LEAP-SE

Long-Term Joint EU-AU Research and Innovation Partnership on Sustainable Energy

December 2025

D4.1: M&E Framework

Version N°1.0

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Abbreviations and Acronyms

Acronym	Description
CCSE	Climate Change and Sustainable Energy
MEL	Monitoring, Evaluation, and Learning
MAR	Multi-annual roadmaps

Summary

This executive summary presents the MEL Plan for the LEAP-SE project, intended for external stakeholders such as funding agencies, government bodies, and international partners. **LEAP-SE** (Long-Term EU-AU Partnership on Sustainable Energy) builds on the **LEAP-RE** pilot (2020–2025), carrying forward and enhancing its MEL framework cordis.europa.eu. The overarching objective of the LEAP-SE MEL Plan is to systematically track project performance while fostering continuous learning and improvement. It generates actionable insights for **accountability and learning**, provides information on progress toward objectives (and whether those objectives remain relevant), evaluates the effectiveness of implementation, and gauges broader impacts across stakeholder levels. By doing so, the MEL Plan lays a foundation for effective project management and adaptive action, ensuring joint activities can be fine-tuned as needed. Importantly, a dedicated MEL system also aligns the project with AU-EU strategic priorities (e.g. the CCSE roadmap), enabling LEAP-SE to respond to European Commission requirements and broader policy goals.

Continuity and Evolution: The LEAP-SE MEL framework draws directly from LEAP-RE's experience, retaining proven practices and integrating lessons learned. It evolves the **indicators and processes** established in LEAP-RE to suit the expanded scope of sustainable energy collaboration. All the activities of LEAP-SE share common MEL dimensions and goals, while accommodating their distinct features and pre-established KPIs.

Key Components of the MEL Plan:

- **KPI Monitoring:** A coherent set of **Key Performance Indicators** is used to monitor inputs, outputs, and outcomes across the project's activities and funding calls. These indicators are developed with rigorous criteria (e.g. relevance, credibility) and cover all pillars and work packages. Regular monitoring ensures that progress is quantifiable and transparent.
- **Stakeholder Engagement:** The MEL Plan employs a participatory approach, involving stakeholders at multiple levels in the evaluation process. Data collection and review involve funding agencies, project partners, and end-users, including through surveys and **stakeholder workshops**. This inclusive engagement builds trust and ensures that diverse perspectives inform the evaluation.
- **Institutional Learning & Capacity-Building:** Beyond tracking metrics, the MEL framework emphasizes **learning**. It facilitates collective learning among African and European partner institutions by identifying best practices and lessons learned from project implementation. These insights are fed back into project management, strengthening partners' capacities and improving coordination. Over time, this process enhances the consortium's ability to manage and evaluate R&I projects, thereby building long-term capacity in the AU-EU partnership.
- **Adaptive Feedback Loops:** The MEL Plan is treated as a "**living document**" that is regularly revisited and updated. Evaluation findings trigger adaptive feedback loops – for example, periodic self-evaluation exercises enable stakeholders to

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reflect on achievements and challenges and recommend adjustments. This iterative feedback mechanism ensures continuous improvement and responsiveness to both internal developments and external context changes. Lessons learned through monitoring and evaluation are used to inform decision-making within the project and beyond, extending impact beyond the project's lifetime.

- **Strategic Use of MEL Findings:** Insights from the MEL process are strategically leveraged to enhance project performance and alignment with policy objectives. By analyzing MEL results, the LEAP-SE consortium can refine implementation strategies in real time, address any emerging issues, and optimize the impact of funded research projects. Crucially, MEL findings also support **policy alignment** across the Africa-EU partnership: the evidence gathered on outcomes and impacts feeds into high-level dialogues and helps ensure that LEAP-SE's activities contribute to the jointly agreed AU-EU priorities in climate and sustainable energy. In summary, the MEL Plan is not just a monitoring tool but a dynamic management instrument that underpins accountability, learning, and strategic decision-making for the LEAP-SE project and the broader AU-EU sustainable energy collaboration.

Keywords

Core Project & Programme Keywords

- LEAP-SE
- LEAP-RE
- EU-AU Partnership
- Horizon Europe
- Sustainable Energy
- Green Energy Transition
- Joint Call
- Climate Change and Sustainable Energy (CCSE)
- Research and Innovation (R&I)
- Transnational Cooperation

Monitoring and Evaluation Keywords

- Monitoring, Evaluation, and Learning (MEL)
- MEL Framework
- Key Performance Indicators (KPIs)
- Baseline and Target
- Indicator Framework
- Outcome Mapping
- Theory of Change
- Impact Pathways
- Formative Evaluation
- Summative Evaluation
- Self-assessment
- External Evaluation
- Mid-term Review
- Final Evaluation
- Evaluation Criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability)
- Data Collection Tools
- Risk Mitigation
- Adaptive Management
- Continuous Improvement

Learning and Capacity-Building Keywords

- Institutional Learning
- Capacity Building
- Stakeholder Engagement
- Participatory Evaluation
- Reflective Practice
- Feedback Loops
- Knowledge Sharing
- Lessons Learned
- Best Practices
- Strategic Learning

Governance and Implementation Keywords

- Consortium Coordination
- Work Packages (WPs)
- MEL Work Package
- Steering Committee
- Governance Board
- National Funding Agencies
- Project Management
- Roles and Responsibilities
- Reporting Templates
- Data Quality Assurance
- Dashboard Monitoring
- Risk Register
- Co-funding Model

Thematic Focus Keywords (Project Topics)

- Renewable Energy
- Smart Grids
- Off-grid Systems
- Green Hydrogen
- Productive Uses of Energy
- Clean Cooking
- Cold Chains
- Energy Access
- Circular Economy
- End-of-Life Solutions
- Energy Efficiency
- Environmental Sustainability

Impact & Outreach Keywords

- SDG7 (Affordable and Clean Energy)
- SDG13 (Climate Action)
- Policy Uptake
- Community Impact
- Inclusivity
- Gender Equality
- Youth Empowerment
- Dissemination Strategy
- Strategic Communication
- Public Reporting
- AU-EU Policy Alignment

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1. Context and Introduction

The **Long-Term Joint EU-AU Research and Innovation Partnership on Sustainable Energy (LEAP-SE)** is a six-year program co-funded by the European Commission (Horizon Europe) to advance Africa-Europe cooperation in sustainable energy research and innovation. The LEAP-SE consortium of 22 partners builds on the achievements of the prior LEAP-RE program. LEAP-SE aims to develop a long-lasting partnership framework under the AU-EU Climate Change and Sustainable Energy (CCSE) initiative, focusing on mutual benefits for EU and African societies through joint R&I actions. It addresses seven thematic priority areas identified in multi-annual roadmaps, including renewable energy resource assessment, end-of-life management of RE components, smart standalone systems, off-grid smart grids, productive use of energy (e.g. in agriculture, mobility, industry), clean cooking and cold-chain solutions, and green hydrogen production/utilization.

In this context, a **Monitoring, Evaluation and Learning (MEL) Plan** is critical to ensure that LEAP-SE's activities remain on track and achieve their intended outcomes. The MEL Plan provides a structured approach to measure progress, evaluate effectiveness, and facilitate continuous learning and improvement throughout the program's lifecycle. This introduction outlines the approach, scope, and rationale for the MEL Plan.

1.1 Approach and Terminology

For clarity, the key terms in MEL are defined as follows:

- **Monitoring** – A continuing function that provides project management and stakeholders with early indications of progress (or lack thereof) in an ongoing intervention. Monitoring involves regular collection of information to support timely decision-making, ensure accountability, and provide a basis for evaluation and learning.
- **Evaluation** – A systematic and objective assessment of an ongoing or completed project, program, or policy, including its design, implementation, and results. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact, and sustainability.
- **Learning** – The process of reflecting on findings from monitoring and evaluation to influence decision-making within and beyond the project. Learning in LEAP-SE aims to create feedback loops that encourage adoption of best practices and interventions, thereby continuously enhancing the partnership's efficacy and efficiency.

These concepts form the foundation of the MEL approach. The MEL Plan is developed using a logical framework analysis of the LEAP-SE initiative, a methodology that supports designing a coherent monitoring and evaluation framework. By clearly defining indicators and processes, the MEL Plan sets a common language and expectations for tracking performance and outcomes across the consortium.

2. Scope of the LEAP-SE MEL Plan

The overall objective of this MEL Plan is to **formulate a comprehensive framework of monitoring, evaluation, and learning, including performance indicators, for the LEAP-SE partnership**. This framework covers all major components of LEAP-SE – from the co-funded research projects to the higher-level partnership activities – and aligns them with LEAP-SE's strategic objectives and expected impacts. In essence, the MEL Plan will

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allow LEAP-SE to *"monitor the merits of the new way of coordinating research and innovation activities thus facilitating the learning curve for increased overall performance."* Regular MEL activities are **highly relevant to the LEAP-SE process**. Continuous MEL will: (1) generate new knowledge on how LEAP-SE is functioning, for accountability, learning, and promotion purposes; (2) provide information on the progress toward objectives and whether those objectives remain relevant; (3) assess the effectiveness of implementation (e.g. the design of instruments and management processes); and (4) capture the broader impacts of LEAP-SE at various stakeholder levels. In doing so, the MEL Plan lays the groundwork for effective management of LEAP-SE and enables timely adjustments or fine-tuning of actions as needed.

Importantly, the MEL system also ensures that LEAP-SE remains aligned with external policy objectives. LEAP-SE is embedded in the jointly funded AU-EU CCSE partnership roadmap adopted by the High-Level Policy Dialogue, and is part of global efforts toward Sustainable Development Goal 7 (affordable and clean energy). The MEL Plan enables LEAP-SE to **align with the CCSE roadmap's specific objectives** and respond to requests from the European Commission (EC) while also proactively setting positions on necessary measures. In summary, this MEL Plan supports both **internal project management needs and external accountability**, ensuring LEAP-SE contributes meaningfully to its broader partnership goals.

Scope of Coverage: This MEL Plan spans all three major dimensions of LEAP-SE's implementation:

- The **co-funded R&I projects** funded through joint calls (including their inputs, activities, outputs, and direct outcomes);
- The **broader partnership and program-level activities** (coordination, networking, capacity building, policy dialogue) that LEAP-SE undertakes to strengthen EU-Africa cooperation;
- The **long-term partnership objectives and impacts** (e.g. sustained collaboration, policy influence, societal benefits) that LEAP-SE strives to achieve beyond the individual projects.

By covering these areas, the MEL framework ensures that monitoring and evaluation happen at multiple levels (project, program, partnership) on a regular basis, feeding into continuous learning loops. The Plan is designed as a living document, adaptable to the evolving needs and findings as LEAP-SE progresses. It will be further refined and updated as more data and lessons emerge during implementation (see Section 5).

3. LEAP-SE MEL Approach

LEAP-SE adopts a MEL approach modeled on the successful strategy of the LEAP-RE project, tailored to LEAP-SE's specific context. This approach was developed in a **participatory** manner involving relevant partners (notably WP4 leaders and funding agencies) and builds on existing knowledge from LEAP-RE's MEL framework. The MEL approach is *flexible and adaptive*, designed to adjust to actual needs and emerging findings over the program's life. In practical terms, this means the MEL system will be periodically reviewed and improved to sharpen its operationalization, ensuring efficient use of resources while maximizing learning.

Key principles of the MEL approach include:

- **Alignment with Objectives:** The MEL framework is directly derived from LEAP-SE's objectives, outcomes, and expected impacts (detailed in Section 3.2). A logic model is used to map how activities lead to outputs, outcomes, and long-term impacts, providing a clear "line of sight" from what LEAP-SE does to what it aims to achieve.

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- **Regular Monitoring and Feedback:** LEAP-SE will perform monitoring and evaluation on a continuous and periodic basis, respectively, to ensure that lessons are learned and applied in real time. *"LEAP-RE intends to perform monitoring and evaluation on a regular basis out of which learning lessons are drawn to further assure that outcomes and impacts effectively contribute to decision making"* – LEAP-SE embraces the same intent. Data collection and analysis will occur at defined intervals (see Section 4.2) so that performance information is up-to-date and actionable.
- **Iterative Learning Cycles:** The MEL approach incorporates iterative **feedback loops**. Findings from monitoring will be analyzed and shared with decision-makers at strategic points (for example, at annual reviews, mid-term of the program, and prior to planning the second joint call). This enables the consortium to adjust strategies and implementation based on evidence. In LEAP-RE, the plan was to conduct sub-actions for sharing and adjusting the monitoring approach and to perform self-evaluations that *"provide the basis for feedback and lesson learning, informing decision making… at strategically important points in the timeline"*. LEAP-SE will similarly ensure that MEL results feed into management decisions, such as refining call procedures, re-aligning resources, or enhancing stakeholder engagement approaches.
- **Phased Development:** The MEL Plan will be **operationalized in phases**. An initial phase focuses on setting up the monitoring framework and gathering baseline data (especially for output and outcome indicators) in the first year of implementation. A subsequent phase will introduce evaluative assessments on specific impact dimensions (e.g. a focused evaluation on capacity-building impact or policy impact) at the mid-term. The results of these activities will be presented to the project management board and also used in **"Learning Workshops"** with stakeholders. The insights gained will then be incorporated to **refine the MEL concept and tools**, leading to a more finalized MEL system for the remaining duration of LEAP-SE. In short, the MEL framework is not static – it will be tested, adapted, and improved step by step, so that by the end of the project it is robust and fully tailored to LEAP-SE's context.
- **Use of Previous Experience:** LEAP-SE explicitly leverages the experience of LEAP-RE's MEL Plan. According to the LEAP-SE work plan, *"Based on the previous experience of the LEAP-RE Monitoring, Evaluation and Learning Plan (MEL Plan), the Monitoring and Evaluation framework and indicators for monitoring activities in the COFUND will be developed."*. This means many of the concepts, indicator definitions, and processes that proved effective in LEAP-RE are being adapted for LEAP-SE. The MEL team will ensure that the framework respects the program's embeddedness in the broader CCSE partnership and relevant policy spheres (national, AU, EU, global).

In summary, the MEL approach for LEAP-SE is **systematic, adaptive, and learning-oriented**. It treats MEL not as a tick-box reporting exercise, but as a dynamic process that adds value to the partnership. By doing so, it aims to **"increase the efficiency, enhance performance, deepen impact, and achieve the strategic goals"** of LEAP-SE over the long run.

3.1 Approach and steps to develop the MEL Plan

The development of the MEL Plan followed a structured process:

- **Step 1: Review of Existing Frameworks and Objectives.** The MEL team analyzed sources such as the CCSE Roadmap, LEAP-RE's MEL framework, and LEAP-SE's proposal objectives to ground the MEL Plan in relevant contexts. The CCSE

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high-level vision (e.g. jointly addressing climate change and sustainable energy, contributing to SDG7) was taken into account from the start. This ensured that the MEL Plan would assess LEAP-SE's contributions not only to its own objectives but also to broader policy goals.

- **Step 2: Definition of the Logical Framework.** Using a logical framework approach, the MEL concept was structured by mapping **inputs** → **activities** → **outputs** → **outcomes** → **impacts** for the LEAP-SE initiative. This provided a *"formal way of thinking about the initiative and a tool for building a coherent set of indicators across… dimensions"*. The logical framework analysis helped identify the cause-effect linkages and the assumptions at each level, which is crucial for choosing meaningful indicators.
- **Step 3: Participatory Indicator Development.** The MEL team engaged with work package leaders and key stakeholders to identify a preliminary set of performance indicators. In LEAP-RE, for example, meetings with pillar leaders were held to decide on indicators. For LEAP-SE, WP4 (which leads MEL) consulted WP leaders from WP2/3 (calls), WP5 (clustering & networking), WP6 (capacity building) etc., to ensure indicators cover all major aspects of the program. The criteria of **RACER** (Relevant, Accepted, Credible, Easy, Robust) were applied to select a core set of indicators – i.e., each indicator needed to clearly link to objectives, be agreed upon by partners, be unambiguous to interpret, and be feasible to collect data for. This collaborative selection process generated buy-in and a common understanding of how success will be measured.
- **Step 4: Framework Transfer and Setup.** Once defined, the MEL framework (indicators, methods, responsibilities) was communicated and transferred to those responsible for implementation. In LEAP-RE's case, the MEL plan/framework was handed off to Pillar managers and co-coordinators for execution. Similarly in LEAP-SE, WP4 will coordinate with the Call Steering Committee, project Monitoring Team, and other bodies (see Section 4.4) to integrate MEL procedures into the project's operations. This includes setting up tools like the online monitoring platform (see Section 4.3) and training partners on reporting requirements.
- **Step 5: Operationalization and Iteration.** The MEL process will run alongside project implementation, with continuous monitoring and periodic evaluations. As noted, an **Action Plan** for MEL is phased: initial monitoring data collection, followed by a self-evaluation cycle, then refinement. Feedback will be gathered at each stage. Specifically, LEAP-SE plans to **share monitoring results and adjust the MEL approach** in collaboration with all pillar/WP leaders as needed, with a focus on evaluation of progress toward intended results. Subsequent actions will use these insights for *"feedback and lesson learning, informing decision making"* at key milestones (for instance, prior to launching the second call or planning post-project sustainability).

This stepwise approach ensures that the MEL Plan is **grounded, consensus-based, and practical**, and that it remains effective as the project advances. The following sections detail the MEL framework (objectives and indicators) and how it will be implemented.

3.2 MEL Framework and Logical Structure

The MEL framework for LEAP-SE will be built around the program's objectives and intended results, using a generic logic model, illustrating the logic frame elements – from inputs (resources, funding, partnerships) to activities (calls, projects, networking events, etc.), to outputs (tangible deliverables and immediate results), to outcomes (short-to-medium term effects on stakeholders, capacities, etc.), and ultimately to impacts (long-term

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changes aligned with LEAP-SE's vision and societal goals). This logic frame is the backbone of the MEL Plan.

Crucially, LEAP-SE's objectives are not isolated; they tie into a broader policy context. As an AU-EU partnership program, LEAP-SE's objectives contribute to the CCSE roadmap and other high-level targets such as SDG7 (universal energy access and sustainable energy). A conceptual framework (analogous to LEAP-RE's MEL framework in Figure 1) defines **eight dimensions of impact** that cluster LEAP-SE's aims and objectives. These dimensions span areas like program management efficiency, scientific and technological innovation, capacity building, socio-economic impact, environmental sustainability, policy influence, partnership strengthening, and visibility. All LEAP-SE objectives and activities can be mapped to one or more of these dimensions. By grouping indicators into these common dimensions, the MEL Plan ensures that data can be aggregated and analyzed coherently to give an overall picture of progress.

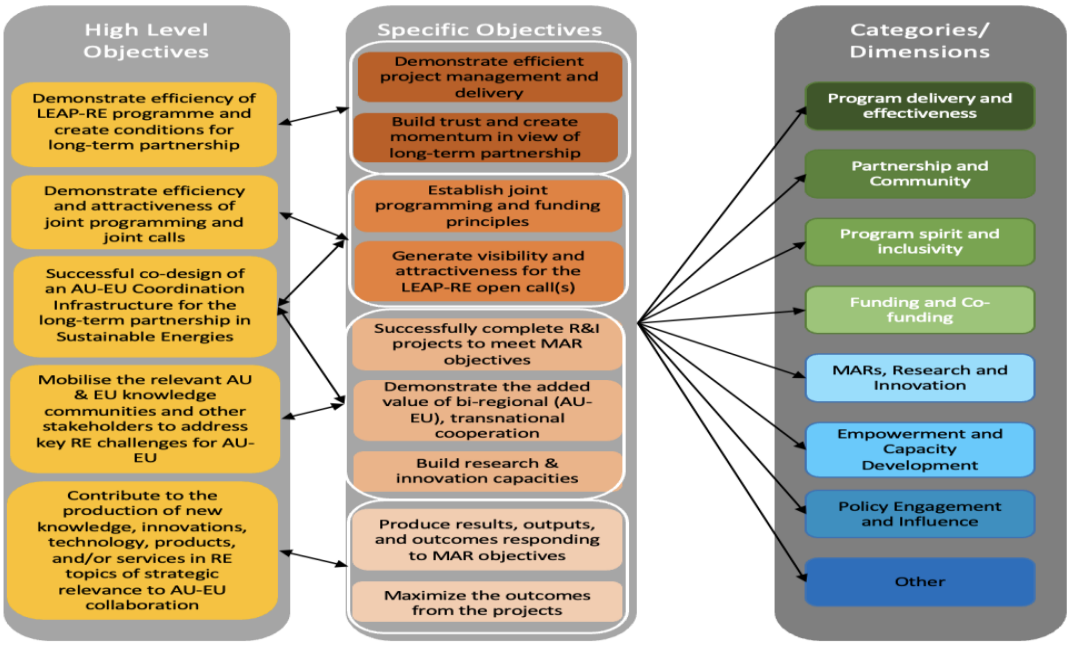

Figure 1: LEAP-RE MEL Framework eight dimensions

3.2.1 Objectives of LEAP-SE

LEAP-SE has defined four **General Objectives (GO)**, each with Specific Objectives (SO) and Operational Objectives (OO), which guide the entire program. The MEL Plan is fully aligned to these objectives. Below is a summary of the general objectives (and their intent) of LEAP-SE:

- **GO1: Launch joint research & innovation calls addressing African sustainable energy roadmaps.** LEAP-SE will **launch two open transnational calls** for R&I projects, ensuring they cover the priority topics identified in the multi-annual roadmaps for sustainable energy development in Africa. This objective emphasizes supporting the transformative path toward affordable, accessible, sustainable energy by funding joint projects. *Specific objectives* under GO1 include comprehensive thematic coverage of all roadmap priorities (SO1.1) and promoting innovation-oriented projects (SO1.2) in the calls. *Operational objectives* include organizing **two co-funded calls with substantial budgets**, integrating innovation in proposal evaluation, and deploying robust M&E mechanisms for

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funded projects. GO1 represents the core activity of LEAP-SE – the joint call mechanism – and its success is vital to the program.

- **GO2: Increase the attractiveness of joint funding initiatives for African partners.** LEAP-SE strives to **further reinforce the engagement of African funding agencies** and researchers in EU-AU co-funded calls. This objective addresses the need for balanced partnership: encouraging more African-led participation and commitment. *Specific objectives* include promoting active engagement of African funding organizations (SO2.1) and enhancing the incentives for African entities to participate (SO2.2). *Operational objectives* under GO2 involve wide awareness-raising about the calls to ensure diverse regional representation (OO2.1) and targeted outreach to African scientific and innovation communities about co-fund opportunities (OO2.2). In short, GO2 is about **capacity and trust building** – making the co-fund program appealing and accessible so that African stakeholders take full ownership alongside European ones.
- **GO3: Foster clustering and knowledge exchange among funded projects and beyond.** LEAP-SE aims to **develop clustering between individual funded projects** (from LEAP-SE, and also linking with LEAP-RE and other initiatives) to avoid fragmentation of efforts. By clustering projects around themes or methodologies, LEAP-SE will animate a wider R&I community and create synergies. *Specific objectives* include ensuring projects cluster by topic/methodology (SO3.1) and regularly extracting policy-relevant insights from ongoing projects (SO3.2). *Operational objectives* include building an online platform to share research results and strengthen multilateral collaboration among researchers, industry, policy, and society across Europe & Africa (OO3.1), as well as implementing a comprehensive communication and dissemination strategy (OO3.2). GO3 thus extends the impact of individual projects through **networking, knowledge management, and dissemination**. It leverages the collective intelligence of the project portfolio to benefit the broader community.
- **GO4: Enable efficient dialogue with high-level stakeholders for policy impact.** LEAP-SE endeavors to **create channels for dialogue with senior decision-makers** in the EU and AU to ensure R&I findings inform policy. *Specific objectives* include generating policy-relevant synthesis reports for EU-AU R&I policy representatives (SO4.1). *Operational objectives* include organizing **stakeholder forums involving high-level policymakers** from Europe and Africa (OO4.1) and conducting capacity-building seminars on renewable energy policies for policymakers (OO4.2). Through GO4, LEAP-SE will contribute to **science-informed policy**, aligning research outputs with the needs of energy sector planning and regulation. This objective also helps sustain political support for the partnership by demonstrating its value to governmental stakeholders (science diplomacy outcomes).

Together, these four GOs encapsulate LEAP-SE's mission: (1) funding joint projects (implementation mechanism), (2) strengthening the partnership (engagement and co-ownership), (3) maximizing knowledge sharing and uptake (clustering and dissemination), and (4) influencing the enabling environment (policy dialogue). The MEL Plan is structured to track progress under each of these objectives and their sub-objectives.

3.2.2 Key performance indicators (KPIs)

To measure progress toward the above objectives, LEAP-SE employs a comprehensive set of **Key Performance Indicators (KPIs)**. These indicators cover both quantitative metrics and qualitative assessments, and are organized in alignment with LEAP-SE's

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objectives and the impact dimensions mentioned earlier. They serve as the backbone of the MEL framework, translating abstract goals into measurable signals of success or areas needing improvement.

Multi-Level Indicator Framework: The KPIs are defined at multiple levels – from **input and activity indicators** (e.g. number of funding partners, budget committed, events organized), to **output indicators** (e.g. number of projects funded, publications produced), to **outcome indicators** (e.g. new capacities built, policy uptake instances), and **impact indicators**(e.g. improvement in energy access, long-term partnership sustainability). All objectives and most activities have indicators corresponding to: inputs, outputs, outcomes, and impacts, following the logic chain. This ensures that we not only track what is delivered (*outputs*) but also what difference it makes (*outcomes* and *impacts*). Annex 1 provides detailed definitions and measurement approaches for many of these indicators, especially those assessing project outcomes.

For clarity, we group the KPIs into categories corresponding to LEAP-SE's strategic areas. The tables and lists below summarize the **core KPIs** for LEAP-SE (drawing on LEAP-RE's indicator set and the LEAP-SE proposal's targets):

- **a. Program Management & Efficiency:** These indicators relate to the effective execution of the LEAP-SE program and its internal management (contributing mainly to GO1 and the general success of the initiative):
  - *Deliverables on-time (%):* Percentage of project deliverables submitted by partners on schedule and with acceptable quality (target: 100%). This reflects efficient coordination and adherence to plan.
  - *Milestones achieved (%):* Percentage of project milestones passed successfully by their due date (target: 100%). Indicates that critical implementation steps are completed as planned.
  - *Risk management success:* Percentage of identified risks that are successfully mitigated or avoided (target: 100%). This monitors how well the project's risk mitigation strategies are working.
  - *Consortium carbon footprint reduction:* Qualitative indicator of emissions savings achieved through project management practices (e.g. use of virtual meetings to reduce travel). While not a primary objective, LEAP-SE tracks this to align with sustainability values.
  - *MEL Plan implementation:* Percentage of MEL indicators that are being satisfactorily tracked and reported as planned. A meta-indicator to ensure the MEL system itself is functioning (target: 100% of defined indicators are monitored).
- **b. Partnership & Community Building:** Indicators to gauge how the EU-Africa R&I partnership is expanding and strengthening (related to GO2 and partly GO3):
  - *New organizations engaged:* Number of new organizations joining the LEAP-SE community or network during the project (e.g. as associate partners, observers, or through call participation). LEAP-RE targeted *at least 100* new organizations engaged; LEAP-SE similarly aspires to broaden the network significantly.
  - *Individuals reached or involved:* Number of individual stakeholders (researchers, practitioners, etc.) who become involved in LEAP-SE activities (target example from LEAP-RE: 500 individuals). This indicates community growth and outreach effectiveness.
  - *Stakeholder survey respondents:* Number of stakeholders providing feedback via surveys or consultations (with a target of ≥100 responses). This shows stakeholder interest and helps in learning from a broad audience.
  - *Long-term partnership framework agreed:* A qualitative milestone indicating that by the end of the project, a model/strategy/governance for continuing the EU-AU partnership beyond LEAP-SE is developed (target timing: by project

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month 60). This was a KPI in LEAP-RE and remains crucial for LEAP-SE's sustainability ambitions.
    - *Post-project commitments:* Number of organizations committing to or expressing interest in a follow-up long-term partnership after LEAP-SE (e.g. signing an MoU or letter of interest for a next phase, target: ≥50 organizations). This is an indicator of LEAP-SE's legacy and the durability of the network it creates.
- **c. Joint Call Implementation and Reach:** These indicators measure the success of the co-funded calls themselves (GO1 and GO2 related):
    - *Funding organizations participating:* Number of national/regional funding agencies committed to each LEAP-SE joint call. LEAP-RE had a target of >10 funding organizations per call. LEAP-SE's consortium already includes 20 funding orgs, so we expect a similar or higher number; maintaining or increasing this count in Call 2 would indicate continued attractivity.
    - *Total call budget:* Total budget available for funding projects in each call (in EUR, including EC co-fund). LEAP-SE targeted around €10M for the 2025 call. We set a KPI target of **≥ €5M per call** (so ≥ €10M over two calls). This reflects resource mobilization success.
    - *Regional budget distribution:* Percentage of total call funding contributed by African vs. European sources. To ensure balance, an indicator is the share of funds from each continent (target example: at least ~30% from each continent in each call). LEAP-SE's design aims for strong African co-funding, so this metric tracks the commitment level of African funding agencies financially.
    - *Thematic coverage of priorities:* Extent to which the funded projects collectively cover the topics of the multi-annual roadmaps (MARs). Measured as the percentage of MAR priority topics addressed by funded projects (target: 100% coverage across all 7 thematic priorities). This shows how comprehensively the call results map to the intended scope.
    - *Number of proposals submitted & funded:* The volume of response to the calls. KPI: number of proposals submitted versus number funded. LEAP-RE's target was ≥50 proposals and ≥20 projects funded (with ≥5 projects coordinated by African organizations). For LEAP-SE's first call, similarly a high submission count (dozens) and a selection of ~20 strong projects is expected. This reflects the visibility and attractiveness of the call.
    - *Diversity of applicants:* The number and regional distribution of applicant organizations in the calls. A specific target is to have broad country coverage; for instance, an **indicator is number of countries represented among project partners**. We aim for participation from all consortium member countries and even beyond. Concretely, a **target is at least one funded project per participating country** and **at least two participating teams per country in proposals** (to ensure depth of involvement).
    - *African participation in projects:* A key measure of GO2 success is the level of African partner involvement in funded projects. KPIs include: **% of funded projects led by African coordinators** (target: ≥20% of projects coordinated by an African institution) and **% of African partner organizations per project** (target: each project has ≥50% African partner representation). These targets, drawn from the proposal, ensure that African researchers have significant leadership and roles in the research projects, reflecting true bi-regional collaboration.
    - *Innovation integration:* To gauge how the calls spur innovation and industry involvement, an indicator is the proportion of projects that meet an innovation criterion. For example, target: **at least 50% of funded projects either achieve Technology Readiness Level (TRL) > 5 by end or involve at least**

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one private company partner. This was formulated as OO1.2 in the proposal and ensures projects are not purely academic but move toward application.

- *Monitoring mechanisms deployed:* As part of call implementation, **deployment of the project monitoring systemis** a KPI. OO1.3 in the proposal specifies having robust M&E mechanisms for projects. Concretely, an indicator is: *Mid-term and final project evaluations conducted* (yes/no, target: yes for all projects) and *annual project reports collected* (target: 100% compliance). The baseline plan is to conduct a mid-term and final assessment for each funded project, in addition to yearly progress reports. Successful execution of these indicates the monitoring system is functioning.
- *Central data platform utilization:* OO1.4 entails implementing a centralized platform for project data and results. A KPI is: **All funded projects actively using the central data repository and tools** (e.g. uploading publications to an open platform like Zenodo, using the LEAP-RE results app or its LEAP-SE equivalent). The baseline expectation is that each project will deposit its outputs (papers, datasets) in the platform and use the monitoring tool provided. User satisfaction surveys on the platform may also be conducted to improve it.

- **d. Clustering, Networking & Knowledge Sharing:** These indicators track the efforts to cluster projects and disseminate knowledge (GO3 related):
  - *Clustering workshops/meetings:* Number of clustering meetings or workshops organized on specific themes or methodologies that involve multiple projects. The target per the proposal is **up to 1-2 clustering meetings per year (after the first 18 months)**. This ensures continuous exchange among projects. Meeting minutes and documentation serve as evidence of these events.
  - *Thematic clusters formed:* Number of distinct thematic clusters of projects or research topics that are formed. For example, by the end of LEAP-SE, a target could be to have **at least 1 active thematic clusters** (similar to LEAP-RE's target) covering areas like solar technologies, smart grids, bioenergy, etc.. Each cluster would link projects working on related challenges, fostering synergies.
  - *Online knowledge platform usage:* The existence and usage of an online platform (perhaps an extension of the LEAP-RE platform) where project results are made available to the community. Indicators: number of research outputs uploaded, number of platform users or downloads, etc. A deliverable in WP5 is an online platform user guidebook (due M6) and the platform itself. KPI could be *platform operational by M6 (Yes/No)* and *≥X users or uploads by a certain date*. (Baseline: LEAP-RE had an online platform for its community.)
  - *Cross-project collaborations:* Instances of collaboration or knowledge exchange among LEAP-SE projects and with LEAP-RE or other initiatives. For example, **number of joint activities or publications involving multiple LEAP-SE projects**. Also, *new collaboration projects launched by partners outside LEAP-SE* as a multiplier effect (LEAP-RE had a target of at least 5 new external projects among partners). This indicates that the networking is seeding further R&I cooperation beyond the funded scope.
  - *Quadruple-helix stakeholder involvement:* The extent to which different stakeholder types (academia, industry, government, civil society) are engaged in LEAP-SE's project portfolio. KPI: Share of projects that involve at least 3 of the 4 stakeholder types, or a breakdown of participants by category. In LEAP-RE, an indicator was *distribution of stakeholder types in projects (research, private sector, public, NGO)*. For LEAP-SE, since consortium eligibility already required academia and industry partners in each project, we monitor continued diversity (e.g. additional civil society or public sector partners integrated in projects, perhaps through stakeholder forums or advisory roles).
  - *Capacity-building activities in projects:* Though capacity building is mainly WP6, many research projects also contribute (e.g. training students, exchange of

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staff). KPI: number of capacity-building actions conducted within R&I projects (like trainings, workshops, student exchanges). LEAP-SE expected projects to have capacity-building elements, and an indicator was to count those actions.

- **e. Policy Dialogue & Uptake:** These indicators measure outputs and outcomes of the high-level dialogue and policy influence activities (GO4 and partly GO3):
  - *Stakeholder forums conducted:* Number of high-level stakeholder forums organized with EU and AU policy makers' participation. Target from proposal: **at least 3 stakeholder forums** during the project. These forums (planned in WP5/WP6) gather policy makers, funding agencies, and project representatives to discuss findings and policy implications. Evidence: event agendas, participant lists.
  - *Policy briefs produced:* Number of policy brief documents synthesizing project insights for policy audiences. Per SO3.2/GO4, target is **5 policy briefs (one for each African region)**. These briefs would capture recommendations emerging from the research in a form useful to energy ministries, regulators, or international bodies.
  - *Synthesis reports for decision-makers:* A consolidated report that draws together insights and recommendations from across LEAP-SE to inform senior decision-makers (likely produced towards the end of the program). As described under SO4.1, the goal is to *"generate a report that consolidates insights from funded projects, aimed at informing policymakers"*. KPI: completion of such a synthesis report by the final year (Yes/No), and its dissemination to target audiences.
  - *Participation of high-level officials:* Number of distinct high-level policy makers (e.g. ministry directors, government agency heads) who engage with LEAP-SE (through forums, workshops, etc.). The proposal baseline anticipated involvement of about **50 high-level policy makers** in program events. Tracking this number indicates the reach of our policy dialogue.
  - *Capacity-building for policy makers:* Number of seminars or training sessions held for policy makers on renewable energy topics (target: at least 2 seminars, for example) and number of policy actors trained. This corresponds to OO4.2 – organizing capacity building seminars for policy makers. Monitoring the count of events and participants will show how LEAP-SE is building knowledge in the policy community.
  - *Policy adoption or reference:* Instances where LEAP-SE outputs inform policy decisions or plans. This is a higher-level outcome indicator: e.g., references to LEAP-SE research in national energy strategies, or uptake of recommendations by the CCSE working group. Although difficult to quantify in the short term, we will qualitatively document any such influence (e.g. case studies of a policy influenced by a project result).
- **f. Research & Innovation Outputs:** These indicators capture the direct outputs from funded projects, reflecting scientific productivity and innovation (contributing to GO3 and GO4 outcomes, and ultimate impact goals):
  - *Scientific publications:* Number of peer-reviewed scientific publications produced by the funded projects, especially **co-authored by EU and African researchers**. Target: e.g. >30 joint publications resulting from LEAP-SE projects (LEAP-RE aimed for >30). This shows knowledge generation and cross-continental collaboration in science.
  - *Data sets or tools released:* Number of open-access datasets, software tools, or other research outputs made publicly available by projects. This can be tracked via the central platform or project reports (no fixed target, but the aim is that all projects share key outputs openly unless restricted).

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- *Intellectual property (patents):* Number of patent applications filed or patents granted based on project results (target: >5 patents filed). This indicates technological innovation arising from the program.
- *New products or prototypes:* Number of new or improved products, services, or prototypes developed through the projects (target: >5 launched or demonstrated). This aligns with seeing tangible innovations reaching nearer to market or deployment.
- *Technical advancement (TRL gain):* Improvement in Technology Readiness Level in project technologies. A qualitative indicator recorded per project; overall we expect measurable advancement of the state-of-the-art in the targeted domains (LEAP-RE included an indicator for TRL progress across the six roadmap areas). For example, if a project starts at TRL 3 and reaches TRL 5 by end, that's a success. We can summarize how many projects advanced to prototype or pilot stages.
- *Exploitable results:* A count of distinct exploitable results identified (compiling deliverable D5.3 "List of exploitable material" due at M48). This deliverable will enumerate key results from projects that have potential for commercial or societal use. A successful outcome is a robust list of exploitable innovations for further uptake.

- **g. Capacity Building & Exchanges:** These relate to building human and institutional capacity (GO3 and GO2 dimensions):
  - *Trainings and educational programs:* Number of training modules or workshops delivered (target: ≥5 modules/webinars, e.g. through WP6), and the number of people trained (e.g. in summer/winter schools – target at least 15 participants per school). LEAP-SE's WP6 includes online capacity-building webinars and possibly summer schools; we will track participation.
  - *Researchers exchanged:* Number of exchanges of researchers between Africa and Europe facilitated by the program (target: >10 researchers). This reflects direct human capacity development and network building.
  - *Research visits:* Number of visits of researchers between Europe and Africa facilitated by LEAP-SE.
  - *Africans with improved research capacity:* A qualitative/quantitative indicator aggregating how many African professionals (students, researchers) enhanced their skills or career prospects via LEAP-SE (through publications, training, managing projects). LEAP-RE aimed for *at least 100 African professionals* benefiting in terms of publication output, innovation skills, and ability to undertake joint projects. We will similarly measure this via surveys or project reporting (e.g. counting African early-career researchers involved and their outputs).
  - *Institutions strengthened:* Number of institutions (especially in Africa) that enhance their R&I management or networking capacity as a result of participating. This can be gauged through self-assessment or follow-up surveys at project end, asking if involvement in LEAP-SE improved their ability to secure funding, manage international projects, etc. Also, indicator: number of organizations endorsing a future strategy for capacity-building (LEAP-RE targeted 50 orgs endorsing future capacity strategy).
- **h. Socio-Economic and Environmental Outcomes:** While many of these will only manifest in the long run or at individual project scale, the MEL Plan includes a framework to evaluate project outcomes on society, economy, and environment (see Annex 1: Key Performance Indicator Catalog for Project Outcomes) for detailed KPIs). At program level, we will look for aggregate signs of impact such as:
  - *Improved energy access:* Number of people or communities benefiting from improved energy services due to project solutions. We expect qualitative evidence from demonstration projects (e.g. a project may report that a pilot

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provided solar power to X households). We will collect such data across projects to illustrate contribution to SDG7.

- *Enhanced services and productivity:* Examples where project innovations lead to better basic services (health, education, agriculture) or increased productivity in target sectors. These map to social KPIs like "impact on access to basic services" (Annex 1) and economic KPIs like productivity change. We will document cases (e.g. a solar irrigation project increasing crop yields by Y%).
- *Environmental benefits:* Estimated reductions in greenhouse gas emissions, improvements in resource efficiency or other environmental gains from project implementations. For instance, an off-grid solar project might reduce diesel generator usage, cutting CO_2 emissions. Each project's environmental KPIs (Annex 1 includes climate resilience and resource efficiency metrics) will feed into a broader picture of environmental impact.
- *Policy and regulatory influence:* Instances of project results informing standards, policies or investment decisions (as discussed under policy uptake). Even if not immediately measurable, qualitative narratives will be compiled.
- *Macro-level potential:* Though LEAP-SE itself is limited in scale, we anticipate that if successful, it could demonstrate models that influence larger programs or investments (multiplier effect). LEAP-RE expected mid-term macro-economic impacts in areas like increased local employment, higher disposable income from energy access, etc… LEAP-SE will track proxy indicators (e.g. number of jobs created in pilot projects, additional funding attracted during the project) to gauge this broader impact potential.

These KPIs together form a **KPI Matrix** for LEAP-SE. Where applicable, each indicator has a baseline value (initial state), a target value, data sources, frequency of measurement, and responsible parties for data collection (these details are outlined in Section 4 and Annex 1/2). The MEL team will maintain this matrix and update it regularly.

It is important to note that some **KPIs are qualitative or narrative** in nature (especially at outcome/impact level) – for example, "quality of partnership coordination" or "evidence of trust between partners." Such aspects will be captured through interviews, surveys or case studies as part of evaluation exercises. Meanwhile, the more **quantitative KPIs** (like counts, percentages) will be tracked via reporting templates and the online monitoring system.

Finally, to ensure consistency and learning, the KPIs have been designed to be comparable with those used in LEAP-RE and aligned with CCSE Partnership indicators. This allows LEAP-SE to contribute data to higher-level monitoring of the CCSE and to benchmark its performance against similar initiatives, improving the credibility of evaluation results.

Project Outcome KPIs – Business, Social, Environmental: In addition to program-level indicators, LEAP-SE has introduced a specific **evaluation framework for individual project outcomes** under the CCSE partnership. This framework uses a balanced scorecard of **Business & Economic, Social, and Environmental KPIs** to assess the real-world impact of R&I projects. Each project will be evaluated along these three dimensions, with a scoring system from 0 to 3 for each KPI (0 = no impact, 3 = high impact). The Business & Economic dimension is weighted 50% of the overall impact score, while Social and Environmental dimensions are 25% each, reflecting the importance of economic viability alongside social and environmental benefits. This ensures that projects are holistically evaluated for sustainability and practical impact.

A summary of the **Business/Economic KPIs (50%)** is as follows:

- *Revenue Change for End-Users/Communities:* Measures the increase in revenues, savings, or financial returns achieved by end-users or companies due to the

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project's outputs (for example, improved energy efficiency reducing fuel costs). Quantitatively, this could be measured as a percentage change in income or cost savings; qualitatively, as perceived financial benefit. Scoring example: >15% increase = 3 (high impact), smaller increase = 1–2, no increase or negative = 0.

- *Change in Operational Cost:* Measures reduction in capital or operational expenditures through the project's technology (e.g. cheaper maintenance or fuel). Scoring: >15% cost reduction = 3, etc., or qualitatively "high decrease = 3".
- *Productivity Improvement:* Assesses the project's impact on productivity – the output vs input efficiency, which can result from improved processes, reduced downtime, etc. For instance, an energy innovation that allows more output per unit input will raise productivity. Scoring similarly based on % increase in productivity (with >15% = 3).
- *New Business Opportunities:* Evaluates to what extent the project enables new market segments, value chains, or business models – for example, creation of new startups, services, or energy access solutions that did not exist prior. Scoring is more qualitative: "None = 0; Improbable = 1; Probable = 2; Already achieved during project = 3".
- *Patents (Innovation Maturity):* Indicates the innovation level through patentability – whether project outputs have led to patent applications or grants. Score 3 if a patent is already secured (or product commercialized), 2 if probable, 1 if improbable, 0 if no patent potential.
- *Commercial/Replication Readiness:* Measures how close the project's solution is to real-world deployment or scale-up. For example: concept stage = 0, pilot tested = 1, pre-commercial prototype = 2, already being adopted commercially = 3. This aligns with TRL progression and market readiness.

Next, the **Social KPIs (25%)** gauge societal benefits:

- *Impact on Access to Energy:* Does the project improve energy availability, reliability, affordability, or quality for populations? This includes providing new connections or enhancing existing services (e.g. better reliability or cleaner cooking fuel). Scoring: High positive impact (e.g. significant increase in energy access for a community) = 3; medium = 2; low = 1; none or negative = 0.
- *Impact on Access to Basic Services:* Measures how the project's energy solution improves essential services such as healthcare, education, or mobility. For instance, solar power for clinics, lighting for schools, refrigeration for vaccines, or clean energy for transport in underserved areas. If the project demonstrably enhances such services, it scores higher (again none = 0, high improvement = 3).
- *Knowledge and Capacity Building:* Assesses the project's contributions to education, training, and knowledge dissemination. This covers academic outputs (publications, theses), skills developed (people trained), and partnerships with educational institutions. For example, a project that supports multiple MSc/PhD students, hosts training workshops, and publishes research would score high. The rubric might be: negligible contribution = 0; minor (e.g. one-off workshop or a single publication) = 1; moderate (some local training programs, a couple of academic outputs) = 2; high (supporting advanced training like PhDs, multiple publications, formal knowledge transfer partnerships) = 3.
- *Gender, Youth, and Inclusivity:* Whether the project delivers specific benefits for women, youth, or marginalized groups in terms of empowerment, access, employment, or involvement. For instance, does it create jobs for young people, improve energy access for women-headed households, or involve women/youth in project design? A project with strong inclusivity impact (e.g. significant increase in women employed or benefiting) = 3; moderate = 2; minimal = 1; none or negative (if it somehow bypassed these groups) = 0.

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- *Civil Society Involvement:* The degree of participation and benefit of civil society and local communities in the project. This looks at how community members, local businesses, NGOs, and local authorities are engaged or empowered by the project. If a project has high community buy-in and engagement (e.g. community co-design, local user groups benefiting), it scores higher. Scoring guideline: High involvement = 3, moderate = 2, low = 1, none = 0.

Finally, the **Environmental KPIs (25%)** capture ecological sustainability:

- *Impact on Climate Change Resilience:* To what extent does the project enhance the ability of local systems (communities, infrastructure, ecosystems) to withstand and adapt to climate change? For example, a project introducing drought-resistant energy systems or diversifying energy supply improves resilience. Scoring: if it significantly strengthens resilience = 3; moderate improvement = 2; minor = 1; none or negative (e.g. increases vulnerability) = 0.
- *Resource Efficiency:* Measures how the project promotes efficient use of natural resources and reduces environmental externalities (pollution, waste). This can be broken into sub-indicators: water savings, land use impact, energy efficiency gains, GHG emissions reduction. Each sub-indicator can be scored 0–3 (e.g. zero to high improvement), and an average taken. A project that, for instance, substantially reduces GHG emissions and improves energy efficiency would score high on this composite indicator.
- *Value Chain Greening:* Evaluates improvements in environmental sustainability across the entire value chain of the technology – from production of components, to usage, to end-of-life management (circular economy aspects). If a project addresses recycling of solar panels or uses sustainable materials, it contributes here. Scoring: none = 0; low = 1; moderate = 2; high = 3, based on extent of greening practices integrated.
- *Environmental Integration:* Assesses how well the project's solution integrates into local ecosystems or reduces its environmental footprint locally. This includes avoiding harm to biodiversity, using local resources sustainably, etc. A project that is in harmony with the environment (e.g. solar mini-grids that do not damage local habitat and perhaps even improve it) would score high. Scoring uses the same none/low/medium/high scale.

Each project will be asked to report on these KPIs at mid-term and final (with quantitative data where available, or qualitative assessment otherwise). This approach ensures **accountability of projects to deliver not just research outputs but real impacts** in economic, social, and environmental terms. It also allows comparison across projects on common outcome metrics. For instance, a project might ultimately be able to claim a 10% increase in agricultural productivity for farmers (score ~2 on productivity) and a high improvement in local health services via solar clinics (score 3 on basic services), etc. The MEL team will aggregate these individual project results to present an overall **impact profile for the LEAP-SE portfolio**.
Notably, the scoring system accommodates both **quantitative data and qualitative judgments**: *"If quantitative data available"* versus *"if only qualitative data available"*, with guidance for each. For example, if exact percentages of revenue change are measured, those thresholds are used; if not, a qualitative estimate (low/medium/high increase) is used with corresponding scores. This flexibility is important given the varying nature of projects (some may be able to quantify impacts precisely, others may be more exploratory).

By incorporating the above KPI sets, LEAP-SE's MEL Plan will generate a rich dataset on performance. These indicators will be tracked through specified tools and processes described in Section 4 (e.g. an Online Monitoring System for project reports, annual

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surveys, etc.). The next subsection discusses the expected results and how these indicators tie into outputs, outcomes, and impacts.

3.2.3 Expected Outputs, Outcomes and Impact

LEAP-SE's MEL framework ultimately focuses on whether the partnership achieves its intended **outputs, outcomes, and impacts**. We distinguish these levels:

- **Outputs** are the immediate, tangible results of LEAP-SE activities. Expected outputs include: two joint call launches and their resulting funded **research projects** (the primary output of GO1); a functional **monitoring platform** and data repository (output of OO1.4); organized events such as **clustering workshops and stakeholder forums** (outputs of GO3 and GO4 activities); **policy briefs and synthesis reports** (outputs of GO4); and various knowledge products from projects (publications, prototypes, datasets). These outputs are largely within the direct control of the consortium and are delivered during the project term. The MEL Plan tracks outputs closely (as seen with indicators like number of events, publications, etc.), since achieving outputs is the first step toward higher-level results.
- **Outcomes** refer to short to medium-term effects on target groups resulting from those outputs. For LEAP-SE, key outcomes expected by or shortly after the project's end include:
    - **Enhanced R&I Capacity and Networks:** Researchers and institutions, especially in Africa, will have increased capacity and experience in collaborative projects. For example, LEAP-SE is expected to strengthen **"research and innovation capacities in Africa"** through training and network-building. Outcome indicators here are number of persons trained, exchanges done, etc. Also, a more interconnected EU-AU sustainable energy research community (via clustering and the LEAP platform) is an outcome.
    - **Innovations and Solutions Developed:** The projects should deliver new or improved renewable energy solutions (technologies, business models, etc.) that have been validated at least in pilot form. The outcome is that **R&I projects are completed successfully** and meet their technical goals (e.g. X prototypes developed, Y pilot systems installed). As a metric, LEAP-RE set a target of 95% of projects completing with their results accepted (in terms of cost and quality) – LEAP-SE similarly expects the vast majority of funded projects to reach their objectives, yielding usable knowledge or prototypes.
    - **Knowledge Advances in Thematic Priorities:** Each roadmap topic addressed should see advancement, however this will depend on the number of projects funded under each MAR. For instance, in the 7 MAR areas (solar integration, end-of-life management, etc.), LEAP-SE outcomes include new insights or techniques that push the state-of-the-art (measured by things like TRL increase or outputs met per MAR).
    - **Policy & Community Outcomes:** Greater awareness and uptake of sustainable energy solutions among stakeholders. LEAP-SE's forums and briefs aim for outcome that **high-level stakeholders are informed** and engaged with current R&I progress. A concrete outcome could be inclusion of LEAP-SE findings in working group discussions of the CCSE Partnership, or specific policy proposals emerging. Also, *trust and common understanding* between EU and AU partners is an outcome explicitly sought. By working together over 6 years, partners build relationships that are an intangible but vital outcome (we might gauge this via surveys on partnership quality).

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- **Socio-economic benefits realized in pilots:** Some projects (especially demonstration pilots) might directly result in improved livelihoods or social conditions in their test communities (e.g. a microgrid project providing electricity to 100 households, leading to outcomes like better study conditions for children, new small businesses powered, etc.). These outcomes will be captured qualitatively in project reports and the MEL case studies.

The MEL Plan will evaluate these outcomes through both monitoring data and dedicated evaluations (like the self-evaluation focusing on a specific impact dimension mentioned in Section 4.2). For example, one evaluation might focus on **capacity-building outcomes**, another on **innovation adoption outcomes**, etc., to drill deeper into why certain outcomes did or did not materialize.

Impacts are the longer-term changes to which LEAP-SE contributes – typically beyond the project's immediate timeframe. While these may fully materialize only after project completion, the MEL Plan identifies and, where possible, measures progress toward them:

- **Long-Term EU-AU Partnership**: A core impact is a sustained, long-lasting R&I partnership on sustainable energy between Europe and Africa. Signs of this impact include formal continuation plans, continued joint calls after LEAP-SE, or integration of LEAP-SE structures into a permanent platform. The number of entities willing to continue collaboration (KPI 1.2.5, target ≥50) is a proxy measure. Achieving a viable model for future partnership by project end (KPI 1.2.4) is a direct impact indicator.
- **Scientific and Technological Innovation**: Over the long term, LEAP-SE should result in new technologies or knowledge that significantly advance sustainable energy solutions. The impact would be seen in increased adoption of these solutions, new companies or markets in clean energy, etc. For instance, if a LEAP-SE solar storage innovation becomes widely used in Africa, that's a concrete impact. While during the project we measure outputs (patents, prototypes), the impact is their widespread use and the energy capacity added or carbon emissions reduced as a result.
- **Socio-Economic Development**: Contributing to development goals like improved energy access (SDG7) and economic growth. The ultimate impact LEAP-SE seeks is to improve quality of life by expanding access to reliable, sustainable energy in Africa, while also creating opportunities in both continents. This might be evidenced by metrics such as people gaining energy access, jobs created in sustainable energy sectors, or contribution to national targets on renewable energy. As noted in the proposal, *"socially inclusive local growth is central to LEAP-SE"* and impacts on gender empowerment and the informal economy are expected benefits. Macro-economic impacts could include higher productivity in communities, reduced energy expenditures, etc., as hinted for four areas in the proposal. The MEL Plan will collect whatever evidence is available by project end (e.g. testimonies, pilot outcome data) to illustrate movement toward these impacts.
- **Environmental and Climate Impact**: In line with global climate goals, LEAP-SE's impact is a contribution to low-carbon energy transition and climate resilience in Africa (and globally). If scaled, the innovations from LEAP-SE would help avoid greenhouse gas emissions and enhance resilience of communities to climate change. While LEAP-SE itself is a piece of a larger puzzle, its impact can be measured via potential emissions reductions from its technologies and increased climate adaptation capacity (some projects may explicitly target adaptation). For example, if a project piloted a new solar-powered irrigation system, the impact could be the model's replication

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improving climate resilience in agriculture. LEAP-SE's impact indicators include qualitative ones like *climate change resilience improved* (from the KPIs) and alignment with climate targets. The **transition to low-carbon systems is a shared goal** highlighted by CCSE, so MEL will look at contributions in this regard (e.g. cumulative kW of renewable energy capacity deployed in pilots, CO_2 reductions estimated).

- **Policy and Institutional Impact**: Over time, LEAP-SE is expected to influence policy frameworks (through its high-level engagement) and perhaps catalyze the creation of supportive instruments (like new funding programs or regulations encouraging clean energy innovation). A successful impact would be integration of lessons from LEAP-SE into AU-EU policy dialogues or joint strategies on science, technology, and innovation beyond the project. Evidence might include citations of LEAP-SE in strategic documents, or new initiatives launched as a spin-off (similar to how PRE-LEAP-RE laid groundwork for LEAP-RE, LEAP-SE could lay groundwork for a successor).

It is understood that **impacts are harder to attribute** solely to LEAP-SE because many factors play roles. The MEL Plan adopts a contribution-based approach: we will document how LEAP-SE contributed to observed changes, acknowledging other influences.

To summarize, **LEAP-SE's success** will be judged by a combination of output delivery (e.g. calls executed, projects funded), outcome realization (knowledge created, capacities built, networks strengthened, solutions demonstrated), and movement toward long-term impacts (sustainable energy advancements and a lasting EU-AU collaboration). The MEL Plan's indicators and evaluation activities are designed to capture evidence at each of these levels. Section 5 will reflect on how ongoing MEL will guide adaptive management to maximize these outcomes and impacts as the project progresses.

4. Implementation of the LEAP-SE MEL Plan

This section describes how the MEL Plan will be put into practice: who will use the MEL results (target groups), the schedule and frequency of monitoring activities, what data will be collected and how, roles and responsibilities for MEL tasks, and how evaluation and learning processes (like self-evaluation) will be carried out. It also addresses considerations of risk management and adaptive measures for the MEL process.

4.1 Target Groups for MEL Results

The information and insights generated by LEAP-SE's MEL activities will serve multiple stakeholders. In general, there are **three main groups** with an interest in MEL results:

1. **Internal Consortium and Management:** *Foremost, LEAP-SE partners and governance bodies* (General Assembly, Project Management Team, work package teams) are primary users of MEL data. Regular monitoring data will enable the consortium to work more efficiently and in a focused manner, as they will have evidence on their performance. For example, WP leaders can steer their activities based on up-to-date facts – if a KPI shows low engagement in an activity, they can take corrective action. The Project Management Team will use MEL reports to support operational decision-making and strategic thinking, ensuring the project remains on course to meet its objectives. In essence, MEL provides the *management feedback loop* to improve implementation.

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2. **Policy Makers and Funders:** A second important group of MEL stakeholders are *research and innovation (R&I) policy makers at national/regional level in both Africa and Europe, the CCSE partnership leadership, and the European Commission*. These actors are interested in evidence of what LEAP-SE is achieving, to justify the investments and to inform future policy. For instance, national funding agencies and ministries will look at MEL outcomes to see the benefits of their participation (e.g. number of national researchers supported, capacity built, etc.), which can justify continued funding commitments. The CCSE High-Level Policy Dialogue expects MEL evidence to assess how the partnership is strengthening and contributing to joint objectives. The European Commission will examine MEL data for accountability (ensuring the grant yields results) and for learning to design future programs. By providing transparent information on progress and results, MEL helps *"increase transparency and better justify national and European investments geared towards LEAP-SE."*
3. **Wider Stakeholder Community:** Further stakeholders include *the broader research and innovation community, industry associations, and renewable energy policy makers beyond the consortium*. MEL information – especially through a public-facing monitoring report or dissemination of key findings – can offer orientation and knowledge to other organizations working in sustainable energy. For example, African renewable energy research institutes or European technology platforms could learn from LEAP-SE's results to shape their activities. Similarly, RE policy makers at continental or international level (outside direct CCSE, like those in multilateral development banks or initiatives like Mission Innovation) could use the findings on what works in AU-EU cooperation. In LEAP-RE, it was envisioned that *"information on progress and activities by means of a monitoring report can provide orientation for related activities"* of such stakeholders. Thus, by sharing MEL findings (in appropriate formats), LEAP-SE contributes knowledge to the global community of practice on clean energy partnership.

Given these groups, the MEL Plan tailors its outputs accordingly. Certain data will be kept internal (for the consortium's continuous improvement), while other information will be synthesized for external audiences. **The decision on what MEL information to publish or keep internal will be made case-by-case,** depending on sensitivity and purpose. For instance, internal learning memos on management efficiency might remain internal, whereas summary statistics on call outcomes and success stories can be made public in reports or newsletters. The guiding principle is purpose-driven disclosure: some insights will solely feed internal learning processes while other reports or data may inform external groups.

Ultimately, effective use of MEL results can transform how challenges are addressed: Based on monitoring data, the consortium can identify *"bottlenecks, risks, challenges, opportunities, success factors, good practices, and obstacles"*. Rather than reacting to problems after they escalate, MEL allows the partnership to anticipate and prevent them, moving to proactive management. This benefits all target groups: the project team improves performance (internal), funders see better outcomes for their investment (policy makers), and the broader community gains successful models to emulate (external stakeholders).

Thus, a clear **dissemination and communication strategy for MEL findings** is part of the plan (in coordination with WP5's broader communication strategy). For example, LEAP-SE may produce an **Annual MEL Summary** for stakeholders, hold **learning webinars** to share lessons with other initiatives, and integrate MEL highlights into newsletters and the website to reach civil society and interested public. These actions close the loop, ensuring

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MEL is not just data collection but leads to *knowledge sharing and course-correction*, embodying the learning culture the project espouses.

4.2 Frequency of Data Collection and Analysis

Different indicators and evaluation activities in the MEL Plan operate on different timescales. The **frequency** of data collection is determined by the nature of each indicator, the expected pace of change, and practical considerations like reporting burden. The approach is to collect data **as frequently as needed, but not more so**, to capture meaningful changes without causing excessive workload.
Here is the schedule for key MEL data collection and analysis activities:

- **Ongoing & Real-Time Monitoring:** Certain metrics are tracked continuously or in real-time via the online system. For example, as proposals come in for calls, the call secretariat logs data (number of submissions, countries) – these data are captured at call deadlines. Similarly, the project repository might continuously log publications or outputs. The MEL team will have access to these live data streams but will analyze them at set intervals.
- **Quarterly Tracking:** Internally, the project management might review a handful of operational indicators quarterly. This could include deliverables due vs. delivered, milestones status, and risk register updates. Such frequent check-ins (every 3 months) help catch any schedule slippage or emerging issues early.
- **Annual Monitoring Cycle:** *Most quantitative indicators will be collected on an annual basis.* This aligns with annual reporting periods. Each year, the consortium will gather data from projects and WPs:
    - **Annual Project Reports:** All funded projects are **obliged to submit relevant information on an annual basis** during their lifespan. These reports include updates on technical progress, results achieved, publications, training activities, etc., as well as reporting against the project-level KPIs (from Annex 1). Typically, projects will report at the end of each calendar year or project year. The MEL team will aggregate these into a consolidated view of portfolio progress.
    - **Annual WP Reports:** Work package leaders (especially WP2-6) will report annually on their KPIs (e.g. WP2/3 on call implementation stats, WP4 on MEL progress itself, WP5 on dissemination activities, WP6 on capacity-building events).
    - **Data Refresh for Indicators:** Many program-level indicators (number of new organizations, number of policy briefs, etc.) will be updated yearly. Some may be updated more frequently if changes occur (e.g. if new partners join mid-year, that can be logged).
    - **Analysis & Reporting:** After collecting annual data, the MEL team will analyze trends and produce an **Annual MEL Report** or input to the official Periodic Report for the EC. This analysis flags whether targets are on track and identifies any deviations.
- **Biannual (Every 6 months) Light Updates:** In addition to full annual reports, a lighter semi-annual check might be performed for critical indicators. For instance, at mid-year the call secretariat might update on project starts or any new outputs. This semi-annual check could coincide with General Assembly meetings to provide the latest figures for discussion.
- **Alignment with Project Milestones:** Some data will be collected at specific milestones rather than fixed periods. For example, right after the first call selection, a detailed analysis of call results will be done (number of proposals, success rates by region, etc.). Similarly, once the second call is concluded, another dataset is captured. This ensures we evaluate each call's outcomes in a timely manner.

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- **Evaluation Schedule:** Aside from monitoring, **evaluation exercises are scheduled at strategic points**:
  - A **Mid-Term Self-Evaluation** is planned roughly halfway through the project (around years 3–4, likely after the first cohort of projects has considerable results and the second call projects are initiated). This could be analogous to LEAP-RE's plan of a short evaluation in 2022 (year 2) focusing on a specific impact dimension. For LEAP-SE, the mid-term evaluation might focus on, for instance, "partnership effectiveness and capacity building" or "early innovation outcomes," using a combination of data and stakeholder feedback. The scheduling will consider that by mid-term, some projects from Call 1 will be nearing completion or at least mid-point, providing substantial content to evaluate.
  - **End-of-Project Evaluation:** Near project conclusion (year 6), a comprehensive evaluation will take place, assessing the overall achievement of objectives, outcomes, and preliminary impacts. This will likely involve external inputs (e.g. the Scientific Committee or independent experts) to impartially assess results. It will synthesize all KPI data and qualitative insights.
  - **Post-Project Follow-up:** While outside the funded scope, the MEL plan suggests possibly checking certain impact indicators a year or two after project end (if feasible, through follow-up surveys) to capture late-emerging impacts. This ties into the "learning and sustainability" focus, seeing how many project outcomes continued or scaled.
- **Indicator-specific Frequency:** Each indicator has an optimal frequency:
  - **Immediate outputs** (like meetings held, deliverables) can be recorded as they occur and summarized annually.
  - **Activity indicators** (like "# of meetings in region") are simple counts and can be updated continuously or yearly.
  - **Outcome indicators** (like behavioral changes or policy influence) manifest over longer periods and might only be meaningfully assessed yearly or at project end. For example, changes in stakeholder perception or policy take time; measuring those annually might be too frequent, so mid-term and final might be more appropriate.
  - **Impact indicators** (like societal benefits) definitely need longer observation windows. Many impact indicators will not show significant change on an annual basis during the project; thus, they might be evaluated only at final evaluation (and noted for future tracking post-project).
  - **Call-related indicators** have a specific cadence: e.g. number of proposals is measured per call event. Since calls occur in 2025 and 2026, those KPIs will be updated at those times.

In essence, **monitoring of implementation and outputs is frequent (annual or more), whereas evaluation of outcomes/impacts is periodic (mid-term, final)**. After the first full cycle of data collection (likely in the second project year, once initial results are in), the MEL team will review if the chosen frequencies make sense and adjust if needed. For example, if we find that certain data barely change quarterly, we might switch to annual collection to reduce effort.

To illustrate the timeline, LEAP-RE's MEL plan included **General timeline for MEL Plan development and implementation**. Translating that concept to LEAP-SE:

- **Year 1 (2024/25):** Establish MEL framework, baseline data from proposal and initial activities. By end of Year 1, collect data from Call 1 proposals and selection. Possibly deliver MEL Plan v1 (this document) as a deliverable.
- **Year 2 (2025/26):** Projects from Call 1 start; Call 2 launched and selected. Monitoring of project kick-offs, initial outputs. End of Year 2: first annual monitoring report, including Call 1 early progress and Call 2 results.

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- **Year 3 (2026/27):** Full swing implementation. Annual monitoring report. Plan and execute Mid-Term Self-Evaluation (likely in late Year 3 or early Year 4). Use data from first 2–3 years and gather stakeholder feedback.
- **Year 4 (2027/28):** Many Call 1 projects finish (~end of 2027 if 36-month projects from early 2025) – collect final data on those. Call 2 projects mid-term. Annual monitoring report. Learning workshop to discuss mid-term findings and any needed adaptations for remaining period.
- **Year 5 (2028/29):** Call 2 projects approach completion (if 36 months from early 2026, they end by 2029). Monitoring focuses on wrapping up outputs, capturing outcomes. Start compiling overall results. Possibly an initial brainstorming on long-term partnership continuation (related to KPI on long-term model by M60).
- **Year 6 (2029/30):** Final year: All projects completed. Conduct Final Evaluation (with external input) – assess full outcomes against objectives. Prepare final MEL report with all data, lessons learned, recommendations. Engage partners in reflecting on what's next (long-term partnership commitments).

This general timeline will be refined in the project's Annual Work Plans and MEL detailed schedule. The main point is that data collection will be synchronized with project rhythms to maximize relevance: **"important points in the LEAP-SE timeline"** will be when learning feedback is consolidated and fed into decision-making – for instance, before launching Call 2, after mid-term reviews, before planning a successor initiative, etc.
In conclusion, the MEL Plan employs a **multi-temporal approach**: routine monitoring at short intervals for management, and deeper evaluations at a few key milestones for strategic learning. This balanced frequency ensures timely identification of issues without being overwhelmed by constant data.

4.3 Data Requirements, Sources and Tool

Implementing the MEL Plan requires careful attention to **what data is needed, where it comes from, and how it will be collected and managed**. In this subsection, we outline the data requirements for our indicators and the tools/procedures to gather and analyze that data.
Identification of Data Needs: For each KPI identified in Section 3.2.2, the MEL team has specified the type of data required (quantitative figures, qualitative inputs, or both). These requirements guide the design of data collection instruments. In general:

- Quantitative KPIs (counts, percentages, financial figures, etc.) will rely on structured data collection forms or system logs.
- Qualitative KPIs (narrative feedback, case studies) will use surveys, interviews, or open-ended report sections.
- Some indicators may need *baseline data* (initial values for comparison) and *target values*. Baselines have been set using proposal data or initial surveys (e.g. baseline number of African partners = count at project start, baseline energy access = pre-project situation in pilot communities). Targets were either given in the proposal (as seen in the tables with target values) or set by the consortium for new KPIs (like the CCSE assignment KPIs use a scoring scale rather than a predefined target, since they measure degree of impact).

Data Sources: The main sources of information for MEL include:

- **Project Reports:** As mentioned, each funded project will provide periodic reports. These are a primary source for many indicators such as publications, patents, training activities, pilot outcomes, etc. To ensure consistency, the consortium will develop **common reporting templates** for projects. According to WP4 tasks, *"guidelines for project monitoring and evaluation will be developed to ensure efficiency and coherence, including level and type of data collection, timeframe and*

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frequency". These guidelines will detail what each project must report on (aligned to the KPIs) and the format (likely a mix of numeric tables and narrative sections).

- **Online Monitoring System (OMS):** LEAP-SE will utilize a centralized **Online Monitoring Tool/Platform** operated by LEAP-SE partner 6(LGI). This system (possibly the same or an upgraded version of the LEAP-RE Observatory Management System) will collect data from projects electronically. Project partners will have accounts to input their data (e.g. progress metrics, deliverables status, etc.). The OMS will store and organize these data, enabling the MEL team to extract summary reports. It will also track call information, partner information, etc. Use of the OMS ensures data is collected uniformly and stored securely in one place. We have a KPI that each project indeed uses this system and uploads required information.
- **Call Secretariat Records:** For call-related indicators (number of proposals, budgets, etc.), the Call Secretariat (WP2/3) is a key source. They maintain the official list of proposals submitted, the evaluation results, funding decisions, and the statistics of participation. At the conclusion of each call, the secretariat will provide a dataset (often in the form of a call report or an **"info on third party funding"** document as partially shown in Section 3 of the proposal) detailing these figures. For example, from the call secretariat we get *"list of projects selected for funding"* which is used to compute metrics like projects per country.
- **Meeting and Event Documentation:** WP5 and WP6 will produce minutes or reports for clustering workshops, forums, etc. These documents (participation lists, summary of discussions) serve as data for indicators like number of events, number of participants, and qualitative feedback from events. For instance, if a stakeholder forum report indicates certain policy insights were generated, that info feeds into our policy outcome evaluation.
- **Surveys and Interviews:** To capture less tangible outcomes (e.g. stakeholder satisfaction, partnership quality, learning uptake), the MEL plan will deploy **surveys** to different groups. Examples: an annual **partner survey** to gauge the consortium's internal collaboration health; a **participant survey** after each forum to see if policymakers found it useful; a **trainee survey** for those who attended capacity-building events to see if they gained skills. Also, **interviews or focus groups** might be conducted especially during evaluation phases (mid-term/final) with key informants (project leaders, funding agency reps, end-users of pilot projects) to gather in-depth insights.
- **External Data Sources:** Some indicators may require external information. For example, if we want to quantify community-level impact (like increased income), we might use local statistics or SDG indicators as references. Or for environmental impact (like GHG reduction), projects might use emission factors from literature to calculate their contributions. Where projects produce such analysis, it becomes part of our MEL data. Additionally, to measure long-term outcomes like new collaborations formed outside the program, we might track publications or projects via external databases (e.g. checking if LEAP-SE partners co-author papers outside project scope – sign of sustained collaboration).
- **Consortium Monitoring (WP1):** The coordination WP1 keeps track of management outputs like deliverables and milestones. The MEL team will liaise with WP1 to get updates on, say, deliverable submission status (for KPI 1.1.1) and risk mitigation reports. In fact, the periodic management report will include sections on these, which MEL can extract.
- **Platform Analytics:** If an online platform or website is used for dissemination, its analytics (e.g. number of visitors, downloads) will provide data for outreach indicators (like website visitors – LEAP-RE had a target 30k by M60). We will ensure to incorporate any such easy-to-collect metric from Google Analytics or similar on LEAP-SE web portals.

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Data Collection Tools and Formats: Based on the above sources, the following tools will be employed:

- Standardized **Excel spreadsheets or online forms** for projects to report indicator values. For instance, an online form for annual project report where they input numbers (like trained people) and upload documents. These forms feed the OMS database.
- **Templates** for qualitative reporting – e.g. a section in the project report template asking for "Success stories or significant outcomes this period" to capture narrative evidence.
- **Survey tools** (like Google Forms, SurveyMonkey, or EU's EUSurvey) for feedback surveys to partners and stakeholders. These are easy to deploy and can automatically compile results.
- **Interview guides** for semi-structured interviews during evaluations.
- A centralized **MEL data repository** (could simply be part of the OMS or a SharePoint) where all collected data, reports, minutes, etc. are stored and organized by indicator or by WP. This repository (with access controlled as needed) helps the MEL team efficiently retrieve information when analyzing.
- **Data analysis software:** We will use tools like Excel or statistical software to analyze quantitative data (computing sums, averages, progress against targets) and qualitative analysis tools (or manual coding) for open-ended responses. For example, if we have many comments from stakeholders, we might categorize them to see common lessons.
- **Indicator tracking matrix:** The MEL team will maintain an internal matrix listing each indicator, its definition, data source, last updated date, and next update due. This helps manage the schedule (as per Section 4.2) and ensure no indicator is overlooked.

Different requirements guide the mode of collection for each indicator to ensure best use of effort. For instance, if an indicator can be measured via existing data (e.g. proposal counts from the submission system), we won't burden partners with providing it again. If an indicator needs estimation (like "% of outcomes met for each MAR" which might be an evaluative judgment), we schedule that for evaluation workshops rather than routine reporting.

Data Quality and Validation: The MEL plan includes steps for verifying data accuracy:

- The WP4 MEL team (led by UEFISCDI and co-lead IRESEN) will review incoming data for consistency and plausibility. If something looks off (e.g. a project reports an improbably high number of beneficiaries), they will query and cross-check.
- Funding organizations (through the Call Steering Committee) also have a role in validating project reports, since they often receive scientific/financial reports from their national teams. This dual layer (project -> funder -> MEL team) helps catch errors.
- The Online Monitoring System will have basic validation rules (e.g. fields required, numeric ranges) to reduce errors at entry.
- For qualitative info like case studies, the MEL team might triangulate by contacting the project or stakeholders to confirm the story.
- We also aim to align with Horizon Europe reporting standards, so data collected can be cross-used for EC reports, reducing duplication and ensuring reliability.

By clearly specifying **"requirements for data collection and best use"** at the start, we lay the groundwork for efficient MEL operations. All partners will be briefed on these requirements early on (perhaps in a MEL Plan introductory workshop) so that everyone knows what data they need to gather during implementation.

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4.4 Roles and Responsibilities for MEL

Successful MEL implementation depends on clearly defined roles and responsibilities across the consortium's governance structure. LEAP-SE has set up dedicated bodies and assigned tasks to ensure monitoring and evaluation are carried out effectively. The following are the key actors and their responsibilities related to MEL:

- **WP4 – Follow-up and Monitoring of Projects (MEL Lead):** Work Package 4 is the focal point for MEL. It is coordinated by UEFISCDI (Romania) with co-lead IRESEN (Morocco) – notably, these are the same two organizations who led MEL in LEAP-RE, bringing experience. **WP4 Task 4.1** is specifically to *"Define the project monitoring and evaluation framework, including outcomes, outputs and activity indicators"*. This task, as described earlier, develops the M&E framework building on LEAP-RE's MEL Plan, identifies relevant indicators at various levels (impact, outcome, output), and ensures the framework is periodically reviewed and optimized. **Task 4.2** deals with *"development and implementation of common reporting and monitoring procedures"*, led by ANR (France) with co-lead MESRSI (Morocco) and contributions from UEFISCDI, MUR, PtJ, IRESEN. This means multiple funding agencies are involved in shaping how projects report and how data flows, ensuring the system meets various needs. **Task 4.4** involves *"monitoring and evaluation of the funded projects and submission of periodical reports"*, led by UEFISCDI with STDF (Egypt) co-leading and many partners participating. In practice, WP4 team's responsibilities include:
  - Designing MEL templates and tools (with Task 4.2).
  - Collecting data from projects annually (Task 4.4).
  - Compiling and analyzing MEL data.
  - Preparing MEL reports/deliverables (e.g. an annual monitoring report, mid-term evaluation report).
  - Coordinating self-evaluation exercises (organizing workshops, surveys).
  - Liaising with other WPs to gather needed information (e.g. WP5 for dissemination data, WP6 for training data).
  - Reporting to the Project Management Team and General Assembly on MEL findings.
  - Ensuring MEL framework stays relevant (reviewing indicators, possibly updating them with GA approval if needed).
- **Project Management Team (PMT):** The PMT, composed of WP leaders (9 organizations including UEFISCDI as WP4 lead, ANR coordinator, etc.), has oversight on operational decisions and **monitoring of work plan execution**. It will receive MEL updates from WP4 and use them for decision-making. The PMT is responsible for *"minor adaptations of the work plan… approval of reports; risk management"*. If MEL data indicates a need for course correction (say a target is not being met), the PMT can take action (e.g. reallocating resources, initiating mitigation). The PMT also ensures integration between WP4's work and other WPs (so that, for example, WP2, WP3 which run calls cooperate in providing data to WP4, and WP5, WP6 incorporate MEL insights into their activities).
- **Coordinator (ANR):** As overall coordinator, ANR ensures the project meets its obligations including reporting. ANR will work closely with WP4 to ensure MEL deliverables are produced and to interface with the European Commission (EC). The coordinator might also review the MEL reports and include summaries in official periodic reports to EC. Furthermore, the coordinator can help resolve any issues if partners are not providing required data, by emphasizing the contractual obligation.
- **Call Steering Committee (CSC):** The CSC is the decision-making body for call implementation and follow-up. It supervises the joint calls and likely also oversees the progress of funded projects at a high level. For MEL, the CSC's involvement may

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include reviewing the monitoring and evaluation approach for the calls (ensuring it fits funders' expectations) and using MEL data to inform call-related decisions (like gap filling, new partners integration). Also, since CSC members are funding agencies, they play a role in **validating project monitoring**: indeed, *"the monitoring and evaluation of the funded projects process will be coordinated by UEFISCDI…and IRESEN…(in charge of M&E in LEAP-RE)"*, but importantly, *"the beneficiaries (the projects) are instructed in the monitoring and evaluation procedures"* and must comply. The national funding organizations (CSC members) will enforce that compliance by making it part of their grant agreements with project teams (i.e. national contracts require annual reports). They also provide any national-level data needed.

- **Joint Call Secretariat:** This body handles operational management of the calls. It will supply WP4 with data on proposals, selection results, project start/end dates, and will likely maintain the central database of project information. The Secretariat ensures that right after calls are concluded, the monitoring of projects can begin seamlessly (e.g. introducing WP4 to project coordinators, scheduling kick-off where MEL expectations are communicated).
- **Project Beneficiaries (Funded Projects Teams):** At the ground level, each funded project consortium is responsible for **providing accurate and timely data on their progress**. As per the procedures, *"The beneficiaries will be obliged to submit relevant information on an annual basis"*, likely through the OMS or templates provided. They need to designate a responsible person (often the project coordinator or a specific WP leader within the project) to handle reporting. They also must attend any MEL-related training or briefing (so they understand indicators like those in Annex 1) and integrate data collection into their project activities (e.g. if they need to survey their pilot's users for MEL, they schedule that accordingly). Project teams should be honest and thorough in their reporting; any difficulties in achieving targets should be explained (this feeds into learning). Additionally, projects may be asked to participate in evaluation events (e.g. present at mid-term review, engage with Scientific Committee members during site visits or reviews).
- **Scientific Committee (SC):** An external Scientific Committee composed of independent experts (some possibly from LEAP-RE's SC) is set up in LEAP-SE. The SC *"provides active support to the scientific agenda…and participates in the scientific forums (WP5) and is active in projects' mid-term and final review…providing external scientific evaluation of progress and results."*. This means the SC will play a critical role in the **evaluation** aspect of MEL:
    - SC members may review progress reports of projects (mid-term and final) and give independent assessments of project performance.
    - They may attend review meetings with project teams to ask questions and give feedback.
    - The SC can validate whether the research outputs meet quality standards and whether the projects are likely to achieve impact.
    - They might also provide recommendations for course corrections or future directions (learning input).
    - Essentially, they add an objective lens, which is valuable for the MEL Plan to have credible evaluations. WP4 will coordinate with the SC, e.g. providing them with the MEL indicators to focus on and any synthesized data.
- **General Assembly (GA):** The GA, consisting of representatives of all partner organizations, is the ultimate decision-making body. The GA's decisions can include strategic reorientations of the work plan. MEL findings will be reported to the GA at least annually (probably at GA meetings) so that the members can decide on any needed reorientation or major changes. For example, if MEL shows a certain objective is not being sufficiently addressed, the GA can decide to allocate more effort or alter tasks. The GA would also approve any significant modifications to the

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MEL framework (e.g. adding a new indicator or changing a target) if deemed necessary.

- **WP Leaders (Other WPs):** Each WP leader has some responsibilities to provide data to WP4:
  - WP1 (Management): share info on deliverables, milestones, risk updates.
  - WP2 & WP3 (Calls management): provide data on call implementation (as described).
  - WP5 (Dissemination & Clustering): report on events, communication metrics, clustering outcomes (like list of newsletters that included LEAP-SE, etc.).
  - WP6 (Capacity & Policy): report on webinars, training outcomes, stakeholder forums outcomes.
    Each WP leader might have an internal monitoring of their WP tasks which feeds into the overall MEL.
- **External Audiences:** While not responsible for MEL execution, external stakeholders (like CCSE HLPD working group) might occasionally be invited to review MEL progress for transparency or advice. For instance, if CCSE partnership has its own monitoring framework, LEAP-SE MEL lead might present how LEAP-SE is contributing, and get feedback.

To coordinate all these roles, LEAP-SE will likely create a **MEL Working Group** or designate points of contact in each WP and among funding agencies to liaise with WP4. This group can meet periodically to ensure everyone fulfills their duties (for example, a quarterly MEL coordination call with WP4 leads, WP5 lead, WP6 lead, etc., to gather updates and troubleshoot issues in data collection).
In summary, WP4 drives the MEL process, but it is a **collective responsibility**:

- The **MEL core team (WP4)** designs and compiles,
- **Consortium bodies (PMT, GA, CSC)** oversee, support, and use MEL info,
- **Projects and WPs** provide the raw data and implement recommendations,
- **External experts (SC)** enhance objectivity and depth in evaluations,
- **Coordinator** ensures integration and compliance.

The LEAP-SE proposal explicitly states that *"the monitoring and evaluation of the funded projects process will be coordinated by UEFISCDI…the Romanian funding agency (in charge of M&E in LEAP-RE) and IRESEN…with participants: … (list of agencies)"*. This shows a strong commitment from multiple organizations to contribute staff time and expertise to MEL. It also ensures continuity of knowledge from LEAP-RE. Meanwhile, *"FFG, DSTI and LGI will oversee the exploitation of LEAP-SE Action projects"* which suggests these partners (Austria's FFG, South Africa's DSTI, and France's LGI) may have roles in particular aspects like data platform (LGI) or capacity building exploitation (DSTI). Each partner's specific role is detailed in the consortium plan and those are taken into account in MEL (for instance, LGI as platform lead ensures the OMS runs, FFG might lead science communication aligning with WP6 and thus monitor that aspect).
All partners have been made aware in the Consortium Agreement of these obligations. An important part of risk management (next sub-section) is ensuring partners do their MEL tasks; clear roles and strong leadership from WP4 and coordinator will mitigate any lapses.

4.5 Risks and Adaptive Management in MEL

Implementing a MEL Plan of this scope comes with potential **risks and challenges**, both in conducting MEL activities and in responding to the findings they generate. LEAP-SE acknowledges these risks and has plans for adaptive management to address them.
Risks to Effective MEL Implementation:

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1. **Incomplete or Low-Quality Data:** There is a risk that project teams do not report data fully or accurately (e.g. due to lack of capacity, oversight, or reluctance to share bad news). If annual reports are delayed or missing key info, the MEL analysis could be compromised. To mitigate this, as noted, we obligate annual reporting contractually and provide training/guidance to ensure understanding. The WP4 team will follow up with any lagging project immediately. Also, by simplifying reporting templates and aligning with funders' requirements, we reduce duplication (projects often have to report to both the consortium and their national funder, but if we streamline this, they are more likely to comply diligently). If despite this, data gaps occur, WP4 will flag it to the PMT and, if needed, escalate to the GA to enforce compliance. Additionally, the MEL plan calls for *periodic review of the framework to optimize data collection* – if some data is too hard to get or not useful, we might adjust the requirement to focus on more obtainable indicators.
2. **Indicator Overload:** With a large number of KPIs, there's a risk of overwhelming those collecting data and those analyzing it. The RACER criteria and iterative refinement are meant to keep the indicator set **manageable and relevant**. We plan to prioritize a core subset of indicators ("key" KPIs) for regular focus, while treating others as supplementary or to be measured less frequently. If during implementation it becomes clear some indicators are not yielding value (e.g. always static or redundant), the MEL team will recommend dropping or replacing them (with GA approval). This adaptability ensures effort is spent where it matters.
3. **Technical Issues with Data Tools:** The success of the OMS or other tools is critical. A risk is technical failure or user unfriendliness leading to poor uptake. To mitigate: LGI (or the responsible IT partner) will ensure the platform is robust and provide technical support to users. We have a metric to monitor platform operational status and user satisfaction. If early user surveys show problems, we allocate resources to fix them quickly (collaboration between WP4 and WP5/IT team).
4. **Lack of Engagement in Learning:** Beyond data, a risk is that partners or stakeholders might not engage in the *learning* aspect (e.g. not attending reflection workshops, or ignoring MEL feedback due to other priorities). To counter this, the project leadership (coordinator and WP4 lead) will foster a culture where MEL is valued, by regularly discussing MEL results in management meetings and highlighting improvements made due to MEL. Also, scheduling learning events conveniently (perhaps back-to-back with GA or major events) can improve participation. We also demonstrate quick wins from MEL – e.g., show how an identified issue was resolved – to build trust in the process.
5. **External Factors Affecting Outcomes:** Some outcomes/impacts may not be achieved due to external factors (e.g. a project can't complete a pilot due to political instability in a region, or market conditions change). This is a risk to achieving targets. While MEL cannot prevent external issues, adaptive management means we track such risks and adapt expectations. For instance, in the risk registry (in Section 3.2 of the proposal), certain risks would be identified (like "Political or security issues delay field activities"), with mitigation. If such a risk manifests, the MEL reports will note it and the consortium may reallocate efforts or adjust targets for affected indicators. The PMT's role in risk management (monitored as % of risks mitigated) ensures proactive measures.
6. **Pandemic or Travel Restrictions Impact Monitoring:** As seen in recent times, events like pandemics can hamper on-site monitoring (e.g. inability to conduct physical mid-term reviews or site visits). LEAP-SE can leverage virtual tools (as LEAP-RE did) – e.g. conduct remote evaluations, virtual stakeholder forums. The MEL Plan already values virtual engagement (even measuring reduced travel footprint). So, if needed, we will pivot to online methods without halting MEL.

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7. **Data Sensitivity and Privacy:** Some data (especially involving individuals, like surveys or personal info) must be handled carefully. We have to ensure GDPR compliance, anonymity in reporting sensitive feedback (so people can be honest), and overall ethical standards. WP4 will set protocols (e.g. informed consent for surveys, anonymization of quotes). If any stakeholder is uncomfortable providing data, we offer alternatives or ensure confidentiality to get quality input.

Adaptive Management Strategies:
Adaptive management in LEAP-SE means using MEL findings to inform decisions and adjust implementation in an ongoing cycle. Concretely:

- **Regular MEL Review in Management:** MEL results will be a standing agenda item in PMT meetings. The PMT will review monitoring data (e.g. quarterly dashboard or annual report) and identify any concerning trends. If, say, one of the general objectives lags (maybe GO2 – African engagement – if not enough African partners apply to the call), the PMT can initiate actions: e.g. intensify outreach, allocate budget for a second call information campaign, etc. This quick response prevents issues from compounding.
- **Learning Workshops and Adjustments:** As per plan, after initial monitoring phases and the mid-term self-evaluation, we will hold *"Learning Workshops with different stakeholder groups"*. In these, participants (e.g. project PIs, funding agency reps, end-users) will discuss what's working or not. The outcomes are recommendations. The MEL Plan specifically notes that *"final insights from these activities will be added to the MEL concept and will lead to a finalized concept"*. That means we expect to tweak our approach mid-project. For example, if stakeholders say some important impact isn't being captured, we might add an indicator or change how we evaluate an outcome.
- **Flexibility in Work Plan:** The General Assembly can approve strategic changes to the work plan based on MEL. For instance, if MEL shows that a certain activity (like a particular type of clustering event) yields great value, but only few were planned, the GA could decide to allocate additional resources to WP5 to do more of those. Conversely, if something is not effective, they could scale it down. MEL provides the justification for such amendments, which are indeed within GA's purview (GA can "Define strategic reorientations of the work plan or budget").
- **Risk Register Updates:** MEL will feed into the project's risk management. New risks identified (like underperformance in some area) get added to the risk log and mitigation actions are assigned. We track *"percentage of indicators satisfactorily addressed"* and *"risks avoided or mitigated"* as internal metrics. If an indicator isn't being met, that flags a risk which then must have a mitigation plan (like assign a task force to improve that metric).
- **Stakeholder Feedback Loops:** Particularly for policy impact, the MEL plan emphasizes creating feedback loops inside and outside the project. For example, if policy makers express through MEL surveys that they need more digestible info, WP5 could adapt its communication products (like more policy briefs or simpler summaries). Or if project teams share lessons learned about partnership challenges, the consortium can address those in the next call's design or in future collaboration agreements.
- **Documentation and Knowledge Management:** All changes made and lessons learned will be documented (possibly in an "adaptive management log"). This ensures institutional memory so that by project end, we have a clear narrative of how we improved over time. It will also be useful for any follow-up program to start with those insights.

The ultimate goal of adaptive management is captured in the line that monitoring data helps *"identify trends faster and respond as early as possible, thus increasing impact"*. We

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aim to exemplify this: if, hypothetically, MEL shows by Year 2 that not many cross-continent researcher exchanges are happening (lower than target), we don't wait till final review to lament it; instead, we might launch an exchange program within LEAP-SE in Year 3 or incentivize projects to do short visits by adding a small mobility fund.
In summary, LEAP-SE's approach to MEL is not just to monitor and evaluate in a vacuum, but to **close the loop by acting on the findings**. The plan is explicitly built to be *"ambitious and complex"* but *"designed to adapt… according to actual needs and emerging findings"*. This adaptive ethos ensures that MEL is a tool for continuous improvement and not merely an accountability requirement.

5. Conclusions and Further Development

In conclusion, this Monitoring, Evaluation and Learning Plan provides a comprehensive roadmap for tracking LEAP-SE's performance, evaluating its outcomes, and feeding lessons back into its management and strategic direction. By modeling the plan on the LEAP-RE experience and tailoring it to LEAP-SE's objectives, we have ensured both **continuity and customization** – continuity in using proven MEL concepts, and customization for the specific goals and context of sustainable energy partnership under LEAP-SE.
Key highlights of the MEL Plan include:

- A **clear logical framework** linking LEAP-SE's activities to expected results, with defined objectives and a robust set of indicators for each level (Section 3.2).
- An integrated **KPI matrix** (summarized in Section 3.2.2 and detailed in Annex 1) that encompasses program management, call implementation, partnership development, research outputs, capacity building, and impact metrics (business, social, environmental).
- Well-defined **processes for data collection** (Section 4.3) leveraging an online platform and standardized reporting, ensuring that data is gathered efficiently and consistently.
- A strong **governance and responsibility structure** (Section 4.4) with WP4 leading the MEL tasks and involvement of all relevant bodies (consortium partners, Scientific Committee, etc.) to validate and utilize the MEL outputs.
- A commitment to **adaptive management** – using MEL insights to make timely adjustments, thus fostering a culture of learning and continuous improvement within the project.

The MEL Plan is not a static document; it will continue to evolve. As noted, after initial implementation and the mid-term review, we will refine the MEL approach further. For example, we may streamline indicators, update targets if initial ones were unrealistic, or incorporate new evaluation questions that emerge. The annexes will be updated accordingly (for instance, Annex 2 indicator details might be expanded with actual baseline and progress values as we gather data).
By the end of LEAP-SE, we expect to deliver:

- **Annual MEL Reports** (internal or to EC) summarizing each year's monitoring data, achievements, and issues.
- A **Mid-Term Evaluation Report** capturing deeper analysis of outcomes up to that point and recommendations for the remaining duration.
- A **Final MEL Report / Final Impact Assessment** which will present the overall results against the objectives and key impact indicators, including success stories and areas where goals were not fully met (with reasons). This final report will also highlight how MEL was used to improve performance, thereby closing the learning loop.

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- **MEL Data Annexes** (comprehensive datasets of indicators) to accompany these reports for transparency.
- **Policy and Practice Lessons** documentation – essentially the knowledge gained from MEL that can inform future EU-AU collaborations. This could be an annex or separate brief for the CCSE partnership, ensuring that the learning in LEAP-SE benefits the design of subsequent initiatives.

One of LEAP-SE's aspirations is to pave the way for a long-term, self-sustaining platform for EU-Africa STI cooperation in sustainable energy. The MEL Plan contributes to this by systematically capturing what works and what doesn't in this partnership model, thus providing a foundation for that long-term strategy (KPI 1.2.4 and 1.2.5 on partnership model and commitments). Through MEL, the consortium will have evidence and confidence to propose future steps (e.g., continuation of the co-fund scheme, expansion to new countries, or integration into a permanent AU-EU program).

In summary, the MEL Plan is an enabling tool that will help **maximize LEAP-SE's strategic and operational performance**:

- Strategically, by keeping the project aligned with its objectives and external policy goals (using data to stay on mission).
- Operationally, by informing management decisions and encouraging efficient use of resources (identifying and solving problems early).
- And not least, **accountability-wise**, by demonstrating to all stakeholders – from the European Commission to African ministries, and to the public – what the partnership has delivered in concrete terms.

By implementing this MEL Plan diligently, LEAP-SE will not only achieve its own targets more effectively but will also generate valuable insights into the process of international R&I partnership. These insights will be disseminated and used, closing the loop between learning and action. The MEL findings will be shared in consortium meetings, with project partners, and with broader audiences through communication channels (reports, policy briefs, conferences), thereby contributing to wider learning beyond LEAP-SE.
The MEL Plan therefore embodies the project's commitment to transparency, effectiveness, and learning. With all partners' collaboration, we will use this Plan to guide LEAP-SE toward a successful conclusion and ensure that its legacy – in knowledge, capacity, and partnership strength – endures well beyond the project's formal end.

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Annexes

Annex 1: Key Performance Indicator Catalog for Project Outcomes

(This annex presents the detailed KPIs used to evaluate the outcomes and impacts of LEAP-SE funded projects, as introduced in Section 3.2.2, particularly the Business & Economic, Social, and Environmental impact dimensions. Each KPI includes its definition, measurement approach, and scoring criteria.)

Table 1: Business & Economic KPIs (Weight 50% of overall project impact score)

KPI	Description & Measurement	Scoring (0–3)
Revenue Change	Increase in revenues, cost savings, or financial returns achieved by end-users or companies due to the project's outputs (e.g. reduced energy costs from efficiency). Measured as % change in revenue or savings for beneficiaries.	Quantitative: <0% = 0; 0–5% = 1; 5–15% = 2; >15% = 3. Qualitative (if exact data not available): No increase or negative = 0; Low increase = 1; Medium increase = 2; High increase = 3.
Operational Cost Reduction	Reduction in capital or operating expenditures resulting from the project's innovation (e.g. maintenance, fuel costs). Measured as % decrease in relevant costs.	<0% (cost increase) = 0; 0–5% cost reduction = 1; 5–15% = 2; >15% = 3. If qualitative: No reduction or higher costs = 0; Low decrease = 1; Medium = 2; High = 3.
Productivity Change	Improvement in productivity (output per unit input) due to the project. E.g. increased agricultural yield per energy input, or labor productivity gains. Measured as % increase in output or efficiency.	<0% = 0 (productivity worsened); 0–5% = 1; 5–15% = 2; >15% = 3 increase. Qualitative: None/negative = 0; Low improvement = 1; Moderate = 2; High = 3.
New Business Opportunities	Extent to which the project enables new market segments, businesses, or value chains (e.g. creation of startups, new services, energy access models). Assessed qualitatively or by evidence of business creation.	None identified = 0; New opportunities unlikely ("improbable") = 1; Probable = 2; Already realized (e.g. a new startup formed or product commercialized during project) = 3.
Patents & IP Generation	Indication of innovation maturity via patentability. Counts whether project results have patent applications filed or granted, or IP clearly protectable.	No patent potential or none filed = 0; Patentable idea identified (patent "improbable" but possible) = 1; Patent likely ("probable") = 2 (patent application filed); Patent granted or IP already exploited = 3.
Replication Readiness	How close the technology/solution is to deployment or scale-up. Aligns with TRL: concept, pilot, pre-commercial, commercial-ready.	Concept stage only = 0; Pilot/demonstration done = 1; Pre-commercial prototype = 2; Commercial uptake started

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KPI	Description & Measurement	Scoring (0–3)
		(solution adopted by market/users) = 3.

Table 2: Social KPIs (Weight 25%)

KPI	Description & Measurement	Scoring (0–3)
Impact on Energy Access	Project's contribution to improved energy access for people/communities – including new connections or improved reliability/affordability/quality of energy services. Measured by number of people with access improvements or qualitative degree of improvement.	None or negative effect on energy access = 0; Low positive impact (e.g. minor improvement for few people) = 1; Medium positive impact (noticeable improvement or access for some communities) = 2; High positive impact (significant increase in access/reliability for a large population) = 3.
Impact on Basic Services	Degree to which the project improves essential services (health, education, etc.) through energy access or technology. E.g. powering clinics or schools, enabling cold chain for vaccines. Measured qualitatively by testimonials or service metrics.	None or negative = 0; Low positive impact (e.g. one facility marginally benefited) = 1; Medium impact (several facilities or a community see moderate improvements) = 2; High impact (transformative improvement in essential services, e.g. village clinic now fully powered, multiple outcomes) = 3.
Knowledge & Capacity Building	Contribution to education and research capacity – e.g. training sessions held, students supported, academic collaborations, knowledge-sharing workshops. Can be measured by number of people trained, workshops, or qualitatively by increased skills.	No significant capacity activity = 0; Minor contribution (e.g. one-off training or a brochure) = 1; Moderate (local training programs, one or two academic outputs or partnerships) = 2; High contribution (supporting advanced training like multiple PhDs/postdocs, several publications, formal partnerships with universities, etc.) = 3.
Gender, Youth & Inclusion	Targeted benefits for women, youth, or marginalized groups – e.g. improved access for women, jobs for youth, inclusive decision-making. Measured qualitatively (and quantitatively if data on participants by gender/age).	None or negative (no inclusion or even reinforcing inequality) = 0; Low positive (some minor consideration of gender/youth) = 1; Medium (project had a notable component benefiting these groups, e.g. some women employed or trained) = 2; High (strong focus and outcomes for gender/youth, e.g. majority of beneficiaries are women or

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KPI	Description & Measurement	Scoring (0–3)
		youth, specific empowerment results) = 3.
Civil Society Involvement	Degree of engagement of civil society and local communities in the project. Looks at participation of NGOs, community orgs, local residents in design, implementation or benefit from outputs.	None (project isolated from community) = 0; Low (minimal community interaction) = 1; Moderate (some community consultations or involvement, moderate local uptake) = 2; High (community actively involved, project co-created or widely embraced by local society) = 3.

Table 3: Environmental KPIs (Weight 25%)

KPI	Description & Measurement	Scoring (0–3)
Climate Resilience	Extent project increases resilience of local systems to climate change – e.g. helping communities anticipate, cope with, and recover from climate impacts through the solution. Qualitative assessment based on project context (does it address climate vulnerabilities?).	None or negative (no effect or increases vulnerability) = 0; Low improvement in resilience = 1; Medium improvement = 2; High improvement (clear evidence of enhanced adaptive capacity, e.g. system keeps running under extreme weather where previously it wouldn't) = 3.
Resource Efficiency	How the project promotes sustainable use of resources and reduces waste/pollution. Assessed via four sub-indicators: *Water savings*, *Land use impact*, *Energy efficiency*, *GHG emissions reduction*. Each sub-indicator is scored 0 (no improvement) to 3 (high improvement).	**Sub-indicator scoring:** e.g. Water saving: none =0, high saving =3; similarly for Land, Energy, Emissions. **Overall score:** Arithmetic mean of the four sub-indicator scores (rounded to nearest whole number for 0–3 scale). High overall resource efficiency gains would thus yield 3.
Value Chain Greening	Degree project improves environmental sustainability across its entire value chain – from production of technology to end-of-life. Includes circular economy aspects (reuse/recycle), reduced emissions in production/transport, etc.	None = 0; Low = 1 (minor greening, e.g. some recyclable materials); Moderate = 2 (project introduces several greener practices in value chain); High = 3 (project fundamentally green across lifecycle, e.g. zero-waste or fully circular design).
Local Environmental Integration	How well the solution integrates with/protects local environment and ecosystems. E.g. avoids deforestation, minimizes pollution, maybe improves local environmental quality.	None or negative (causes local harm) = 0; Low = 1 (little consideration of local ecosystem); Medium = 2 (some measures to reduce footprint, minor improvement); High = 3 (solution is eco-friendly, possibly enhancing local environment, e.g. replacing

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KPI	Description & Measurement	Scoring (0–3)
		diesel generators reducing local air pollution).

Scoring and Use: Each project will be evaluated on these KPIs at mid-term and end. A score of 3 indicates a high positive outcome in that area, 0 indicates no benefit or a negative effect. The weighted combination (50% Economic, 25% Social, 25% Environmental) can be used to compute an overall impact score per project for comparison and portfolio analysis (though qualitative nuances will also be considered). This KPI catalog enables a structured assessment of how each project contributes to LEAP-SE's broader goals of sustainable impact. All project partners have been briefed on measuring these factors; data will be collected via project reports, beneficiary surveys, and calculations as appropriate. The MEL team will aggregate findings from these KPIs to report program-level impact (e.g. total people gaining energy access across all projects, total CO_2 emissions potentially avoided, etc.), as well as highlight exemplary success stories or lessons for improvement in these dimensions.

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