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List of Acronyms and Abbreviations

BoD	Board of Directors
CAPA	Corrective Action Preventive Action
CS	Cyprus Seeds
CoE	Centre of Excellence
D	Deliverable
DEI	Diversity, Equity, and Inclusion
DTU	Technical University Denmark
EC	European Commission
EMC	Executive Management Committee
EMMENA	Eastern Mediterranean, Middle East and North Africa
EU	European Union
GA	Grant Agreement
H&S	Health and Safety
HE	Horizon Europe
HRS4R	Human Resources Strategy for Researchers
ISO	International Organization for Standardization
KPI	Key Performance Indicator
QA	Quality Assurance
QMS	Quality Management System
R&I	Research and Innovation
REA	European Research Executive Agency
RIF	Research and Innovation Foundation
SOP	Standard Operating Procedure
SWOT	Strengths, Weaknesses, Opportunities and Threats
UCY	University of Cyprus
UG	University of Groningen
WI	Work Instruction
WP	Work Package

Executive Summary

This document presents the Operationalisation Manual, (Deliverable 2.1 - PHAETHON Teaming project) developed to provide a structured framework for the governance, operations, and strategic management of the PHAETHON Centre of Excellence (CoE). Specifically, this document aims to describe the standardized processes developed to streamline governance, administration, and research operations. In addition, it defines the responsibilities of leadership, operational units, and stakeholders in maintaining and continuously improving the CoE's processes.

In addition, the document also emphasizes continuous improvement, ensuring that the Operationalisation Manual evolves in response to emerging challenges, regulatory updates, and technological advancements. By implementing robust monitoring mechanisms and key performance indicators (KPIs), the manual supports data-driven decision-making and enhances operational efficiency.

Moreover, the Operationalisation Manual outlines key organizational structures, leadership responsibilities, policies, operational procedures, risk management strategies, and performance evaluation mechanisms. It provides guidance on ensuring seamless Director of Operations coordination between various units, optimizing resource utilization, and maintaining transparency in decision-making. Additionally, the manual defines the quality assurance processes and risk mitigation strategies necessary to uphold high operational standards and enhance stakeholder engagement.

This manual is intended for use by PHAETHON CoE leadership, operational units, research staff, and external stakeholders, ensuring that all aspects of the CoE's operations are aligned with its mission and strategic objectives. The Director of Operations holds primary responsibility for maintaining and updating this manual, in collaboration with the Executive Management Committee (EMC) and under the governance of the Board of Directors (BoD). By adhering to the principles and methodologies outlined in this document, PHAETHON CoE aims to drive operational excellence, foster international collaborations, and position itself as a leading Centre in the energy sector. This document remains a living document, subject to periodic updates and refinements to reflect best practices, regulatory changes, and institutional developments.

Finally, the deliverable is structured into ten sections, each addressing key aspects of the CoE's operational framework:

- Chapter 1: Introduces the purpose and scope of the Operationalisation Manual.
- Chapter 2: Provides an overview of the organizational structure, objectives, and priorities of the PHAETHON CoE.
- Chapter 3: Defines leadership roles, management reporting lines, and the responsibilities outlined in the Operationalisation Manual.
- Chapter 4: Details the policies governing PHAETHON CoE, covering overarching rules, compliance standards, and strategic guidelines.
- Chapter 5: Describes risk management processes, including risk identification, mitigation strategies, and contingency planning.
- Chapter 6: Outlines resource management requirements, specifying personnel, infrastructure, and financial needs.

- Chapter 7: Defines the operational procedures and workflows, including Standard Operating Procedures (SOPs) for different units.
- Chapter 8: Explains performance evaluation mechanisms, monitoring frameworks, and internal audit procedures.
- Chapter 9: Focuses on continuous improvement strategies, corrective actions, and innovation-driven refinements.
- Chapter 10: Summarizes the conclusions drawn from the deliverable.

1 Introduction

This document serves as the Operationalisation Manual for PHAETHON Centre of Excellence (CoE), providing a structured framework for ensuring consistency, efficiency, compliance, and quality control in a company's processes by providing standardized guidelines, policies, and procedures for daily operations and strategic decision-making. The aim of this manual is to establish the principles, mechanisms, and procedures necessary to maintain high standards of quality and efficiency across all activities, outputs, and strategic objectives of the CoE.

The manual details the organizational structure, roles and responsibilities, standard operating procedures (SOPs), quality assurance measures, risk management strategies, compliance requirements, performance evaluation metrics, communication protocols, resource management, and continuous improvement processes to ensure streamlined operations and sustained growth.

To ensure sustained quality and effectiveness, this manual also establishes mechanisms for continuous monitoring and improvement, detailing the methodologies and key performance indicators (KPIs) that will be used to evaluate the CoE's performance. By adhering to the principles and processes outlined in this manual, the CoE aims to achieve operational excellence, and support the research and innovation activities to the highest standards. As a living document, this manual will be updated as necessary to reflect evolving best practices, regulatory requirements, and strategic refinements.

1.1 Scope

The scope of this document is to outline the framework for governing the CoE's structure, processes, and operational methodologies. It provides guidance on the strategic, administrative, and technical functions necessary to ensure the effective and efficient operation of the CoE while maintaining compliance with international standards and best practices. This manual applies horizontally to all organizational units, departments, and personnel within the PHAETHON CoE, including research teams, administrative staff, and management bodies. It also extends to partners, collaborators, and external stakeholders engaged in PHAETHON CoE initiatives. The document outlines standardized procedures, roles, and responsibilities to ensure consistency and quality in all CoE activities.

1.2 Objectives

Overall, the PHAETHON CoE Operationalisation Manual serves to provide a structured, standardized, and efficient approach to the management and execution of the Centre's activities: The objectives of the manual are to:

- Ensure operational efficiency by standardizing procedures for operations (administration, personnel and equipment management, and resource execution).
- Maintain compliance and governance by adhering to national and international regulations, ethical standards, and best practices.
- Strengthen quality assurance and risk management through performance monitoring, risk mitigation strategies, and a Quality Management System (QMS).
- Optimize resource utilization by ensuring effective financial planning, budgeting, and allocation of infrastructure and human resources.

- Facilitate research, innovation, and knowledge transfer by supporting efficient project execution, interdisciplinary collaboration, and industry engagement.
- Enhance stakeholder engagement by fostering strategic partnerships with academia, industry, government, and research institutions. This also entails the communication and dissemination practices of main outputs.
- Ensure sustainability and long-term Impact by aligning operations with global best practices and supporting economic, social, and environmental sustainability.
- Drive continuous improvement by implementing monitoring and evaluation mechanisms to track progress and adapt to emerging trends.

1.3 Responsibilities

The Operationalisation Manual is the responsibility of the Director of Operations of PHAETHON CoE. The Director of Operations holds overall responsibility for the development, enforcement, and continuous improvement of the Operationalisation Manual. This includes ensuring that all policies, processes, and operational frameworks remain aligned with the CoE's mission, national regulations, and international best practices.

Since the Operationalisation Manual is a living document, it requires periodic revisions to reflect operational improvements, regulatory changes, and strategic shifts. The Director of Operations, in collaboration with the Executive Management Committee (EMC) of PHAETHON CoE and department heads, is responsible for proposing and implementing necessary updates. These changes are subject to review and approval by the CoE's governing Board of Directors (BoD).

Ultimately, all personnel within PHAETHON CoE share responsibility for adhering to the manual and upholding its principles. Through effective governance, accountability, and continuous improvement, the Operationalisation Manual ensures the CoE's long-term excellence, sustainability, and impact.

2 Context of organisation

The PHAETHON CoE is established as a leading research and innovation centre in the field of intelligent, efficient, and sustainable energy solutions. It originates from the successful transformation of the FOSS Research Centre for Sustainable Energy at the University of Cyprus (UCY) into a fully autonomous and self-sustaining entity. The PHAETHON CoE operates through the Horizon Europe Teaming Project, a European initiative aimed at strengthening research and innovation excellence in widening countries by fostering international collaboration and knowledge transfer.

PHAETHON CoE determines all the external and internal issues that are relevant to its purpose and strategic direction and affect its ability to achieve the intended results of operations. Accordingly, consideration is given to the following:

- Positive and negative factors or conditions that directly or indirectly affect its ability to meet quality, environmental, and health and safety requirements.
- External context and issues include legal, regulatory, technological, competitive, cultural, social, political, and economic environments.
- Internal context and issues, such as values, culture, organization structure, knowledge, and performance of the business.
- Determination and requirements of the needs and expectations of interested parties relevant to its operations.
- Authority and ability to exercise control and influence.
- Activities, services and innovation products relevant to the core business of the CoE.
- Documented information is controlled and retained as evidence to support that the context of the CoE has been considered in the operational procedures.
- Identification of threats and assessing the degree of risk based on the criteria set for the consequence and likelihood of risk (these issues are recorded in risk registers).

This section introduces the context of the organisation alongside the priorities and the operational processes.

2.1 Organisational priorities

The core mission of the PHAETHON CoE is to advance cutting-edge research, technological innovation, and industry collaboration in the energy sector. It seeks to address global, European and regional challenges related to climate neutrality, decarbonization, energy efficiency, and renewable grid integration.

Overall, PHAETHON CoE is strategically aligned with the priorities of the European Green Deal [1], REPowerEU [2], and Cyprus' Smart Specialisation Strategy and Integrated National Energy and Climate Plan [3], ensuring that its research contributes to the green and digital transition at national and European levels. With a multidisciplinary and international consortium, PHAETHON CoE is supported by key partners, including the Technical University of Denmark (DTU), the University of Groningen (UG), and Cyprus Seeds (CS). This collaboration fosters expertise in technological development, socio-economic research, policy analysis, and sustainable energy solutions. The CoE is structured to enhance research capacity, attract investment, and strengthen the energy innovation ecosystem in Cyprus and the broader Eastern Mediterranean, Middle East, and North Africa

(EMMENA) region. The strategic organisational priorities of PHAETHON CoE are outlined in the Table below.

Table 1. Strategic organisational priorities (P) of PHAETHON CoE.

Id	Priority description
P1.	Research and Innovation excellence by fostering cutting-edge research, technological innovation, and interdisciplinary collaboration in intelligent, efficient and sustainable energy solutions.
P2.	Quality assurance, compliance and risk management by ensuring adherence to national and international standards through robust quality assurance processes and compliance frameworks. Priority is also given to the identification, assessment, and mitigation of operational, financial, and research-related risks proactively.
P3.	Effective governance and management by establishing transparent, accountable, and efficient governance structures and management practices.
P4.	Resource optimization by maximizing the utilization of human, infrastructure, and financial resources for optimal operational efficiency and sustainability.
P5.	Collaboration and stakeholder engagement by strengthening partnerships with academic institutions, industry, government bodies, and international research networks.
P6.	Knowledge dissemination and technology transfer by promoting the effective dissemination of research findings and facilitating technology transfer to industry and society.
P7.	Capacity building and career development by investing in human capital through targeted training, education, and professional development initiatives.
P8.	Continuous improvement regularly evaluating performance through established metrics and implementing continuous improvement strategies.
P9.	Sustainability and long-term impact by embedding sustainability in all operations and ensuring lasting economic, social, and environmental impacts.

2.2 Needs and expectation of interested parties

As with internal and external issues, the PHAETHON CoE has identified its stakeholders along with their specific requirements and expectations. Additionally, the CoE has assessed the needs and expectations of interested parties, recognizing associated opportunities, threats, and the level of risk linked to each. Table 2 summarises the needs and expectations of interested parties.

Table 2. Needs and expectations of interested parties to PHAETHON CoE.

Interested parties	Needs and expectations
Government and regulatory bodies	Government and regulatory bodies expect the PHAETHON CoE to align with national and international energy policies, comply with regulatory frameworks, transparently manage public funds, and contribute strategically to Cyprus's national objectives.
Academic and research institutions	Academic and research institutions require collaborative research opportunities, access to advanced facilities (Smart Energy Infrastructure lab access and Energy Analytics dataspace access), contributions to scientific knowledge, open-access data, effective knowledge

	dissemination, and joint capacity-building initiatives, including staff mobility.
Industry and the private sector	Industry and the private sector need practical, market-oriented research outcomes, efficient technology commercialization processes, strategic partnerships that enhance competitiveness, involvement in decision-making, and support for startups and spin-offs.
Funding Agencies	Funding agencies (e.g., European Commission (EC), European Research Executive Agency (REA), Research and Innovation Foundation (RIF) Cyprus) expect effective use of awarded grants, impactful research aligned with EU strategic priorities (such as the Green Deal and REPowerEU), timely completion of milestones, strong quality assurance and risk management practices, and clear evidence of long-term sustainability.
PHAETHON CoE employees	Operations staff and researchers need clear roles and responsibilities, professional growth opportunities, a safe and inclusive workplace, recognition for high-quality performance, and effective internal communication, including involvement in decision-making processes.
International partners and networks	International partners and networks require meaningful contributions to global research collaborations, educational activities and joint programmes, knowledge-sharing, increased international visibility, opportunities for researcher exchanges, and alignment with international energy and climate action initiatives.
Community (general public)	Local communities and broader society expect research that addresses significant societal challenges, creates positive socio-economic impacts, fosters transparent communication and ethical research practices, and actively contributes to local and regional sustainable development goals.

2.3 Scope of operationalisation manual

This Operationalisation Manual defines the structure, processes, and governance mechanisms that will enable PHAETHON CoE to achieve its strategic objectives while maintaining high standards of quality, compliance, and operational efficiency. It provides a roadmap for sustainable growth, stakeholder engagement, and continuous improvement, ensuring that PHAETHON CoE remains at the forefront of energy research and innovation.

2.4 Operational processes

In establishing, operating, and maintaining high standards of operational quality, PHAETHON CoE has identified all processes necessary to deliver its research and innovation outputs, and services (education and high-level consulting) in accordance with defined standards.

PHAETHON CoE implements a process-based approach within its operational framework. By clearly defining and managing top-level organizational processes, the CoE effectively reduces the likelihood of nonconforming outputs or service deviations being identified only at the final stages or after completion. Instead, potential nonconformities and

associated risks are proactively identified and addressed in real time within each primary process. These main processes may be supported by various subordinate tasks and sub-processes.

Monitoring and controlling these primary processes ensure that subordinate tasks and sub-processes are effectively implemented and maintained. Each top-level process is supported by detailed Standard Operating Procedures (SOPs) outlining:

- Relevant inputs and expected outputs.
- Clearly identified process owners.
- Roles, responsibilities, and authority levels.
- Potential risks and opportunities.
- Essential and supporting resources.
- Criteria and methodologies to measure process effectiveness.
- Process-specific quality objectives (as applicable).

The documentation relevant to the operations within PHAETHON CoE consists of the following hierarchical levels tabulated in the Table below.

Table 3. Hierarchical levels of PHAETHON CoE operations documentation.

Level	Document	Description
1	Policies	Policies are documents authorized by the CoE EMC and approved by the BoD demonstrating organizational commitment to quality excellence and continuous improvement.
2	Operationalisation Manual	A high-level foundational document that delineates the CoE's structural and functional blueprint. It provides comprehensive guidelines on governance, process flows, quality assurance, risk management, and operational procedures, ensuring that all activities align with the CoE's mission to advance intelligent, efficient, and sustainable energy solutions. By standardizing processes and establishing clear protocols, the manual fosters consistency, compliance, and continuous improvement across all facets of the organization, thereby enhancing its capacity to effectively address contemporary energy challenges.
3	Standard Operating Procedures (SOPs)	A SOP is a set of detailed, written instructions designed to guide employees through routine tasks and operations. By providing clear, step-by-step guidelines, SOPs aim to ensure consistency, quality, and compliance across all functions within an organization.
4	Work Instructions (WIs)	A work instruction is a detailed document that provides specific, step-by-step guidance on how to perform a particular task or activity within a process. It serves to ensure consistency and accuracy in task execution by clearly outlining the required actions, tools, and standards (e.g. specific process flows, software tools used, and equipment utilized for the undertaken work).

- | | | |
|---|---|---|
| 5 | Records, Forms, Guides, Manuals and Plans | The various records, forms, guides, reports and notes are maintained as documented evidence, demonstrating the ongoing effective operation and compliance of PHAETHON CoE to standardized document control processes. |
|---|---|---|

The hierarchy of the operational processes of PHAETHON CoE is depicted in Figure 1.

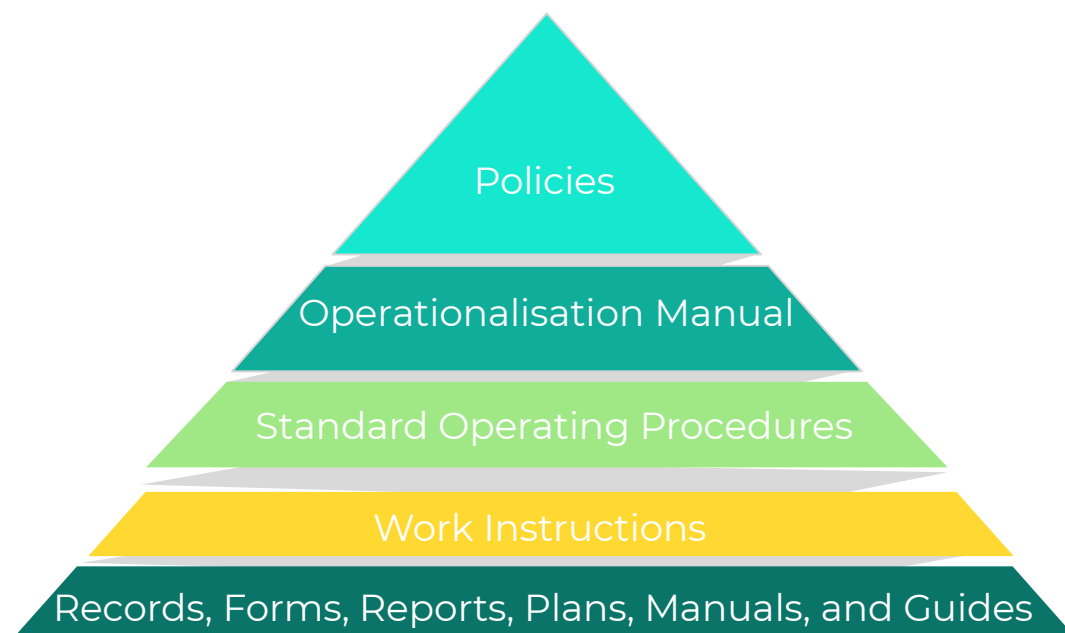


Figure 1. PHAETHON CoE process documentation hierarchy levels.

2.5 Internal and external issues

At PHAETHON CoE, each directorate and unit identify issues and concerns pertinent to their stakeholders, encompassing both direct and indirect aspects. Internal issues may involve technological challenges, employee welfare, organizational culture, and management considerations, while external concerns might relate to consumer behaviour, statutory and regulatory compliance, procurement processes, and economic factors. The main pillars of the external and internal context impacting the operations of PHAETHON CoE are summarised in Figure 2.

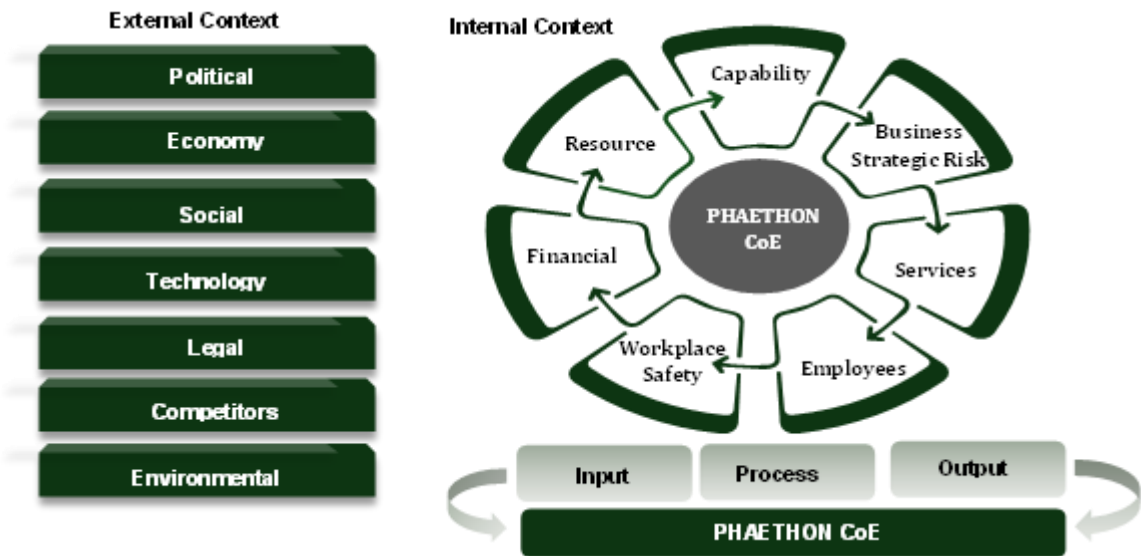


Figure 2. PHAETHON CoE external and internal issues.

Overall, respective departments and units are responsible for identifying risks and opportunities associated with these concerns and managing them effectively.

3 Leadership and Commitment

Operational excellence within PHAETHON CoE is guided by an autonomous governance framework, ensuring effective management, financial sustainability, and regulatory compliance. The CoE operates under the European Research Executive Agency (REA) funding guidelines and adheres to international quality assurance and risk management standards. Its long-term sustainability is further secured through government support, private-sector collaboration, and industrial partnerships, positioning PHAETHON as a key driver of energy innovation and economic growth in the region.

3.1 General

The leadership of PHAETHON CoE is dedicated to exemplifying strong leadership and unwavering commitment to its Operationalisation Manual. The EMC assumes full responsibility for the manual's effectiveness and demonstrates this commitment through the following actions:

- **Defining roles and responsibilities** - PHAETHON CoE leadership establishes clear roles, allocates responsibilities, and delegates authorities to ensure the efficient management of the Operationalisation Manual. These roles and responsibilities are meticulously documented in the "Leadership - Organizational Roles, Responsibilities, and Authorities" section (Section 3.3) and are further detailed in position descriptions (Job description records) and procedures as applicable.
- **Policy and objectives alignment** - PHAETHON CoE leadership ensures that relevant policies and objectives are formulated for the Operationalisation Manual, aligning them with the CoE's context and strategic direction.
- **Integration into business and service-oriented processes** - PHAETHON CoE leadership integrates the requirements of the manual seamlessly into the CoE's core business processes, ensuring coherence and consistency across all functions.
- **Resource allocation (human and infrastructure resources)** - PHAETHON CoE leadership guarantees the availability of necessary resources for the effective implementation and maintenance of the Operationalisation Manual.
- **Achievement of intended outcomes** - PHAETHON CoE leadership oversees that the manual achieves its intended outcomes, contributing to the CoE's mission of advancing intelligent, efficient, and sustainable energy solutions.
- **Promotion of processes and risk-based thinking** - PHAETHON CoE leadership advocates for a process-oriented approach and the adoption of risk-based thinking throughout the organisation.
- **Communication of Operationalisation Manual** - PHAETHON CoE leadership emphasizes the significance of effective management and adherence to the requirements of the Operationalisation manual, fostering a culture of quality and continuous improvement.
- **Engagement and support of personnel** - PHAETHON CoE leadership actively engages, directs, and supports staff at all levels, encouraging their contribution to the manual's effectiveness and the CoE's overall success.
- **Promotion of improvement** - PHAETHON CoE leadership fosters an environment where continuous improvement is encouraged and facilitated, ensuring the Centre remains at the forefront of energy research and innovation.

- **Support for management roles** - PHAETHON CoE leadership ensures that other managerial roles are empowered to demonstrate leadership within their respective areas of responsibility, promoting a cohesive and accountable organisational structure.

Furthermore, PHAETHON CoE leadership is fully committed to serve stakeholder needs and the continuous enhancement of stakeholder satisfaction. This commitment is demonstrated through several key actions: ensuring that all relevant stakeholder and statutory requirements are thoroughly identified, understood, and consistently met across all operations; proactively identifying and addressing risks and opportunities that could influence the quality of services, as well as the CoE's capacity to boost stakeholder satisfaction; exercising diligent care over stakeholders' assets and interests entrusted to the CoE; and routinely evaluating stakeholders' perceptions to assess the fulfilment of their needs and expectations. To support informed decision-making and strategic planning, critical data and insights derived from the effective execution of the Operationalisation Manual processes are systematically gathered and compiled by the Director of Operations and subsequently presented at each Executive Management meeting.

3.2 Service-need focus

The leadership of PHAETHON CoE adopts a stakeholder-centric approach directed to service needs, ensuring that the expectations of stakeholders are identified, translated into actionable requirements, and consistently fulfilled to enhance stakeholder satisfaction. This commitment is outlined in the CoE's Operationalisation Manual and is achieved through the following measures outlined in the Table below.

Table 4. Commitment measures of PHAETHON CoE towards current and future needs.

Id	Measures description
1	Understanding requirements and meeting expectations - Ensuring that all relevant stakeholder, statutory, and regulatory requirements are identified, comprehended, and consistently met across all operations.
2	Maintaining high standards of stakeholder satisfaction- Continuously prioritizing the enhancement of stakeholder satisfaction in all strategic and operational decisions.
3	Timely addressing risks and opportunities - Identifying and mitigating risks and opportunities that could affect the conformity of products and services, as well as the Centre's ability to enhance stakeholder satisfaction.

To comply with service needs and ensure that all services provided meet high standards and end-user expectations, PHAETHON CoE has implemented a comprehensive quality assurance (QA) framework aligned to ISO 9001 [4]. This framework encompasses the development and adherence to SOPs and WIs, which provide detailed, step-by-step guidance for performing specific tasks and processes. By standardizing these procedures, the CoE ensures consistency, reliability, and excellence in service delivery.

Moreover, PHAETHON CoE emphasizes continuous improvement through regular monitoring and evaluation of its services. Feedback mechanisms are in place to gather insights from stakeholders and end-users, facilitating the identification of areas for enhancement. This proactive approach enables the CoE to adapt to evolving needs and maintain the highest quality standards in its offerings.

In addition, the CoE invests in the professional development of its personnel, providing training and resources to ensure that staff members are well-equipped to execute their roles effectively. This commitment to capacity building not only enhances service quality but also fosters a culture of excellence and accountability within the organisation.

3.3 Management reporting lines

PHAETHON CoE is structured to facilitate effective management and operational efficiency in the realm of intelligent, efficient, and sustainable energy solutions. At the lead is the BoD, responsible for strategic decision-making and overall governance (first-level decision-making body). The BoD comprises of esteemed individuals with expertise in the energy sector from various organizations, including one representative from the University of Cyprus.

Second-level decision-making is performed by the EMC. Specifically, the EMC is responsible for second-level decisions and comprises of senior members of the organisation appointed by the BoD. Additionally, the EMC ensures that the CoE's objectives align with both national and international energy policies, fostering collaborations with the esteemed partners of the Technical University of Denmark (DTU), the University of Groningen (UG), and Cyprus Seeds (CS).

Reporting directly to the EMC are various departments and units which are directed by appointed managers/directors.

This hierarchical structure, with clear reporting lines from specialized departments and units to the EMC and BoD, ensures cohesive operations and the successful realization of PHAETHON CoE's mission to drive sustainable energy solutions.

3.4 Leadership roles and responsibilities of Operationalisation Manual

In the context of the Operationalisation Manual, the leadership structure and their associated responsibilities are tabulated below.

Table 5. Leadership roles and responsibilities for the Operationalisation Manual.

Id	Designation	Leadership and Responsibilities
1	EMC	<p><u>Leadership</u> - This top-tier leadership body is responsible for overarching strategic direction and governance. The EMC ensures that the organization's mission, vision, and objectives are consistently pursued and achieved.</p> <p><u>Responsibilities:</u></p> <ul style="list-style-type: none"> • Develop and uphold the organisation's long-term vision and strategic plan. • Establish policies that guide the organization's culture and operational methodologies. • Ensure the availability and optimal utilization of resources necessary for operational success.
2	Director of Operations	<p><u>Leadership</u> - Reporting directly to the EMC, the Director of Operations oversees daily operations, ensuring that business processes align with strategic goals. The Director of</p>

		<p>Operations acts as a bridge between high-level strategic planning and ground-level execution.</p> <p><u>Responsibilities:</u></p> <ul style="list-style-type: none"> • Oversee the development, design, and improvement of operational systems that deliver the organisation's activities and services. • Implement processes that enhance efficiency, quality, and cost-effectiveness. • Establish performance metrics and monitor outcomes to ensure alignment with strategic objectives.
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Lastly, the delineation of the leadership roles and responsibilities within the Operationalisation Manual, of PHAETHON CoE can foster clarity, enhance communication, and drive cohesive efforts toward achieving the strategic and operational goals.

4 Policies

4.1 General

Policies are fundamental for the effective operation of PHAETHON CoE, providing a structured framework that guides its operations, research endeavours, and strategic initiatives. By establishing clear guidelines and standards, these policies ensure that all activities align with the CoE's mission to advance intelligent, efficient, and sustainable energy solutions. They promote consistency in decision-making, uphold ethical standards, and facilitate compliance with local, European, and international regulations. Moreover, well-defined policies foster a culture of continuous improvement and innovation, enabling PHAETHON CoE to effectively address complex energy challenges and contribute meaningfully to socio-economic development at both national and regional levels.

4.2 Overarching Policies

Establishing a comprehensive policy framework is recognised as of utmost importance for the efficient operations and sustainability of PHAETHON CoE. Such policies provide structured guidance across various facets of the CoE's operations, ensuring that all activities align with the overarching mission and strategic objectives.

The main overarching policies of PHAETHON CoE are summarised and described in the following Table.

Table 6. PHAETHON CoE policies overview.

Id	Policy	Brief description
1	Personnel Code of Conduct Policy	<p>The policy for the researchers and administrative code of conduct outlines the expected behaviour, responsible conduct of research and responsibilities of researchers, detailing disciplinary procedures and consequences for violations, thereby upholding academic integrity and community standards.</p> <p>This policy is linked to the:</p> <ul style="list-style-type: none"> • Personnel SOP • Document control SOP • Control of Non-conforming Work SOP • Personnel Training SOP • Job roles and description records • Conflict of Interest records • Impartiality records • Authorization records
2	Performance Evaluation Policy	<p>This policy applies to all research and administrative employees of PHAETHON CoE, irrespective of their role or level within the organization. The Performance Evaluation Policy aims to establish a transparent and formalized system to evaluate and enhance employee performance, ensuring alignment between individual goals and the CoE's mission to advance intelligent, efficient, and sustainable energy solutions.</p> <p>This policy is linked to the:</p>

		<ul style="list-style-type: none"> Performance Appraisals SOP
3	Equal Opportunity and Diversity Policy	<p>This policy is a commitment to fostering an inclusive environment is vital. This policy ensures that all members of the academic community have equal access to opportunities, prohibiting discrimination based on race, gender, religion, or other protected characteristics.</p> <p>This policy is linked to the:</p> <ul style="list-style-type: none"> Human Resource SOP Human Resources Recruitment and Retention Plan (PHAETHON Teaming project D2.3)
4	Data Protection and Privacy Policy	<p>This policy is dedicated to safeguarding personal data and the CoE's commitment to collecting, processing, and storing personal information responsibly and transparently, in compliance with applicable data protection laws and regulations. The policy further reflects PHAETHON CoE's dedication to maintaining trust and upholding the highest standards of data privacy.</p> <p>This policy is linked to the:</p> <ul style="list-style-type: none"> Data Management Plan (PHAETHON Teaming project D1.6) Ethics, Security and Privacy Guidelines (PHAETHON Teaming project D1.9)
5	Infrastructure Policy	<p>The Infrastructure Policy outlines the rules for using and accessing the Smart Energy Infrastructure of PHAETHON CoE and utilizing equipment. It further involves all the H&S rules of the facilities and laboratories.</p> <p>This policy is linked to the:</p> <ul style="list-style-type: none"> Equipment purchasing SOP Equipment calibration SOP Requirements for Facility and Environmental Conditions SOP Interlaboratory comparison and methods verification SOP Lab Access manual Lab Access rules Infrastructure Authorization records H&S Manual
6	Leave, Time-Off and Remote Work Policy	<p>This policy outlines the guidelines for employees to request and utilize time away from work, encompassing various forms of leave such as vacation, personal days, and sick leave. All necessary approval processes, and any restrictions are outlined transparently in order to help balance employee well-being with the organization's needs.</p> <p>This policy is linked to the:</p> <ul style="list-style-type: none"> Human Resource SOP
7	Disciplinary Action Policy	<p>The Disciplinary Action Policy outlines the rules PHAETHON CoE follows to address employee misconduct or performance issues. The policy incorporates a progressive discipline framework, starting with verbal warnings and escalating to written</p>

reprimands, suspension, or termination, depending on the severity and frequency of the offence.

This policy is linked also to the:

- Human Resource SOP

8	Budgeting and Financial Management Policy	<p>The Budgeting and Financial Management Policy outlines PHAETHON CoE's framework for planning, allocating, and managing financial resources to ensure fiscal responsibility and alignment with strategic objectives.</p> <p>This policy is linked to the:</p> <ul style="list-style-type: none"> • Financial Management SOP • Review of requests, tenders and contracts SOP • Purchasing SOP
9	Quality Policy	<p>The Quality Policy of PHAETHON CoE describes the high-level rules that ensure quality assurance and control horizontally to all operational processes.</p> <p>This policy is linked to the:</p> <ul style="list-style-type: none"> • Internal Audit SOP • Management Review SOP • Risk Management SOP • Quality Assurance and Control record

4.3 PHAETHON CoE Objectives and Targets

PHAETHON CoE is wholly committed to the objectives which are in place to ensure that the services provided fully always meet the requirements of the end-users. PHAETHON CoE's ultimate objective is to be a world-class autonomous and self-sustained Centre of Excellence (CoE), which will act as a catalyst for excellence and innovation in the energy field. The overarching objectives and targets of PHAETHON CoE (addressed by the Operationalisation Manual) are tabulated below.

Table 7. PHAETHON CoE overarching objectives and targets.

Id	Objective	Targets	Achievement Indicators
1	Broaden the scientific scope of the CoE in needs-based research and education, placing Cyprus at the forefront of energy research.	<p>A multi-disciplinary research agenda.</p> <p>New research and educational programmes.</p>	<ul style="list-style-type: none"> • 5 energy research themes established with the advanced partners. • A joint PhD programme (capacity: 15 students/yr) and MSc in Sustainable Energy (capacity: 25 students/year). • Dynamic internship programme to upskill graduates and technical personnel.

		High-quality research publications.	<ul style="list-style-type: none"> • 282+ publications/year in high-impact journals/conferences (estimated as 2 publications per year × 141 CoE researchers)
2	Build scientific capacity and state-of-the-art infrastructure in key energy domains, rendering the CoE as the driving R&I force in the Eastern Mediterranean, Middle East and North Africa (EMMENA) region.	Enhanced critical mass of highly-skilled researchers in energy domains.	<ul style="list-style-type: none"> • 141+ full-time equivalent (FTE) researchers recruited and trained through specialised scientific and competence-building programmes
		State-of-the-art research infrastructure.	<ul style="list-style-type: none"> • Research infrastructure comprising of 4 laboratories, 5 test-beds and 2 pilots in key energy domains
3	Advance the uptake of novel smart energy solutions by the high-tech energy sector through the CoE's Innovation Hub and partnership with the energy industry, stimulating sustainable socio-economic development.	Innovation Hub.	<ul style="list-style-type: none"> • A fully functional Innovation Hub that incorporates supportive innovation and mentoring services.
		Enhanced industrial collaborations.	<ul style="list-style-type: none"> • 30+ international industrial memorandums of understanding (MoU) with renewable energy source (RES), storage and smart grid companies and SMEs for joint research and development (R&D)
4	Increase the capacity of Cyprus in cross-border scientific and innovation networks, and place the CoE at the heart of the R&I energy ecosystem, focusing on the energy transition of Cyprus and the EMMENA region.	Active participation and leadership in international energy networks.	<ul style="list-style-type: none"> • 18+ memberships by connecting the CoE to the networks of all partners and beyond.
		A national energy R&I Taskforce.	<ul style="list-style-type: none"> • A Taskforce encompassing at least 10 key energy stakeholders and policymakers of Cyprus.

		An EMMENA region energy R&I platform.	• A fully operational platform mirroring EU Technology and Policy platforms and transferring knowledge with at least 20 regional energy R&I, governance and industry members.
5	Secure PHAETHON CoE's long-term sustainability through diversified funding sources that include national, regional and European research funds, education and training programmes, exploitation of research results, generation of intellectual property rights (IPR), new businesses and start-ups	Increased submissions and funding. Improved exploitation and technology transfer capabilities for CoE.	• 15% increase in the number of submitted proposals/yr with average funding of €0.33m/yr/project, targeting national, regional and EU funds. • 5 research outputs/year (e.g. smart energy solutions) to be transferred for product development and commercialisation (e.g. start-ups).

Note: The list of KPIs presented in this Table represents only a partial selection, as it does not disclose the full set of project KPIs. In particular, the above table represents a selection of the most relevant KPIs that the project is pursuing in its plan and implementation, providing evidence of the overall intent and aim, while maintaining the confidentiality on critical competitive aspects).

4.3.1 Quality Policy

PHAETHON CoE Quality Policy has been created taking account of the context of the Organization, and in support of the strategic direction we are taking regarding quality. The policy refers to the SMART framework PHAETHON CoE uses for setting objectives and contains the relevant commitments. For PHAETHON CoE, the Quality Policy is pivotal in steering its mission to advance intelligent, efficient, and sustainable energy solutions. By adhering to a robust Quality Policy, PHAETHON CoE ensures that its research, innovation, and educational activities consistently align with the highest standards of excellence. The Quality Policy statement of PHAETHON CoE is:

Quality Policy Statement: At PHAETHON CoE, we are committed to excellence in all aspects of our research and innovation endeavours in the energy field. Our dedication to quality is inherent in our pursuit of knowledge, innovation, and impactful contributions to the energy sector. As a Centre of Excellence, we recognize the importance of maintaining the highest standards of quality in our research processes, methodologies, and outcomes.

The PHAETHON CoE is committed to achieving sustainable, impactful growth by delivering high-quality research in intelligent, efficient, and sustainable energy solutions, while promoting knowledge and technology transfer within the region. This commitment

is realized through the implementation of systematic procedures that demonstrate the organization's competence to society. The successful execution of the Quality Policy involves the active participation of all staff members, fostering a culture of continuous improvement within the working environment. To maintain the desired level of quality assurance, PHAETHON CoE assumes full responsibility for its Quality Management System (QMS), conducting regular inspections to ensure compliance and effectiveness. To this end, the objectives of the Quality Management System are to:

- Position PHAETHON CoE among the leading research centres, facilitating knowledge and technology transfer in the region.
- Support innovation and economic growth in Cyprus.
- Explore capabilities that enhance the Research, Technology, Development, and Innovation (RTDI) landscape in the surrounding region.
- Foster the development of a business and innovation cluster.
- Maintain an effective Quality Management System.
- Adhere to local, European, and international legislation.
- Monitor, measure, and evaluate critical parameters and processes to ensure the quality, health, and safety of employees and visitors.
- Ensure continuous consultation and participation of employees and their representatives on issues affecting them.

Embracing the principle of continuous improvement, PHAETHON CoE recognizes and rewards both teamwork and individual contributions, investing in its people to drive excellence and innovation.

4.4 Communicating the Quality Policy

The Quality Policy is held as documented information, and the controlled copy is owned and maintained by the Director of Operations. An electronic copy is held on the PHAETHON CoE server ([collaborative environment](#)). All employees can view this copy, and the PDF version can be copied and sent to relevant third parties. The Quality Policy is also published on the webpage of PHAETHON CoE (weblink: <https://www.phaethon-coe.eu/>).

5 Operational procedures

5.1 Operational requirements

Ultimately at PHAETHON CoE, our aim is to establish and promote standards and best practices that drive excellence across the research, innovation, educational, infrastructure and operations pillars. This involves developing and documenting templates, blueprints, and repeatable methodologies for critical operations, including:

- Standardizing and unifying documentation (Policies, SOPs, WIs and records) and output formats.
- Estimating levels of effort.
- Quality assurance.
- Technical architecture maintenance.
- Performance monitoring and optimization.
- Programming standards and styles.
- Comprehensive management and resource planning.

Procedures developed for everyday operations are a fusion of best practices transferred from advanced partners, established industry standards and the practical insights gained through experiences and successes [4], [5], [6]. Key considerations of the developed procedures include:

- Reflecting on past solutions to similar challenges and their outcomes.
- Evaluating what was effective, identifying areas for improvement, and extracting valuable lessons.
- Benchmarking against industry standards to establish baselines for comparison.

5.1.1 Content of SOP

As regards the content of SOPs, an SOP typically includes a clear purpose and scope, defining the procedure's objective and its relevance within the organization. It also specifies roles and responsibilities, identifying the individuals accountable for executing and overseeing the procedure.

Additionally, SOPs detail the step-by-step workflow, including necessary tools, materials, or technologies required to complete the process effectively. They often incorporate compliance and regulatory requirements to ensure adherence to industry standards, legal obligations, and safety protocols.

Furthermore, the SOPs employed at PHAETHON CoE include performance metrics or quality control measures to evaluate the effectiveness of the process and maintain operational excellence. All the SOPs and related WIs are mapped at the PHAETHON CoE Procedural Outline (see Annex C).

Finally, to enhance clarity and usability, SOPs may also feature visual aids, flowcharts, and reference documents, providing additional guidance to users.

5.2 Standard Operating Procedures

This section provides an overview of the SOPs of each PHAETHON CoE Unit subjected and included within the Operationalisation Manual. In addition, the mandate of each Unit is located at the PHAETHON CoE common repository (see Annex B).

As part of the Director of Operations's responsibilities, oversight of the overall quality assurance and performance monitoring at PHAETHON CoE ensures that all research, innovation, and operational activities adhere to the highest standards of quality. The Director of Operations is responsible for developing, implementing, and monitoring quality assurance frameworks to guarantee that the CoE's outputs align with national, European, and international best practices, regulatory requirements, and strategic objectives. **The SOPs of the Quality Assurance Unit** are summarised and described in the following Table.

Table 8. SOPs overview for performance monitoring and quality assurance.

Id	SOP brief description
1	<p>SOP – Management Review</p> <p>The scope of this procedure is to regularly review the quality of the operational processes and ensure that operations continue to be effective and suitable fulfilling the changing and future needs of the CoE.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> Record - Management review minutes of meeting records Quality Manager Record - Meeting schedule Record - Corrective action requests Record - Stakeholder complaint Record - Management review meeting checklist Record - Management review meeting schedule
2	<p>SOP – Internal Quality Audit</p> <p>This procedure outlines the method by which internal quality audits are conducted within PHAETHON CoE.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> Record - Internal audit reports Record - Internal audit schedule Record - Internal audit checklist Record - Internal audit report Record - Corrective action request form
3	<p>SOP – Risks and Opportunities</p> <p>The scope of this procedure is to provide a flexible process to assist in managing downside risks and focus on value creation by capitalizing on opportunities. Each of the steps within this procedure is expanded with optional considerations, potential questions, and techniques that can be applied if deemed appropriate.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> Record – Risk Register
4	<p>SOP – Complaints</p> <p>The scope of this procedure is to define how to handle and resolve stakeholder complaints and to outline steps for handling corrective action requests where the</p>

problem has been discovered by the stakeholder rather than identified and rectified within the CoE.

Associated WIs and records:

- Record - Corrective Action Request form
- Record – Corrective Action Preventive Action (CAPA) request log
- Record - Stakeholder complaint

5 SOP – Control of Non-conforming work

The scope of this procedure is to control any aspect of the activities of the CoE that does not conform to its own procedures or the agreed requirements of the stakeholders or significant deviations in the outputs that were obtained.

Associated WIs and records:

- Record - Corrective Action Request form

5.2.1 Human Resources Unit

5.2.1.1 Mission

The Human Resources Unit is responsible for the strategic management and administration of the CoE's human capital. The main scope of the Unit is to attract, develop, retain, and support a highly skilled workforce that aligns with PHAETHON CoE's mission of advancing sustainable energy research and innovation. The Human Resources Unit ensures that all employment policies, talent management strategies, and workplace practices promote fairness, inclusivity, and operational excellence while adhering to national, European, and international labour laws and best practices (e.g. HRS4R).

5.2.1.2 Responsibilities

The Human Resources Unit is mandated to oversee and implement policies and procedures that support effective workforce planning, professional development, and a productive working environment. The key responsibilities include:

- Develop and implement recruitment and selection processes to attract top-tier talent in research, administration, and technical roles.
- Ensure transparent, merit-based recruitment practices in line with EU and national employment regulations.
- Promote diversity, equity, and inclusion (DEI) in hiring and workplace policies.
- Foster a positive work culture that encourages collaboration, innovation, and professional growth.
- Develop and implement a performance appraisal system, ensuring regular and structured feedback.
- Establish career development programs, training, and mentorship initiatives.
- Develop and manage competitive compensation structures and benefits packages.
- Ensure timely and accurate payroll processing, contract management, and employment compliance.
- Establish and regularly update HR policies to reflect best practices, legal obligations, and institutional needs.
- Ensure compliance with National labour laws, workplace safety regulations, and ethical standards.

5.2.1.3 Authority

The Human Resources Unit operates closely linked to the EMC for the development and implementation of strategic workforce planning. It has the authority to:

- Develop and implement Human Resources policies, procedures, and workforce planning strategies.
- Conduct performance evaluations and recommend career advancement opportunities.
- Address employee relations issues, grievances, and workplace conflicts.
- Oversee compliance with employment laws and regulations.

5.2.1.4 Reporting and Accountability

The Human Resources Unit Manager reports directly to the Chief Executive Officer (CEO) of PHAETHON CoE and submits periodic workforce reports to the EMC. The Human Resources Unit is responsible for documenting all Human Resources processes, maintaining accurate employee records, and ensuring transparency in all matters.

5.2.1.5 Overview of processes and documentation

The SOPs of the Human Resources Unit are summarised in the following Table.

Table 9. SOPs overview of Human Resources Unit.

Id	SOP brief description
1	<p>SOP – Personnel</p> <p>This procedure outlines the process for defining competence requirements, selecting and supervising personnel, authorizing and monitoring staff, assessing training needs to ensure optimal performance, providing both specific and general quality awareness training, and maintaining comprehensive training records.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • WI – Onboarding • Record - Onsite training evaluation • Record - Personnel training and qualification • Record - Authorization certificate • Record - Conflict of interest disclosure form • Record - Confidentiality agreement form • Record - Personnel list of activities • Record - Job description
2	<p>SOP – Personnel Training</p> <p>This procedure describes the approach taken for training and upskilling employees with the necessary knowledge to perform their tasks effectively. It involves identifying training needs, developing and delivering targeted training programs, and maintaining records of completed training sessions.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • Record - Training summary
3	<p>SOP – Human Resource</p> <p>This procedure aligns with the principles of the Human Resources Strategy for Researchers (HRS4R) to foster a transparent, inclusive, and merit-based research environment. It covers key aspects such as recruitment and selection, professional development, career progression, training, and working conditions, ensuring compliance with the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. The procedure focuses on equal opportunities, open recruitment, and continuous skills enhancement through structured training programs. Additionally, it integrates measures for work-life balance, performance evaluation, and ethical research conduct, ensuring a supportive and collaborative working environment for all personnel.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • Plans – Recruitment and Retention plan • Record – Personnel archive
4	<p>SOP – Performance Appraisals</p> <p>This procedure outlines the steps for the yearly evaluation of personnel in order to ensure continuous professional growth. The appraisal process includes the yearly evaluation of personnel based on predefined KPIs, contributions, and milestones.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • Record – Appraisal form

5.2.2 Finance & Accounting Unit

5.2.2.1 Mission

The mission of the Finance & Accounting Unit is to manage financial resources, revenue streams and procurement activities, ensuring fiscal responsibility, transparency, and compliance with national and European financial regulations. Along this context, the unit supports the CoE's sustainability by ensuring efficient budget allocation, financial planning, procurement efficiency, and regulatory adherence.

5.2.2.2 Responsibilities

The Finance & Accounting Unit is mandated to oversee the development, implementation, and monitoring of financial and procurement policies, ensuring the efficient management of resources while maintaining accountability and compliance. The key responsibilities include:

- Develop and oversee the annual budget, ensuring alignment with the CoE's strategic and operational goals.
- Ensure effective resource allocation to support research, innovation, and administrative functions.
- Monitor financial performance and provide regular financial reports to senior management.
- Ensure that all expenditures comply with financial regulations and align with the CoE's financial policies.
- Manage the disbursement of funds, ensuring accurate and timely processing of payments.
- Establish and implement procurement policies and procedures to ensure fair, transparent, and cost-effective purchasing.
- Maintain financial records and documentation for audits and external evaluations.
- Identify and mitigate financial risks, ensuring the CoE's long-term fiscal stability.
- Monitor project-related financial transactions and report on fund utilization to stakeholders.

5.2.2.3 Reporting and Accountability

The Finance & Accounting Unit operates under the authority of the EMC and reports to the Chief Financial Officer (CFO). The CFO has the authority to:

- Develop and implement financial and procurement policies in alignment with institutional and regulatory requirements.
- Conduct financial reviews, audits, and procurement assessments to ensure transparency and accountability.
- Approve and monitor budget allocations and financial disbursements.
- Oversee the financial administration of grants and research funding, ensuring compliance with donor and funding agency guidelines.
- Implement procurement procedures to ensure fair, transparent, and cost-effective purchasing.

5.2.2.4 Overview of processes and documentation

The SOPs of the Finance & Accounting Unit are summarised and described in the following Table.

Table 10. SOPs overview of Finance & Accounting Unit.

Id	SOP brief description
1	<p>SOP – Financial Management SOP</p> <p>This procedure outlines the allocation, monitoring, and reporting of financial resources in compliance with institutional, national, and European regulations (research and non-research funds). The procedure also includes grant and funding management, ensuring compliance with project-specific financial guidelines.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • Record – Yearly budget plan and forecast • Record – Financial statements • Record – Personnel payroll statements • Record – Tax and Compliance Documents • Record – Reimbursement and Travel Expense
2	<p>SOP – Review of requests, tenders and contracts SOP</p> <p>This procedure outlines the review process for requests, tenders, and contracts to ensure that stakeholder requirements are clearly defined, documented, and understood. It verifies that the CoE has the necessary resources and capabilities to meet these requirements while selecting appropriate test methods that align with stakeholder expectations (in liaison with the Head of PHAETHON CoE Research Directorate).</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • Record – Stakeholder information request • Record – Price list (services offered by PHAETHON CoE) • Record – Contract review • Record – Stakeholder approval for subcontracted work • Record – Stakeholder satisfaction survey form
3	<p>SOP – Purchasing SOP</p> <p>This procedure defines the process for the selection and purchase of services and supplies for PHAETHON CoE. Moreover, this procedure is also used for the reception and storage of supplies relevant to the infrastructure (in liaison with the Head of the Smart Energy Infrastructure of PHAETHON CoE).</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • WI – Invoicing supplies • Record – Request for purchase form • Record – List of Suppliers record

5.2.3 Research & Innovation Support Unit

5.2.3.1 Mission

The mission of the Research Support Unit of PHAETHON CoE is to significantly contribute to the long-term sustainability of PHAETHON Centre of Excellence (CoE), and its capacity for research & innovation excellence, by facilitating and increasing the Centre's access to competitive funding (national, European and international), and enhancing the successful compilation and implementation of funded projects, to help them achieve their objectives and maximize their impacts, on the CoE and overall.

5.2.3.2 Responsibilities

The Research Support Unit is mandated to provide consultation services to the CoE and its staff, to support their goals for participation in grants funded through calls for proposals or other competitive selection processes. These grants may be related to any of the R&I, Education, and Infrastructure pillars of PHAETHON CoE. On the other hand, the Unit does not provide support to any of the contracted research & development, consulting or educational services that the CoE provides. The key responsibilities include:

- Promote the active participation of the CoE in calls that align with its strategic objectives, such as carrying out cutting-edge research, expanding its thematic agenda, developing new research and educational programmes and attracting highly skilled researchers.
- Streamline the proposal development process to reduce administrative burdens and allow the CoE to take over increasingly leading/complex roles in proposals.
- Enhance the CoE's proposal development capabilities through continuous training, to facilitate the submission of high-quality proposals and increase success rates, resulting in a sustained revenue stream for the CoE.
- Collaborate with the Strategic Development & External Affairs Head for promoting and facilitating collaborations in proposals.
- Monitor participation in funded projects to ensure efficient and effective use of financial, personnel, or other resources, and adherence to funding agency requirements.
- Promote timely progress of funded projects, achievement of milestones and completion of deliverables, to help projects successfully reach their objectives and wider impacts.
- Contribute to the successful delivery of all project responsibilities, thus further enhancing PHAETHON's credibility as leader/partner in international consortia.
- Maintain dissemination channels and organize information events, workshops and orientation sessions for newcomers, covering topics throughout the whole research funding lifecycle.
- Oversee compliance with the Open Science Policy of PHAETHON CoE, and the requirements of different funding agencies.

5.2.3.3 Authority

The Head of the Research Support Unit operates under the Director of Operations and works closely with the EMC to ensure that information regarding research funds and successful proposals are effectively communicated. The unit has the authority to:

- Advise and assist researchers in identifying open calls (pre-award assistance) and securing funding (provision of research toolkits).

- Develop research guides that align with National and European regulatory and institutional requirements.
- Oversee proposal submissions to ensure completeness and compliance with funding agency guidelines.
- Monitor funded projects for adherence to financial and ethical obligations.
- Provide strategic recommendations on research opportunities and partnerships.

5.2.3.4 Reporting and Accountability

The Head of the Research Support Unit reports to the Director of Operations and submits periodic reports to the EMC. The unit ensures that all funding applications, research toolkits and guides, and relevant research funding documents are properly maintained and regularly updated.

5.2.3.5 Overview of processes and documentation

The SOPs of the Research Support Unit are described in the following Table.

Table 11. SOPs overview of Research Support Unit.

Id	SOP brief description
1	SOP – Pre-award research funding identification This procedure outlines the process for the identification of possible research funding opportunities and consortium participation for research proposal development. Associated WIs and records: <ul style="list-style-type: none"> • WI - Monitoring and dissemination of funding opportunities
2	SOP – Pre-award research funding training This procedure outlines the approach taken by PHAETHON CoE to provide researchers with the necessary training, resources, and guidance on identifying funding opportunities, developing competitive proposals, ensuring compliance with funding requirements, and successfully undertaking the grant application process stages. Associated WIs and records: <ul style="list-style-type: none"> • WI – Research funding training • Records – Training material (RIF and HE)
3	SOP – Research proposal development and grant agreements preparation This procedure describes the approach for compiling competitive research proposals, ensuring alignment with funding requirements, budgeting, consortium building and compliance with grant agencies regulations. Associated WIs and records: <ul style="list-style-type: none"> • WI - Proposal Development (National, Regional, European). • WI - Grant agreement preparation • WI - Consortium agreement preparation
4	SOP – Research project initiation and planning This project outlines the step to initiate the execution of project after successful grant notification. Associated WIs and records: <ul style="list-style-type: none"> • WI - Administrative project initiation • WI – Project planning
5	SOP – Research project execution, monitoring, and control This procedure defines the processes for managing project implementation, tracking progress against milestones, ensuring compliance with funding and CoE requirements, and applying corrective actions to maintain project efficiency.

Associated WIs and records:

- WI - Project execution, monitoring and control for National projects
- WI - Project execution, monitoring and control for EU-funded projects
- WI - Organization of project meetings and other events

- | | |
|---|--|
| 6 | <p>SOP – Research project financial and administrative management</p> <p>This procedure describes the processes for overseeing project budget, financial reporting, expenditure tracking, and resource allocation (human and equipment resources), ensuring adherence with funding regulations and CoE policies.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • WI - Purchasing and subcontracting • WI - Purchase of durable equipment and depreciation • WI - Financial and technical reporting |
| 7 | <p>SOP – Research project closure</p> <p>This procedure outlines the process for concluding research projects, including also administrative, financial, and technical reporting, dissemination of results (publications), and secure archiving of project data and outputs.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • WI - Administrative project closure • Record – Research project archive |
| 8 | <p>SOP – Research outputs open science compliance</p> <p>This procedure describes the principles and steps taken to ensure that all research publications, datasets, and outputs adhere to open science principles, promoting transparency, accessibility, and compliance with national, European, and international open-access policies, including findability, accessibility, interoperability, and reusability (FAIR) data principles.</p> <ul style="list-style-type: none"> • WI - Open access to publications • WI - Open access to research outputs (methods, data, models and schematics) |

5.2.4 Administration Unit

5.2.4.1 Mission

The mission of the Administration Unit of PHAETHON CoE is to safeguard and support the efficient operation of the CoE's administrative processes. The unit is crucial in supporting the governance, operational, and compliance functions of PHAETHON CoE by managing general administration, institutional affairs, legal compliance, document control, and best practices.

5.2.4.2 Responsibilities

The Administration Unit is mandated to manage processes that facilitate seamless operational administrative efficiency. The key responsibilities include:

- Manage and coordinate all administrative functions of the CoE (general admin services, including procurement of office supplies and resource management). Maintain and update institutional administration records, legal agreements, and compliance documents.
- Oversee document management, archiving, retention and official records related to the CoE's activities.
- Manage official correspondence and reporting obligations with internal and external stakeholders.
- Coordinate administrative support services for employees, including workspaces, office supplies, and internal logistics.
- Facilitate onboarding and administrative processes for new staff and visiting researchers (lab access and internships).
- Provide administrative support for legal agreements, contracts, and institutional policies.
- Ensure all contracts, procurement agreements, and partnerships comply with legal and institutional requirements.
- Organize official events, meetings, and institutional engagements.
- Oversee scheduling, travel arrangements, and protocol management for official events.

5.2.4.3 Authority

The Administration Unit operates under the management of the Director of Operations. The unit has the authority to:

- Develop and implement administrative standard procedures and guides.
- Oversee the management of official documents, records, and reporting obligations.
- Coordinate with internal and external stakeholders to ensure effective administrative alignment.

5.2.4.4 Reporting and Accountability

The Head of the Administration Unit reports to the Director of Operations regarding administrative issues and financial budgeting. The unit is responsible for maintaining accurate administrative records, ensuring regulatory compliance, and supporting the operational needs of PHAETHON CoE.

5.2.4.5 Overview of processes and documentation

The SOPs of the Administrative Unit are summarised and described in the following Table.

Table 12. SOPs overview of Administration Unit.

Id	SOP brief description
1	<p>SOP – Administrative coordination and operational support</p> <p>This procedure outlines the management and coordination of the everyday administration operations, resource allocation, and compliance with institutional and regulatory requirements.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • WI – Institutional office supplies administration • WI – Office work operational support • WI - Letters filing and disseminating • WI - Repairs and maintenance • WI - Internal/external communication of CoE
2	<p>SOP – Events organisation</p> <p>This procedure documents the steps taken to organize and undertake internal events within the CoE.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • WI – Calendar events management
3	<p>SOP – Document control</p> <p>The Document control procedure outlines the steps taken to control all PHAETHON CoE operational documents (internally generated and from external sources) and to identify changes made to documents</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • Record - Master list of controlled documents
4	<p>SOP – Control of records</p> <p>This procedure outlines the steps taken to identify, collect, index, access, file, store, maintain, protect, backup, and dispose of quality and technical records. Moreover, the procedure describes the process for the protection and backup of data/records held on computers.</p> <p>Associated WIs and records:</p> <ul style="list-style-type: none"> • Record - Backup maintenance (records)

5.2.5 Communications Unit

5.2.5.1 Mission

The mission of the Communications Unit develop and implement strategic communication initiatives that enhance the visibility, engagement, and outreach of PHAETHON CoE. The unit plays a crucial role in promoting PHAETHON CoE's R&I activities, and achievements through effective internal and external communication.

5.2.5.2 Responsibilities

The Communications Unit is mandated to ensure clear, consistent, and impactful messaging that strengthens the CoE's reputation at local, national, and international levels. The key responsibilities include:

- Develop and implement a comprehensive communication strategy aligned with PHAETHON CoE's goals.
- Facilitate internal communication to ensure efficient information flow among researchers, staff, and leadership.
- Serve as the primary point of contact for media inquiries, public relations, and institutional messaging.
- Establish and maintain the PHAETHON CoE brand identity, ensuring consistency in design, messaging, and outreach efforts.
- Manage the CoE's visual identity, logo usage, and brand guidelines across all platforms.
- Oversee the creation of promotional materials, including brochures, reports, newsletters, and multimedia content.
- Maintain and update the CoE's website with relevant news, events, and research outputs.
- Develop and implement a social media strategy to enhance PHAETHON CoE's visibility on platforms such as LinkedIn, X, and YouTube.
- Create and disseminate engaging content, including news articles, blog posts, and research highlights.
- Promote workshops, conferences, seminars, and networking events.
- Director of Operations coordinates public outreach initiatives to engage policymakers, industry stakeholders, and the wider community.
- Support PHAETHON CoE researchers and staff in preparing presentations and public lectures.
- Build relationships with journalists, media outlets, and research communication networks to enhance public awareness of the CoE's work.
- Support the dissemination of scientific findings through press releases, interviews, and media briefings.
- Develop targeted communication strategies for engaging government agencies, industry partners, funding bodies, and the academic community.
- Support internal communication channels to ensure efficient information flow within the Centre.

5.2.5.3 Authority

The Communications Unit operates under the management of the Director of Operations and reports to the EMC. The unit has the authority to:

- Develop and implement communication procedures, branding guidelines, and media strategies.
- Approve and distribute official communication materials representing PHAETHON CoE.
- Oversee the management of the Centre's website, social media platforms, and digital presence.
- Director of Operations coordinates with internal and external stakeholders to ensure alignment in messaging and branding.

5.2.5.4 Reporting and Accountability

The Head of the Communications Unit reports to the Director of Operations and submits periodic updates to the EMC. The unit is responsible for maintaining accurate records of communication, dissemination and outreach efforts, and media engagement.

5.2.5.5 Overview of processes and documentation

The SOPs of the Communications Unit are summarised and described in the following Table.

Table 13. SOPs overview of Communications Unit.

Id	SOP brief description
1	<p>SOP – Communication Request of Activities</p> <p>The scope of this procedure is to outline the systematic approach for communicating R&I activities performed by PHAETHON CoE. It encompasses the identification, documentation, and communication activities of findings through various channels, ensuring that activities are accurately and effectively communicated to relevant stakeholders.</p> <p>Associated WIS and records:</p> <ul style="list-style-type: none"> • Record - Communication request of activities guide record
2	<p>SOP – Communication Request of Research Outputs</p> <p>The scope of this procedure is to outline the systematic approach for communicating research outputs generated by PHAETHON CoE. It encompasses the identification, documentation, and communication activities of findings through various channels, ensuring that research is accurately and effectively communicated to relevant stakeholders.</p> <p>Associated WIS and records:</p> <ul style="list-style-type: none"> • Record - Communication outputs guide record
3	<p>SOP – Communication Toolkit Procedure</p> <p>The scope of this procedure is to outline the steps followed to present and provide the employees of PHAETHON CoE with the necessary information. It encompasses the identification, documentation, and communication activities of findings through various channels, ensuring that research is accurately and effectively communicated to relevant stakeholders.</p> <p>Associated WIS and records:</p> <ul style="list-style-type: none"> • Record - Communication outputs guide record
4	<p>SOP – Dissemination Research Paper Measures Procedure</p>

The scope of this procedure is to outline the systematic approach for disseminating research publications generated by PHAETHON CoE.

Associated WIS and records:

- Record – Dissemination outputs guide record

6 Risk Management

6.1 General

The Management of risks is an integral part of PHAETHON CoE's business management and internal control framework. The aim is to enable the achievement of strategic and financial objectives and targets in a controlled manner. It is closely tied to our business processes as an ongoing controlled process. All risks are categorized, and a clear focus has been set on proactive preventive and protective measures and actions. In case of materialized risks, decisive and structured steps are taken and followed up (all described in PHAETHON Teaming project - D1.5 Quality assurance and risk management plan).

Operational issues, that are within our direct control (internal) and those which are outside our direct control (external), are detailed in the central Risk Register record. Each issue is assessed in terms of what can affect it, the net result of any negative effect, and controls that are in place to manage it. These assessments are to be conducted per the:

- Risk Management Procedure.

Threats and opportunities are (re)considered at the yearly review of risk documents done by or on behalf of the document owner. Where actions are required to address risks and opportunities about issues, they are entered into the Risk Register record. Where efforts to address opportunities and risks are pursued, the effectiveness of the action must be evaluated. This is managed by the review fields in the Risk Register record.

6.2 Risk and Opportunities

Management and CoE personnel regularly consider risks and opportunities, implementing plans and actions under the guidance of the EMC. A Laboratory Risk and Opportunity review is regularly performed (yearly period) and whenever significant changes occur within the management system of the CoE, documenting outcomes in the Risk and Opportunity Review record.

Recognizing that opportunities can lead to expanding the scope of our laboratory activities, addressing new stakeholder needs, and adopting innovative technologies, proactive risk management and continuous enhancement of the services provided is of utmost importance. The Risk Register implemented for the operations of PHAETHON CoE includes all identified risks and a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis (See Annex A).

6.3 Planning for changes

Changes to the Operationalisation Manual must be planned to avoid unintended consequences. The Director of Operations determines how changes are planned, assessed, and controlled. Overall, changes can arise from:

- Changes to work processes, procedures, equipment, or organizational structure.
- Changes to applicable legal requirements and other requirements.
- Changes in knowledge about hazards and related H&S processes, or services.
- Development in expertise and technology.

7 Performance Evaluations

7.1 General

The performance and effectiveness of the Operationalisation Manual shall be discussed during a dedicated management review meeting of the EMC. Other informal reviews of the performance and effectiveness of sections of the management system may also be prompted as required. Overall, the performance evaluations determine:

- What needs to be monitored and measured, including the methods for monitoring, measurement, analysis and evaluation needed to ensure valid results.
- When the monitoring and measuring shall be performed.
- When the results from monitoring and size shall be analysed and evaluated. The CoE evaluates the performance and the effectiveness of the Operationalisation Manual and retains appropriate documented information as evidence of the result

7.2 Monitoring and Evaluation

Information and data should be used from all parts of PHAETHON CoE to evaluate overall performance, evaluation of outcomes being used to determine trends, operational performance, services performance, stakeholder satisfaction and dissatisfaction, CoE effectiveness and efficiency. The results of the analysis and evaluation conducted are as evaluate:

- Performance and effectiveness of the Operationalisation Manual, including the environment, health and safety and quality.
- The degree planning has been effectively implemented.
- Effectiveness of actions taken to address risks and opportunities.
- Degree of stakeholder satisfaction.
- Performance of external collaborations and services.
- Need for improvements to the Operationalisation Manual.

Appropriate documented information must be retained as evidence of the monitoring, measurement, analysis and evaluation conducted.

7.3 Internal Audit

The CoE shall conduct internal audits at planned intervals to provide information on whether the operational processes conform to CoE's requirements for its operations and quality management system and are effectively implemented and maintained.

The CoE shall plan, establish, implement, and maintain an audit program(s), including the frequency, methods, responsibilities, planning requirements and reporting, which shall take into consideration the importance of the processes concerned, changes affecting the CoE, and the results of previous audits.

Lastly, it must be ensured that the results of the audits are reported to the relevant EMC and that appropriate corrections and corrective actions are taken without undue delay.

7.4 Management Review

Top Management (EMC) reviews the CoE's operation processes yearly to ensure its continuing suitability, adequacy, effectiveness, and alignment with the strategic direction of PHAETHON CoE following the Management Review Meeting. The Director of Operations shall ensure that the management review is conducted per schedule (once a year, commonly every May).

The agenda for the management review meeting includes the following items:

- Performance and effectiveness of the Operationalisation Manual, including the environment, health and safety and quality.
- Follow-up actions from previous management review.
- Changes in internal and external issues, including changes to legislation.
- Operational performance, including trends in stakeholder satisfaction (services provided), the extent to which quality objectives have been met, process performance/conformity of services, non-conformities, and corrective actions (and the status of same o, monitoring and measurement results of audits results o performance of external providers
- Adequacy of resources (human and infrastructure).
- Effectiveness of measures taken to address risks and opportunities.
- Opportunities for improvement.

Finally, the management review meeting yields decisions and actions pertinent to improvement opportunities, necessary modifications to the management system, and resource requirements. To substantiate the outcomes of these reviews, the Director of Operations maintains documented information as evidence.

8 Improvements

8.1 General

All necessary steps shall be taken to plan and manage the processes necessary for the continual improvement of the Operationalisation Manual through the establishment of objectives, the planning of the process, the provision of resources and information needed to carry out the process, the monitoring of necessary related measures to assess process effectiveness and efficiency, and the identification/implementation of the actions required to achieve desired results.

Mechanisms shall be established at PHAETHON CoE to determine and select opportunities for improvement and implement any necessary actions to meet stakeholder requirements and enhance internal/external satisfaction. These include:

- Improving services to meet requirements as well as to address future needs and expectations.
- Correcting, preventing, or reducing undesired effects.
- Improving the performance and effectiveness of the operational processes through continuous improvements, non-conformities, and corrective actions reported, recorded, investigated and followed up.
- Adequacy of resources (human and infrastructure).

8.2 Nonconformities and Corrective Actions

When a nonconformity occurs, including any arising from complaints, all necessary reactive actions are taken to control and correct the nonconformity and deal with the consequences associated with the nonconformity following:

- **Control of Nonconforming Procedure**
- **Nonconformity and Corrective Action Procedure.**

The CoE shall evaluate the need for action to eliminate the cause(s) of the nonconformity so that it does not recur or occur elsewhere and shall implement any action needed. Any corrective action taken shall be reviewed for its effectiveness, and risks and opportunities determined during planning shall be updated accordingly. Documented information shall be retained as evidence for the following:

- Nature of nonconformities and action taken.
- The results of any corrective action.

8.3 Continual improvement

PHAETHON CoE continually improves the integrated management system's suitability, adequacy, and effectiveness. The results of analysis and evaluation and the outputs from management review are considered to determine if there are needs or opportunities to be addressed as part of continual improvement.

Overall, continuous improvement of the Operations Manual at PHAETHON CoE is essential to maintain operational excellence and adapt to evolving challenges in the energy sector. This overarching process involves several key actions:

- Establishing a systematic schedule for reviewing the Operationalisation Manual to ensure it reflects current practices, technologies, and regulatory requirements. Engage stakeholders from various units to provide insights and identify areas needing revision. This collaborative approach ensures the manual remains relevant and comprehensive.
- Incorporating feedback mechanisms for employees to offer feedback on the manual's content and usability.
- Encouraging open communication allows for the identification of ambiguities or gaps, facilitating timely updates.
- Providing regular training sessions in order to serve as platforms for gathering constructive input.
- Continuously comparing the manual's guidelines with academia and industry standards and best practices. This benchmarking process helps identify opportunities for improvement and ensures that PHAETHON CoE remains aligned with leading methodologies. In addition, this entails adopting proven strategies from similar organizations that can enhance operational efficiency and effectiveness.
- Integrating new technologies and tools that can streamline processes and improve accuracy.
- Fostering a culture of continuous improvement and recognizing and rewarding initiatives that contribute to the manual's improvement.

9 Conclusions

This deliverable serves as the framework for the operationalisation of PHAETHON CoE, defining the core governance structures, policies, and procedures necessary for its successful and sustainable operation. It delineates the responsibilities assigned to various roles within the organization, ensuring clarity in decision-making and efficient resource management. Additionally, it establishes the foundational elements for quality assurance, risk mitigation, and performance monitoring, which are essential for maintaining excellence and achieving the CoE's strategic objectives.

A structured approach has been followed, aligning the content of the manual with the regulatory, operational, and strategic requirements of the CoE. The document first outlines the institutional framework, detailing the governance structure, leadership roles, and reporting lines. It then expands on the policies governing the CoE, covering areas such as compliance, financial management, human resources, and data protection. The manual also integrates risk management processes, detailing procedures for identifying, assessing, and mitigating potential risks that may impact operations, research initiatives, and stakeholder engagement.

Furthermore, this document serves as a dynamic reference for performance evaluation and continuous improvement. It incorporates standardized workflows, SOPs and Wis that guide the CoE's operational processes. It also provides structured methodologies for internal audits, quality control, and resource optimization. A crucial component of this manual is its adaptability; it is designed as a living document that will undergo periodic revisions and refinements to reflect evolving best practices, regulatory updates, and emerging industry trends.

The responsibilities of key stakeholders in ensuring adherence to the manual's policies and procedures have been clearly defined. The EMC, in collaboration with the BoD, holds primary accountability for governance and decision-making, while the Director of Operations is responsible for overseeing day-to-day operations. The implementation of this manual ensures that all personnel, from administrative staff to research teams, operate within a standardized and structured framework that aligns with the CoE's mission and objectives.

Additionally, the document integrates a robust risk management strategy, identifying risks associated with four key operational domains: research and innovation, management and Director of Operations coordination, financial sustainability, and stakeholder engagement. The risk assessment framework categorizes risks based on their probability and impact, facilitating proactive mitigation planning. Identified risks range from operational and regulatory challenges to technological and financial uncertainties, with corresponding mitigation measures carefully outlined to minimize disruptions and ensure the CoE's long-term viability.

Finally, alignment to the processes and principles outlined in this manual, ensures that PHAETHON CoE will be well-positioned to achieve its mission of fostering excellence in intelligent, efficient and sustainable energy R&I. To this end, the CoE's leadership will continuously oversee the refinement and enhancement of this document (living document), ensuring its relevance and effectiveness in an evolving research and innovation landscape.

10 References

- [1] European Commission Directorate-General for Communication, "The European Green Deal – Delivering the EU's 2030 climate targets," 2023.
- [2] European Commission Directorate-General for Communication, "REPowerEU Actions," 2022.
- [3] Ministry of Energy Commerce and Industry, "Cyprus' Integrated National Energy and Climate Plan," 2020.
- [4] International Organization for Standardization, "ISO 9001 - Quality Management Systems- Requirements," 2015.
- [5] ISO/IEC 17025, "Testing and calibration laboratories," 2017.
- [6] SolarPower Europe (SPE), "SolarPower Europe O&M best practices guidelines," 2016.

11 Appendices

11.1 Annex A – Risk Register

11.2 Annex B – Mandates of PHAETHON CoE Units

The Mandates of all Units, alongside the details of SOPs and WIs, are stored at the common repository of PHAETHON CoE.

11.3 Annex C – PHAETHON CoE Procedural Outline

QMS Risk Register															
Identification of Risk and Opportunities								Objectives and Targets			Risk Rating = Severity x Likelihood				
#	Category	Risk Description	Date	Owner	Intrested Parties Concern	Impact	Level of Risk	Compliance Obligation	Goals and Objectives	Opportunities	Severity	Likelihood	Risk Rating	Residual Risk	Risk Treatment Plan
1	Legislation, Regulation & Compliance	Legislative changes may affect current procedures and may result in additional costs. Risk of being fined for non-compliance.	-	-	Risk of being fined for non-compliance.	Awareness of applicable legislation	Low	Legislation, Regulation & Compliance	Review of legislation through management meetings. Use external advisors. Subscribe to trade bodies and companies that keep business updated with legislative changes and best practice recommendations	Create a register of applicable legislation	3	3	9	4	
2	Resource Management	Lack of planning leads to loss of key personnel and skills vacuum	-	-	Loss of Opportunities	Succesion Planning	Low	ISO 9001 QMS	Most roles have identified succession planning with key processes / work instructions mapped out	Formal recording of succession plan within company structure and initiate appraisal system to capture staff expectations	3	2	6	4	
3	Reputation	Human error or incompetence leading to loss of clients and reputational damage	-	-	Bad reputation	Performance Failure	Medium	ISO 9001 QMS	Ensure that full investigation is managed into any failure of resources or process through non-conformance process:	Act on any outcomes from Non-conformance process and communicate to all relevant personnel	3	4	12	4	
4	Supplier Management	Suppliers go out of business or can't meet contract agreements leading to lack of supply of materials or services	-	-	Losing Focus	Commerical/Financial	Medium	ISO 9001 QMS	Company has numerous suppliers in place for each service. Approved list in place.	Ensure suppliers are approved prior to purchasing goods. Continual review of non-conformances	3	3	9	4	
5	Commerical/Financial	Loss of clients and reputational damage, with potentials loss of earnings	-	-	Losing Focus	Commerical/Financial	Medium	ISO 9001 QMS	Contracts are signed apoon acceptance of proposal to ensure both parties fully understand the obligations that they are committing to.	Carry out more regular audits to ensure robust paperwork in place in accordance with procedure.	3	4	12	6	
6	Health/Safety	Risk of workplace accidents leading to injury to staff, downtime and reputational damage	-	-	Existing Skilled Workers Overburdened	Workplace Accidents	Medium	ISO 45001 OHS	Risk assessments, Procedures & Policies in place for key activities	Reassess, record and monitor hazards / risks / controls associated with internal / external activities	2	3	6	4	
7	Commerical/Financial	Significant impact on cash availability and long term expenditure commitments	-	-	Bad Debtors	Commerical/Financial	Medium	None	Complete financial investigation and credit checks prior to any new clients accepted. Ensure keep invoicing as regularly as possible through projects and as soon as project completion.	Look to instigate milestone payment schedule on any large significant projects that could majorly affect business continuity if unpaid	3	3	9	3	
8	System Implementation	Lack of Quality management system Implementation	-	-	Loss of Opportunities	Results in Audit failure	Medium	ISO 9001 QMS	All QMS documentation has been prepared.	Periodic meetings needs to be conducted by top management in order to check the progress of QMS implementation. Furthermore, internal audits needs to be conducted to check the implementation level, if any discrepancies found during this audit then management take actions.	3	3	9	3	
9	QMS Compliance	Lack of top management commitment	-	-	Bad reputation	<ul style="list-style-type: none"> • Non fulfillment of requirements of standards followed • Non availability of resources • No continual improvement in the processes or activities • Disengagement of all the employees in quality assurance 	Medium	ISO 9001 QMS	Monthly review meeting is conducted by top management to check and evaluate the performance of each function.	Future plan is discussed by concerned departmental head/ personnel.	3	2	6	2	
10	Legal & regulatory compliance	Lake of awareness of legal and regulatory requirements	-	-	Risk of non-compliance	<ul style="list-style-type: none"> • Expected to attract regulatory attention • Investigation, prosecution and / or fine • Infringement notice • Registration / licensing in jeopardy • Sustained / prominent local media coverage • Damage to image or reputation 	Medium	ISO 9001 QMS	Legal and regulatory requirements are identified and meet by concerned department.	Legal & regulatory register to be maintained and implemented in true spirit	2	3	6	3	
11	Communication	Communication channel of Organization work for environment and society improvement need to be determined and communicated to the customers and society	-	-	Communication Gap with customers	Loss of Good Will	Medium	ISO 9001 QMS	Communication channel will be developed and information need to be provided on website like quality policy and organization's work for betterment of society	Perception from society and customers regarding <organization> for society need to be perceived by the employees and time to time suggestions will be taken.	3	3	9	3	
12	Regulatory	Unstable political situation of politics, inflation, service cost and economic slump, the unrest in the public and the business community.	-	-	Loss of Business	Customer dis-satisfaction	High	ISO 9001 QMS	Factors affecting business continuity will be monitored and ensured that they do not adversely affect the business processes	Records to be checked & verified	3	4	12	4	
13	Employees	Roles within the organization not defined	-	-	Unclear roles / confusion	Overlapping of roles, responsibilities and accountabilities	High	ISO 9001 QMS	Organogram will be reviewed and JDs will be monitored and any changes will be implemented	Records to be checked & verified during internal & external Audits	3	4	12	4	
14	Service Providers / Customer	Relationships with interested parties	-	-	Communication Gap with customers	Lack of good relationship causing conflict within <organization> and with customer it cause customer dis-satisfaction	Medium	ISO 9001 QMS	Organization will sustain its business with healthy relationship with all the interested parties	Communication with interested parties and their feedback and suggestions	3	4	12	6	
15	Employees	Employee Turnover Rate	-	-	Low motivational level of Employees	High employee turn over effect <organization> financially as well as market repute also effect	Medium	ISO 9001 QMS	Employee turnover rate is less which helps <Organization> in maintaining its processes in systematic way and positive for organization's Image	Good Compensation, Benefits, Work-Social Life Balance, Company's defined benefits	3	3	9	3	

