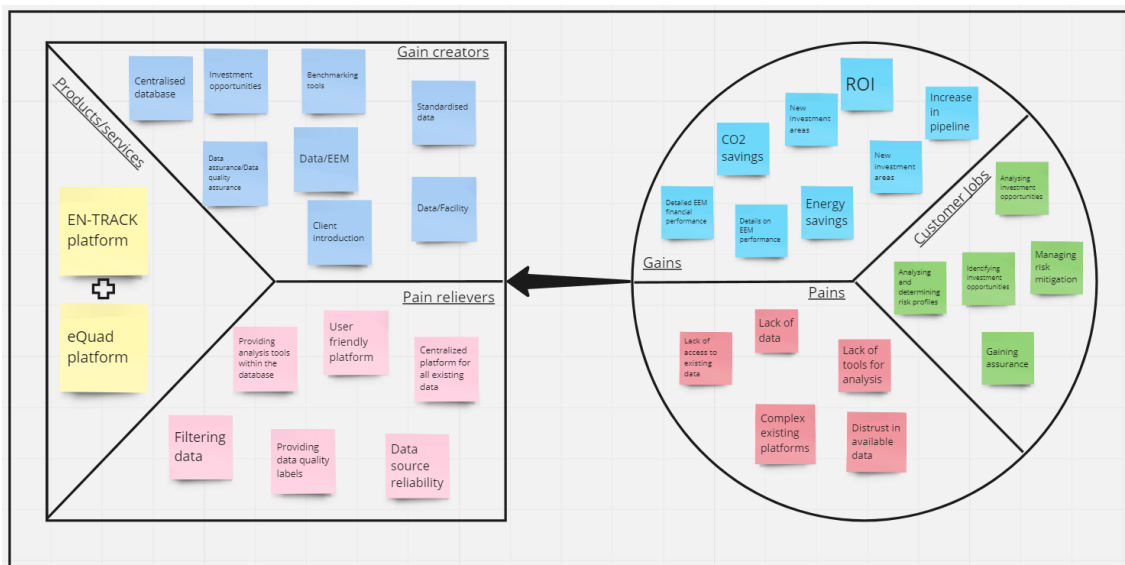


Figure 2: Financial Institution's Value Proposition Canvas

9.3 Policy Makers

PMs are responsible for formulating, implementing, and influencing public policies within a government or organizational framework. These decision-makers play a crucial role in shaping the direction and priorities of government initiatives and crafting laws, regulations, and guidelines that address societal issues and challenges. PMs analyze complex datasets, consider various perspectives, and engage with stakeholders to develop informed and effective policies.

9.3.1 Customer jobs

PMs often draw inspiration from various sources such as research findings, stakeholder fora and emerging industry trends. Creating long-term plans is a central aspect of their work, involving the formulation of detailed and strategic roadmaps that outline the objectives, methods, and expected outcomes of proposed policies.

To ensure well-informed decisions, PMs mobilize technical experts and cross-profession teams, tapping into a diverse pool of knowledge and expertise. Discussion fora play an important role as platforms for dialogue and debate, allowing PMs to gather insights from various stakeholders and refine their proposals accordingly. Seeking information from



experts is part of the decision-making process, as PMs consult specialists to obtain knowledge on complex issues.

Continuous monitoring is essential to assess the effectiveness of policies over time and make necessary adjustments. Policy delivery plans are carefully crafted, outlining the steps and resources required for successful implementation. Furthermore, collecting statistical information is key, as data-driven decision-making enables policymakers to assess the impact of policies and make evidence-based decisions.

Summary of jobs below:

- Create plans
- Mobilize technical experts and cross-profession teams
- Discussion forums
- Seeking information from experts
- Monitor success
- Policy delivery plans
- Collecting statistical information
- Develop strategies

9.3.2 Gains

PMs want to mobilize private funds for public initiatives. This involves creating an environment conducive to private sector investment through incentives, partnerships, and policies.

PMs work towards CO₂ savings by implementing regulations and incentives encouraging industries to adopt cleaner technologies and reduce their carbon footprint. Understanding trends involves continuously monitoring technological, economic, and social developments.

Energy savings are pursued by developing and implementing policies that promote energy efficiency, renewable energy adoption, and sustainable practices across sectors. PMs strive to identify and implement relevant solutions for current issues, acknowledging the societal challenges.

Achieving feedback from those affected by the policy involves engaging with stakeholders, addressing concerns, and fostering a sense of inclusion and shared responsibility. PMs work towards reaching climate targets by setting ambitious and realistic goals, implementing regulations that drive sustainable practices, and engaging in international collaborations to address global climate challenges.

Understanding the effectiveness of strategies is achieved through data collection, analysis, and feedback mechanisms to ensure that policies produce desired outcomes. PMs focus on the effective use of resources by prioritizing projects with the highest impact, optimizing budget allocations, and exploring innovative financing mechanisms.

Ultimately, PMs aim to improve living standards by creating policies that contribute to economic growth, social equity, and environmental sustainability, with resources committed to programs that align with long-term sustainable development goals.

Summary of gains below:

- Mobilization of private funds



- CO2 savings
- Understanding trends
- Quantity and level of public officials' degree of application and disseminated knowledge
- Energy savings
- Relevant solutions for current issues
- Acknowledgment from those affected by the policy
- Reaching climate targets
- Understanding effectiveness of strategies
- Effective use of resources
- Improved living standards
- Resources committed to programs
- Sustainable decisions

9.3.3 Pains

PMs often deal with short time frames, where the urgency to address issues may stand in the way of the development of well-thought-out policies. The pressure to produce results within limited time can compromise the depth of analysis and stakeholder engagement needed for effective decision-making.

Linking policies present another pain point as it involves coordination across multiple sectors and agencies, leading to complexities in formulation and implementation and linking data to decisions becomes challenging when there is a lack of integration between data sources, stopping PMs from leveraging valuable insights for informed policy development. Quality assurance is a recurrent concern, especially when dealing with diverse data sets.

Extracting value from data becomes challenging when there are extensive and disparate data sources. The expense of acquiring and managing data is often a significant pain point, limiting access to crucial information and constraining the resources available for analysis. Which is why EN-TRACK's revenue streams and cost structure providing a relief for the users.

Complex platforms can impede efficiency, causing data processing and analysis delays. Small data pools can also limit the scope and accuracy of insights, particularly in complex policy areas. Short-termism, or a focus on immediate results without considering long-term impacts, stands in the way of the development of sustainable policies.

Summary of pains below:

- Short time frames
- Cross-cutting policies
- Linking data to decisions
- Quality assurance
- Difficult to formulate and implement
- Extracting value from data
- Expensive data
- Complex existing platforms
- Small data pools
- Short termism



- Dispersed data
- No capability to properly analyze and take action on the results
- Lack of data
- Lack of access to existing data
- Lack of tools for analysis

9.3.4 Gain creators

The ability to de-risk investments serves as a powerful incentive for both public and private sectors to engage in initiatives that align with policy goals, promoting the realization of sustainable and innovative projects. Furthermore, having a bridge to private finance is crucial for PMs seeking to leverage external funding for large-scale projects. By creating avenues for private financing, PMs can amplify the impact of their policies and expedite the realization of strategic goals.

Occupancy comfort levels are important for PMs as they contribute to the success and acceptance of building-related policies. Trend insights help PMs stay ahead of issues and adapt their strategies to evolving circumstances.

Identifying sectors or building typologies with high Energy Use Intensity (EUI) assists policymakers in targeting interventions where they are most needed, optimizing the allocation of resources for maximum impact, tracking grants and subsidies, and managing financial incentives effectively, enhancing resource utilization efficiency.

Summary of gain creators below:

- De-risking investments
- Bridge to private finance
- Occupancy comfort levels
- Standardized data
- Trend analysis
- Identifying sectors or buildings typologies with high EUI
- Tracking grants/subsidies
- Aiding the financing process
- Benchmarking tools
- Data quality assurance
- Data/EEM
- Centralized database
- Data/Facility
- Insights into EEM

9.3.5 Pain relievers

PMs jobs are significantly eased by tools that allow them to track the results of subsidies and grants efficiently. A streamlined system for monitoring the outcomes of financial incentives enables PMs to assess the effectiveness of their policies, identify successful strategies, and make good adjustments.

Tracking portfolios provides PMs with a holistic view of the various projects and initiatives under their active, facilitating good oversight and decision-making. This approach ensures that PMs have access to a wealth of information in one location, reducing the need to navigate many systems and enhancing the speed at which they can assess and



analyze.

EN-TRACK simplifies data management and ensures that PMs have a holistic view of the landscape. Providing analysis tools within the database further improves decision-making processes.

Trends and results analysis tools enable them to see patterns, identify successful strategies, and predict future needs. Identifying risks is made more efficient through readily available data and tools, empowering PMs to address challenges and uncertainties promptly and proactively.

Summary of pain relievers below:

- Tracking results of subsidies
- Tracking portfolios
- Tracking results of grants
- Centralized platform for all existing data
- Providing analysis tools within the database
- User friendly platform
- Trends and results analysis
- Identifying risks
- Readily available data and tools

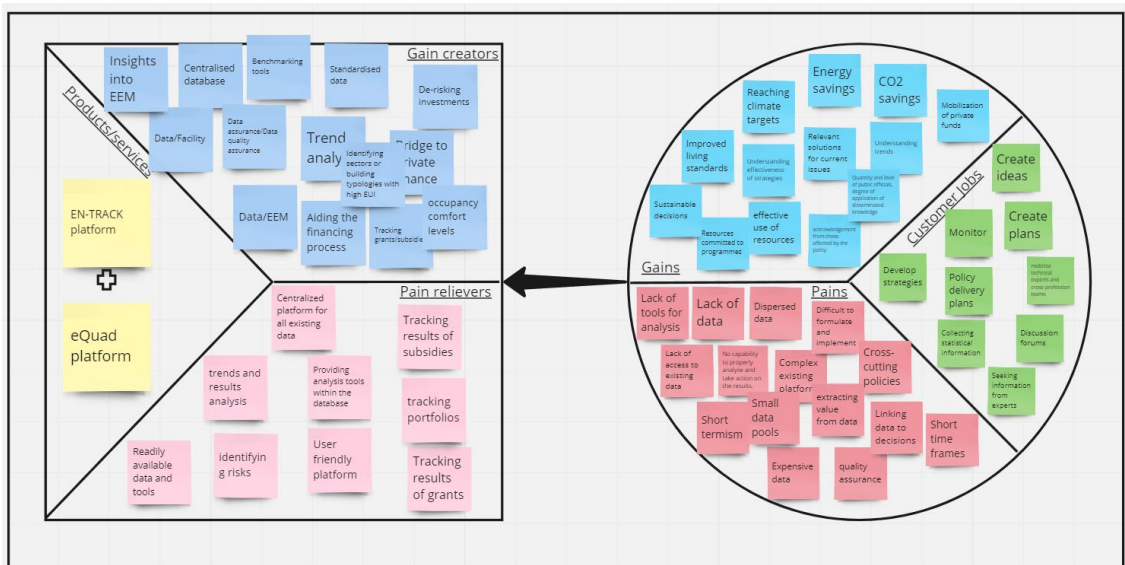


Figure 3: Policymakers Value Proposition Canvas

9.4 Value Proposition Statements

Based on the above value propositions canvases, it is needed to create a unified value proposition statement, that represents the unified value proposition for the main business model. To do this, firstly it is needed to summarize the value propositions for each customer segment.



9.4.1 Building Owner

- Access to finance
- Centralised and standardised data
- EEM insights
- Energy savings
- Planning capabilities

Value Proposition Statement: Knowledge, control, and opportunity to improve.

9.4.2 Financial Institutions

- Analysis and benchmarking
- Assurance
- EEM knowledge
- Investment opportunities
- Quality data

Value Proposition Statement: Knowledge and assurance of opportunities.

9.4.3 Policy Maker

- Big picture analysis
- Centralised and standardised data
- Concrete knowledge of current situation
- EEM insights
- Gap analysis

Value Proposition Statement: Knowledge and understanding for decision making.

9.4.4 Main Value Proposition Statement

The three statements share common themes related to knowledge, control, and opportunities for improvement.

Knowledge:

All three statements emphasize the importance of knowledge. Knowledge is presented as a fundamental element in each statement, suggesting that it is a key factor in achieving the desired outcomes.

Opportunity:

The concept of opportunity is present in all three statements. Statement 1 mentions "opportunity to improve," Statement 2 refers to "assurance of opportunities," and



Statement 3 talks about "opportunity for decision making." This implies a recognition of the positive possibilities that can arise through the possession and application of knowledge.

Control:

The first statement includes "control," indicating a sense of influence or authority over a situation. While the other two statements do not explicitly use the term, the notion of assurance and understanding in Statements 2 and 3 implies a level of control or agency that comes with possessing knowledge.

Improvement and Decision Making:

Statements 1 and 3 touch upon the idea of improvement and decision-making. Statement 1 directly mentions the "opportunity to improve," while Statement 3 discusses "knowledge and understanding for decision making." Both of these involve making informed choices to enhance a situation.

The common threads across these statements revolve around the pivotal role of knowledge, the potential it brings for positive opportunities, and the associated sense of control or assurance in decision-making and improvement.

Based on these common themes in the value propositions for the customer segments, the main value proposition statement is:

“Comprehensive knowledge, enabling opportunities and providing the understanding needed for informed decision-making, fostering a continuous pathway to improvement and risk assurance. “



10 Business model canvases

The Business Model Canvas is a widely used strategic tool and framework for developing, analyzing, and documenting business models. It was created by Alexander Osterwalder and Yves Pigneur and is a visual representation that helps businesses, entrepreneurs, and innovators understand and communicate the key components of their business in a concise and structured manner. The canvas is typically presented as a one-page diagram, making it a powerful and accessible tool for brainstorming, strategic planning, and collaboration. The Business Model Canvas is particularly useful for startups, established businesses, and organizations looking to innovate and improve their business models.

This chapter briefly overviews the business model canvases drafted for each customer segment. Due to the nature of the products and services offered, the business model canvases between the three customer segments are similar. Therefore, the business model canvases, and all the subsections will be presented as one within this chapter. For these purposes the chapter highlights and discusses the few distinctions between the three customer segments for each subsection.

For example, the database is a key resource for all three customer segments, however eQuad integration might not be. The key points that fall under all three will be presented under the umbrella of “Main business model,” and the key points that differ per customer segment will be explained separately under the heading of each customer segment.



10.1 Building Owners

Figure 4 shows the business model canvas drafted for the building owners. It offers all the categories of the methodology that make up the business model canvas and lists the key points in each category for the customer segment.

<p><u>Key Partners</u></p> <p>Joule Assets</p> <p>EnEffect</p> <p>CIMNE</p> <p>DTES</p> <p>ICAEN</p> <p>ESCos</p> <p>Partner platforms</p>	<p><u>Key Activities</u></p> <p>Customer support</p> <p>Educational activities</p> <p>Database upkeep</p> <p>eQuad support</p> <p>Software maintenance and development</p> <p>Data gathering and standardization</p> <p>Focus and detail on the recommendations</p> <p>Further development of the BO interface</p> <p><u>Key Resources</u></p> <p>Platform and analysis services</p> <p>eQuad integration</p> <p>Due diligence handholding</p> <p>Customer data</p> <p>Database</p> <p>Partnerships</p> <p>Grant funding</p> <p>Weather data</p>	<p><u>Value Propositions</u></p> <p>Centralised and standardised data</p> <p>Planning capabilities</p> <p>EEM insights</p> <p>Energy savings</p> <p>Access to finance</p>	<p><u>Customer Relationships</u></p> <p>Long term</p> <p>Close handholding</p> <p>Account reps</p> <p>Train on data management</p> <p><u>Channels</u></p> <p>Events</p> <p>SEFA</p> <p>Existing networks</p> <p>Future EU funded projects</p>	<p><u>Customer Segments</u></p> <p>Niche market</p> <p>Property managers</p> <p>Asset managers</p> <p>Portfolio managers</p> <p>Facility managers</p> <p>Energy managers</p>
<p><u>Cost Structure</u></p> <ul style="list-style-type: none"> • Data Purchasing (i.e. Weather data) • Data collection & sufficiency checks • Software support including Management & Registration of Users • Sales channels • Billing and Accounting • Legal Support • Ongoing Development and Alignment (user interface) (could have user costs/revenues associated) 		<p><u>Revenue Streams</u></p> <ul style="list-style-type: none"> • Flat fee for all users • Variable fee for net data access • Grant funding • Flat fee for all users submitting less than 300 records per month • License for API access and customisation 		

Figure 4: Building Owner's Business Model Canvas



10.2 Financial Institutions

Figure 5 shows the business model canvas drafted for financial institutions. It offers all the categories of the methodology that make up the business model canvas and lists the key points in each category for the customer segment.

<p><u>Key Partners</u></p> <p>Joule Assets</p> <p>EnEffect</p> <p>EP Group</p> <p>CIMNE</p> <p>ESCos</p> <p>Partner platforms</p>	<p><u>Key Activities</u></p> <p>Maintaining relationships</p> <p>Educational activities</p> <p>Database upkeep</p> <p>Networking activities</p> <p>Software maintenance and development</p> <p>Data gathering and standardization</p> <p><u>Key Resources</u></p> <p>Platform and analysis services</p> <p>Quality assurance and guidance</p> <p>Due diligence handholding</p> <p>Customer data</p> <p>Database</p> <p>Partnerships</p> <p>Grant funding</p> <p>Weather data</p>	<p><u>Value Propositions</u></p> <p>Quality data</p> <p>Investment opportunities</p> <p>Assurance</p> <p>Analysis and benchmarking</p> <p>EEM knowledge</p>	<p><u>Customer Relationships</u></p> <p>Long-term</p> <p>Work hard to retain</p> <p>Close relationships</p> <p>More focus and training on value rather than function</p> <p><u>Channels</u></p> <p>Partner platforms</p> <p>Outreach to existing networks</p> <p>Events</p> <p>Future EU funded projects</p>	<p><u>Customer Segments</u></p> <p>Niche market</p> <p>Financial institutions</p> <p>Financial analyst</p> <p>Risk manager</p> <p>Underwriter</p>
<p><u>Cost Structure</u></p> <ul style="list-style-type: none"> • Data Purchasing (i.e. Weather data) • Data collection & sufficiency checks • Software support including Management & Registration of Users • Sales channels • Billing and Accounting • Legal Support • Ongoing Development and Alignment (user interface) (could have user costs/revenues associated) 		<p><u>Revenue Streams</u></p> <ul style="list-style-type: none"> • Data hosting • Data output/ access • Analysis tools • API integration & customisation (license to access, revenue for server-side adaptations /modifications) • Fiat fee for all users • Variable fee for net data access • Grant funding • Fiat fee for all users submitting less than 300 records per month • License for API access and customisation 		

Figure 5: Financial Institution’s Business model canvas



10.3 Policy Makers

Figure 6 shows the business model canvas drafted for policy makers. It offers all the categories of the methodology that make up the business model canvas and lists the key points in each category for the customer segment.

<p><u>Key Partners</u></p> <p>Joule Assets</p> <p>CIMNE</p> <p>Partner platforms</p>	<p><u>Key Activities</u></p> <p>Provide key data</p> <p>Educational activities</p> <p>Database upkeep</p> <p>Software maintenance and development</p> <p>Data gathering and standardization</p> <p>Adding recommendations section for PMs</p> <p>Developing PM interface</p> <p><u>Key Resources</u></p> <p>Platform and analysis services</p> <p>Targeted PM content</p> <p>Customer data</p> <p>Database</p> <p>Partnerships</p> <p>Grant funding</p> <p>Weather data</p> <p>Gap analysis</p>	<p><u>Value Propositions</u></p> <p>Centralised and standardised data</p> <p>Big picture analysis</p> <p>EEM insights</p> <p>Concrete knowledge of current situation</p> <p>Gap analysis</p>	<p><u>Customer Relationships</u></p> <p>Long-term</p> <p>Work hard to obtain and retain</p> <p>Rarely in contact</p> <p>More focus and training on understanding and utilizing the output rather than input</p> <p><u>Channels</u></p> <p>Events</p> <p>Sustainable energy finance association</p> <p>Targeted outreach to city/national officials</p>	<p><u>Customer Segments</u></p> <p>Niche market</p> <p>National ministry officials</p> <p>Policy officers</p> <p>Policy analysts</p> <p>EU, IEA, world bank, Lobby groups</p>
<p><u>Cost Structure</u></p> <ul style="list-style-type: none"> • Data Purchasing (i.e. Weather data) • Data collection & sufficiency checks • Software support including Management & Registration of Users • Sales channels • Billing and Accounting • Legal Support • Ongoing Development and Alignment (user interface) (could have user costs/revenues associated) 		<p><u>Revenue Streams</u></p> <ul style="list-style-type: none"> • Flat fee for all users • Variable fee for net data access • Grant funding • Flat fee for all users submitting less than 300 records per month • License for API access and customisation 		

Figure 6: Policymakers Business Model Canvas



10.4 Main Business Model

As seen in the above sections, many overlapping items exist between the customer segments. Hence, for the remainder of the document, the business model elements will be referred to as the “main business model,” the outliers for each customer segment will be highlighted and reflected upon as appropriate per category.

11 Key activities

The key activities section explains why these resources are needed. The critical question here is what activities does the value proposition need, and what processes and tasks must be completed for the customers to be served?

When establishing key activities, the following issues are examined:

- What key activities do the value propositions require?
- What key activities do the distribution channels require?
- What key activities do the customer relationships require?
- What key activities do the revenue streams require?

11.1 Key activities for the value proposition

The success of EN-TRACK’s value proposition relies on integration of key activities for the platform. Firstly, data gathering, and standardization is of course key for EN-TRACK’s value proposition. This activity ensures accurate and reliable information, laying the foundation for informed decision-making and great service delivery.

Simultaneously, the upkeep of the databases is critical, guaranteeing the accessibility and efficiency of data repositories. Educational activities enable EN-TRACK to empower its stakeholders with the knowledge necessary to maximize the use of the platform’s products and services. Continuous software maintenance and development efforts ensure the reliability of EN-TRACK.

1. Data gathering and standardization.
2. Database upkeep
3. Educational activities
4. Software maintenance and development

11.2 Key activities for the sales channels

Key activities for EN-TRACK’s sales channels involves building on existing relationships and networks. This requires proactive engagement with networks, understanding their evolving needs, and ensuring value from EN-TRACK. Simultaneously, establishing new connections with city and national officials involves strategic outreach, leveraging industry events, personalized emails, and mutual connections to lay the groundwork for potential collaboration.

Networking activities are key in increasing EN-TRACK’s reach and gaining industry insights. Participating in conferences and leveraging other digital platforms facilitates



interactions with industry professionals, identifying potential clients or partners. Educational and promotional activities, such as webinars, workshops, and newsletters, position the platform as an industry leader and provide value to EN-TRACK's audience.

Lead generation is another key element. Targeted efforts to ensure leads align with EN-TRACK's target customer profile. Finally, establishing partnerships involves identifying synergies with organizations that complement the offering, leading to collaborative initiatives that strengthen market presence and address industry challenges in a unified manner.

- Maintaining and fostering existing relationships
- Establish new relationships with city and national officials.
- Networking activities
- Educational and promotional activities
- Lead generation
- Establishing partnerships

11.3 Key activities for the customer relationships

11.3.1 Key activities for Building owners

For building owners, customer support, ensuring they receive prompt and practical assistance, and providing solutions to enhance their overall experience. Support on eQuad platform is equally crucial, offering a specialized platform that caters to the unique needs of building owners, streamlining processes for financing.

The emphasis on providing recommendations is marked by a focus on detail, offering tailored and insightful guidance to building owners for optimizing their property's performance and efficiency.

Furthermore, the continuous improvement of the Building Owner interface is a priority, with ongoing development efforts aimed at enhancing user experience, providing intuitive tools, and ensuring that the platform evolves with the changing needs of building owners. An example would be the integration with the eQuad platform.

1. Customer support
2. eQuad support
3. Focus and detail on the recommendations.
4. Further development of the BO interface

11.3.2 Key activities for financial institutions

Engaging and maintaining relationships with financial institutions revolves around key activities that foster trust, collaboration, and longevity. Central to this is the ongoing commitment to maintaining relationships, which involves consistent communication, and delivering value over time.

Networking activities complement direct interactions, knowledge-sharing, and relationship-building opportunities. Participating in industry events, conferences, and forums enables EN-TRACK to connect with key stakeholders, stay informed about industry trends, and showcase its expertise and value. Through effective networking, EN-TRACK strengthens existing relationships and open doors to new collaborations and



partnerships, ultimately contributing to a mutually beneficial ecosystem within the financial sector.

1. Maintaining relationships
2. Networking activities

11.3.3 Key activities for policymakers

EN-TRACK's value proposition to policymakers is enforced by key activities that reflect its dedication to facilitating informed decision-making. Adding a recommendations section for policymakers is key, offering tailored insights and strategic suggestions to help in policy formulation and implementation.

Developing a robust policymaker interface ensures an intuitive and user-friendly platform, enhancing accessibility to information and promoting efficient decision-making processes.

1. Adding recommendations section for PMs
2. Developing PM interface
3. Provide key data.

11.4 Key activities for the revenue streams

The continuous and expanding data gathering and standardization process. This involves collecting relevant data and ensuring its usability and value. The database upkeep is also crucial for sustaining the value of the collected information, ensuring it remains accurate and reliable.

In terms of sales, maintenance of relationships and partnerships. Cultivating solid connections with customers and collaborators fosters client retention and opens doors to new opportunities and revenue sources. Networking activities are important, providing avenues for expanding the platform's reach and attracting new users and platform partners.

Lead generation is a fundamental revenue driver, necessitating strategic efforts to identify and nurture potential users. This relates mainly to PMs. If EN-TRACK is to only deliver core services in the early years, then there needs to be a concerted effort in upping the growth numbers for flat fee users, or the revenues will be substantially lower than needed to cover the essential costs. More on this in the financial plan chapter.

It is also believed that if EN-TRACK can be widely adopted with the PMs, there is a good chance that it can be widely adopted and/or pushed as an industry standard in the future.

A very simple but important step for the revenue streams is the onboarding of the customer. There needs to be a smooth and efficient onboarding and support process in place which will initially require EN-TRACK staff to train and actively guide. This can later be substituted by quality training and guidance material available online.

Furthermore, diversifying revenue streams involves grant writing and application processes.

12 Key resources

Questions to ask regarding key resources are:



- What key resources do the value propositions require?
- What key resources do the distribution channels require?
- What key resources do the customer relationships require?
- What key resources do the revenue streams require?

These key resources can generally be placed in four different categories:

- **Physical.** Buildings, vehicles, point of sales systems, distribution networks etc. Retailers e.g. rely heavily on the physical resources.
- **Intellectual property.** Brands, patents and copyrights, partnerships, customer databases, software etc.
- **Human resources**
- **Financial.** Cash, capital, credit.

Table 2: Key Resources Categories

Key resource for:	Resource	Resource category
Value proposition	<ul style="list-style-type: none"> • Customer data • Database • Weather data • Handholding • Platform and analysis services 	<ul style="list-style-type: none"> • Intellectual property • Human resources
Sales Channels	<ul style="list-style-type: none"> • Partnerships • Business Development 	<ul style="list-style-type: none"> • Human Resources
Customer relationships	<ul style="list-style-type: none"> • Business Development • Customer data • Database 	<ul style="list-style-type: none"> • Intellectual Property • Human resources
Revenue streams	<ul style="list-style-type: none"> • Grant funding • Partnerships • Business Development 	<ul style="list-style-type: none"> • Intellectual property • Human resources • Financial

12.1 Human Resources

The key resources under the human resources category are detailed in this chapter.

12.1.1 Handholding

Having a team for due diligence and handholding is essential for maintaining the value of EN-TRACK. This team can ensure customer data is handled correctly and ensure the users meets their goals of using the platform.



12.1.2 Platform and Analysis Services

Human resource expertise is important for developing and maintaining EN-TRACK. This includes the development and improvement of the platform's features, as well as the analysis of data and quality control.

12.1.3 Administrative staff

Administrative staff, for example, in accounting and legal support, constitute a key resource for EN-TRACK as in any organization. The administrative staff ensures the smooth operation of the business by managing financial transactions, maintaining accurate records, and ensuring compliance with legal requirements. The administrative staff provides the foundational support necessary for the organization to operate efficiently, mitigate risks, and uphold legal standards.

12.1.4 Partnerships

Extended reach through partnerships with other businesses or organizations can significantly expand EN-TRACK's reach. Collaborations allow for cross-promotion, access to new user bases, and the opportunity to tap into complementary expertise. Partnerships can also involve resource sharing, such as technology, knowledge, or marketing efforts, which can be mutually beneficial and cost-effective.

12.2 Intellectual Property

The key resources under the intellectual property category are detailed in this chapter.

12.2.1 Customer Data

The buildings data uploaded by the users is the core to the platform's value and the more users that upload data on their buildings, the more value EN-TRACK can provide. A robust database supports the scalability of EN-TRACK, accommodating and incentivizing growing user numbers and increasing data volumes and value.

12.2.2 Weather Data

Enhanced Functionality with weather data is likely a crucial component of EN-TRACK. It can be used to enhance the functionality of its services.

12.2.3 Training and educational materials

The EN-TRACK platform's successful deployment and adoption require a robust training and education strategy within its distribution channels. Recognizing the significance of knowledge transfer, developing complete onboarding materials is important. These materials should be accessible online, guidance and courses to facilitate a seamless integration process for users.

The onboarding materials should cover essential aspects such as platform functionalities, system navigation, troubleshooting procedures, and best practices. By providing clear and interactive educational resources, EN-TRACK ensures that its distribution channels are well-equipped to convey the platform's value proposition effectively. This approach contributes to the overall success and scalability of the platform in the market.



12.2.4 Financial and Payment Tools

EN-TRACK will need to set up an account and integrate with a third-party payment tool, such as Stripe or other, in order to facilitate payment and the revenue streams of the platform. This is likely to be the case for all flat fee services, whereas for API services and some of the additional services might be served under separate agreements.

12.2.5 Website

The website serves as the landing page and key sales channel for directing customers to the platform and signing up.

12.3 Financial

The key resources under the financial category are detailed in this chapter.

12.3.1 Grant Funding

Grant funding provides a stable foundation for EN-TRACK's development and operations. It allows EN-TRACK to invest in research, development, marketing, and infrastructure, ensuring sustained growth. Grants can be used to fund innovative projects and expand the platform's capabilities. This financial support facilitates experimentation and the implementation of new features that enhance user experience. Perhaps also helps fund further integration with other existing platforms.



13 Key partners

The key partners are the foundation of suppliers and partners that enables the EN-TRACK business model to work. Questions answered in this chapter are:

- Who are the key partners?
- Who are the key suppliers?
- Which key resources are the partners providing?
- Which key activities are the partners performing?

Table 3: Key Partners Table

Key Partner	Key resource(s) provided	Key Activities performed
CIMNE	Customer data, database, grant funding, human resources, handholding, platform and analysis services, business development	<ul style="list-style-type: none"> • Maintaining and fostering existing relationships • Networking activities • Educational and promotional activities • Data gathering and standardization. • Database upkeep • Educational activities • Software maintenance and development • Establish new relationships with city and national officials. • Lead generation • Establishing partnerships • Customer support • Further development of the BO interface • Developing PM interface • grant writing and application
EnEffect	Human resources, business development	<ul style="list-style-type: none"> • Maintaining and fostering existing relationships • Networking activities • Educational and promotional activities • Lead generation
ICAEN	Human resources, business development	<ul style="list-style-type: none"> • Networking activities • Educational and promotional activities
SIN	Human resources, business development, intellectual property	<ul style="list-style-type: none"> • Networking activities • Educational and promotional activities • Website maintenance
Joule Assets	Partnerships, Human resources, handholding, platform and analysis services, business development	<ul style="list-style-type: none"> • Software maintenance and development • Maintaining and fostering existing relationships • Establish new relationships with city and national officials. • Networking activities • Educational and promotional activities • Lead generation • eQuad support



Partner Platforms	Partnerships, weather data, business development	<ul style="list-style-type: none"> • Data gathering and standardization. • Educational and promotional activities
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13.1 CIMNE

13.1.1 Partnership engagement

CIMNE is dedicated to **maintaining and foster existing relationships** with existing partners through regular communication and collaboration to understand and address emerging needs, exploration of new collaborations, and strengthen relationships. **Support and maintenance** of the EN-TRACK platform is a priority, ensuring prompt assistance, training, and guidance for users to guarantee a positive experience.

A focus for CIMNE, as a key player in fostering innovation and sustainable development, is the **establishment of new relationships** with large building owners such as public or private administrations. This strategic initiative aims to strengthen partnerships, contributing to the growth and adoption of the EN-TRACK platform.

CIMNE also engages in **lead generation** activities to identify and capitalise on opportunities for collaboration with local and regional authorities, industry associations, financial institutions, and other potential partners.

13.1.2 Platform development and enhancement

CIMNE is committed to the continuous **maintenance and development of the software**, ensuring that the platform remains up-to-date, reliable and adaptable to changing user requirements. This continuous effort involves improving and extending the **Building Owners interface** through ongoing software development.

In addition, CIMNE is dedicated to the **development and enhancement of the Policymaker (PM) interface**. This initiative ensures that the PM interface is in harmony with project objectives and meets the evolving needs of users, contributing to a comprehensive and user-friendly experience.

13.1.3 Data management and standardisation

CIMNE is engaged in maintaining and updating the databases associated with the EN-TRACK project. A complete **database upkeep** that involves ensuring data integrity, security, and accessibility.

In addition, CIMNE is responsible for a continuous **collection and standardisation** of the relevant data for the EN-TRACK platform. This ensures the consistency and accuracy of the information used through the harmonisation of data according to international standards.

13.1.4 Outreach and awareness

CIMNE engages in various **networking activities**, such as participating in industry events, conferences, and forums. This allows CIMNE to stay informed about industry trends, showcase their expertise, and foster collaborations within the industry.

CIMNE actively engages in **educational initiatives** aimed at increasing awareness of sustainable energy practices and highlighting the advantages of the EN-TRACK project. These efforts encompass a mix of online and offline promotional activities to effectively reach a diverse audience. In addition, CIMNE conducts educational programs designed



to enhance the knowledge and skills of stakeholders directly involved in or affected by the EN-TRACK project. Alongside these endeavours, CIMNE assumes the responsibility of preparing and submitting **grant applications** to secure essential funding for the successful implementation of the EN-TRACK project.

13.2 EnEffect

EnEffect will enhance and expand the business model through its contributions through its contribution in the following areas.

13.2.1 Maintaining and Fostering Existing Relationships with Bulgarian stakeholders

As the coordinator of the activities of the EcoEnergy Municipal Energy Efficiency Network and as an organization supporting and advising Bulgarian municipalities in the field of sustainable energy management, EnEffect will continue to promote the platform among public authorities and demonstrate it at various events, such as the annual EcoEnergy conference, national roundtables on financing sustainable energy efficiency, and various trainings and workshops.

As part of the management of the Bulgarian Energy Efficiency and Renewable Sources Fund, EnEffect cooperates with other specialized financial institutions, such as the National Trust Eco and the Fund FLAG, as well as with commercial banks. Using the contacts already established with them, EnEffect will continue to promote the platform among them and support them in case they need advice in using it.

13.2.2 Networking Activities, presenting EN-TRACK to Bulgarian stakeholders

In recent years, EnEffect has established itself as the main organizer of events focused on energy efficiency and sustainable energy financing in Bulgaria, organizing 4 to 5 events per year with at least 100 participants per event. In addition, EnEffect experts participate in almost all other events (conferences, webinars, workshops, trainings) on these topics as speakers or panelists. This creates good opportunities to promote the EnEffect platform and attract new users.

13.2.3 Educational and Promotional Activities in Bulgaria

EnEffect is committed to conducting educational initiatives to raise awareness about sustainable energy use and the benefits of the EN-TRACK platform on the above-mentioned events. These efforts not only serve to promote the platform but also contribute to building knowledge and skills among Bulgarian stakeholders.

13.2.4 Lead Generation for Bulgarian Building Owners and Financial Institutions

EnEffect will engage in lead generation activities, identifying opportunities for collaboration with financial institutions, public authorities and ESCo companies. By identifying and pursuing potential partnerships, EnEffect contributes to the growth of EN-TRACK's network on national level, expanding the platform's reach and impact within the stakeholders.



13.3 ICAEN

ICAEN will enhance and expand the business model through the following areas.

13.3.1 Networking Activities, presenting EN-TRACK to Catalan stakeholders

ICAEN is the public entity in Catalonia established to promote and carry out initiatives and programs for research, study and support of actions for the energy efficiency and sustainable energy. For this propose ICAEN regularly organizes events as conferences, webinars, workshops, trainings on energy topics. Besides, ICAEN has a facilitator's team that specifically promotes sustainable investments in all Catalan public buildings. ENTRACK platform is of the interest of this team as it facilitates very much to make specific proposals of new projects as it helps to identify the more inefficient buildings. This team will promote the use of the ENTRACK Platform

13.3.2 Educational and Promotional Activities in Catalonia

ICAEN is committed in conducting educational initiatives to raise awareness about sustainable energy use and the benefits of the EN-TRACK platform on the above-mentioned events. These efforts not only serve to promote the platform but also contribute to building knowledge and skills among Catalan stakeholders.

13.4 SIN

SIN will support the continuous development, relevance and usability of the EN-TRACK platform, SIN will be able to conduct user testing when future updates and improvements are made.

The project website will also be maintained online for two years after the project ends in order to ensure the online visibility of EN-TRACK and guide users to the platform.

Furthermore, SIN will be able to promote the platform through its business relationships and participation in other research and innovation projects, many of which concern energy efficiency and new business models.

13.5 Joule Assets

Joule Assets will enhance and expand the business model through its contributions across various domains.

13.5.1 Software Maintenance and Further Development of the eQuad Platform:

Joule Assets recognizes the importance of maintaining and evolving the eQuad platform to provide further future value for EN-TRACK through the integration between the two platforms. By dedicating resources to ongoing software maintenance and development, Joule Assets ensures that the platform remains cutting-edge, reliable, and adaptable to the evolving needs of its users and EN-TRACK users. Regular updates and improvements will enhance the user experience and solidify the value proposition for EN-TRACK.



13.5.2 Maintaining and Fostering Existing Relationships with Financial Institutions and Policymakers:

Building on existing relationships is a cornerstone of Joule Assets' role in EN-TRACK. Joule assets is committed to cultivating strong ties with financial institutions and policymakers. By actively engaging with these key stakeholders, Joule Assets seeks to understand their evolving needs and position itself as a trusted partner. This approach contributes to the long-term sustainability of the business model and ensures alignment with the industry.

13.5.3 Establishing New Relationships with City and National Officials:

Recognizing the importance of government partnerships, Joule Assets aims to forge new relationships with city and national officials. These connections are invaluable for increasing EN-TRACK adoption and expanding the data set in public buildings.

This also aligns with the potential for the additional service number 4 in chapter 14.

13.5.4 Networking Activities, Representing EN-TRACK at Events:

Through participation in industry events, conferences, and forums, Joule stays ahead of industry trends and positions itself as a thought leader. By representing EN-TRACK at these events, Joule Assets showcases EN-TRACK's value and fosters collaborations, ultimately contributing to the growth and visibility of the platform.

13.5.5 Educational and Promotional Activities, Mostly Online:

Joule Assets is committed to conducting online educational initiatives to raise awareness about sustainable energy practices and the benefits of the EN-TRACK platform, especially integrated with eQuad. These efforts not only serve to promote the platform but also contribute to building a knowledgeable and informed user base.

13.5.6 Lead Generation for Financial Institutions and National and Industry Associations:

Joule Assets will engage in lead generation activities, identifying opportunities for collaboration with financial institutions and national and industry associations. By identifying and pursuing potential partnerships, Joule Assets contributes to the growth of EN-TRACK's network, expanding the platform's reach and impact within the industry.

13.5.7 eQuad Platform Customer Support:

Joule Assets is committed to providing customer support for the eQuad platform, ensuring EN-TRACK users receive prompt assistance, training, and guidance. By offering reliable and responsive support services, Joule Assets fosters a positive user experience and cultivates long-term customer loyalty.

13.6 Partner Platforms

EN-TRACK has been built using standards-based open data models in order to interoperate with existing and future databases. This has already enabled agreements with the DEEP and eQuad platforms.



13.6.1 DEEP

De-risking Energy Efficiency Platform (DEEP) was launched by the Energy Efficiency Financial Institutions Group (EEFIG) in 2016 and is the largest pan-European database containing over 11,000 buildings and related energy efficiency projects.

EN-TRACK is fully aligned with the objectives of DEEP for gathering and disclosing large scale data on actual performance of Energy Efficiency Investments (EEI). Due to its building-centred approach, EN-TRACK complements DEEP with building energy use benchmarking, more detailed EEI benchmarking output, and capabilities for tracking the performance of buildings over the time.

13.6.2 eQuad

Developed within the SEAF project, the eQuad platform helps European energy efficiency project managers (ESCOs, engineering firms, and construction companies) access appropriate project finance while lowering upfront due diligence costs for investors.

Developed within the SEAF project, the eQuad platform helps European energy efficiency project managers (ESCOs, engineering firms, and construction companies) access appropriate project finance while lowering upfront due diligence costs for investors.

EN-TRACK and eQuad are currently undergoing development work to integrate under the following use cases:

- UC1 is about incorporation of data from eQuad to EN-TRACK. Expanding the EN-TRACK database and adding value to the users.
- UC2 is about Exporting benchmarking data from EN-TRACK to eQuad. Allowing eQuad users to take advantage of EN-TRACK's data and features within the eQuad platform.
- UC3 is about Enabling access from EN-TRACK for financial assessment of new projects with eQuad.

The above use-cases can be valuable templates for other platform integrations and the backend work already done by Joule and CIMNE can be reproduced and used for other potential partners.

13.6.3 Potential Future Partner Platforms

1. SEFA:

SEFA is the European trade association for the sustainable energy industry. They offer the SEFA Member Access Platform, a one-stop web service for sustainable energy project developers. This platform allows members to conduct due diligence on energy efficiency projects and provides various services such as contract authentication, sales materials, training, risk assessment, and financial analysis. EN-TRACK can be integrated into this platform, offering an additional tool for SEFA members to benchmark their projects easily using the existing API between eQuad and EN-TRACK.

2. CarbonFit:

CarbonFit uses advanced technology to calculate carbon footprints automatically, providing verified data for industry benchmarking and reducing carbon emissions. The goal is to enhance performance, decrease carbon emissions, and ensure compliance across businesses and supply chains. Collaboration with CarbonFit and similar platforms could involve sharing anonymous building data and exchanging services.



3. Sphere:

Sphere is an ICT System of Systems infrastructure based on Platform as a Service (PaaS). It facilitates large-scale integration, synchronization, and sharing of data, information, and knowledge. Various stakeholders can interact with the BIM Digital Twin model throughout a building's lifecycle using different software tools. The system operates seamlessly and efficiently, updating based on the IDDS framework. This framework allows virtual analysis of actions before physical implementation, minimizing expenses and ensuring a thorough understanding of potential outcomes.

14 Revenue streams

EN-TRACK's revenue streams are carefully designed to align with the diverse needs of its users while ensuring sustainability and growth for the platform. The primary revenue source is a flat fee applicable to all users, providing an accessible and straightforward pricing structure that caters to organizations of all sizes. This inclusive approach ensures that even smaller entities benefit from the platform without prohibitive costs. Furthermore, EN-TRACK offers a special flat fee for users submitting less than 300 records per month, recognizing the varying scales of data usage among clients. This tiered pricing strategy encourages organizations with lower data volumes to leverage the platform cost-effectively, fostering a broad user base.

Beyond user fees, EN-TRACK's revenue diversification strategy includes grant funding. By actively seeking and securing grants, it solidifies EN-TRACK's financial foundation, allowing EN-TRACK to invest in research and development, enhance platform features, and explore innovative solutions without solely relying on user-generated revenue. Grant funding provides stability and positions EN-TRACK well in terms of technological advancements in the sector.

EN-TRACK offers a license for API access and customization to expand its revenue streams. This extra service allows users to tailor EN-TRACK to their unique requirements. The API license contributes to revenue and reflects EN-TRACK's commitment to providing adaptable solutions for stakeholders.

A variable fee for net data access provides a flexible pricing model that scales with the magnitude of data usage. This approach aligns with the principle of fairness, as clients pay in proportion to the extent of their data access, reflecting EN-TRACK's commitment to accommodating the evolving needs of its user base. The variable fee structure encourages organizations to optimize data usage while ensuring EN-TRACK remains cost-effective.

EN-TRACK's revenue streams showcase a commitment to accessibility, flexibility, and innovation. By combining flat fees, tiered pricing, grant funding, API licensing, and variable fees, EN-TRACK positions itself as a comprehensive and sustainable solution, empowering users to manage their data efficiently while contributing to EN-TRACK's continued growth and development.

These revenue streams will be further detailed in the business plan chapter and financial forecasts.



15 Cost structure

EN-TRACK's cost structure is designed to support the platform's functionality and continuous improvement. Analysis tools, the backbone of the platform, constitute a significant portion of the costs, ensuring EN-TRACK users have access to analytical capabilities. API integration and customization come with associated licensing fees, covering user access, and generating revenue for server-side adaptations and modifications to tailor EN-TRACK to user needs.

Billing and accounting functionalities are essential, ensuring the platform's transparent and efficient processing of financial transactions.

Data hosting represents a substantial cost as EN-TRACK invests in secure and scalable infrastructure to accommodate the volumes of data the platform manages.

Purchasing external data, such as weather data, adds to EN-TRACK's expenses but enriches the value provided to users with comprehensive datasets.

Legal support and ensuring compliance with regulations and safeguarding the interests of the users is also an expense to EN-TRACK. Ongoing development and alignment, particularly with user interface enhancements, contribute to EN-TRACK's costs. Sales channels, representing the avenues through which EN-TRACK reaches its users, require investment to maintain an influential presence in the market.

Software support, including user management and registration, for the seamless operation of the platform. This includes ongoing maintenance and addressing user inquiries and issues. While it adds to the costs, it is essential for user satisfaction and retention.

The cost structure reflects the diverse components necessary to deliver a high-quality and sustainable platform. This cost structure will be further detailed in the business plan chapter and financial forecasts.

15.1 Cost Types

Fixed and variable costs are two fundamental components of the total cost structure for a business. Understanding the difference between these two types of costs is important for financial management.

Fixed costs are expenses that do not change with the level of production or sales within a specific range. Fixed costs remain the same regardless of the volume of goods or services a business produces. Variable costs on the other hand are expenses that change in direct proportion to the level of production or sales. These costs fluctuate as the business produces more or fewer units of goods or services.

Both fixed and variable costs have advantages and disadvantages, and the optimal mix depends on various factors.

Fixed costs provide stability as they do not change with the production level. This can be advantageous for businesses with predictable and steady operations. Fixed costs per unit decrease as production increases, leading to potential economies of scale. This means that the average cost per unit may decrease with higher production levels. Since fixed costs remain constant, they can help businesses better manage their cash flow and financial planning.

Variable costs offer flexibility as they fluctuate with the level of production or sales. In low production levels, variable costs allow for better cost control. Businesses only incur



variable costs when they produce and sell goods or services. Variable costs allow businesses to adjust to changes in market conditions quickly. If demand drops, a business can reduce production and variable costs.

EN-TRACK has a combination of fixed and variable costs, and the goal is to find the right balance based on the specific circumstances. Ultimately, the key is effective cost management and aligning the cost structure with the business's strategy.

15.2 Key resources costs

Table 4: Key Resources Cost Types

Resource	Cost type
Customer data	Variable cost
Database	Fixed cost
Weather data	Variable cost
Handholding	Fixed cost
Sales staff	Fixed cost
Partnerships	Variable cost
Analysis services	Variable cost
Grant funding	Variable cost
Administrative staff	Fixed cost

For the key resources EN-TRACK have four considered as fixed costs and eight considered as variable costs.

15.3 Key activities costs

Table 5: Key Activities Cost Types

Activity	Cost type
Adding recommendations section for PMs	Fixed cost
Customer support	Variable cost
Data gathering and standardization	Variable cost
Database upkeep	Fixed cost
Developing PM interface	Fixed cost
eQuad support	Fixed cost
Educational and promotional activities	Variable cost
Establish new relationships with city and national officials	Variable cost
Establishing partnerships	Variable cost
Focus and detail on the recommendations	Fixed cost
Further development of the BO interface	Variable cost
Lead generation	Variable cost
Maintaining and fostering existing relationships	Variable cost



Networking activities	Variable cost
Software maintenance and development	Variable cost

For the key activities EN-TRACK has five considered as fixed costs and 10 considered as variable costs.



15.1 Key activities and resources in relation to financial planning

Data Purchasing (i.e. Weather data)	Data collection & sufficiency checks	Software support including Management & Registration of Users	Sales channels	Billing and Accounting	Legal Support	Ongoing Development and Alignment (user interface) (could have user costs/revenues associated)	Data hosting	Data output/access	Analysis tools	API integration & customisation (license to access, revenue for server-side adaptations /modifications)
Weather data	Customer data	Handholding	Sales staff	Administrative staff	Administrative staff	Adding recommendations section for PMs	Database	Analysis services	Analysis services	Partnerships
	Data gathering and standardization	eQuad support	Educational and promotional activities	Grant funding	Grant funding	Developing PM interface	Database upkeep			
		Customer support	Establish new relationships with city and national officials			Focus and detail on the recommendations				
			Establishing partnerships			Further development of the BO interface				
			Lead generation			Software maintenance and development				
			Maintaining and fostering existing relationships							
			Networking activities							
			Partnerships							

Figure 7: Cost category allocation



EN-TRACK's primary goal is to optimize operational efficiency by cutting fixed costs. By reassessing the current expenses and identifying areas where costs can be reduced without compromising essential functions. This involves cutting overhead expenses and streamlining processes to eliminate unnecessary financial burdens. Doing this can enhance EN-TRACK's financial stability, ensuring that resources are better allocated.

Furthermore, turning service and human resources-related costs into variable expenses to be more autonomous through training and education materials. This shift towards a variable cost structure allows greater scalability.

By aligning costs more closely with the demand, EN-TRACK can adapt to changes in business activity without the burden of fixed overheads. This approach enhances the ability to manage costs and positions EN-TRACK to be more responsive to changing customer needs. EN-TRACK should also explore opportunities to increase its sales budget or piggyback on partnerships with other organizations. Collaborative efforts can open up new revenue streams, growth, and market expansion while keeping costs to a minimum.

Furthermore, looking at future platform development, it should be anticipated that a significant portion of funding for that will be sourced through grant opportunities. Leveraging grants for innovation and development aligns with EN-TRACK's commitment to advancing its technology and services while minimizing the financial burden and creating a sustainable foundation for the platform.

16 Additional Scenarios

In D5.1 there were additional scenarios identified for potential commercialization value. These are summarized below as:

1. Data verification:
Collecting, verifying, and summarising data from third party certifications.
2. Educational organizations:
Special fees for universities, professional colleges of Architects or Engineers (Spanish case), etc.
3. Consultancy sales:
Selling services to large "middleman" consultancies such as WSP, CBRE, Siemens, Johnston Controls, JLL.
4. Municipal and governmental collaboration:
There is an additional scenario which may simplify the business modelling & value propositions, whereby a wide-reaching organisation, such as the EU's Covenant of Mayors for Climate & Energy, or the Green Finance Institute's [Coalition for the Energy Efficiency of Buildings](#) hosts the platform to offer the service for free to all municipalities across Europe or their jurisdiction.
5. Spin off:
Another potential offering, this time relying on private rather than public provision of the service, would be to create a spin-off company resulting from the project's final outputs.



6. Sale of platform:

Another possible scenario is once the project is completed, to sell the resulting product to a third-party company to exploit the service.

16.1 SWOT Analysis

SWOT analysis is a strategic planning tool individuals and organizations use to identify and evaluate their Strengths, Weaknesses, Opportunities, and Threats. The acronym "SWOT" stands for:

Strengths: Internal factors that give you an advantage over others. Like resources, capabilities, expertise, etc.

Weaknesses: Internal factors that place you at a disadvantage compared to others. Like limitations, deficiencies, etc.

Opportunities: External factors that EN-TRACK could leverage to its advantage. Opportunities from market trends, technological advancements, regulation changes, etc.

Threats: External factors that pose challenges or risks to EN-TRACK. Threats may come from competitors, changes in consumer behaviour, etc.

The SWOT analysis of the additional scenarios provides an understanding of the factors affecting EN-TRACK's current and future state and which additional scenarios are viable for consideration.

16.2 Data Verification

Strengths

Accuracy and Reliability: The service's primary strength is reliability of data by sourcing it for third-party certifications, which are often considered trustworthy.

Time Efficiency: Data verification for third-party allows for quicker decision-making based on credible information.

Credibility: Leveraging data from reputable enhances the credibility of the collected information, instilling trust among users and stakeholders.

Weaknesses

Dependence on Third Parties: The service relies on the availability and accuracy of data.

Costs: Costs associated with accessing and verifying the data. This could increase the overall cost of the service.

Limited Customization: The service might need to be improved in terms of customization, as it relies on data provided by external entities. Tailoring the verification process to specific needs may take time and effort.

Opportunities

Market Demand: There is a growing demand for reliable and verified data. EN-TRACK can capitalize on this trend by positioning itself as a solution ensuring information authenticity.



Partnerships: Collaborating with and forming partnerships with reputable third-parties can enhance the service's access to high-quality data.

Threats

Inaccurate Third-Party Data: If the third-party provides inaccurate or outdated information, it could compromise the reliability of the service.

Competitive Landscape: The market for data verification services is competitive. Other services may emerge with different approaches or technologies, posing a threat to the service's market share.

Regulatory Changes: Changes in data certification or privacy regulations may impact the service's operations and require adaptation to new compliance standards.

16.3 Educational Organizations

Strengths

Increased Access: Special fees can increase university and professional education access for a broader range of students and researchers.

Enhanced Database: Offering special fees may attract more students and researchers to upload more data, helping to add to the database.

Government Support: If there is governmental backing for such initiatives, it could strengthen the implementation and sustainability of the platform.

Weaknesses

Financial Sustainability: Special fees may reduce revenue from these user types.

Administrative Challenges: Implementing and managing a special fee structure requires administrative efforts and systems that may strain existing resources.

Opportunities

Industry Collaboration: Partnerships with architectural and engineering firms could lead to sponsorships or financial support, creating a link between academia and industry.

Threats

Competition with Other Platforms: If competing institutions introduce similar programs, it may lead to a race to the bottom in terms of fees, impacting the overall financial health of EN-TRACK.

16.4 Consultancy Sales

Strengths

Reputation: Large consultancies often have a strong reputation in their respective industries. Associating with such brands can enhance credibility and visibility in the market.



Opportunities: Working with middle-man consultancies means potential access to a high volume of projects, providing a steady stream of opportunities.

Reach: Many of these consultancies operate globally, opportunities to expand EN-TRACK internationally, and work on diverse projects in various regions.

Weaknesses

Competition: Selling consultancy services to large consultancies may involve competing with other service providers.

Negotiations: Dealing with large organizations may involve complex negotiations and longer sales cycles, potentially leading to delays in closing deals and increased costs.

Opportunities

Collaborative Innovation: Partnering with large consultancies opens doors to collaborative innovation, where EN-TRACK services can complement and enhance existing offerings.

Long-Term Contracts: Successful engagements may lead to long-term contracts or retainer agreements, providing a stable and predictable revenue stream.

Cross-Selling: Establishing solid relationships with middle-man consultancies may create opportunities for cross-selling additional services or expanding into other areas.

New Markets: Collaboration with global consultancies can provide entry into new markets or industries where they have a presence.

Threats

Technological Disruption: Technological advancements in the consultancy industry pose a threat if EN-TRACK fails to evolve continually, its services become outdated.

16.5 Municipal and governmental collaboration

Strengths

Extensive Network: Collaborating with a well-established organization like the EU's Covenant of Mayors or the Green Finance Institute provides access to an extensive network of municipalities and governmental bodies, enhancing the platform's potential reach.

Credibility: Being associated with reputable organizations adds credibility and trust to the platform, making it more appealing to municipalities and governments.

Free Service: Offering the service for free through a reputable organization can significantly lower entry barriers for municipalities, fostering widespread adoption and participation.

Weaknesses



Dependency: Relying on a third-party organization to host and offer the service for free may lead to dependency, and any changes in their strategies or priorities could impact the availability and sustainability of the platform.

Bureaucratic Processes: Collaborating with governmental bodies, especially at the European level, may involve complex bureaucratic processes, leading to delays and challenges in decision-making.

Passivity: The availability of a free service might lead to a lack of urgency or commitment from some municipalities, affecting active participation and engagement.

Opportunities

Standardization and Best Practices: A centralized platform could facilitate the standardization of processes and the sharing of best practices among municipalities, promoting efficiency and effectiveness in addressing everyday challenges.

Threats

Privacy and Security Concerns: There can be concerns about data privacy and security from municipalities.

Resistance from Local Governments: Some local governments may resist the idea of a centralized platform, expressing a desire for more autonomy and control over their initiatives.

Changing Landscape: Changes to political leadership or policy priorities at the European or national level could impact the support and continuity of the platform.

16.6 Spin Off

Strengths

Revenue Generation: The spin-off has the potential to generate revenue through the commercialization of the service, contributing to the project's financial sustainability.

Weaknesses

Market Uncertainty: The success of the spin-off depends on the market's acceptance of the service, and there may be uncertainty in predicting demand and competition.

Dependency on Initial Success: The initial success of the spin-off is critical, and failure to gain traction in the market could lead to financial losses and reputational damage.

Opportunities

Market Expansion: The spin-off has the potential to expand the market reach of the service beyond the project's original scope, tapping into new customer segments and industries.

Partnership Opportunities: Establishing a spin-off may open doors to partnership opportunities with other platforms or investors, facilitating growth and development.

Threats

Market Competition: The spin-off may face stiff competition from existing companies offering similar services, requiring effective differentiation, and marketing strategies.



Technology evolves: Technological advancements in the industry may outpace the spin-off's capabilities.

16.7 Sale of Platform

Strengths

Immediate Revenue Generation: Selling the platform to a third-party company provides an opportunity for immediate profit.

Market Access: A third-party company may have established market access, allowing the product to reach a wider audience and accelerate its adoption.

Weaknesses

Loss of Control: Selling the platform means relinquishing control over its future development and strategic direction.

Opportunities

Strategic Partnerships: The buyer could form partnerships or collaborations that enhance the platform's value proposition, potentially leading to further innovation and market growth.

Faster Scaling: The acquiring company may have the resources to scale the platform faster than the project team could have independently, capitalizing on existing infrastructure and market relationships.

Threats

Technological failure: Failing to keep up with evolving industry.

16.8 Summary

Considering the above analysis, aiming to align the chosen strategy with the overall goals and vision of EN-TRACK. A hybrid strategy should be considered, where one strategy's strengths complement another's weaknesses.

For example, initial collaboration with large consultancies, or governmental organizations could help develop the platform before considering options like selling. Data verification and special fees are meanwhile low-cost additional sales options which might help increase revenue's to EN-TRACK.

Based on the above, additional scenarios 1-4 are immediately incorporated in the business plan and 5-6 remain options for the future who will be further strengthened through the utility of scenarios 1-4.

Were EN-TRACK able to provide these services, the value proposition and service readiness level would substantially increase, and the financial forecast would be significantly more positive for the early years of commercialization.



17 Business plan

The business plan focuses around the numbers on costs and revenues identified in D5.1 alongside the business model to complement the plan for commercialization and identify any gaps in the financial sustainability of the platform and business model.

17.1 Business Plan Assumptions

17.1.1 Escalation of services

Table 7: The proposed “escalation” of provisioned services & required revenues to ensure de-risked commercialization of the platform whilst maintaining maximum value to the users and the European Community.

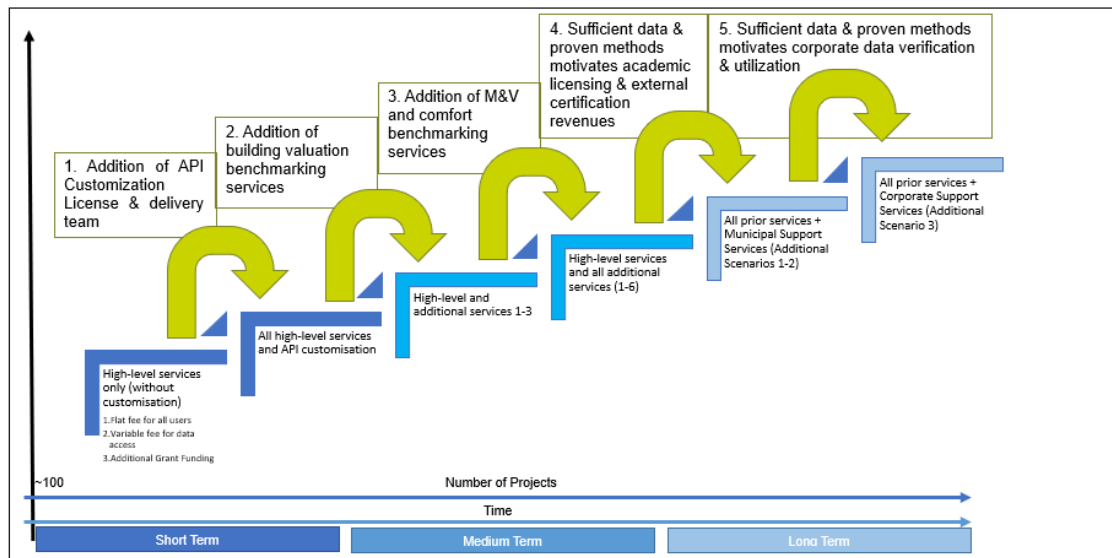


Figure 8: Escalation of Services

17.1.2 Costs

Table 6: Costs Summary

Underlying costs	Annual
Data Purchasing (i.e. Weather data)	450,00 €
Data collection & sufficiency checks	7.200,00 €
Software support including Management & Registration of Users	4.320,00 €
Sales channels	2.160,00 €
Billing and Accounting	2.160,00 €
Legal Support	7.500,00 €
Ongoing Development and Alignment (user interface) (could have user costs/revenues associated)	15.000,00 €
Total underlying	38.790,00 €
High level services costs	Annual



Data hosting	1.380,00 €
Data output/access	4.320,00 €
Analysis tools	4.824,00 €
API integration & customization (license to access, revenue for server-side adaptations /modifications)	4.680,00 €
Total high level services costs	15.204,00 €
Complete model costs	53.994,00 €

17.1.3 Pricing Strategy year 1-10

Table 7: Pricing Strategy Year 1-10

Service	Price Point Per Escalation Methodology				
	Y1-2	Y3-4	Y5-6	Y7-8	Y9-10
Flat fee (per/month)	€ 240	€ 360	€ 360	€ 360	€ 360
Vaiable fee for net data access (per/month)	€ 48	€ 48	€ 48	€ 48	€ 48
License for API access and customisation		€ 3.960	€ 3.960	€ 3.960	€ 3.960
Additional flat fee for benchmarking services 1-3			€ 180	€ 180	€ 180
Additional flat fee for benchmarking services 4-6				€ 180	€ 180
Additional flat fee for benchmarking services 1-6				€ 300	€ 300
Third-party certifications					€ 600
Special fees for universities, professional colleges Flat fee					€ 180
Special fees for universities, professional colleges API					€ 1.980
Middle-man consultancy services					€ 600

17.1.4 Growth assumptions

Table 8: 10 Year Growth Assumption

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
# of (new) Flat fee	10	15	20	25	30	35	40	45	35	40
# accum. of Flat fee	10	25	45	70	100	135	175	220	255	295
# of (new) Variable fee	2	4	6	8	10	12	14	16	18	20
# accum. of Variable fee	2	6	12	20	30	42	56	72	90	110
# of (new) API licenses	5	10	15	20	25	30	35	40	45	50
# accum. of API licenses	5	15	30	50	75	105	140	180	225	275
# of New 1-3	10	20	30	40	50	60	70	80	90	100
# accum. Of 1-3	10	30	60	100	150	210	280	360	450	550
# of new 4-6	10	20	30	40	50	60	70	80	90	100
# accum of 4-6	10	30	60	100	150	210	280	360	450	550
# of new 1-6	10	20	30	40	50	60	70	80	90	100
# of accum 4-6	10	30	60	100	150	210	280	360	450	550
Total volume of users	94	225	398	613	870	1169	1510	1893	2288	2740

17.1.5 Additional Service Y7-10

1. EN-TRACK could be an option for collecting, verifying, and summarising data from third party certifications, such as the Energy Awards in Bulgaria.

- a. This could be a condition as part of grant funding.



- b. A data validation fee could be leveraged, of 50 EUR/project/month for 5 or fewer projects, or 30 EUR/project/month for greater than 5 projects. If just 1% of projects are validated, and the platform reaches the size of DEEP, this could equate to a minimum of 3,720 EUR/month. This would displace more than half of the maximum grant funding required.
2. Special fees for universities, professional colleges of Architects or Engineers (Spanish case), etc.
 - a. This could be a condition as part of grant funding identified above for national institutions.
 - b. This would enable bulk licensing, increasing the “number” of licenses provided as well as a reduction of the administrative costs associated with providing and servicing these licenses. Some of these cost reductions would likely be passed to the academic institution in the form of discounted licensing.
 - c. Additional API customisation would likely result, boosting these revenues.
 - d. Production of specialised services and analysis tools would likely boost the revenues related to specialised analysis tools.
3. EN-TRACK could sell services to large “middleman” consultancies such as WSP, CBRE, Siemens, Johnston Controls, JLL. This would be a franchise model where the consultancies use EN-TRACK for both collecting, verifying, and analysing data. It would be highly dependent on the commercial utility of final services.
 - a. A data validation fee could be leveraged, of 50 EUR/project/month for 5 or fewer projects, or 30 EUR/project/month for greater than 5 projects. If just 1% of projects are validated, and the platform reaches the size of DEEP, this could equate to a minimum of 3,720 EUR/month. This would displace more than half of the maximum grant funding required.
 - b. Additional API customisation would likely result, boosting these revenues.
 - c. Production of specialised services and analysis tools would likely boost the revenues related to specialised analysis tools.



17.2 Financial forecast

Though it was initially planned on adding additional services in the long term, the numbers show EN-TRACK should aim to deliver these services early on to cover for the lack of flat fee, variable fee, and API user uptake. It would significantly lower the need for early grant funding.

	Price point Y1-2	Price point Y3-4	Price point Y5-6	Price point Y7-8	Price point Y9-10	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	
REVENUE	Flat fee (per/month)	€ 240,00	€ 360,00	€ 360,00	€ 360,00	€ 360,00	2.400,00 €	6.000,00 €	16.200,00 €	25.200,00 €	36.000,00 €	48.600,00 €	63.000,00 €	79.200,00 €	91.800,00 €	106.200,00 €
	Variable fee for net data access (per/month)	€ 48,00	€ 48,00	€ 48,00	€ 48,00	€ 48,00	96,00 €	288,00 €	576,00 €	960,00 €	1.440,00 €	2.016,00 €	2.688,00 €	3.456,00 €	4.320,00 €	5.280,00 €
	License for API access and customisation		€ 3.960,00	€ 3.960,00	€ 3.960,00	€ 3.960,00			118.800,00 €	198.000,00 €	297.000,00 €	415.800,00 €	554.400,00 €	712.800,00 €	891.000,00 €	1.089.000,00 €
	Additional flat fee for benchmarking services 1-3			€ 180,00	180,00 €	180,00 €				27.000,00 €	37.800,00 €					
	Additional flat fee for benchmarking services 4-6				180,00 €	180,00 €							50.400,00 €	64.800,00 €	81.000,00 €	99.000,00 €
	Additional flat fee for benchmarking services 1-6					300,00 €							84.000,00 €	108.000,00 €	135.000,00 €	165.000,00 €
	Third-party certifications					600,00 €									13.728,00 €	16.440,00 €
	Special fees for universities, professional colleges Flat fee					180,00 €									3.150,00 €	3.600,00 €
	Special fees for universities, professional colleges API					1.980,00 €									44.550,00 €	49.500,00 €
	Middle-man consultancy services					600,00 €										16.440,00 €
	TOTAL REVENUE						2.400,00 €	6.288,00 €	135.576,00 €	224.160,00 €	361.440,00 €	504.216,00 €	804.888,00 €	1.033.056,00 €	1.284.120,00 €	1.563.480,00 €
Underlying Costs	Data Purchasing (i.e. Weather data)					450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	
	Data collection & sufficiency checks					7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	
	Software support including Management & Registration of Users					4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	
	Sales channels					2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	
	Billing and Accounting					2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	
	Legal Support					7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	
Ongoing Development and Alignment (user interface) (could have user costs/revenues associated)					15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €		
TOTAL UNDERLYING COSTS						38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	
HS Costs	Date hosting					1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	
	Date output/access					4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	
	Analysis tools					4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	
	API integration & customisation (license to access, revenue for server-side adaptations /modifications)					4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	
TOTAL High Level Services Costs						15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	
NET	NET PROFIT					-51.594,00 €	-47.706,00 €	81.582,00 €	170.166,00 €	307.446,00 €	450.222,00 €	750.894,00 €	979.062,00 €	1.230.126,00 €	1.509.486,00 €	

Figure 9: 10 Year Financial Forecast



18 Current Status & Next Steps

This chapter will cover all the key next steps for the relevant business model canvas categories until the end of the EN-TRACK project.

18.1 Current Status

With the successful completion of the platform development, the current focus is centred on seamlessly integrating with eQuad and advancing promotional efforts targeted at financial institutions and building owners.

The development phase marks a significant milestone, and now attention turns to optimizing the user experience by finalizing integrations with eQuad. This collaboration enhances EN-TRACK's capabilities. EN-TRACK need to strategically promote the platform to financial institutions and building owners. This involves crafting compelling messaging, showcasing the platform's value, and engaging in targeted outreach to key stakeholders. The aim is to establish the platform as a valuable tool in sustainable development, fostering partnerships and driving widespread adoption within the targeted sectors.

18.2 Key activities Next Steps

The next crucial steps for EN-TRACK's key activities involves lead generation for city officials and policymakers. EN-TRACK aims to position itself as a valuable contributor to improving their building stock by establishing connections, simultaneously identifying potential partner platforms that align with EN-TRACK's mission and objectives.

Collaborative efforts with similar platforms and partners can amplify EN-TRACK's impact and expand its reach. To achieve this, EN-TRACK should conduct thorough research, and proactively engage in discussions to establish cooperative ventures.

Doing this, EN-TRACK can enhance its visibility and influence in policymaking circles and forge strategic alliances that amplify the positive impact of its key activities.

18.3 Key Resources Next Steps

First and foremost, the platform owner must prioritize the structure of human resources to align with the goals described in this document. Simultaneously, it is important to keep up the expansion of the database. Exploring new data sources, enhancing data collection methods, and leveraging technology to capture relevant information.

Addressing the revenue gap in the first two years involves identifying available grant funding opportunities. EN-TRACK can mitigate financial constraints by tapping into external funding sources, allowing the platform to sustain and expand its initiatives.

18.4 Key Partners Next Steps

For EN-TRACK's key partners, the upcoming steps are fostering collaborative relationships. Firstly, it is important to actively identify potential partner platforms that



share synergies with EN-TRACK's objectives. Establishing relationships with these entities will broaden EN-TRACK's network and create opportunities for mutually beneficial initiatives.

Simultaneously, it is essential for all current partners to engage in transparent discussions and collectively agree on a level of commitment to the longevity of the platform. This involves aligning expectations, defining shared goals, and establishing a solid foundation for enduring collaboration.

18.5 Sales Channels Next Steps

It is crucial to identify potential partner platforms. Collaborating with these platforms can extend EN-TRACK's market reach.

Simultaneously, recognizing the potential of European Union-funded projects is not to be forgotten. By identifying current and future EU-funded initiatives that align with EN-TRACK's offerings, EN-TRACK can position itself strategically within a supportive framework and tap into synergies that elevate its sales channels.

Lastly, as EN-TRACK is nearing its end, executing a final push to encourage mass sign-ups in the last months is essential. This targeted sales initiative aims to capitalize on the momentum, incentivize potential clients, and drive conversions, ensuring the platform gains maximum traction in the market.



19 Recommendations: Enhancing EN-TRACK Platform for Maximum Value

Throughout this task and the writing of this report, several key recommendations have emerged and re-emerged to fortify EN-TRACK's value proposition. One enhancement involves the introduction of a *dedicated recommendations section tailored for building owners*. Based on insights from similar buildings within the database, this section should guide building owners in implementing measures to improve their portfolio's efficiency. Furthermore, an extension to this feature could include a long-term planning tool, offering a 10-year process map to help building owners navigate and achieve their sustainability goals. This approach provides tailored and insightful guidance, creating a roadmap for sustainable building management.

Another recommendation is for EN-TRACK to *evolve into a marketplace or integrate with one*. EN-TRACK can position itself as a comprehensive solution by offering services that (1) showcase a building owner's performance, (2) recommend improvements, (3) introduce them to contractors, and (4) facilitate financing. Integrating a networking area between contractors and building owners would further enhance value, fostering valuable connections through client introductions and networking opportunities.

To broaden its utility, EN-TRACK should *prioritize further platform integrations*. This could range from establishing formal and intimate business relationships to simply selling API licenses, enhancing the platform's versatility and accessibility.

Recognizing the importance of user support and implementing *handholding services through guidance materials and ready-made formats* is crucial. Continuous support throughout the user journey, using capacity-building materials that users can independently leverage, ensures a seamless experience, and maximizes the platform's impact.

Though it was initially planned on adding additional services in the long term, the numbers in the business plan excel show EN-TRACK should *aim to deliver these services early* on to cover for the lack of flat fee, variable fee, and API user uptake. It would significantly lower the need for early grant funding. Efforts to provide these services should be escalated.

Market trends play a significant role in decision-making. EN-TRACK can offer an additional layer of value by *analyzing and displaying market trends using simple metrics derived from benchmarking data*.

Addressing concerns about data reliability, EN-TRACK must *prioritize transparency in data labels and their meanings*. This clarity will alleviate user distrust and ensure confidence in the accuracy and reliability of the information provided.

For policymakers, EN-TRACK can evolve into a powerful monitoring tool, facilitating the assessment of policy effectiveness over time. *By tracking the results of subsidies and grants efficiently*, EN-TRACK can optimize the allocation of resources for maximum impact, helping policymakers target interventions where they are most needed. This would help determine whether member states are achieving 2030 targets and help enhance resource utilization efficiency.

In addition to recommendations for building owners, contractors, and policymakers, *streamlining the onboarding process is equally crucial*. EN-TRACK should define a straightforward onboarding process and provide accompanying materials to make it easy for users to sign up and pay for its services. Joule has already created such materials to show the value of the EN-TRACK and eQuad integration and the practicalities of signing up and using both platforms.



These collective recommendations create a more comprehensive, user-friendly, and impactful EN-TRACK platform in the evolving landscape of sustainability and building management.



20 Annex 1: Financial Forecast Working Model.


Underlying costs	Annual
Data Purchasing (i.e. Weather data)	450,00 €
Data collection & sufficiency checks	7.200,00 €
Software support including Management & Registration of Users	4.320,00 €
Sales channels	2.160,00 €
Billing and Accounting	2.160,00 €
Legal Support	7.500,00 €
Ongoing Development and Alignment (user interface) (could have user costs/revenues)	15.000,00 €
Total underlying	38.790,00 €
High level services costs	Annual
Data hosting	1.380,00 €
Data output/access	4.320,00 €
Analysis tools	4.824,00 €
API integration & customisation (license to access, revenue for server-side adaptations)	4.680,00 €
Total high level services costs	15.204,00 €
Complete model costs	53.994,00 €

The screenshot shows an Excel spreadsheet with the following tabs: Costs, Revenues, Start point, Established, Final Pricing, Growth Assumptions, 1, 4, 10Y, 10 year progress methodology, Sheet1. The 'Costs' tab is active, displaying the table above. The spreadsheet interface includes a formula bar at the top showing 'H7' and a grid of columns (A-P) and rows (1-10).



Scenario Title	Description of service and value	Revenues & Approximate Value	Related Costs
Non-customised high-level services only	This scenario will contain all the services needed for a data platform, including Data Hosting, Access & Analysis, without further customisation or API access. This outsourced data management service provides value by centralising and reducing transaction costs resulting from the purchasing, collection and checking of data; support, sales and billing services; & ongoing legal support and development.	8,170 EUR/month See Table 4 below	All Underlying Costs + High-level Service Costs 1-3
All high-level services	This scenario will contain all the services above with the addition of API access and customisation. This will enable mass data import and export for large scale clients and users. This will provide value by	8,170 EUR/month See Table 4 below	All Underlying Costs + All High-level Service Costs
High-level services + non-M&V/NEB benchmarking services (1-3)	This scenario will contain all the services described above, with the addition of additional services 1-3, which relate to the impact of energy improvements on building valuation. The ability to measure the capital gains resulting from energy improvements provides huge value by enabling and verifying novel business cases across the building performance landscape.	8,170 – 8,445 EUR/month See Table 4 below	All Underlying Costs + All High-level Service Costs + Additional Service Costs (Integration of Valuation and Rental Rate data collection & output testing)
High-level services + all benchmarking services (1-6)	This scenario will contain all the services described above, and also the additional services 4-6, which relate to the impact of energy improvements and varied M&V approaches on employee comfort and energy performance outcomes respectively. Understanding employee comfort brings value through the associated productivity increases, whilst the impact of M&V on savings outcomes can assure	8,170 – 8,445 EUR/month See Table 4 below	All Underlying Costs + All High-level Service Costs + Additional Service Costs (Integration of Valuation and Rental Rate data collection; Comfortmeter API / Integration; Collection of M&V data and related guidance; output testing)

< >
Costs
Revenues
Start point
Established
Final Pricing
Growth Assumptions
1
4
10Y
10 year progress methodology
Sheet1
+

ady  Accessibility: Investigate



	A	B	C	D	E	F	G	H	I	J	K
1				Service scenario							
2	*Per user		1	2	3	4					
3	Flat fee (per/month)		6,00 €	6,00 €	6,00 €	6,00 €					
4	Vaible fee for net data access (per/month)		4,00 €	4,00 €	4,00 €	4,00 €					
5	License for API access and customisation			330,00 €	330,00 €	330,00 €					
6	Additional flat fee for benchmarking services 1-3				15,00 €	15,00 €					
7	Additional flat fee for benchmarking services 4-6					15,00 €					
8	Additional flat fee for benchmarking services 1-6					25,00 €					
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11	Grant funding										
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	A	B	C	D	E	F	G	H	I	J	K
1			Service scenario								
2	*Per user		1	2	3	4					
3	Flat fee (per/month)		20,00 €	30,00 €	30,00 €	30,00 €					
4	Vaible fee for net data access (per/month)		4,00 €	4,00 €	4,00 €	4,00 €					
5	License for API access and customisation			330,00 €	330,00 €	330,00 €					
6	Additional flat fee for benchmarking services 1-3				15,00 €	15,00 €					
7	Additional flat fee for benchmarking services 4-6					15,00 €					
8	Additional flat fee for benchmarking services 1-6					25,00 €					
9											
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11	Grant funding										
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A	B	C	D	E	F	G
		This is based on chapter 9 of D5,1				
				Use in year:		
		Non-customised high-level services only				
	Flat fee		20 User/month	year 1-2		
	Variable fee		4 €/search			
		All high-level services				
	Flat fee		30 User/month	Year 3-4		
	Variable fee		4 €/search			
	API License		330 User/month			
		High-level services + non-M&V/NEB benchmarking services (1-3)				
	Flat fee		30 User/month	Year 5-6		
	Additional flat fee 1-3		15 User/month			
	Variable fee		4 €/search			
	API License		330 User/month			
		High-level services + all benchmarking services (1-6)				
	Flat fee		30 User/month	Year 7-8		
	Additional flat fee 1-3		15 User/month			
	Additional flat fee 4-6		15 User/month			
	Bundle 1-6		25 User/month			
	Variable fee		4 €/search			
	API License		330 User/month			
		All prior services + Municipal Support Services (Additional Scenarios 1-2)		Year 9		
		All prior services + Corporate Support Services (Additional Scenario 3)		Year 10		



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	BP - ASSUMPTIONS															
2				Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10			
3	Growth Projections	# of (new) Flat fee		10	15	20	25	30	35	40	45	35	40			
4		# accum. of Flat fee		10	25	45	70	100	135	175	220	255	295			
5		# of (new) Variable fee		2	4	6	8	10	12	14	16	18	20			
6		# accum. of Variable fee		2	6	12	20	30	42	56	72	90	110			
7		# of (new) API licenses		5	10	15	20	25	30	35	40	45	50			
8		# accum. of API licenses		5	15	30	50	75	105	140	180	225	275			
9		# of New 1-3		10	20	30	40	50	60	70	80	90	100			
10		# accum. Of 1-3		10	30	60	100	150	210	280	360	450	550			
11		# of new 4-6		10	20	30	40	50	60	70	80	90	100			
12		# accum of 4-6		10	30	60	100	150	210	280	360	450	550			
13		# of new 1-6		10	20	30	40	50	60	70	80	90	100			
14		# of accum 4-6		10	30	60	100	150	210	280	360	450	550			
15		Total volume of users		94	225	398	613	870	1169	1510	1893	2288	2740			
16																
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22		Flat fee (per/month)														
23		Vaiable fee for net data access (per/month)														
24		License for API access and customisation														
25		Additional flat fee for benchmarking services 1-3														
26		Additional flat fee for benchmarking services 4-6														
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
				Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	
REVENUE	Flat fee (per/month)		72,00 €		720,00 €	1.800,00 €	3.240,00 €	5.040,00 €	7.200,00 €	9.720,00 €	12.600,00 €	15.840,00 €	18.360,00 €	21.240,00 €	
	Variable fee for net data access (per/month)		48,00 €		96,00 €	288,00 €	576,00 €	960,00 €	1.440,00 €	2.016,00 €	2.688,00 €	3.456,00 €	4.320,00 €	5.280,00 €	
	License for API access and customisation														
	Additional flat fee for benchmarking services 1-3														
	Additional flat fee for benchmarking services 4-6														
	Additional flat fee for benchmarking services 1-6														
TOTAL REVENUE					720,00 €	2.088,00 €	3.816,00 €	6.000,00 €	8.640,00 €	11.736,00 €	15.288,00 €	19.296,00 €	22.680,00 €	26.520,00 €	
Underlying Costs	Data Purchasing (i.e. Weather data)				450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	
	Data collection & sufficiency checks				7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	
	Software support including Management & Registration of Users				4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	
	Sales channels				2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	
	Billing and Accounting				2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	
	Legal Support				7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	
	Ongoing Development and Alignment (user interface) (could have user costs/revenues associated)				15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	
TOTAL UNDERLYING COSTS				38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	
HLS Costs	Data hosting				1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	
	Data output/access				4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	
	Analysis tools				4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	
	API integration & customisation (license to access, revenue for server-side adaptations)				4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	
TOTAL High Level Services Costs				15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	
NET	NET PROFIT				-53.274,00 €	-51.906,00 €	-50.178,00 €	-47.994,00 €	-45.354,00 €	-42.258,00 €	-38.706,00 €	-34.698,00 €	-31.314,00 €	-27.474,00 €	

			Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
REVENUE	Flat fee (per/month)	72,00 €	720,00 €	1.800,00 €	3.240,00 €	5.040,00 €	7.200,00 €	9.720,00 €	12.600,00 €	15.840,00 €	18.360,00 €	21.240,00 €	
	Variable fee for net data access (per/month)	48,00 €	96,00 €	288,00 €	576,00 €	960,00 €	1.440,00 €	2.016,00 €	2.688,00 €	3.456,00 €	4.320,00 €	5.280,00 €	
	License for API access and customisation	3.960,00 €	19.800,00 €	59.400,00 €	118.800,00 €	198.000,00 €	297.000,00 €	415.800,00 €	554.400,00 €	712.800,00 €	891.000,00 €	1.089.000,00 €	
	Additional flat fee for benchmarking services	180,00 €	1.800,00 €	5.400,00 €	10.800,00 €	18.000,00 €	27.000,00 €	37.800,00 €	50.400,00 €	64.800,00 €	81.000,00 €	99.000,00 €	
	Additional flat fee for benchmarking services	180,00 €	1.800,00 €	5.400,00 €	10.800,00 €	18.000,00 €	27.000,00 €	37.800,00 €	50.400,00 €	64.800,00 €	81.000,00 €	99.000,00 €	
	Additional flat fee for benchmarking services	300,00 €	3.000,00 €	9.000,00 €	18.000,00 €	30.000,00 €	45.000,00 €	63.000,00 €	84.000,00 €	108.000,00 €	135.000,00 €	165.000,00 €	
	TOTAL REVENUE			22.320,00 €	81.288,00 €	162.216,00 €	270.000,00 €	404.640,00 €	566.136,00 €	754.488,00 €	969.696,00 €	1.210.680,00 €	1.478.520,00 €
Underlying Costs	Data Purchasing (i.e. Weather data)		450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €
	Data collection & sufficiency checks		7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €
	Software support including Management & Registration of Users		4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €
	Sales channels		2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €
	Billing and Accounting		2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €
	Legal Support		7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €
	Ongoing Development and Alignment (user interface) (could have user costs/revenues associated)		15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €
TOTAL UNDERLYING COSTS			38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €
HIS Costs	Data hosting		1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €
	Data output/access		4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €
	Analysis tools		4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €
	API integration & customisation (license to access, revenue for server-side adaptations)		4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €
	TOTAL High Level Services Costs			15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €
NET	NET PROFIT		-31.674,00 €	27.294,00 €	108.222,00 €	216.006,00 €	350.646,00 €	512.142,00 €	700.494,00 €	915.702,00 €	1.156.686,00 €	1.424.526,00 €	



		C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
		Price point Y1-2	Price point Y3-4	Price point Y5-6	Price point Y7-8	Price point Y9-10	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10		
REVENUE	Flat fee (per/month)	€ 240,00	€ 360,00	€ 360,00	360,00 €	360,00 €	2.400,00 €	6.000,00 €	16.200,00 €	25.200,00 €	36.000,00 €	48.600,00 €	63.000,00 €	79.200,00 €	91.800,00 €	106.200,00 €		
	Variable fee for net data access (per/month)	€ 48,00	€ 48,00	€ 48,00	48,00 €	48,00 €	96,00 €	288,00 €	576,00 €	960,00 €	1.440,00 €	2.016,00 €	2.688,00 €	3.456,00 €	4.320,00 €	5.280,00 €		
	License for API access and customisation		€ 3.960,00	€ 3.960,00	3.960,00 €	3.960,00 €			118.800,00 €	198.000,00 €	297.000,00 €	415.800,00 €	554.400,00 €	712.800,00 €	891.000,00 €	1.089.000,00 €		
	Additional flat fee for benchmarking services 1-3			€ 180,00	180,00 €	180,00 €					27.000,00 €	37.800,00 €	50.400,00 €	64.800,00 €	81.000,00 €	99.000,00 €		
	Additional flat fee for benchmarking services 4-6				180,00 €	180,00 €							50.400,00 €	64.800,00 €	81.000,00 €	99.000,00 €		
	Additional flat fee for benchmarking services 1-6				180,00 €	180,00 €							50.400,00 €	64.800,00 €	81.000,00 €	99.000,00 €		
	Third-party certifications					300,00 €							84.000,00 €	108.000,00 €	135.000,00 €	165.000,00 €		
	Special fees for universities, professional colleges Flat fee															13.728,00 €	16.440,00 €	
	Special fees for universities, professional colleges API						1.980,00 €									3.150,00 €	3.600,00 €	
	Middle-man consultancy services						600,00 €									44.550,00 €	49.500,00 €	16.440,00 €
TOTAL REVENUE							2.400,00 €	6.288,00 €	135.576,00 €	224.160,00 €	361.440,00 €	504.216,00 €	804.888,00 €	1.033.056,00 €	1.284.120,00 €	1.563.480,00 €		
Underlying Costs	Data Purchasing (i.e. Weather data)						450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €	450,00 €		
	Data collection & sufficiency checks						7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €	7.200,00 €		
	Software support including Management & Registration of Sales channels						4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €		
	Billing and Accounting						2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €	2.160,00 €		
	Legal Support						7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €	7.500,00 €		
	Ongoing Development and Alignment (user interface) (could have user costs/revenues associated)						15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €	15.000,00 €		
	TOTAL UNDERLYING COSTS						38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	38.790,00 €	
HLS Costs	Data hosting						1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €	1.380,00 €		
	Data output/access						4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €	4.320,00 €		
	Analysis tools						4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €	4.824,00 €		
	API integration & customisation (license to access, revenue for server-side adaptations /modifications)						4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €	4.680,00 €		
TOTAL High Level Services Costs						15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €	15.204,00 €		
NET	NET PROFIT						-51.594,00 €	-47.706,00 €	81.582,00 €	170.166,00 €	307.446,00 €	450.222,00 €	750.894,00 €	979.062,00 €	1.230.126,00 €	1.509.486,00 €		



