A leap towards SAE L4 automated driving features

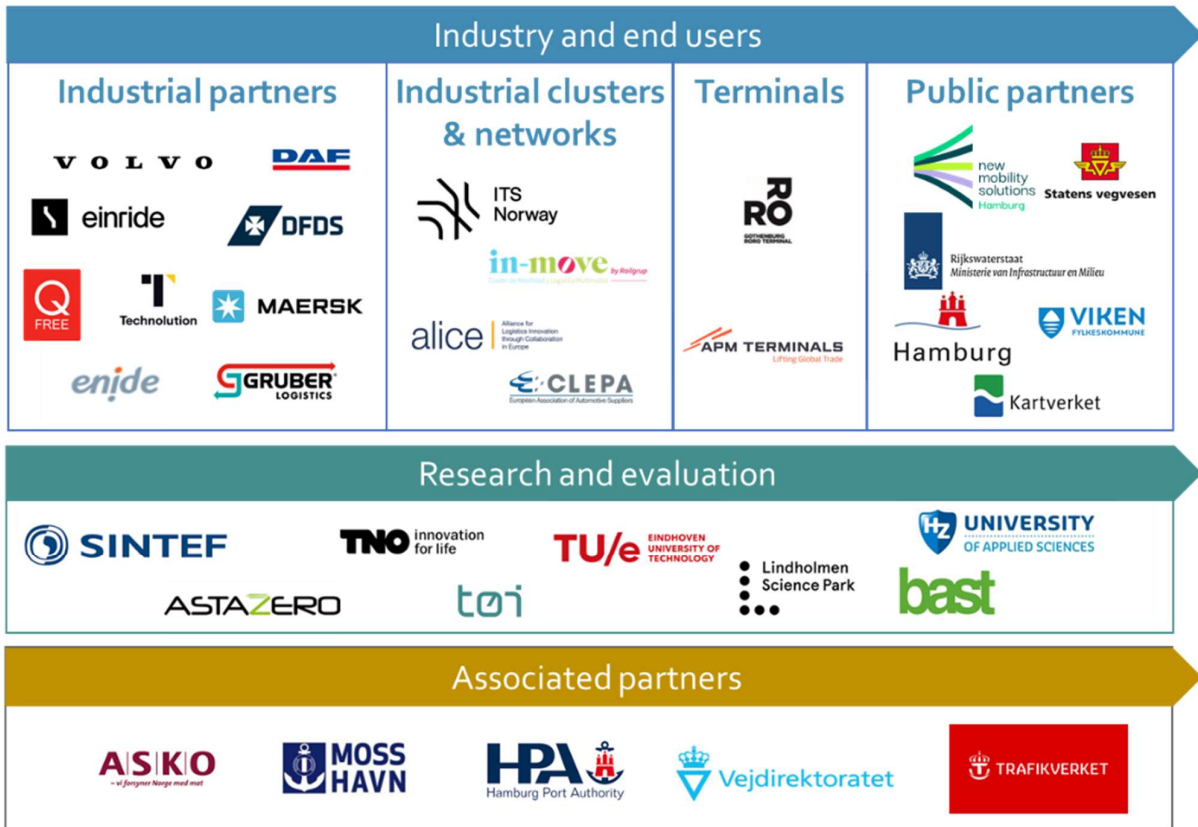## D6.1 Stakeholder Group Setup and Engagement Plan
30th January 2023

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einride DFDS
Qfree Technolution MAERSK
enide GRUBER LOGISTICS

Industrial clusters & networks

ITS Norway
in-move by Religrup
alice Alliance for Logistics Innovation through Collaboration in Europe
CLEPA European Association of Automotive Suppliers

Terminals

RO Gothenburg Roro Terminal
APM TERMINALS Lifting Global Trade

Public partners

new mobility solutions Hamburg
Statens vegvesen
Rijkswaterstaat Ministerie van Infrastructuur en Milieu
VIKEN FYLKESKOMMUNE
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Research and evaluation

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ASTAZERO toi bast

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Glossary of terms and abbreviations used

Abbreviation / Term	Description
AZ	AstaZero
CCAM	Cooperative, Connected and Automated Mobility
D	Deliverable
EB	Executive Board
INM	In-Move
ITSN	ITS Norway
GA	General Assembly
LOS	Letter of Support
NDA	Non-Disclosure Agreement
M	Month
OEM	Original Equipment Manufacturer
R&D	Research and Development
SBG	Stakeholder Board Group
SIN	SINTEF
T	Task
TNO	TNO
UC	Use Case
VOLV	Volvo
WP	Work Package

1 Executive Summary

The MODI Stakeholder Board Group (SBG), consisting of representatives from external stakeholders, shall guide and advise the process of defining the recommendations for implementing the solutions and measures developed within the MODI project. The purpose of this deliverable is to explain the initial efforts of setting up a relevant and comprehensive group of stakeholders, as well as setting out the principles for including new members, involvement with MODI activities, and engagement of the SBG. Furthermore, this report includes a description of the SBG in terms of member categories, motivation, and a plan of stakeholder activities and the expected interaction with the members of the group over the duration of the project and in relation to project-specific activities.

An initial SBG was established during the proposal stage, based on a stakeholder analysis involving a definition of relevant stakeholder categories, finding suitable representatives for each group, and inviting relevant actors to commit and participate. During this phase, about 20 stakeholders representing authorities, road operators, academia, policymakers, freight logistics, and the automotive industry signed a letter of support (LOS) to participate in the MODI project. The SBG will be further developed with new members according to the project needs as they evolve during the project period, and in compliance with the principles described in this document.

The MODI project will communicate, disseminate, and engage with the SBG to receive advice on the project results and activities throughout the lifecycle of the project (e.g., sharing experience and knowledge on barriers, technology, regulation, policies, and standardisation aspects relevant to MODI). Main activities include targeted communication and dissemination actions involving a variety of channels (e.g., social media, workshops, and conferences), engagement by invitation to participate in data collection of stakeholder needs and feedback on relevant tasks and deliverables, in addition to three dedicated stakeholder workshops during the MODI project.

2   Introduction

This deliverable sets out the structure and involvement of the Stakeholder Board Group (SBG), describing the group set-up and engagement plan, including the stakeholders´ commitment and related activities. Deliverable overview, task descriptions, report structure, and linkage to other project outputs are described in the following sections of Chapter 2.

2.1   Mapping MODI Outputs

The purpose of this section is to map MODI's Grant Agreement commitments, both within the formal Deliverable and Task description, against the project's respective outputs and work performed.

Table 1: Adherence to MODI's Grant Agreement deliverable & tasks descriptions

MODI Grant Agreement Component Title	MODI Grant Agreement Component Outline	Respective Document Chapter(s)	Justification
DELIVERABLE			
D6.1 Stakeholder group setup and engagement plan	D6.1 describes the stakeholder group setup and engagement plan.	Chapter 3 Chapter 4	This deliverable describes the foundation and process for forming and involving an active and relevant SBG consisting of representatives from external stakeholders to guide and advise the process of defining the recommendations for implementing the solutions and measures developed within the MODI project. In this document, references to the Grant Agreement and the Consortium Agreement are made, to ensure that the document complies with the rules and agreements made in the contractual documents.
TASKS			
T6.1 Stakeholder Board Group engagement	This task will define the SBG, commit the partners and motivate the SBG to participate in the project-specific activities. The SBG consists of external stakeholders contributing to the whole logistics value chain. The group will be involved in several actions, workshops, and interviews as part of WP1 and WP2.	Chapter 3 Chapter 4	The SBG shall (i) provide input to MODI on barriers, technology, regulation, policies, standardisation, etc., (ii) discuss and validate intermediate and not restricted results, and (iii) be a communication and dissemination channel. The SBG involvement shall enable an efficient, open, and coordinated approach to add value for further enhancing CCAM processes in Europe.

2.2 Deliverable Overview and Report Structure

This report is organized as follows:

- Chapter 1 presents an executive summary of the report.
- Chapter 2 provides an overview of the deliverable and task description related to this report, as well as the relevance and alignment with the overall project.
- Chapter 3 presents the SBG setup in terms of objectives and motivation, members, and commitment based on a stakeholder analysis, as well as an overview of the relation to the MODI project structure.
- Chapter 4 presents the SBG engagement plan with specific activities.
- Chapter 5 wraps up the report.

2.3 Linkage to other Project Outputs

Table 2: Linkage to other project outputs

MODI Grant Agreement Component Title	Contribution and Value of linkage
D6.1	This deliverable interacts with all other WPs, in that it sets out the principles and processes on how to involve external stakeholders with the project activities and results. All WPs will provide input on results and topics to be addressed in activities with the SBG, as well as input on candidates for the group setup. WP6 will define the target audience. Details on input and output from the SBG will be defined according to the project needs at different progress stages. An initial overview of linkage, not limited, is presented below.
WP1	SBG members will be interviewed and consulted on user and stakeholder requirements, safety and security requirements, and business models.
WP1 and WP2	Alignment of requirements and assessment framework
WP3, WP4, and WP5	Input from WP1 on safety and security requirements, based on input from T6.1
WP1, WP2, WP3, WP4, and WP5	Results from workshops on coordinated CCAM Interface, models, use cases, integration, evaluation, and validation
WP6	Communication channel for SBG activities and findings, promote synergies with MODI's communication and dissemination of foreseen actions to maximize the project's outreach, validation of exploitation strategy and plan, and relevant exploitable results. SBG members could be engaged in further steps toward the implementation of results.
WP7	N/A

2.4 MODI Ambitions: A lead towards SAE L4 automated driving features

The MODI project aims to accelerate the introduction of highly automated freight vehicles through demonstrations and by overcoming barriers to the rollout of automated transport systems and solutions in logistics. The logistics corridor from the Netherlands to Norway has been chosen for demonstration activities as the Netherlands, Germany, Denmark, Sweden, and Norway are expected to be among the first movers to implement fully automated vehicles in Europe.

MODI comprises five use cases, each describing a part of the logistics chain in confined areas and on public roads. It identifies what is already possible on an automated driving level without human interaction and what is yet to be developed. The MODI objectives are to:

- Implement new technology within the CCAM spectrum.
- Define recommendations for the design of physical and digital infrastructure.
- Demonstrate viable business models for connected and automated logistics.
- Perform technical and socio-economic impact assessments.

Major challenges include regulatory aspects and standardisation, border crossings, access control, charging, coordination with automated guided vehicles, loading/unloading and handover from the public to confined areas.

MODI test sites include a CCAM test corridor from Rotterdam to Oslo with specific use cases at Rotterdam (The Netherlands), Hamburg (Germany), Gothenburg (Sweden), Moss (Norway).

The ambition of MODI is to take automated driving in Europe to the next level by demonstrating complex real-life CCAM use cases while:

- Showing the local, national, and international context of freight transport with CCAM vehicles, both in confined areas and on public roads.
- Cooperating and cocreating with logistics companies, road operators, vehicle OEM's, providers of
- physical and digital infrastructure and other stakeholders to bridge the gap between R&D and market readiness.
- L4 solutions for long-distance operational design domains.
- Creating innovative business models and improved business models across the logistics chain.
- Proving that the technology soon can deliver on promised benefits at relatively high speeds and medium traffic complexity, including a coordinated CCAM system to support smart traffic management.
- Paving the way to enable highly automatic transport on important corridors, connecting main ports across Europe.
- Accelerating CCAM in Europe by setting examples of business-wise CCAM integration in logistics.

3   Stakeholder Board Group Setup

3.1   Objectives and Motivation

The main goal of the SBG setup is to facilitate targeted interaction between the MODI project and relevant stakeholders from the CCAM and logistics value chain. MODI partners will share detailed knowledge created through the course of the project, receive input and feedback, engage in dialogue, and collaborate with the members of the external SBG to prepare and showcase the Use Cases (UCs).

MODI emphasizes the engagement with external stakeholders as a prerequisite for ensuring that the project activities consider stakeholder needs in a good way and provide valuable and sound results to various sector actors. Making project results known and available to a broad group of potential users and stakeholders will pave the way for exploiting the project results towards achieving European leadership in innovative CCAM. A strong SBG will contribute to the continuation of the results from the project into business opportunities, new projects, and activities, thus forming the future of logistics based on L4 self-driving.

The SBG is expected to:
- Discuss, comment upon, and validate intermediate and not restricted results
- Provide input on best practices relevant to the individual use cases
- Support and advise on barriers, opportunities, technology, policy, etc.
- Contribute to awareness about MODI and MODI results beyond the project group

The SBG will receive information and feedback including, but not limited to:

- Contact information of all MODI partners
- First-hand information about not-restricted project results
- Specific information and details from use cases and activities that are relevant for a particular group of stakeholders
- Relevant open-access information before being published

The SBG members are encouraged to engage with relevant project partners on various subjects of interest and will be invited to participate in specific actions related to stakeholder needs and interests.

The experience, knowledge, and involvement from SBG will enable MODI to build solutions that end-users and actors along the whole logistic value chain consider applicable and valuable.

3.2   Stakeholder Analysis

Stakeholder analysis helps identify public and sector-related interests and concerns, and it is becoming increasingly relevant as the European logistics system is getting more interconnected. A stakeholder is any entity (individual or organisation) with a legitimate expectation from the MODI ecosystem; in other words, the stakeholders are all those who may be influenced or would be able to influence the system in general.

An initial stakeholder analysis was already commenced by the consortium during the MODI proposal phase to make sure that all relevant stakeholders are well represented in the MODI project. The analysis involved three crucial steps to identify and decide on the members of the MODI stakeholder group to ensure a good balance of representatives of relevant interests:

1) **Defining a targeted selection of stakeholder categories** that cover various and comprehensive interests associated with the MODI solutions. The relevant stakeholder categories were set by the consortium to include (a) freight and logistics service providers, (b) OEMs and technology providers, (c) public authorities, (d) infrastructure administrators, (e) representative bodies, and (f) academia and R&D organisations. The full list of stakeholder member categories and sub-groups is presented

in Table 3. Emphasis was placed on identifying actor types that are not already represented in the MODI partner group yet have a great interest in or influence on MODI solutions.

2) **Identifying relevant actors and contact persons** to be invited as members of the MODI stakeholder group. The key selection criteria were (a) all stakeholder group categories should be included, (b) actors with prior experience in piloting and demonstration activities of automated transport solutions should be included, and (c) the stakeholder group should encompass several relevant nationalities outside Europe, including actors from USA and Asia.

3) **Invitation and commitment** of SBG members based on the results of step 2. About 20 relevant stakeholders across the defined stakeholder categories have already signed a letter of support (LOS). Besides European actors, the group involves members from the USA, Australia, Singapore, and Korea.

The SBG will be further developed with new members according to the project needs as they evolve during the project period. Upcoming activities will focus on maintaining, engaging, and further developing the SBG.

The engagement of the SBG will be based on a continuous stakeholder analysis assessing how a potential stakeholder would affect the project in terms of their interest and expected power to influence the development, dissemination, and exploitation of MODI results and solutions.

3.3 Stakeholder Board Group Members

The MODI project aims to include a minimum of 25 relevant external stakeholders covering the project's whole value chain, particularly incorporating those relevant target audiences for further exploitation of the results or needed for deployment activities.

SBG will be engaged with relevant stakeholder categories, including (but not limited to) freight and logistics service providers, OEMs, public authorities, infrastructure administrators, associations and representative bodies, academia, and R&D organisation from diverse disciplines. The SBG members will be recruited from both European and non-European countries. Table 3 presents an overview of SBG member categories.

Table 3: Stakeholder Board Group member categories

Stakeholder Board Group member category	Description
Freight and logistics service providers	Terminal operators, logistics service providers, and shippers are the end users of CCAM solutions, and MODI results
OEMs and technology providers	OEMs, technology providers, related transportation platforms, and standardisation committees are the technical facilitators
Public authorities	Public authorities are regulatory bodies and policymakers
Infrastructure administrators	Infrastructure administrators provide the required physical and digital infrastructure, including Telecom
Representative bodies	Representative bodies and membership associations represent larger groups of stakeholders or specific industries
Academia and R&D organisations	Academia and R&D organisations develop and provide knowledge and represent the research frontiers

During the project, the specific representations from the abovementioned categories will vary by the project needs. MODI will strive for balanced participation from all categories. All MODI partners may nominate candidates for the SBG, to be decided upon by Coordinator in consultation with the associations involved in WP6. The decision will be based on the principles described in the stakeholder analysis in section 3.2.

The list of SBG members and contact persons will be maintained continuously during the project's lifecycle and published on the MODI SharePoint (only available for MODI partners).

3.4   Stakeholder Board Group Commitment

The coordinator will ensure that a mutual non-disclosure agreement is executed between the project and each SBG member before participating in any project activities. The agreement will include a section on the intentions to collaborate and contribute with input and feedback to relevant project tasks and activities. The parties will enter the project for the purpose of undertaking the actions defined by this document (D6.1).

The SBG members are expected to cover their own costs related to the various activities. The project can reimburse travel expenses in exceptional circumstances in agreement with the project coordinator.

3.5   Stakeholder Board Group´s Relation to the MODI Governance Structure

Figure 1 presents the MODI governance structure. The SBG is directly related to WP6: Dissemination, Communication, and Exploitation and will be administrated by the task leader of T6.1 Stakeholder Board Group Engagement.
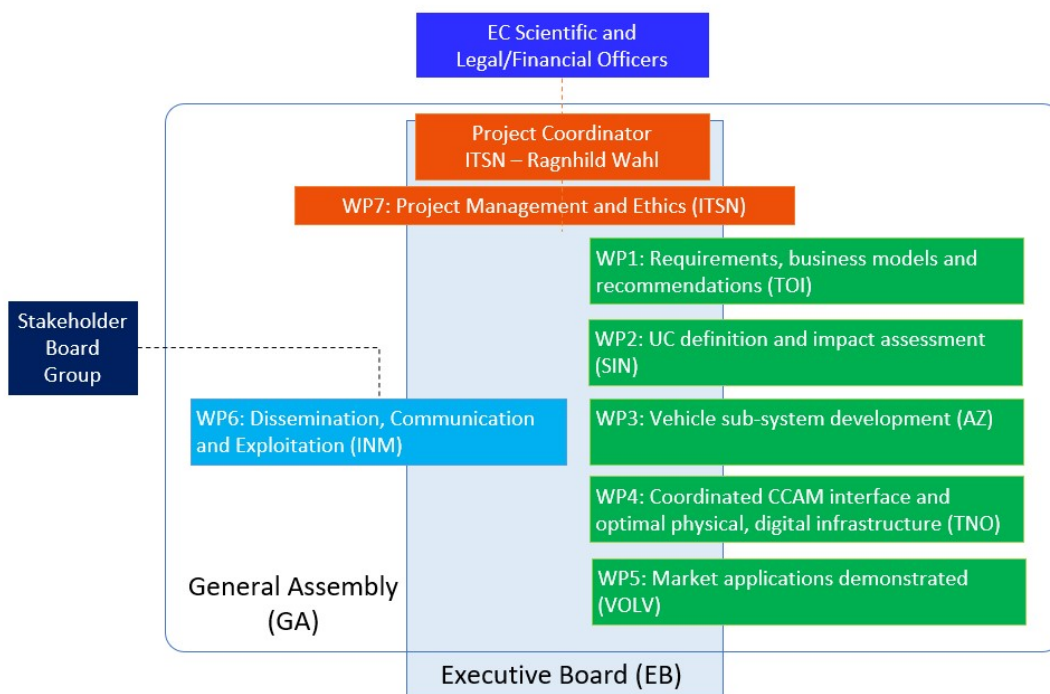

Figure 1: Stakeholder Board Group´s relation to the MODI governance structure

4 Stakeholder Board Group Engagement

MODI partnership will engage with the SBG to receive advice on the results and activities of the MODI project throughout the lifecycle of the project. Main activities include targeted communication and dissemination actions for the CCAM partnership to relevant audiences, engagement in the progress of MODI through project-specific activities (e.g., data collection of stakeholder needs and feedback on relevant tasks), as well as three dedicated stakeholder workshops to discuss and validate the MODI outcome and results.

The SBG engagement in the MODI project is a continuous process throughout the MODI's entire lifecycle and will be adapted according to the project's progress and needs.

4.1 Communication and Dissemination Activities

Communication and dissemination activities will take place through various channels and tools as described in the MODI Communication and dissemination strategy (D6.2):

- Project's website
- Social networks
- Communication and Dissemination materials
- Video(s) / Webcast(s) / Podcast(s)
- Workshops
- Conferences
- Fairs

The MODI stakeholders will play an important role in communicating and disseminating the project's results to a wider CCAM and logistics community. The MODI project will motivate stakeholder communication and dissemination by providing targeted material for them to use in their respective channels.

4.2 Stakeholder Involvement in Project Activities

An important role of the SBG is to provide stakeholder input to ongoing project activities, by sharing their experience and knowledge on relevant aspects of MODI. Involving stakeholders in project activities will facilitate the possibility to influence ongoing work and deliverables. Current topics of interest include (but are not limited to) barriers, technology, regulation, policies, and standardisation. SBG members will be consulted, by invitations to participate in dialogue, interviews, surveys, and workshops carried out by the individual tasks and/or WPs. The need for stakeholder involvement will be identified by the individual task leaders and the specific representation from the SBG will vary by the project needs.

The early stages of MODI will focus on data collection related to stakeholder needs and requirements, use case definitions, and business model development. Later, the stakeholder involvement will to a greater extent draw attention to the demonstration, validation, and exploitation of MODI results.

4.3 Stakeholder Workshops on MODI Outcomes and Results

Three dedicated stakeholder workshops on MODI outcomes and results will be arranged during the MODI project. The first workshop will be scheduled at an early stage (M10), the second by midterm (M20), and the last workshop towards the end of the project period (M36-42). The SBG workshops will take place digitally due to large and geographically widespread international participation.

The workshop agendas will be prepared based on the main results and conclusions of the relevant deliverables. The Lead Beneficiary responsible for the respective deliverable will define the core aspects to be discussed and addressed in the workshops.

Table 4: Stakeholder workshop plan

WS no.	Time	Purpose	Expected results to be shared and discussed
1	M10	Share the overall aim, objectives, and expected results from MODI and align the requirements and assessment framework (WP1 and WP2 & WP3).	D1.1 User and stakeholder requirements (M7) D1.2 Safety and security requirements (M7) D3.1 Connectivity requirements (M6) D3.2 Automation requirements (M6)
2	M20	Present and discuss the coordinated CCAM Interface, models, and use cases	D1.3 Border processes (M12) D2.1 Use case details (M12) D3.3 User/Driver-vehicle interface (M12) D6.3 Updated communication and dissemination strategy (M18) D6.4 Exploitation strategy and plan (M18)
3	M36-M42	Discuss the integration, evaluation, and validation	**WP1**: D1.4 Future business models for connected and automated logistics (M40), D1.5 Book of recommendations (M42) **WP2**: D2.4 Impact analysis report of MODI-CCAM solutions and use cases (M42), D2.5 Gap analysis (M42) **WP3**: D3.4 Demonstration of adapted Volvo, DAF and Einride vehicles (M24), D3.5 Design and test results of the (low-level) path planner (M36), D3.6 Safety testing of adapted vehicles and used methods and confidence levels (M36) **WP4**: D4.1 Optimal design of physical and digital infrastructure for confined areas (M24), D4.2 Optimal designs of physical and digital infrastructures on public roads (M27), D4.3 Validated interface for coordinated CCAM (M30), D4.4 Technical architecture for collaborative CCAM fleet management and traffic management (M30), D4.5 The methodology of logistics optimisation using CCAM (M30) **WP5**: D5.1 Demonstration of CCAM systems and services of goods transport on port sites (M36), D5.2 Demonstration of CCAM systems and services of goods transport in transition from the motorway to a confined area through an urban area (M36), D5.3 Demonstration of CCAM systems and services of goods transport in hub-to-hub (M36), D5.4 Demonstration of CCAM systems and services of goods transport on motorways and border crossings (M36), D5.5 Assessment of CCAM implementation along the MODI corridor (M39) **WP6**: D6.5 Dissemination and communication activities (M42), D6.6 Final exploitation strategy and plans (M42)

5 Conclusions

This deliverable presents the principles for the stakeholder board group setup and engagement plan. The objectives, motivation, and need for involvement of stakeholders are defined, along with a stakeholder analysis. The deliverable gives a presentation of stakeholder member categories and commitment. Furthermore, the stakeholder interaction with different tasks and project activities is identified.

The principles for stakeholder engagement presented in this document are to be followed and consulted upon by all members of the MODI consortium interacting with the stakeholder group. The stakeholder board setup and engagement are crucial for making the MODI activities and processes relevant and aligned with the needs and requirements of the logistics sector. Thus, succeeding in stakeholder engagement will have a great impact on achieving viable solutions for future logistic operations, taking the MODI results to a new level worldwide.