State-of-the-art sustainable energy efficiency technologies roadmap for waterborne transport towards the fit-for-55 guidance compliance

Project 101192661 - FLEETfor55

Deliverable D9.2 - Initial TIN outreach strategy

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Acronyms and Abbreviations	Meaning
ABS	American Bureau of Shipping
CERTH	Centre for Research and Technology Hellas
CINEA	European Climate, Infrastructure and Environment Executive Agency
DNV	DNV Hellas Single Member SA
EAB	External Advisory Board
EET	Energy Efficiency Technology
EMS	Energy Management System
EU	European Union
GA	Grant Agreement
GDPR	General Data Protection Regulation
HE	Horizon Europe
HORIZON-CL5-2024-D5-01	Horizon Europe Cluster 5, Call 2024, Destination 5, Topic 01
HYD	Hydrus Engineering SA
IPR	Intellectual Property Rights
KER	Key Exploitable Result
KPI	Key Performance Indicator
LoI	Letter of Intent
MCI	Magellan Circle Italy SRL
MGLCRL	Magellan Circle – European Affairs Consultancy, LDA
NDA	Non-Disclosure Agreement
NTUA	National Technical University of Athens
TIN	Technologies Innovation Network
TRL	Technology Readiness Level
UPAT	University of Patras
UC	Use Case
WP	Work Package

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Executive Summary

This document presents the initial outreach strategy for the Technologies Innovation Network (TIN) within the FLEETfor55 project, developed under Task 9.2, to raise awareness of the project's objectives, coordinate clustering events and workshops, and facilitate collaboration among TIN members, the External Advisory Board, and other key stakeholders. It outlines how the consortium will activate and sustain a structured, multi-channel engagement process that connects Energy Efficiency Technology (EET) providers with the project's designers and end users, ensuring that industry feedback continuously supports FLEETfor55's objectives on energy efficiency and decarbonisation.

The TIN, officially established under Task 9.1, is an external board within FLEETfor55 composed of Energy Efficiency Technology (EET) providers. The network serves as a collaborative interface where external technology providers interact with the consortium and its end users. It operates through workshops, surveys, and clustering events, feeding requirements and feedback into the project's technical work packages. The initial memberships were established through the signing of Letters of Intent and Non-Disclosure Agreements (NDAs), with membership continuing to expand to include additional EET providers, ensuring balanced representation across technologies and markets. While the expansion of the TIN follows the structured strategy established under Task 9.1 (D9.1), Task 9.2 complements this effort by supporting both visibility and engagement through outreach actions and continuous monitoring of member participation during workshops and clustering events.

The TIN's role is to channel providers' expertise into project activities while creating structured interactions with ship-managers and ship representatives (SEKA, SF, CSM, STEALTH), designers (HYD, DST), ports (FVP), and shipyards (FREIRE). This exchange supports the Use Cases (UCs) development, the benchmarking, and the risk assessment, with inputs coordinated by WP9, such as stakeholder feedback, survey results, technology performance data, and adoption barriers collected through dedicated TIN workshops and clustering events, and subsequently channelled to the relevant technical Work Packages (WP2–WP8) and aligned with the strategic guidance from the External Advisory Board (EAB).

Considered a dynamic, cross-sectoral collaboration hub, the TIN is a board established by the consortium. In line with Objective 7 of the Grant Agreement, its main purpose is to actively interact with the consortium and mainly its end users through targeted engagement activities and efficiently map EETs to the examined use cases. Beyond this facilitation role, the TIN indirectly supports the project's technical progress by supplying stakeholder insights that inform ongoing techno-economic assessments, feasibility considerations, and business-model

discussions carried out within the relevant technical Work Packages (WPs). In this way, the TIN contributes to ensuring that innovative energy-efficiency solutions developed in FLEETfor55 remain aligned with real-world industry perspectives and the broader EU Fit-for-55 objectives.

Led by Task 9.2, the activation strategy follows an iterative, collaborative approach designed to foster meaningful dialogue, receive frequent and valuable feedback, and align innovations with real-world market demands and environmental targets. Engagement mechanisms include clustering events (with the participation of the External Advisory Board (EAB), as stipulated in the GA), thematic workshops, and outreach tools – such as website, newsletters, social media, and structured feedback instruments (e.g. surveys and interactive quizzes) – developed mainly under Task 9.4.

Feedback will be systematically collected through these structured channels to ensure that stakeholders' input is continuously integrated into project activities. Collectively, these formats promote knowledge exchange, collaborative learning, and early alignment between technology providers, end-users, and the project's strategic advisors (i.e., the members of the EAB).

Importantly, Task 9.2 operates at the interface between stakeholder engagement and the project's technical work packages. Feedback gathered from the TIN will support WP2-WP7 (requirements, feasibility, design, safety, and risk assessment) as well as WP8, particularly Task 8.3 on business model development. In parallel, Task 9.2 coordinates with Task 9.5 to align schedules and share summaries of TIN engagement so that the EAB – managed under Task 9.5 – provides strategic guidance. Any EAB recommendations are issued via Task 9.5 and may inform subsequent Task 9.2 outreach cycles.

Furthermore, Task 9.2 interfaces with Task 9.4 by supplying selected outputs from TIN activities (e.g., workshop highlights, anonymised survey aggregates) for potential dissemination through WP9 communication channels. Task 9.2 also relies on the TIN registry and mapping maintained under Task 9.1. This coordinated structure ensures that the TIN operates as an integrated, cross-cutting engagement mechanism within the project's knowledge-exchange ecosystem.

In line with the GA, recurring engagement opportunities – e.g. through clustering events and at least three dedicated TIN workshops during the project – will provide structured touchpoints throughout the project.

1 Introduction

1.1 Technologies Innovation Network (TIN) Outreach in the Context of FLEETfor55 Project

FLEETfor55 is a Horizon Europe flagship initiative driving the maritime sector's transition toward the EU's Fit for 55 climate targets and the International Maritime Organization's (IMO) decarbonization goals. As a pivotal mechanism in this transition, it delivers a comprehensive and integrated roadmap designed to accelerate the adoption of advanced Energy Efficiency Technologies (EETs) across a wide variety of vessel types. In alignment with the project's objectives, the Technologies Innovation Network (TIN), as defined in Deliverable D9.1 "Initial TIN Requirements and Engagement Plan," serves as a collaborative platform established within FLEETfor55 to connect Energy Efficiency Technology (EET) providers with the consortium end-users through structured engagement and feedback mechanisms. Its role is to facilitate the exchange of technical and operational insights that support the assessment and mapping of EETs with the project's examined use cases. Building on the definitions, the objectives, and the membership framework established in D9.1, this deliverable focuses on the outreach and engagement dimension of the TIN under Task 9.2 – ensuring its continuous interaction with stakeholders through workshops, surveys, and clustering events.

TIN: Definition & objectives

The Technologies Innovation Network (TIN) is a board established by the consortium and composed of external Energy Efficiency Technology (EET) providers. It serves as a collaborative engagement mechanism within FLEETfor55, designed to facilitate structured dialogue, feedback collection, and the mapping of EETs to the examined use cases. TIN activities include thematic workshops, surveys, structured assessments, and clustering events that provide continuous input to inform real-world use-case discussions and project decisions.

TIN: Membership (who, status, enlargement)

The TIN itself is composed of EET providers (equipment manufacturers, technology developers, solution vendors). With expansion to at least 35 members via LoIs and NDAs as planned; selection prioritizes balanced representation across EET clusters. The expansion strategy maps gaps, assigns outreach leads, and formalizes onboarding, while monitoring participation and coverage over time.

TIN: Role in the project & interaction with end-users

The TIN supports the technical Work Packages by enabling structured exchanges and feedback between external Energy Efficiency Technology (EET) providers and the consortium. In particular, it contributes to WP2 “Requirements identification and benchmarking of available EETs”, WP3 “Alternative EET systems evaluation and use cases feasibility”, WP4 “Engineering design & EET Systems integration”, WP7 “EET systems and solutions demonstration” and WP8 “LCA, techno-economical assessment, sustainability analysis & business models development” by enabling structured exchanges and feedback between external EET providers and the consortium. Engagement is coordinated under WP9 connecting EET providers with end users, such as ship-managers and -representatives, ports, shipyards, and technical partners (e.g., DST). All interaction outputs are securely stored and shared under signed LoIs-NDAs.

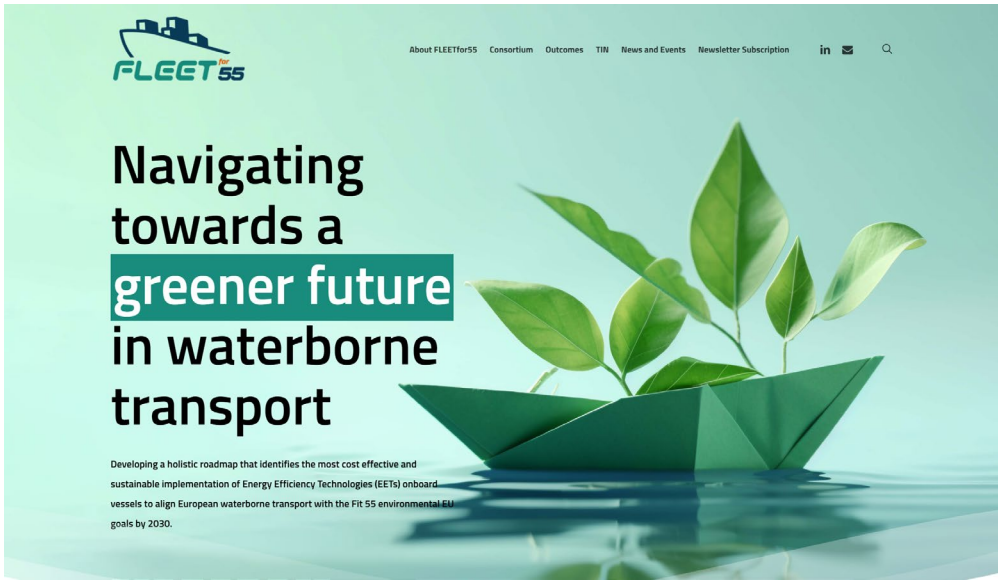


Figure 1: FLEETfor55 website: Navigating towards a greener future in waterborne transport

Within this framework, Task 9.2, led by MCI with contributions from all partners, coordinates the outreach and engagement activities of the Technologies Innovation Network (TIN), ensuring it operates as a platform for structured interaction between EET providers and end users. In close collaboration with Task 9.1 (responsible for the establishment and onboarding of the TIN) and Task 9.5 (External Advisory Board (EAB) engagement), Task 9.2 focuses on facilitating technical knowledge exchange through clustering events, workshops, and surveys. It also seeks to raise awareness about the project and its objectives.

To further strengthen participation and visibility, Task 9.2 also cooperates closely with Task 9.4 to promote TIN-related activities through the project’s communications channels – website, social media channels, newsletters, press releases, stakeholder mailing lists, and participation in external events – ensuring broad and sustained outreach to the maritime

community. This collaboration also ensures that the results of TIN activities are consistently highlighted via official project channels.

1.1.1 Partner Contribution to Technologies Innovation Network (TIN) Outreach

Task 9.2 delivers the TIN outreach strategy in close coordination with Task 9.1 “Technologies Innovation Network - Analysis, requirements and engagement plan” and Task 9.5 “External Advisory Board engagement & synergies with relevant Horizon Europe activities”. The programme combines regular clustering events (≈ every six months) and at least three dedicated TIN workshops – as foreseen in the Grant Agreement – to enable knowledge exchange, collect structured feedback, and efficiently map Energy Efficiency Technologies (EETs) with the examined use cases.

MCI – Task lead and event coordination

As WP9 leader and Task 9.2 coordinator, MCI leads the overall TIN outreach strategy and event organisation. It plans and implements clustering events and workshops, ensuring alignment with Task 9.4 (communication and dissemination activities – website, social media, newsletters, press releases, webinars, and Q&A sessions) and with Task 9.5 (EAB coordination). MCI also interfaces with Task 9.1 (CERTH) to target outreach activities based on the TIN registry and maintain consistency across engagement actions.

HYD – Project coordination and technical liaison

As project coordinator and leading marine engineering design partner, HYD ensures alignment across work packages, monitors workflow and quality, and facilitates communication among partners. HYD supports the planning and scheduling of TIN workshops and clustering events, channels collected feedback to the relevant technical WPs, and ensures that stakeholders’ input is properly integrated into the project’s technical and design processes.

CERTH – TIN registry and integration with Task 9.1

As leader of Task 9.1, CERTH leads the establishment of the Technologies Innovation Network (TIN) and develops targeted engagement strategies to foster collaboration and support from TIN members, efficiently connecting EET providers with end users. This engagement is designed to remain active throughout the project, stimulated through the continuous participation of TIN members. CERTH is also responsible for the proper handling, storage, and distribution of collected information. The structured outputs of Task 9.1 provide the foundation for Task 9.2’s outreach and engagement activities.

WM – Exploitation and IPR linkages

As leader of Task 9.3, WM develops the project's exploitation plan and IP strategy, identifying and managing Key Exploitable Results (KERs) in coordination with WP8 (business models). WM also conduct EETs market analysis, perform holistic sustainability assessment of alternative solutions, and contribute to the clustering events and workshops.

UPAT – Data Management

UPAT ensures the proper management of research data collected within FLEETfor55, including its handling, storage, and protection in line with the project's Data Management Plan. This role supports Task 9.2 by ensuring that information gathered through TIN activities is securely managed, traceable, and compliant with open-science and data-protection requirements.

Cross-cutting contributions: Lead and supports

While specific roles are assigned to MCI, HYD, CERTH , WM, and UPAT, all consortium partners actively contribute to the TIN outreach and clustering activities. Their collective involvement includes participating in event planning, hosting, and facilitation; amplifying communication through Task 9.4 channels; and providing domain expertise during workshops and clustering sessions. This distributed collaboration ensures that the TIN reflects diverse technical, operational, and geographical perspectives across the entire consortium.

1.1.2 Relationship with WP9 and Other Tasks

Task 9.2 is an important activity of WP9 "Dissemination, Exploitation and Communication", with a specific role to activate and support the outreach of the Technologies Innovation Network (TIN) and to facilitate clustering events and workshops, working hand-in-hand with Task 9.1 for the TIN's analysis/requirements/engagement plan and Task 9.5 for EAB inputs.

Synergies within WP9

Task 9.2 acts as the outreach and engagement driver within WP9, turning analysis and planning into interactions with stakeholders. Its value lies in how it connects and exchanges inputs with the other tasks:

- With T9.1 (Technologies Innovation Network – Analysis, requirements and engagement plan): T9.2 relies on the registry and engagement plan to identify target audiences. Feedback collected through T9.2 clustering events and workshops is systematically transmitted to CERTH (Task 9.1 leader) for validation and integration into the TIN engagement records. In this way, T9.2 operationalizes outreach while T9.1 ensures data consistency and knowledge management.
- With T9.3 (Development of exploitation plan and intellectual property strategy): Insights gathered through T9.2 events complement the exploitation and IPR work initiated under

Deliverable D9.4 – Initial Exploitation Plans and IPR, feeding market signals, adoption barriers, and stakeholder perspectives into the refinement of exploitation pathways and Key Exploitable Results (KERs).

- With T9.4 (Communication & dissemination plan & tools): T9.2 uses the communication toolkit developed under T9.4 to promote clustering events and extend outreach. It also provides content, stories, and KPI data for dissemination reporting.
- With T9.5 (External Advisory Board engagement & synergies with relevant Horizon Europe activities): T9.2 co-organises clustering events enabling EAB participation and feedback review. Stakeholder insights gathered by T9.2 are summarised and shared with T9.5, so the EAB can translate them into recommendations that inform subsequent outreach cycles.

Cross-work package connections

As illustrated in Figure 2, Task 9.2 engages TIN members through clustering events, dedicated workshops, and structured instruments (e.g., surveys/quizzes) to collect and organise feedback on operational needs, indicative maturity, and deployment considerations.

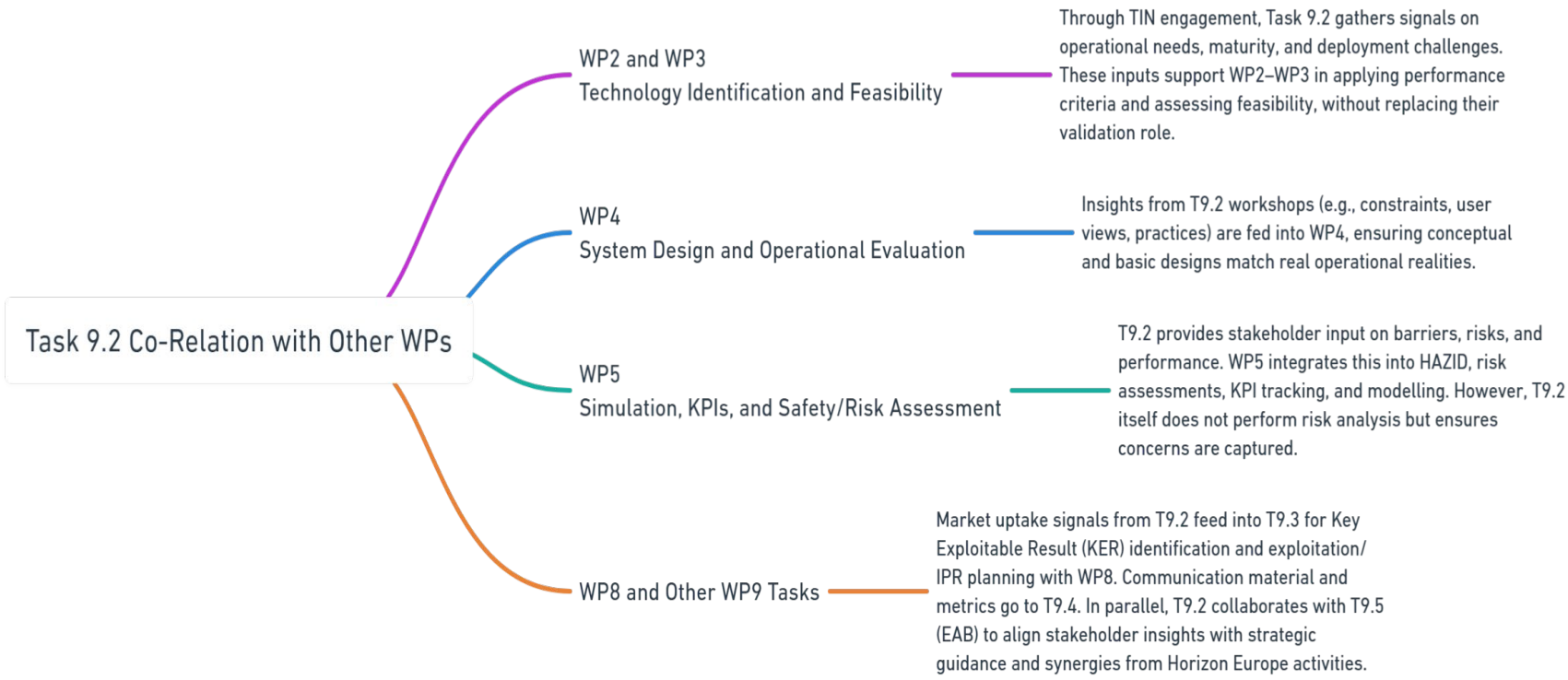


Figure 2: Cross-work package connections of Task 9.2

1.1.3 Status of TIN Membership, Engagement Monitoring, and EET Categorization & Mapping from Task 9.1

The available data indicate that within the project, the TIN is steadily evolving into a diverse and representative network of maritime stakeholders, supported by a series of outreach activities conducted, including clustering sessions, dedicated TIN workshops, digital surveys, and interactive feedback exercises, which collectively enhance member engagement and broaden the coverage of relevant Energy Efficiency Technologies (EETs). In terms of membership, the TIN itself comprises of EET providers; interacts with end-users (e.g., ship-managers and -representatives) and indirect beneficiaries (e.g., classification societies, ports, shipyards) occur through T9.2 outreach. The T9.1 registry maintains contact and engagement records (including LoI-NDA status). T9.2 draws on this registry to plan outreach and collect structured feedback (surveys/quizzes) in collaboration with T9.1 and with planned synergies with the EAB.

The engagement process follows a systematic sequence of identification, invitation, and follow-up. Formal outreach has been conducted through direct contacts, partner networks, and clustering opportunities, with responses recorded in tracking sheets. The structured monitoring provides a transparent view of engagement dynamics and lays the basis for continuous dialogue with TIN stakeholders. Importantly, synergies are also foreseen with Task 9.5 (External Advisory Board), where strategic insights from the EAB will complement the operational and technical inputs collected from TIN members.

On technology coverage, the TIN already reflects a broad scope of EET categories aligned with FLEETfor55's objectives. The updated lists include more than fifty distinct technologies across hydrodynamic improvements, propulsion efficiency, power conversion and electrification, digital optimization, alternative fuels, and renewables.

In summary, while Task 9.2 is not responsible for maintaining the TIN records, it benefits from the structured outputs generated in the project to assess the state of play. The TIN now stands as a growing, engaged network with confirmed members, an organised engagement process, and extensive technological coverage, providing a strong foundation for clustering events, workshops, and the integration of stakeholder evidence into the wider evaluation, design, and exploitation activities of FLEETfor55.

1.1.4 Data Management and Feedback Handling

All TIN-related information is handled undersigned LoIs-NDAs, in line with the project Data Management Plan (D1.3) and stored securely in the consortium's Microsoft Teams repository.

As defined in the Grant Agreement and Deliverable D9.1, Task 9.1 (CERTH) owns and maintains the TIN registry, including member records, LoI/NDA tracking, and EET categorisation. Task 9.2

(MCI) uses these T9.1 resources to target stakeholders, organise clustering events and workshops, and manage feedback cycles – but does not update the registry itself.

Structured feedback tools (surveys, quizzes, templates) are designed, with methodological guidance from MCI and partners. MCI deploys these during engagement activities, compiles responses, applies anonymisation where required, and produces summary reports. Validated, non-sensitive insights may later contribute to dissemination activities in coordination with Task 9.4.

Further details on registry structure, EET mapping, and engagement monitoring are provided in D9.1. A consolidated overview of data and feedback integration from T9.1 and T9.2 will be presented in D9.3 (Final TIN Requirements, Engagement Plan & Outreach Strategy).

1.2 Objectives and Structure of the Deliverable

The objective of this deliverable is to define the outreach and engagement framework of the Technologies Innovation Network (TIN), in line with the overarching goals of Task 9.2 "Technologies Innovation Network – Outreach Strategy, Clustering Events and Workshops". This deliverable translates the strategic direction set by Task 9.1 into a concrete plan for external engagement, visibility, and stakeholder participation, ensuring that the TIN remains an active and collaborative platform throughout the duration of FLEETfor55.

More specifically, Deliverable D9.2 pursues the following objectives:

(a) To establish a structured **outreach strategy** that raises awareness about FLEETfor55 objectives, Energy Efficiency Technologies (EETs), and related use cases across relevant maritime and research communities;

(b) To design and organise **clustering events** (approximately every six months) that bring together TIN members, External Advisory Board (EAB) experts, and external stakeholders for knowledge exchange and synergy building with other Horizon Europe projects;

c) To plan and deliver **dedicated TIN workshops** – at least three during the project – to collect structured feedback, and support the iterative assessment of FLEETfor55 solutions;

(d) To define and implement **interactive tools** (surveys, quizzes, feedback forms) to capture stakeholder insights on EET performance, barriers, and deployment readiness levels, feeding into the TIN database for continuous improvement and cross-WP analysis;

(e) To establish a coordinated **communication and outreach approach**, leveraging digital platforms, social media, and traditional media channels to maximize visibility and disseminate project achievements in support of WP9's objectives on communication, exploitation, and synergy creation.

Deliverable D9.2 is fully aligned with the FLEETfor55 Grant Agreement and contributes directly to the objectives of WP9 “Dissemination, Exploitation and Communication”, particularly by strengthening the interaction between EET providers, end-users (ship-managers and -representatives, ports, and shipyards), classification societies, R&D institutions, regulatory and policy bodies, industry associations, energy suppliers, and digital technology providers – ensuring cross-sector collaboration for maritime decarbonisation. It complements Deliverable D9.1 (Initial TIN Requirements and Engagement Plan) and lays the foundation for subsequent outputs such as D9.6 (Integrated TIN and EAB Engagement Report).

In addition to outlining the engagement objectives, this deliverable sets forth the operational structure for Task 9.2, detailing how events and outreach activities will be organized, monitored, and documented to ensure coherence across the consortium and alignment with CINEA communication requirements.

The structure of this deliverable is as follows:

- **Section 1** introduces the TIN outreach concept under Task 9.2, defining outreach as the promotion and activation of the TIN to raise awareness of its role, engage existing members, and foster synergies with other projects, events, and the EAB, while clarifying that TIN enlargement is addressed separately under Task 9.1 (D9.1);
- **Section 2** presents the preliminary engagement strategy, including formats, clustering events, and workshop planning approach;
- **Section 3** outlines the communication and outreach approach, covering key messages, target audiences, channels, synergies with Horizon Europe initiatives, and feedback monitoring mechanisms;
- **Section 4** provides the conclusions and next steps toward the mid-term consolidation of the TIN activities and their integration with WP9 and WP8 results;
- **Section 5** includes the Annexes, such as the upcoming events calendar and examples of surveys and interactive toolkits to be used for stakeholder feedback.

This deliverable marks the initial implementation of Task 9.2 activities. Following its submission, the work will continue to evolve, and the outcomes of both D9.1 and D9.2 will be further consolidated into Deliverable D9.3, a living document to be finalised at the end of the project.

2 Preliminary TIN Outreach and Engagement Approach

2.1 Engagement Framework & Tools

To ensure the relevance and adaptability of the TIN, Task 9.2 implements and iterates the engagement plan defined under Task 9.1 operationalising a programme of clustering events and hybrid TIN workshops (≥3), supported by structured instruments (e.g., surveys and interactive quizzes) for systematic input collection and analysis. This cycle is run in close collaboration with T9.1 (registry, onboarding process, LoI-NDA framework) and coordinated with T9.5 (EAB) for high-level strategic guidance.

The approach is designed to foster ongoing dialogue with external technology providers engaged via the TIN and to gather actionable feedback that is compiled and relayed to the appropriate Work Packages. To avoid duplicating content detailed elsewhere, this section focuses on the formats and process; the specific input categories and their treatment follow the procedures set out in D9.1 (Initial TIN requirements & engagement plan) and the WP9 description.

Event schedules, EAB participation, and survey planning are integral components of the outreach strategy defined under Task 9.2. These activities are designed to coordinate clustering events, workshops, and interactive feedback mechanisms that engage TIN members and external stakeholders. While event data may be archived internally for coordination purposes, the emphasis of Task 9.2 remains on conducting these outreach activities, ensuring broad participation, effective feedback collection, and alignment with the project's communication and dissemination actions (Task 9.4).

Overview of engagement tools

Engagement with TIN members is carried out through the following key formats:

Table 1: Overview of Engagement Tools (Task 9.2)

Engagement Tool	Purpose & Description
Clustering Events	Convened approximately every six months (physical/virtual) as multi-stakeholder forums co-organised under Task 9.2 in close collaboration with Task 9.5 (EAB). As defined in the GA, these events aim to present project developments, exchange expert views, and collect insights on deployment barriers and

Engagement Tool	Purpose & Description
	opportunities from TIN representatives, EAB members, and external stakeholders. Outputs consist of feedback and participation signals that inform subsequent workshops and surveys.
Dedicated TIN Workshops	At least three dedicated TIN workshops (hybrid), complemented by targeted engineering sessions, are under discussion and planning at key project checkpoints to receive structured feedback on integration constraints, user perspectives, and deployment considerations. As stated in the Grant Agreement, these activities aim to collect frequent and valuable input and efficiently map Energy Efficiency Technologies (EETs) with the examined use cases. Results are compiled by Task 9.2 and shared with the relevant technical Work Packages for methodological assessment and evaluation.
Surveys and Interactive Toolkits	Systematic input will be collected on topics such as indicative Technology Readiness Levels (TRLs), adoption barriers, and operational needs through instruments like Microsoft Forms and structured templates. Survey content and methodology will be co-designed by MCI (Task 9.2 lead) with input from WP9 partners, while UPAT provides oversight on data management, GDPR compliance, and alignment with the project's Data Management Plan (DMP). Surveys will be deployed by Task 9.2 to complement workshops and interviews, and anonymised aggregate results will be analysed by MCI with methodological support from UPAT, then shared with relevant Work Packages and the TIN Committee to inform engagement monitoring and project-wide feedback analysis.
Joint Activities with Sister Projects & the EAB	T9.2 works closely with T9.5 to convene joint sessions where the EAB provides high-level strategic guidance, policy alignment, and to build synergies with related Horizon Europe projects for benchmarking and wider outreach. Overall, the TIN outreach strategy focuses on raising awareness about FLEETfor55 project and its objectives among relevant stakeholders.

2.2 Clustering Events

Planning of the first clustering events under Task 9.2 is underway in coordination with WP9 partners, particularly Tasks 9.4 (communication & dissemination) and 9.5 (EAB engagement). These events will bring together TIN representatives, EAB members, and selected stakeholders to exchange expert views on deployment barriers and opportunities, and discuss how Energy Efficiency Technologies (EETs) correspond to the examined use cases within FLEETfor55. Identification of potential cross-project synergies will be pursued through these clustering interactions and subsequent follow-up sessions with related Horizon Europe initiatives.

The first EAB formation process is still ongoing, with members expected to be confirmed and formally engaged by Month 12; therefore, no formal clustering activity has yet taken place. Preparatory discussions are in progress to define formats, sequencing, and timing, with the initial clustering event foreseen after the EAB constitution and subsequent events suggested approximately every six months, as outlined in the Grant Agreement. All event agendas, attendee lists, and outputs will be managed in line with Task 9.1's data management procedures, ensuring that stakeholder information is handled in accordance with the project's Data Management Plan (DMP), GDPR principles, and WP9 coordination standards for secure storage and traceability.

While workshops in FLEETfor55 are technical sessions supporting the engineering approach behind the Energy Efficiency Technologies (EETs) selection, the clustering events – designed as collaborative and networking forums – will facilitate structured interaction among external technology providers, regulatory experts, project partners, and end-users. Functioning under Task 9.2, these clustering events will complement other TIN engagement formats such as thematic workshops, joint sessions with the External Advisory Board (EAB), and interactive feedback tools (e.g., surveys). Whereas workshops focus on technical discussions of specific EETs or the project's Use Cases, clustering events will operate at a broader level, integrating insights from multiple work packages and fostering dialogue on cross-cutting themes. Key discussion themes for these joint activities will focus on:

- Mapping technology readiness and identifying technical or operational barriers;
- Assessing priorities relevant to exploitation, communication, and cross-project cooperation; and
- Exploring possible synergies through future joint workshops or EU-level clustering sessions.

To date, clustering-related coordination has consisted of preliminary exchanges during the FLEETfor55 General Assembly in Trondheim (June 2025) and follow-up WP9 progress meetings, where partners such as HYD, CERTH, RINA, MCI, and others reviewed the clustering concept and its relation to exploitation planning. These discussions were preparatory only and did not constitute formal clustering events. Future clustering events will be organised as standalone FLEETfor55 sessions or in collaboration with major European maritime forums (e.g., Waterborne TP, ALICE, Green Shipping Days, or Horizon Europe clustering sessions). Event selection will prioritise alignment with project milestones, relevant audience profiles, and cross-project collaboration potential.

Clustering events will engage TIN members, EAB experts, and key stakeholders. As TIN membership continues to expand, participant lists will evolve accordingly. These events will also inform Task 9.3 by channelling stakeholder feedback and market signals into the Key Exploitable Results (KER) framework. Confirmed collaborations include joint outreach with related projects and platforms, strengthening the TIN outreach strategy through shared events, communication channels, and stakeholder networks.

Exploratory links with sister projects are advancing through a structured process based on topic relevance and technological complementarity, expected to result in joint sessions or survey initiatives. All collaborations will be logged in the internal TIN tracker for visibility and follow-up. Overall, clustering events serve as a catalyst to activate the TIN, align members with FLEETfor55 objectives, and establish sustained, multi-stakeholder collaboration and technology co-creation across the project lifecycle.

2.3 TIN Workshops: Preliminary Planning

Task 9.2 foresees at least three hybrid, both physical and virtual, TIN workshops. These workshops will facilitate and help the mapping of Energy Efficiency Technologies (EETs) to the defined desktop cases and capture structured stakeholder feedback at critical checkpoints. Each workshop will be designed with breakout discussions, live polling, and interactive outputs (e.g., EET-desktop case matrices, clustering inputs) to ensure broad and practical engagement.

The TIN workshops will also be supported by dedicated surveys and short quizzes, as foreseen in the GA, to collect structured evidence from stakeholders. The design of these instruments will be led by Magellan Circle Italy (MCI) in consultation with the TIN Committee and WP9 partners, ensuring methodological coherence and alignment with project objectives. Draft versions will undergo internal review by WP9 leaders before circulation to external participants.

TIN workshops are structured, project-run meetings with the Technologies Innovation Network (TIN) – i.e., EET providers and related stakeholders – held at key checkpoints to:

- collect frequent, practical feedback on technologies,
- map EETs to the project's use cases, and
- feed requirements into the design, the business model development, and the digital platform.

The workshops run both physically and virtually, often complemented by surveys/interactive quizzes, and sometimes joined by the External Advisory Board (EAB). They will also be supported by dedicated surveys and short quizzes, as foreseen in the GA, to collect structured evidence from stakeholders. The design of these tools will be led by MCI, in synergy with related partners of the consortium, ensuring methodological coherence and alignment with project objectives. Draft versions will be internally reviewed by WP9 leaders before their release to external participants.

All collected data will be stored in compliance with the project's Data Management Plan (, ensuring GDPR conformity and secure access control. Workshop outputs will be systematically linked to the central TIN folder in the repository, where aggregated and non-personalised results will be cross-referenced with company engagement records and EET-desktop case mapping results. This process ensures traceability of inputs while safeguarding confidentiality and personal data.

Rather than serving as venues for in-depth barrier analysis or the drafting of deployment roadmaps, the workshops are designed as evidence-gathering and facilitation platforms. They will capture structured insights through interactive tools (surveys, breakout sessions, and mapping exercises), feeding into cross-cutting analytical activities.

The findings from TIN workshops will be compiled by Task 9.2 and routed to the appropriate project teams. Specifically, outcomes will inform:

- **WP2** (requirements identification and benchmarking), where TIN feedback supports validation of EET relevance and applicability;
- **WP3** (Use Case development and feasibility), where stakeholder input contributes to assessing integration constraints and operational priorities;
- **WP4** (engineering design and systems integration), by providing complementary perspectives from technology providers on practical implementation aspects;
- **WP6–WP7**, where feedback on digital tools and demonstration considerations will be channelled to align with operational scenarios; and

- **WP8** (LCA, techno-economic assessment, sustainability analysis, and business models), where collected evidence supports market alignment and sustainability evaluations;

This structured flow of information ensures that Task 9.2 acts as a bridge between external stakeholders and the project's core technical activities, in full alignment with the Grant Agreement.

Suggested workshops framework

The scheduling and coordination of the TIN workshops are jointly guided by Task 9.2 (which defines formats, methodologies, and content alignment) and Task 9.1 (which manages stakeholder engagement and TIN member participation). The precise timing and sequencing of the workshops are dependent on project progress and inter-task dependencies.

As illustrated in **Error! Reference source not found.**, each suggested workshop will align with the Task 9.2 objectives, while also ensuring coordination with WP9's broader dissemination and exploitation objectives. The selection of co-hosting opportunities (e.g., relevant Horizon Europe clustering sessions, Waterborne TP events, or Green Shipping Days) will follow criteria of thematic relevance, expected impact, and cost-efficiency, ensuring complementarity with other project activities rather than duplication.

The TIN workshop series is under discussion and planning, with three initially suggested in below table with the timelines and sessions, that to be further discussed and modified based on the feedback of all partners engaged:

Table 2: Suggested workshops frameworks – preliminary version

Workshop	Suggested Title	Focus	Activities	Preliminary Expected Outcome
Workshop 1 (preliminary date suggested between M12-M14)	*EET Mapping Across Desktop Cases*	Align Energy Efficiency Technologies (EETs) with FLEETfor55 desktop cases and early stakeholders' insights.	• Map EETs to newbuilt and retrofit desktop scenarios; • Preliminary technical and financial assessment; • Gather feedback on integration	Outputs will feed into Desktop Case Specifications, supporting the refinement of technology mappings and stakeholder engagement datasets.

Workshop	Suggested Title	Focus	Activities	Preliminary Expected Outcome
			feasibility, performance characteristics and data needs.	
Workshop 2 (preliminary date suggested between M17-M19)	*Barrier Identification and Engineering Design Evaluation*	Build on intermediate results to identify barriers, risks, and enablers for EET adoption.	• Analyse deployment barriers (technical, regulatory, operational, and financial); • Review intermediate KPI trends and feedback loops; • Engineering Design practical guidelines to inform installation.	Expected outcome of this workshop will feed the installation complexity of EETs regarding to technical input from providers and regulatory framework for tasks of WP4.
Workshop 3 (preliminary date suggested between M20-M22)	*Digital Platform Requirements*	Focus on the final testing of the digital platform.	• Requirements' List for the digital platform regarding to operational, economic, environmental and functional data	Outputs will contribute to the analysis for the selection of the most appropriate tools integrated into the digital platform.

Workshop preparation and partner roles/contributions

Workshop preparation under Task 9.2 builds on the engagement framework and role allocations defined in Deliverable D9.1 (coordination procedures, and documentation standards). Within this context, Task 9.2 focuses on the planning and execution of workshops as part of the outreach and feedback cycle, specifically covering:

i. refining workshop objectives in alignment with TIN engagement priorities and Use Case alignment;

ii. coordinating stakeholder outreach and invitations based on the TIN registry maintained under Task 9.1;

iii. preparing event materials (e.g., structured feedback templates, short briefs, pre-session surveys), using formats established in D9.1 where applicable; and

iv. ensuring that post-event deliverables (validated minutes, anonymized feedback summaries, follow-up questionnaires) are produced in line with the Data Management Plan and transferred to Task 9.1 for integration into the TIN registry and engagement log.

These preparatory actions are coordinated with Task 9.1 (for member targeting and engagement tracking), Task 9.5 (for EAB participation and synergies), and the TIN Committee to ensure alignment with the overall clustering schedule and engagement cycle.

Coordination and oversight

Workshop preparation is coordinated by MCI under Task 9.2, with support from WP9 partners and oversight by HYD to ensure consistency with project planning and quality procedures. In line with the Grant Agreement, WM will contribute to the clustering events and workshops.

Agenda and content development

MCI will lead the drafting of workshop agendas, facilitation methods, and survey instruments. Each workshop's content will be co-developed with the relevant technical Work Packages to ensure alignment with ongoing project work. These inputs are now consolidated based on the latest engagement outcomes reported in D9.1.

Once constituted, the External Advisory Board (EAB) – as outlined in Task 9.5 – will review workshop agendas to enhance the strategic and practical relevance of discussions. The EAB provides high-level advice to ensure the workshops align with project milestones, support managerial decision-making, and maintain the quality and applicability of the outputs.

TIN Engagement

CERTH, as the lead of Task 9.1, maintains the official TIN registry, which includes a list of TIN members, their contact details, LoI/NDA status, and engagement history. CERTH ensures that workshop invitations, participation details, and engagement summaries are systematically logged and cross-referenced in accordance with the procedures established in D9.1 and the Data Management Plan. Prior to each event, CERTH circulates relevant preparatory materials to TIN members and coordinates post-event communication (e.g., summary briefs, validated minutes, anonymised feedback summaries). For clarity:

- "Attendance records" refer to participant lists, affiliation details, and consent forms gathered during the event.
- "Structured notes" refer to standardised, anonymised documentation of feedback and discussion points recorded using pre-defined templates (e.g., "EET feedback form" and "barriers-mapping sheet") developed under D9.1.

These outputs will be integrated into the project's repository ensuring traceability and compliance with GDPR provisions in D1.3–D1.5 (Data Management Plan).

Survey tools

Survey instruments and interactive tools will be designed by MCI, with input from WP9 partners and control by WP9 leaders for clarity, coherence, and data protection compliance. The tools will capture quantitative and qualitative stakeholder input related to EET maturity, deployment readiness, and perceived adoption barriers. Aggregated, non-personalised results will be linked to the project's repository.

Logistics and documentation

MCI will coordinate logistical aspects (hybrid or online formats) in cooperation with hosting partners. Attendance lists, presentations, and structured minutes will be archived in the project's repository. Standardised templates – developed under D9.1 and examined through the project's QA procedure – will be used for agendas, consent notices, and minutes to ensure traceable and comparable documentation across events.

3 Communication to Support TIN Outreach, Clustering Events, and Workshops

Task 9.2 employs a multichannel approach to enhance the visibility, accessibility, and engagement of the Technologies Innovation Network (TIN) activities, while ensuring coherence with the project's overall communication and dissemination framework (Task 9.4). The strategy aims to ensure that each outreach action-whether related to clustering events, workshops, or digital interaction-follows a unified identity and contributes to the Key Performance Indicators (KPIs) and editorial standards established for FLEETfor55.

Communication Channels and Tools

The following channels and tools will be employed to support outreach, engagement, and knowledge sharing within and beyond the TIN framework:

- **Project Website and TIN Portal:**

  The official FLEETfor55 website, developed under Task 9.4, serves as the main hub for public information and visibility. A dedicated TIN landing page will present news on clustering events, workshops, and onboarding updates. It will also host non-confidential materials such as event summaries, short news articles, and open calls for participation.

- **Newsletters and Targeted Email Updates:**

  Periodic newsletters-developed and circulated by WP9 will share calls for participation, event recaps, and progress highlights. Distribution lists will be managed in full compliance with the project's Data Management Plan (D1.3 – D1.5) and GDPR requirements. Archived versions will be stored in the project repository for traceability.

- **Survey and Onboarding Toolkit:**

  Structured engagement tools such as digital questionnaires, quick polls, and short quizzes will be implemented through platforms like Microsoft Forms or equivalent tools. These instruments will collect feedback from TIN members on technological applicability, barriers, and emerging trends. Results will be anonymised and summarised in periodic outreach reports.

- **Social Media, Press Releases, and Event Materials:**

  Channels such as LinkedIn along with traditional media outlets, will be used to amplify outreach. Press releases, infographics, short videos, and visual materials will follow the

project's approved visual identity guidelines. Printed collateral (e.g., flyers, roll-ups, or posters) will be prepared for physical events.

- **Clustering Events and Workshops:**

  As described in Section 2.3, clustering events and workshops represent key interactive platforms for knowledge exchange and stakeholder participation. Each session will be supported by standard templates for invitations, agendas, and feedback forms to ensure methodological consistency.

Traceability and Evidence

All outreach artefacts – such as newsletters, survey forms, event agendas, or published materials – will be archived in the project's repository and cross-referenced in internal records to demonstrate compliance with documentation and quality assurance procedures.

This approach guarantees traceability between outreach activities, stakeholder interactions, and evidence of engagement, in line with Horizon Europe's record-keeping and reporting requirements (GA Article 20 and Article 21).

4 Synergies and Interfaces: EAB Engagement and Inter-Project Clustering

In line with WP9's dissemination and clustering goals, Task 9.2 promotes active collaboration between FLEETfor55 and related Horizon Europe initiatives. These collaborations aim to maximise outreach efficiency, ensure methodological coherence, and create structured opportunities for dialogue among projects pursuing complementary maritime decarbonisation objectives. The main objectives are to:

- **Enhance visibility and outreach impact** through shared communication channels, co-organised dissemination activities, and joint branding opportunities at events.
- **Foster engagement with complementary initiatives** by co-hosting clustering sessions, workshops, or panels, ensuring mutual benefit and non-duplication of efforts.
- **Enable technology benchmarking** and knowledge exchange with other projects addressing maritime decarbonisation, not through direct data transfer, but by facilitating dialogue with Energy Efficiency Technology (EET) providers that participate in multiple EU initiatives.
- **Support methodological alignment** across comparable research actions, ensuring that insights on Energy Efficiency Technologies (EETs) are reported consistently and with compatible Key Performance Indicators (KPIs). (This alignment focuses on shared understanding of assessment approaches rather than altering FLEETfor55's defined vessel use cases, which remain distinct combinations of EET packages explored within the project framework.)

Examples of Synergies and Collaborative Activities

As of this reporting stage, the following collaborations have been confirmed or are under active exploration, with evidence of ongoing exchanges documented through WP9 coordination:

Confirmed collaborations

- **European IWT Projects Cooperation Platform:** Joint engagement on inland waterway decarbonisation, including clustering and cross-referencing of outreach events.

Synergies under discussion

- **AEGIR:** Potential coordination on EET mapping and harmonised identification of deployment barriers.

Cross-initiative platforms and EU-level networks

- **Waterborne Technology Platform (Waterborne TP):** Participation in clustering and dissemination events.
- **Horizon Europe Mission Oceans:** Knowledge exchange on sustainable innovation and carbon-reduction strategies.
- **ETP4HPC (European Technology Platform for High-Performance Computing):** Dialogue on digital twin and simulation strategies relevant to fleet optimisation.

Mechanisms for Collaboration

Synergies are implemented through the following mechanisms, coordinated jointly with Task 9.5 and WP9 partners:

- **Co-hosted events and clustering sessions:** Physical or virtual workshops enabling dialogue between project representatives and shared stakeholder networks.
- **Joint communications and dissemination:** Cross-posts on newsletters, social media, and websites to broaden reach and reinforce EU-level visibility.
- **Cross-invitations and networking opportunities:** Engagement of sister projects' representatives in TIN workshops and vice versa.
- **Technical interoperability and benchmarking:** Alignment of reporting metrics and evaluation methods when comparing energy efficiency improvements or retrofit case studies across EU-funded projects.

Initial clustering activities began after Month 12 of the project (December 2025), with preparatory discussions ongoing to formalise structured collaboration frameworks in the upcoming phases. Through these synergies, FLEETfor55 aims to benchmark TIN engagement practices, reinforce methodological coherence across initiatives, and contribute to the EU's collective ambition for zero-emission waterborne transport.

Monitoring, KPIs and Feedback Collection

Monitoring of the Technologies Innovation Network (TIN) under WP9 ensures that outreach and engagement remain effective and traceable. Task 9.2 focuses on collecting structured feedback from clustering events, workshops, and surveys, while overall KPI consolidation and communication analytics are coordinated jointly with Task 9.4. Participation statistics, survey responses, and qualitative remarks from TIN activities are summarised by Task 9.2 & Task 9.1 and shared with relevant technical WPs to inform ongoing assessments.

Outreach effectiveness is periodically evaluated through metrics such as participation levels, diversity of EET categories represented, and feedback quality. These results contribute to WP9's broader reporting on communication impact and project visibility, as reflected in D9.6 Final TIN Outreach and Impact Report.

5 Conclusion and Next Steps

The initial TIN outreach strategy under Task 9.2 has established a clear, GA-compliant framework for engagement and evidence-gathering (clustering events, workshops, surveys/quizzes) to support the project's technical and strategic activities. In line with the Grant Agreement, T9.2 mobilises Energy Efficiency Technology (EET) providers, convenes structured interactions, and channels stakeholder feedback to the relevant Work Packages and WP9 tasks. Formalisation of membership, registry maintenance, and the proper handling/storing/distribution of TIN information are managed under Task 9.1, with T9.2 using these resources for targeted outreach and feedback collection. Strategic advice and cross-initiative synergies are coordinated in Task 9.5 (EAB & synergies), which T9.2 supports operationally through joint clustering activities.

Consistent with these role boundaries, T9.2 activities support the mapping of EETs to the project's examined use cases (as defined in the GA/DoA). Outputs from T9.2 engagement (e.g., anonymised survey insights, workshop minutes) are relayed to the technical WPs (WP2–WP5, WP6–WP7 as applicable) and to WP8/WP9 for assessment, and exploitation planning within their respective remits. The EAB (T9.5) provides high-level, managerial and strategic guidance and reviews stakeholder evidence during clustering sessions co-organised with T9.2, ensuring practical relevance and quality oversight.

Looking across the full project lifetime (M01–M42), the next steps for T9.2 will be implemented in coordination with T9.1 and T9.5 and remain aligned with the WP9 communication/dissemination plan:

- **Biannual clustering events** (≈ every six months): plan and deliver multi-stakeholder forums that present progress and collect structured feedback, with EAB participation coordinated under T9.5; document agendas, attendees, and outputs in line with T9.1 data-handling processes.
- **At least three hybrid TIN workshops**: convene application-oriented sessions to gather structured, non-confidential inputs on EET applicability and constraints; route outputs to the relevant WPs and WP9 tasks for analysis and follow-up.
- **Structured feedback instruments**: maintain surveys/quizzes and standard templates to ensure comparable evidence across events; ensure GDPR-compliant storage and controlled sharing through the T9.1 mechanisms.

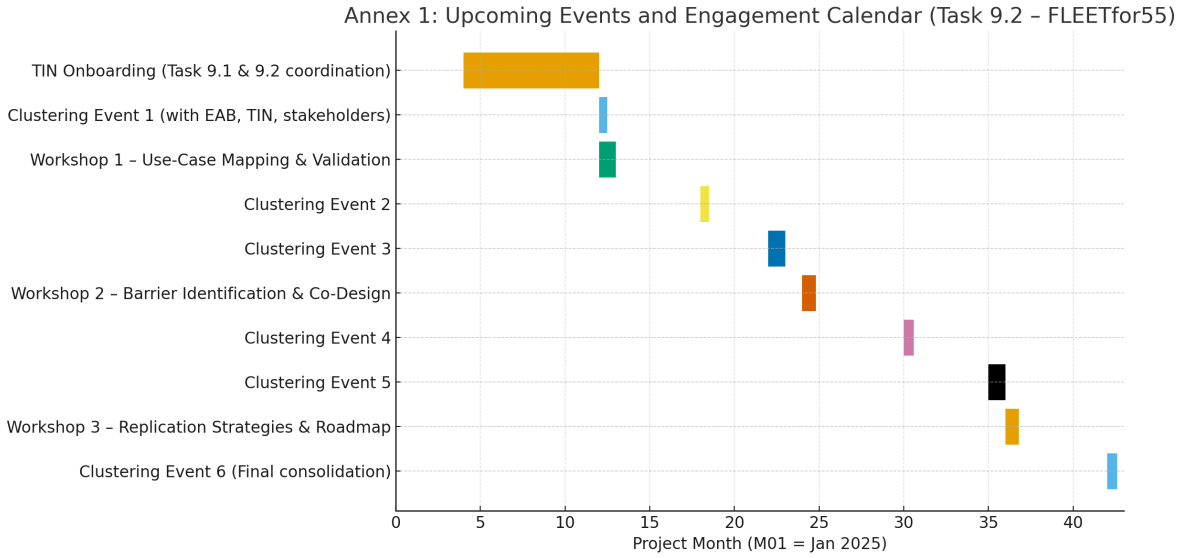
- **Synergies and visibility**: co-brand clustering/workshop sessions with sister HE projects (operational support by T9.2; strategic coordination under T9.5) and feed communication assets to T9.4 for amplification and KPI tracking.
- **Coordination with T9.1 on membership matters**: enlargement and registry ownership remain under T9.1; T9.2 will support by using the T9.1 register for targeting and by returning structured feedback/participation evidence to inform member management. As the final relevant deliverable (D9.3) will address both T9.1 and T9.2, this next-steps roadmap explicitly recognises the interdependence of outreach (T9.2) and engagement/registry management (T9.1).

This division of responsibilities ensures that T9.2 continues to act as the operational interface between external innovation actors and FLEETfor55, without displacing the technical aspects (WP2-WP7), sustainability/business modelling (WP8), or exploitation planning (T9.3) carried out elsewhere in the project. In doing so, the TIN outreach programme will contribute demonstrably, through documented, GA-aligned engagement, in order to the project's evidence base and to the EU's broader objectives for maritime decarbonisation, while preserving clarity of roles across WP9 tasks and the technical work packages.

6 Annexes

ANNEX 1: Upcoming Events and Engagement Calendar

A Gantt Chart under preparation/development by partners. It will be similar to the below example one, once finalised:



Project Month	Engagement Format	Working Title / Focus	Linked WPs / Tasks	Lead / Co-leads	Indicative Outputs / Notes
M04–M12	TIN Onboarding (rolling)	Registry finalisation; LoI/NDA execution; EET cluster mapping; targeting for events	T9.1 (registry, onboarding), T9.2 (outreach); inputs to WP2–WP3	CERTH (T9.1), MCI (T9.2), HYD	TIN roster ≥ 35 members by ~M12; living tracker; feeds all events.
≈ M12	**Clustering Event 1** (hybrid)	TIN activation & EAB introduction; programme overview; survey launch	T9.2 (clustering), T9.5 (EAB); WP9 cohesion	MCI, HYD, CERTH	High-level insights to steer Workshop 1; minutes & anonymised survey.
≈ M12–M13	**Workshop 1** (hybrid)	**Use-Case Mapping (EET↔desktop cases)**	WP2–WP3; T9.2 workshops	MCI, CERTH; tech WPs	EET–case matrices; gaps & data-needs note to WP2/3.

Project Month	Engagement Format	Working Title / Focus	Linked WPs / Tasks	Lead / Co-leads	Indicative Outputs / Notes
≈ M18	**Clustering Event 2** (hybrid)	Progress review; early barriers; TRL signals	T9.2; T9.5 joint session	HYD, MCI, NTUA/RINA	Stakeholder brief → WP3/5; inputs to Workshop 2.
≈ M22–M23	**Clustering Event 3** (virtual)	Cross-WP alignment; interim findings	T9.2 with WP2–WP5	HYD, MCI	Short communique; questions for Workshop 2.
≈ M24	**Workshop 2** (hybrid)	**Barrier Identification & Co-Design** (tech/regulatory/ops/ finance)	WP3, WP5; links to WP8	MCI, DNV; tech WPs	Barrier log; co-design notes; feed WP5 & WP8.
≈ M30	**Clustering Event 4** (hybrid)	Synthesis across WPs; preparation for exploitation track	T9.2 ↔ T9.3	MCI, WM, VPF	Market-uptake signals → KER/KPIs (T9.3).
≈ M35–M36	**Clustering Event 5** (hybrid)	Pre-consolidation checkpoint; invite sister projects	T9.2 & T9.5 synergies	MCI, HYD	Joint session option with HE peers (e.g., Waterborne TP).
≈ M36	**Workshop 3** (hybrid)	**Replication Strategies & Roadmap**	WP8 (business models), WP9	MCI, WM; HYD	Draft deployment/replication roadmap; inputs toward D9.6.
≈ M42	**Clustering Event 6** (final, hybrid)	**Final consolidation**: results, lessons, legacy plan	WP9 (dissemination /exploitation)	HYD, MCI, CERTH	Public-facing wrap-up; legacy & TIN continuation options.

Annex 1 Gantt Chart – TIN Onboarding (M04–M12), six-monthly Clustering Events, and three hybrid Workshops (Task 9.2), aligned with GA WP9 and D9.2.

Alignment notes (for internal QA):

- **Frequency & formats**: Clustering ≈ every 6 months; ≥ 3 TIN workshops, hybrid/physical – exactly as per GA WP9 Task 9.2 and D9.2 wording.
- **Dependencies**: First full events follow **EAB constitution (~M12)**; onboarding and registry ownership stay with **T9.1 (CERTH)**; T9.2 conducts outreach and structured feedback – consistent with D9.1/D9.2 role split.