D7.1
Value and supply chain definition



Deliverable description

Deliverable: D7.1 Value and supply chain definition

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WP 7, package leader is Bryndís Nielsen (Athygli)

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Abstract:

This deliverable defines the value chain and the supply chain of the WHISPER project, and how stakeholders are defined and mapped, including the current network closely linked to the WHISPER consortium. This strong value chain involves:

1) Renewable energy and maritime sectorial associations
2) Policy and regulatory bodies, government, funding agencies, policy makers and standardisation bodies
3) Energy and maritime industry, eg technology providers and end-users
4) Academia, RTOs, and Universities

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UK Research and Innovation

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Executive summary

This report presents the value chain and supply chain definition of the WHISPER project, which is funded by Horizon Europe and UK Research and Innovation. It is a public report classified as Deliverable 7.1 and is a part of Work Package 7 – Exploitation, Communication, and Dissemination - and outlines how the main stakeholder groups for the WHISPER project are categorized.

Chapter 1 defines both the value chain and the supply chain for the WHISPER project, utilising Michael E. Porter's (1985) Value Chain Definition model.

Chapter 2 describes the dissemination of information and Chapter 3 further maps up and categorises the stakeholders to be targeted for effective dissemination of information and smooth implementation of the results, including current networks closely linked to the WHISPER consortium. Mapping stakeholders and stakeholder analysis are key elements in effectively disseminating the results of the project, as well as all general communication and future exploitation of the project.

A WHISPER stakeholder database has been created and will be updated over the course of the project. All WHISPER partners participate in creating the list, paying special attention to stakeholder groups that do not have a WHISPER representative within to ensure that any gaps in the value chain will be filled in (Chapter 4). Stakeholder gathering and analysis is an ongoing process throughout the WHISPER project, allowing for more efficient communication and dissemination of information, as well as establishing collaboration with the most relevant experts and stakeholders, such as other EU funded projects.

In Chapter 5 there is a description on how the WHISPER partners will engage with stakeholders, initiating contact in a respectful manner. All activities and gathering of data will be carried out in accordance with the General Data Protection Regulation (GDPR).

Related to the Value and Supply Chain Definition are the Technology Development and Exploitation Plan and its revisions (D7.2, D7.3, D7.4), the Communications and Dissemination Plan and its revisions (D7.5, D7.6, D7.7) the Final Marketing Event to communicate WHISPER results (D7.8) and the Data Management Plan and its revisions (D7.9, D7.10, D7.11, and D7.12).

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List of abbreviations

WSHPS	Wind Solar Hybrid Power system
WAPS	Wind Assisted Propulsion System
R&I	Research and Innovation

Introduction

The aim of the WHISPER project is to develop fully modular retrofit solutions for the shipping industry: A wind-solar hybrid power system (WSHPS) to significantly reduce auxiliary engine emissions, and a wind assisted propulsion system (WAPS) with tilting wind sails, to significantly reduce main engine fuel consumption and emissions.

WHISPER's viability will be proven through two full-scale commercial shipping demonstrations: the WSHPS will be tested on a Samskip container ship, while the WAPS will be tested on an Ant-Topic bulk carrier. See Figure 1, which shows the two retrofit solutions and where they are used.

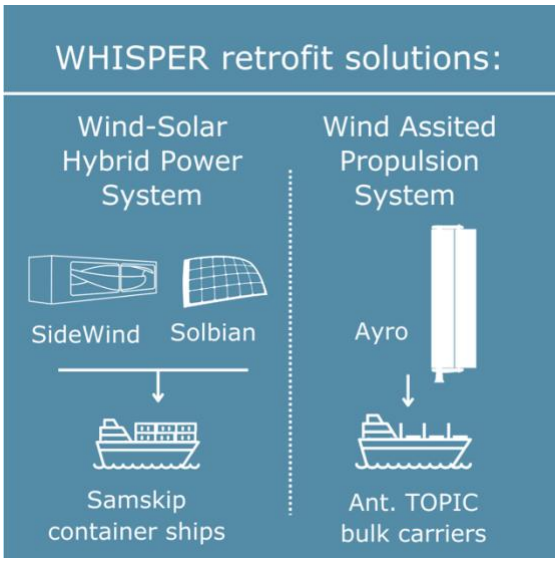


Figure 1 - WHISPER's solutions.

The value and supply chain definitions are an important part of the overall project, in terms of securing targeted dissemination of the project results and to booster the overall goal of reducing emissions in the long-distance maritime industry. The purpose of this deliverable is to define WHISPER's value chain and supply chain (Chapter 1), and map stakeholders to be targeted, including current networks closely linked to the WHISPER Consortium (Chapters 2 and 3).

This strong value chain involves:

i) Renewable energy and maritime sectorial associations.

ii) Policy and regulatory bodies. Government, funding agencies, policy makers, and standardisation bodies.

iii) Energy and maritime industry, eg technology providers, end-users, etc.

iv) Academia, RTOs, and Universities.

A WHISPER stakeholder database has been created and will be updated over the course of the project, defining important stakeholders according to the value chain listed above, and classified according to their roles. All WHISPER partners participate in creating the list to ensure that any gaps in the value chain will be filled in (Chapter 4). Stakeholder gathering and analysis is an ongoing process throughout the WHISPER project, allowing for more efficient communication and dissemination of information, as well as establishing collaboration with the most relevant experts and stakeholders, such as other EU funded projects.

1 Value and supply chain

A supply chain is a network of entities that source raw materials, transform them into finished goods, and then distribute or sell them to customers. In contrast, a value chain refers to creating or adding value to the end product at every step, from conception through production to delivery and support.

1.1 WHISPER's supply chain definition

The WHISPER supply chain encompasses the processes involved in sourcing, manufacturing, and delivering the components and systems necessary for the implementation of the two solutions developed through the project, the wind-solar hybrid power system, and the wind-assisted propulsion system.

The key stages in the supply chain are:

- Raw material acquisition: The supply chain begins with the procurement of raw materials required for manufacturing renewable energy components. This includes sourcing materials such as metals, polymers, composites, and semiconductor materials used in the production of wind turbines, solar panels, tilting wind sails, and batteries.
- Component manufacturing: Manufacturers produce the various components and systems that make up the WHISPER solutions. This involves processes such as molding, casting, machining, and assembly to create wind turbines, solar cells, tilted sails, fuel cells, battery packs, control systems, and other related components.
- Quality control and testing: Strict quality control measures are implemented to ensure the reliability and performance of the WHISPER solutions. This stage involves rigorous testing and inspection procedures to validate the compliance of components with industry standards and specifications.
- Packaging and logistics: Once the components are manufactured and tested, they are packaged securely for transportation. Logistics processes are coordinated to ensure efficient transportation of components to the next stage of the supply chain.
- Distribution and inventory management: Distributors or specialized suppliers receive the components and manage inventory. They store and organize the components in warehouses or distribution centres, ensuring availability and timely delivery to customers when needed.
- Solution integration: The WHISPER solutions' components are supplied to shipyards, retrofitting facilities, or maritime technology integrators. Here, the components are integrated into vessels during retrofitting processes. This involves coordinating with shipbuilders or integrators to ensure the seamless integration of renewable energy systems with the vessel's existing infrastructure.
- Installation and commissioning: The integrated renewable energy systems are installed on the vessels. This stage involves skilled technicians or engineers conducting installation procedures, wiring connections, system calibrations, and commissioning tests to ensure proper functionality and adherence to

safety standards.

- After-sales support and maintenance: Suppliers or manufacturers provide ongoing support and maintenance services to ensure the longevity and optimal performance of the WHISPER systems. This may include periodic inspections, troubleshooting, spare parts supply, and technical assistance to address any issues that arise during the operational lifetime of the systems.

- Supply chain collaboration: Collaboration among suppliers, manufacturers, integrators, and shipbuilders is crucial for an efficient supply chain. Close coordination, communication, and information sharing facilitate smooth and timely delivery of components, streamline installation processes, and optimize overall supply chain operations.

- Environmental sustainability: Companies within the supply chain actively promote sustainable practices by minimizing waste generation, recycling materials, and reducing the carbon footprint associated with transportation and manufacturing processes.

- Continuous improvement and innovation: The supply chain for WHISPER embraces continuous improvement and innovation.

1.2 WHISPER's value chain definition

The primary goal of the value chain is to maximize value creation for the customer while minimizing costs and enhancing efficiency. The value chain concept was introduced by Michael E. Porter in 1985 and is often used as a strategic framework to analyse and improve a company's competitive position. It highlights the interconnectedness of various activities within an organization and emphasizes the importance of managing these activities effectively to achieve a sustainable competitive advantage. The value chain framework created by Porter is made up of five primary activities, as can be seen in Figure 2.

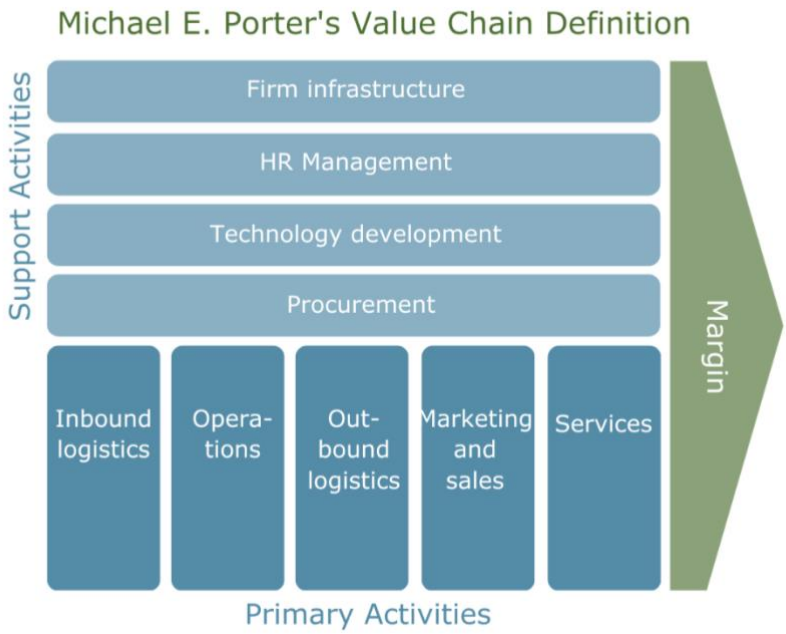


Figure 2 - Michael E. Porter's value chain definition.

To categorize the supply chain for WHISPER's solutions according to Porter's value chain definition, we have categorized the stages of the supply chain to the relevant value chain activities. Here's how it can be categorized, see also *Figure 2 – WHISPER's Value Chain Definition:*

Primary activities:

- Inbound logistics: This includes the procurement of raw materials required for manufacturing renewable energy components, such as metals, polymers, composites, and semiconductor materials.
- Operations: The manufacturing of WHISPER solutions' components and systems, including processes such as molding, casting, machining, and assembly.
- Outbound logistics: Packaging and distribution of the components to shipyards, retrofitting facilities, or maritime technology integrators for integration into vessels.
- Marketing and sales: Promoting and marketing WHISPER solutions to shipbuilders, shipping companies, and other relevant stakeholders.
- Service: Providing after-sales support, maintenance services, and technical assistance to ensure the optimal performance of the renewable energy systems on the vessels.

Support activities:

- Procurement: Sourcing and procuring raw materials required for component manufacturing and establishing relationships with suppliers.
- Technology development: Research and development activities focused on advancing renewable energy technologies, improving component efficiency, and developing innovative solutions.
- Human resource management: Managing skilled technicians, engineers, and workforce involved in manufacturing, installation, and maintenance of WHISPERS's systems.
- Firm infrastructure: Overseeing the overall management, strategic planning, and coordination of the supply chain activities.
- Infrastructure: Establishing manufacturing facilities, warehouses, distribution centres, and service centres required for the supply chain operations.

While this model is quite useful, for innovative new technologies, one must also include an external variable that encompasses the need for establishing new infrastructure (see included in list above), new standardization processes, and adapting the regulatory and policy environment to technological advancement, for a smooth implementation.

Also important for projects that are funded by the EU and UK Research and Innovation, there is also a significant focus on contributing and participating in the wider scientific network, to the advancement of emission-reducing technologies, and to create and disseminate knowledge gained.

WHISPER's value chain, therefore, goes further in defining its stakeholders, including for example regulatory authorities, national authorities (such as port authorities), international and European bodies, the scientific community, and

other EU-related and supported activities, as well as multipliers such as relevant sectorial associations. Figure 3, The Whisper value chain definition, encompasses the original Porter-type value chain, while adding categories that pertain specifically to the WHISPER project.

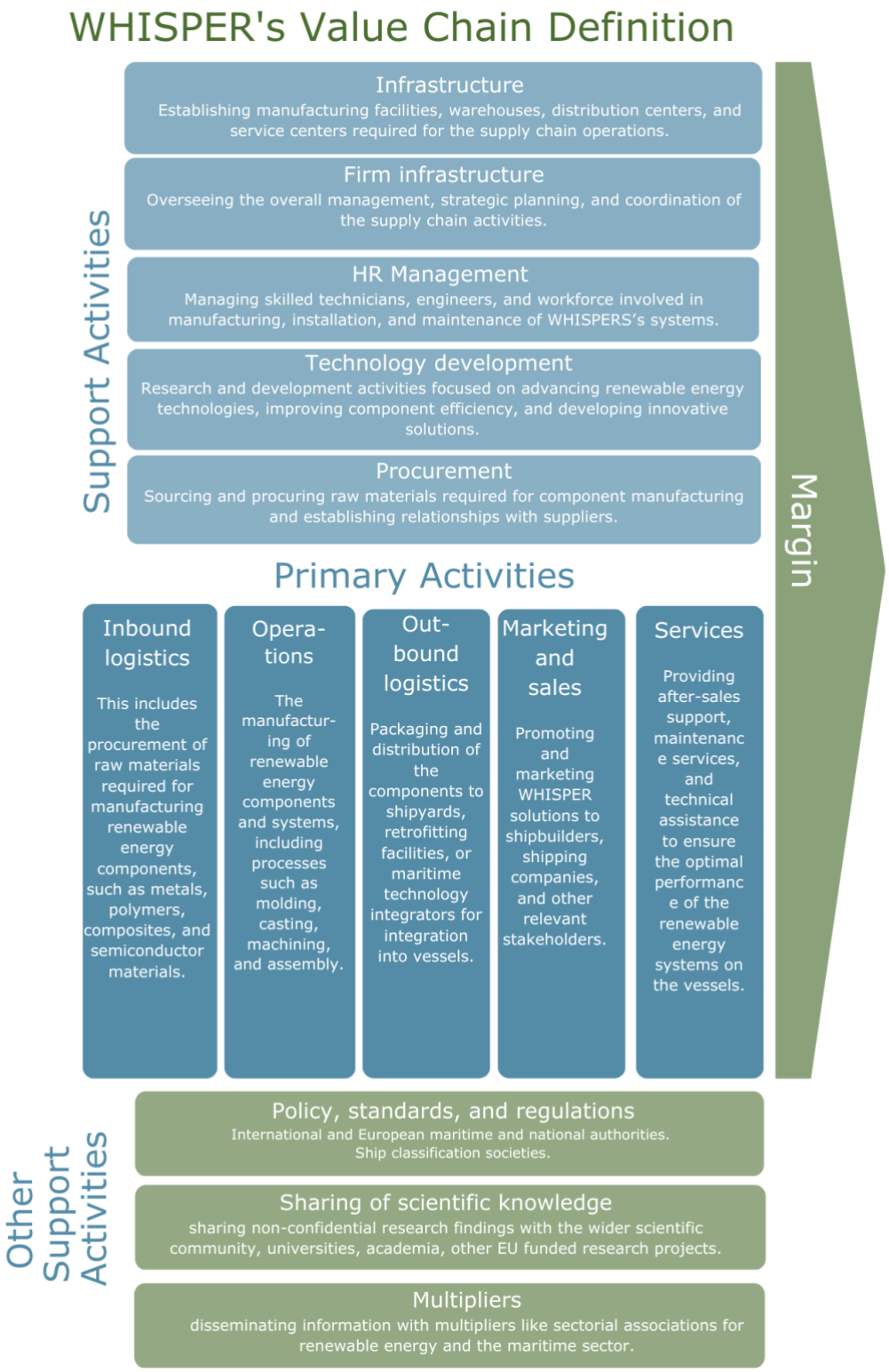


Figure 3 - WHISPER value chain definition.

The value chain and the stakeholder database for the WHISPER project will involve a continuous process of identifying and evaluating the primary and supporting activities, which are required to add value at each step. The purpose of this is to deliver maximum value at the lowest possible cost by increasing the overall efficiency. Efficiency is also contingent upon good communication, and it is therefore imperative that the right information reach the WHISPER stakeholders in a timely and strategic manner.

2 Dissemination of information

The WHISPER dissemination strategy is designed to ensure that all non-confidential outputs reach strategic target groups and are optimally exploited to capture their attention. The strategy aims to maximise the impact of the results generated by the Research and Innovation (R&I) activities and is further described in *Deliverable D7.5 – Communication and Dissemination Plan* (Chapters 1, 2 and 3).

It defines the specific content and forms of dissemination channels, considering target groups and their specific background (eg, knowledge, context, interests, and potential uptake). The dissemination plan also aims to ensure a smooth and fast transition towards the next development stage. The strength of the project and its innovative technological solutions are largely based on the success of its communications, in fact, a study by Bruning, Dials and Shirka (2008) found that organisational outcomes are directly linked to effective relationship building, and that there are clear benefits when resources and effort are devoted to relationship management with publics and stakeholders.

Based on this, the specific objectives of the dissemination action are:

- Enable continuous uptake of the results across the relevant European communities, ensuring that further development and adoption of WHISPER innovations for long distance maritime transport.
- Establish synergies and boost collaboration prospects with other European Research and Innovation projects (R&I) (identified in 1.2.3 National or International R&I activities linked to WHISPER) and external parties within the stakeholder group.
- Share knowledge, lessons learned and strategies to support its transfer to key stakeholders in order to lower barriers to effective adaptation and informed decision-making on energy deployment.
- Contribute to knowledge building and best practices diffusion in Europe and beyond, securing a high level of adoption as well as to increase market replication potential.
- Create a network of potential industrial partners and end users beyond project completion that could support the end-of-development of WHISPER technology.

The definition of stakeholders if of paramount information, for the dissemination plan to go smoothly, ensuring that all relevant stakeholders are aware of the project and its development.

3 WHISPER stakeholders: Value Chain

WHISPER results will be of interest to several players within the energy and maritime sector. The consortium has already built a strong value chain to generate some business traction, defining the main stakeholders in the WHISPER value chain as:

- Policy and regulatory audiences.
- Business / industry audience.
- Multipliers.
- Academic groups.

Figure 4 shows a depiction of how the stakeholders are defined, as well as where some of WHISPER's partners fall within these categories. These categories are then described in more detailed in chapters 3.1 – 3.5.

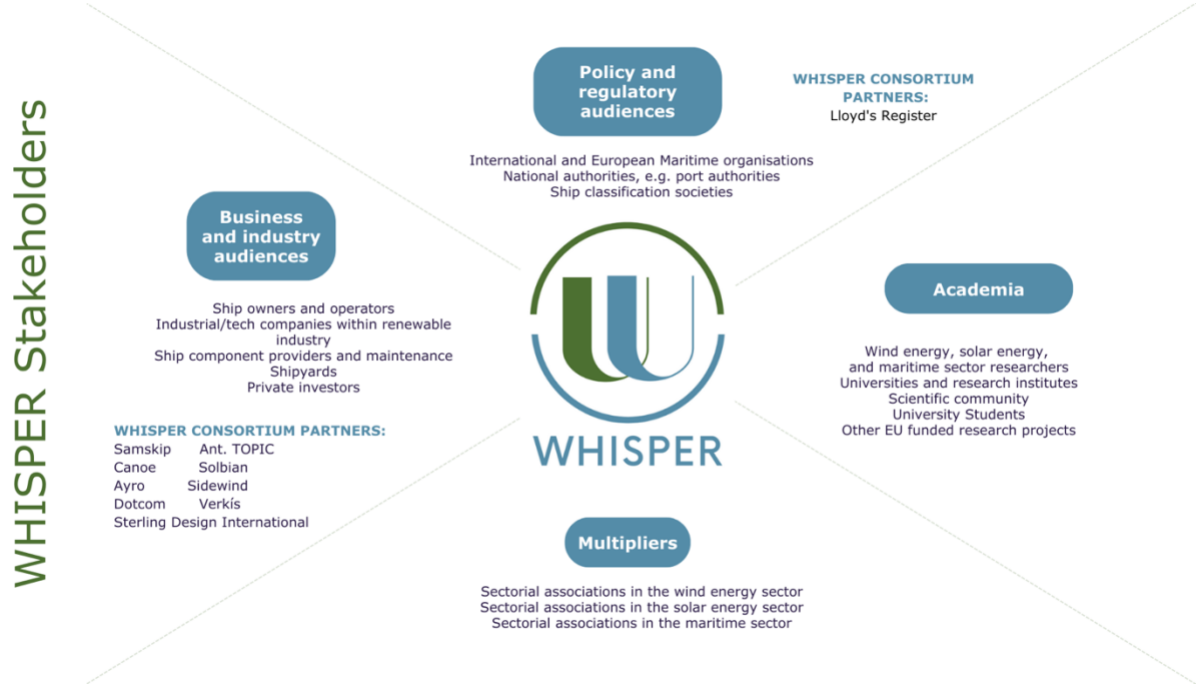


Figure 4 – WHISPER stakeholders. The figure also shows where various WHISPER consortium members fall within the stakeholder categorization.

As Figure 4 shows, many of the WHISPER partners fall in with two stakeholder categories, the business and industry audiences and the policy and regulatory audiences, which will facilitate identifying stakeholders in these categories through existing networks. Other consortium partners, Inspiralia, Athygli, and BBA//Fjeldco, have other specialities that lie outside the defined stakeholder categories. An effort will be made to consult and engage with external stakeholders within the categories that WHISPER does not have a representative within, in order to ensure that no gaps are formed within the value chain.

3.1 Policy and regulatory audiences

Stakeholders that fall under this group span both the national and international stage and are important for the rapid uptake of WHISPER technologies in regulatory frameworks, as well as for the guidelines and standards in this field.

In the context of policy and regulatory audiences, stakeholders refer to individuals, organizations, or groups that have a direct interest in, are affected by, or can influence the development, implementation, and impact of policies and regulations. These stakeholders play a crucial role in shaping, advocating for, and complying with policies and regulations. Here are some key stakeholders in the policy and regulatory landscape:

- Supra-national institutes and organisations: International or European agencies that are directly involved with the maritime industry and/or renewable energy sector, such as the International Maritime Organisation and the European Maritime Safety Agency, are key stakeholders in shaping the future of the industry.

- Maritime authorities and regulators: These stakeholders encompass government agencies, maritime administrations, and regulatory bodies responsible for enforcing laws, regulations, and international conventions related to maritime safety, security, environmental protection, and labour standards.

- National authorities: The national authorities are key stakeholders involved in policy and regulatory development and implementation. They include executive departments, regulatory bodies, and agencies responsible for formulating, enforcing, and monitoring policies and regulations across various sectors.

- Non-Governmental Organizations (NGOs): NGOs are stakeholders that often have specific policy objectives and advocate for social, environmental, or public interest causes. They engage in policy discussions, monitor policy implementation, provide research and expertise, and raise awareness about policy issues to influence decision-making.

- Maritime Service Providers: Various service providers support the maritime industry, including marine insurers, classification societies, maritime technology providers, maritime lawyers, ship agents, port service providers, and marine surveyors. These stakeholders offer specialized services and expertise to support maritime operations.

Understanding the diverse interests, perspectives, and roles of these stakeholders is crucial for effective policy formulation, implementation, and evaluation. Engaging with stakeholders throughout the policy and regulatory process promotes transparency, inclusivity, and accountability, leading to more informed and robust policy outcomes.

Table 1 shows an overview of the policy and regulatory audiences and the reason for defining them as stakeholders.

Table 1 - Policy & regulatory audiences.

POLICY AND REGULATORY AUDIENCES	
Stakeholders include:	Reason to include:
International Maritime Organisation, European Maritime Safety Agency etc.	Refinement of political directives on decarbonising the long-distance shipping sector
National Authorities, including naval authorities, port authorities etc.	Strategic initiatives to influence the regulatory framework to rapid uptake of WAPS and WSHPS technologies
Ship classification societies, such as DNV global, Bureau Veritas, and Lloyd's Register (a partner in the WHISPER consortium)	Improve current blade design guidelines and standards and standardise testing operating procedures and best-practice

3.2 Business and industry audiences

The maritime industry is a key stakeholder for the WHISPER project, as it is imperative the ship owners and ship operators adapt to this new technology and are open to and aware of making changes to increase sustainability. The business and marine industry is not only an important element in the value chain but are also a key component in the supply chain.

The maritime industry encompasses various sectors such as shipping, ports, logistics, shipbuilding, marine services, and maritime regulations. Following are key stakeholders for WHISPER within the maritime industry:

- Ship Owners and Operators: These stakeholders own and operate vessels, ranging from cargo ships and tankers to passenger vessels and offshore support vessels. They are responsible for the safe and efficient transportation of goods, passengers, or resources by sea.

- Ports and Terminal Operators: Ports play a crucial role in the maritime industry as they serve as hubs for loading, unloading, and trans-shipment of cargo. Port authorities, terminal operators, and port service providers are stakeholders involved in managing port infrastructure, logistics, and related services.

- Shippers and Cargo Owners: Shippers and cargo owners are stakeholders who rely on the maritime industry for transporting their goods and commodities globally. They include manufacturers, exporters, importers, and freight forwarders who utilize shipping services to move their products across national and international borders.

- Shipbuilders and Naval Architects: Shipbuilding companies and naval architects are stakeholders involved in the design, construction, and maintenance of vessels. They play a crucial role in ensuring the safety, efficiency, and compliance of ships with industry standards and regulations.
  The business audiences are also an important factor of this stakeholder category, such as private investors and venture capitalists are also vital stakeholders for the future commercialisation of the technology and must therefore have information and evidence that can shape their decision towards engagement.

Understanding the perspectives, interests, and concerns of these stakeholders is crucial for effective decision-making, policy formulation, and sustainable development within the maritime industry. Engaging with stakeholders allows for collaboration, consensus-building, and the development of strategies that consider diverse perspectives and lead to better outcomes for all parties involved. Table 3 shows an overview of the business and industry audiences and the reason for defining them as stakeholders.

Table 2 - Business and industry audiences.

BUSINESS & INDUSTRY AUDIENCES	
Stakeholders include:	Reason to include:
Industrial/Technology companies within the renewable industry (eg, designers, manufacturers, installers, etc.)	Use of novel simulation models of tailored clean solutions and new composite materials with anti-icing properties for offshore structures
Ship owners and operators	Incorporation of cost-efficient technology to reduce fuel consumption and CO2 emissions (carbon tax)
Ship components' providers and maintenance, shipyards	Design of an optimized electric coupling to existing vessels' motor
Private investors, eg, Business Angels, venture capitalists, etc.	Provide evidence to shape decisions on participation in future commercialisation of the technology

3.3 Multipliers

Multipliers refers to associations or entities that connect a variety of important stakeholders and can be of great assistance in spreading the WHISPER results within their sectors. Key amongst those are sectorial associations that play a vital role in representing the interests of their members, influencing policy and regulatory decisions, promoting best practices, facilitating industry-wide collaboration, and fostering the sustainable growth and development of their respective sectors within the maritime industry. They serve as a unified voice and a focal point for stakeholders within their specific sector, working towards common goals and addressing challenges collectively.

- Maritime sector: Sectorial Associations refers to organizations that represent a specific sector within the broader maritime industry. These associations bring together companies, professionals, and stakeholders with common interests, expertise, and objectives. Sectorial associations in the maritime sector can cover various areas such as shipping, port operations, shipbuilding and repair, maritime services, logistics and supply chain, marine technology, offshore industries, and maritime trade associations.
- Renewable energy sector: A sectorial association in the *renewable energy sector* is an organization that represents a specific segment or subsector within the broader renewable energy industry. These associations bring together businesses, professionals, and stakeholders that share common interests, expertise, and objectives related to a specific renewable energy technology or sector. They serve as a platform for collaboration, knowledge sharing, policy advocacy, and collective action to promote the growth and development of their respective segments.

Table 3 shows an overview of the multipliers and the reason for defining them as stakeholders.

Table 3 - Multipliers.

MULTIPLIERS	
Stakeholders include	Reason to include
Sectorial associations in the renewable energy sectors, particularly wind and solar, such as WindEurope, European Technology and Innovation Platform on Wind Energy (ETIPWIND), Renewable Energy Association (REA), and the Global Wind Energy Council (GWEC). They can also refer to various Environmental organizations, advocating for sustainable energy	Further spreading results to their members to promote a new market sector and continual development of the sector Advocating for a more sustainable shipping industry and promote initiatives for minimizing the industry's carbon footprint and preserving marine biodiversity
Sectorial associations in the maritime sector, eg, the Waterborne, International Wind Ship Association (IWSA), European Technology Platform ETP-Alice, European Ships & Maritime Association (SEA Europe), Community of European Shipyards Association (CESA), Green Ports, European Community Shipowners Association (ECSA) and European Network of Maritime Clusters (ENMC)	Further spreading results to their members to uptake and speed up the decarbonization of the sector

3.4 Academia and EU projects

When it comes to academia, stakeholders refer to individuals, groups, or entities that have a vested interest in or are affected by the activities and outcomes of educational institutions such as universities, colleges, research institutions, and schools. It also refers to other EU-supported projects, where dissemination of information can be of mutual benefit for both the projects and the industry as a whole. Key stakeholders in academia include:

- Researchers and scientific community: Researchers within academic institutions play a vital role in advancing knowledge and contributing to academic disciplines through their research work. They may collaborate with other stakeholders, both within and outside academia.
- Universities and research centres: The focal point to share results for the advancement of the field.
- EU funded projects: Sharing results with and learning from other EU funded research is an integral part of the European Horizon project.
- University students: Students seek knowledge, engage in research and are the future of the scientific community.

Understanding and actively engaging with these stakeholders is vital for academic institutions to address their needs, fulfil their missions, and maintain relevance in the educational landscape. Effective stakeholder engagement allows academic institutions to create an inclusive and supportive environment, enhance educational outcomes, foster collaborations, and contribute to societal progress. Table 4 shows an overview of the academia and EU project audiences, and the reason for defining them as stakeholders.

Table 4 - Academia and EU projects.

ACADEMIC GROUPS	
Stakeholders include	Reason to include
Wind energy, solar energy, and maritime sector researchers, universities, research institutes, scientific community	Assimilate innovative project outputs in further research and development activities
University Students	
Other EU funded research projects	

3.5 Others

While the above listed are key stakeholders, other more general stakeholders must be considered, that are of interest and can affect the success of the project. First and foremost, these refer to the media and public opinion and the public:

- Media: Media outlets and public opinion shape and influence policy and regulatory discussions. Stakeholders in this category include journalists, news organizations, and public opinion influencers who play a critical role in raising awareness, framing debates, and holding policymakers accountable.

- The public: Citizens and the general public are stakeholders who are directly affected by policies and regulations. Their perspectives, concerns, and feedback are essential in the policy development process. Engaging with citizens and the public through consultations, surveys, and public hearings helps ensure policies and regulations are responsive to societal needs.

Communication with these stakeholders will be conducted according to the Communication's part of the Communication and Dissemination Plan.

4 Database of stakeholders

A WHISPER *Stakeholder database*, which will include stakeholders from all four groups of key stakeholders listed above, will be created, and added to over the course of the project, defining different stakeholders and categorizing them according to their priority and interest in the project.

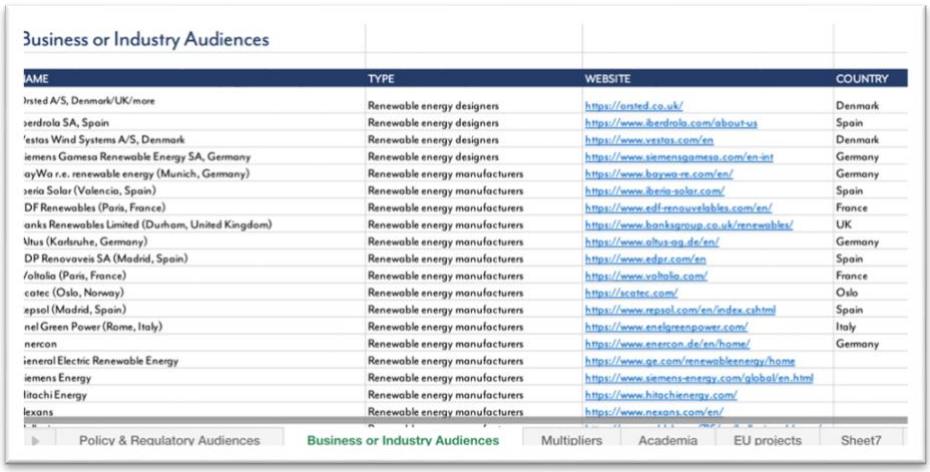
While the task leader and project coordinator oversee the management and updating of the WHISPER stakeholder database, all WHISPER partners will be required to contribute to the database, adding to it as the project evolves. The WHISPER project has set a Key Performance Indicator for this database to reach over 1000 entities over the course of the project period.

The Networking database of stakeholders will be established by implementing the following rules:

- A Microsoft Excel file has been developed with pre-defined categories and criteria for the mapping.
- The excel file is centrally stored on the WHISPER intranet, BIM 360, where all partners have access to this. The location of the file is to be found here: https://docs.b360.autodesk.com/projects/1a5b3f1d-ddf4-4910-a311-f9daf37f692b/folders/urn:adsk.wipprod:fs.folder:co.ud17_HVRRfutakYWv1FLjg/documents/urn:adsk.wipprod:dm.lineage:J_HuUdO9TvmbfOXwcCajFw
- All consortium partners are requested to enter the information about the potential stakeholders in this template spreadsheet. See figure 5 for a snapshot of the excel file, in which all stakeholder data is gathered.

The information collected in this database includes:

- Stakeholders' personal data (if relevant, name, affiliation, position within their organization, country, and public contact data (only stored if the person in question gives approval following an invite).
- Organizational data: name, acronym, sector, setup in the value chain, geographical focus.
- Further categories or criteria may be added based on the needs of work packages.



Business or Industry Audiences

AME	TYPE	WEBSITE	COUNTRY
rsted A/S, Denmark/UK/more	Renewable energy designers	https://orsted.co.uk/	Denmark
erdrola SA, Spain	Renewable energy designers	https://www.iberdrola.com/about-us	Spain
estas Wind Systems A/S, Denmark	Renewable energy designers	https://www.vestas.com/en	Denmark
iemens Gamesa Renewable Energy SA, Germany	Renewable energy designers	https://www.siemensgamesa.com/en-int	Germany
ayWa r.e. renewable energy (Munich, Germany)	Renewable energy manufacturers	https://www.baywa-re.com/en/	Germany
eria Solar (Valencia, Spain)	Renewable energy manufacturers	https://www.iberia-solar.com/	Spain
DF Renewables (Paris, France)	Renewable energy manufacturers	https://www.edf-renouvelables.com/en/	France
anks Renewables Limited (Durham, United Kingdom)	Renewable energy manufacturers	https://www.banksgroup.co.uk/renewables/	UK
ltus (Karlsruhe, Germany)	Renewable energy manufacturers	https://www.altus-ag.de/en/	Germany
DP Renovaveis SA (Madrid, Spain)	Renewable energy manufacturers	https://www.edpr.com/en	Spain
oltalia (Paris, France)	Renewable energy manufacturers	https://www.voltalia.com/	France
catec (Oslo, Norway)	Renewable energy manufacturers	https://scatec.com/	Oslo
epsol (Madrid, Spain)	Renewable energy manufacturers	https://www.repsol.com/en/index.cshtml	Spain
nel Green Power (Rome, Italy)	Renewable energy manufacturers	https://www.enelgreenpower.com/	Italy
nercon	Renewable energy manufacturers	https://www.enercon.de/en/home/	Germany
ieneral Electric Renewable Energy	Renewable energy manufacturers	https://www.ge.com/renewableenergy/home	
iemens Energy	Renewable energy manufacturers	https://www.siemens-energy.com/global/en.html	
itachi Energy	Renewable energy manufacturers	https://www.hitachienergy.com/	
lexans	Renewable energy manufacturers	https://www.nexans.com/en/	

Policy & Regulatory Audiences | Business or Industry Audiences | Multipliers | Academia | EU projects | Sheet7

Figure 5 – Snapshot from the Stakeholder Database on the BIM 360 intranet site.

4.1 Personal data and confidentiality

The WHISPER consortium partners have guaranteed that all personal data collected during the project will be kept secure and unreachable by unauthorized persons. The data will be handled with appropriate confidentiality and technical security, as required by law in the individual countries and EU laws and recommendations. It should be noted that all the organisations that participate in the consortium have in place their own data privacy and security policies, which are compliant with EU regulations.

All activities will be carried out in accordance with the General Data Protection Regulation (GDPR) (Regulation EU) 2016/679) that is a regulation by which the European Parliament, the European Council and the European Commission intend to strengthen and unify data protection for individuals within the European Union (EU).

4.2 Stakeholder analysis

Stakeholder analysis is a systematic process used to identify and assess the interests, influence, and importance of various stakeholders that are affected by, have an interest in, or have an impact on the WHISPER project. The purpose of stakeholder analysis is to understand the perspectives, needs, and expectations of different stakeholders to effectively manage relationships, mitigate risks, and achieve project or organizational objectives.

The WHISPER stakeholder analysis will be conducted as follows:

1. Identification of stakeholders and creation of database: Stakeholder definition and gathering of stakeholders.

2. Prioritizing and analysing: Once the stakeholders are identified, they are prioritized based on their level of influence, importance, or potential impact on the project. This helps in determining the focus and attention that should be given to different stakeholders. This step involves gathering information and analysing the characteristics, interests, and concerns of each

stakeholder, and potential risks or opportunities they pose.

3. Assess stakeholder interests and expectations: Understanding the interests, needs, and expectations of stakeholders is crucial for effective stakeholder management. This involves identifying their desired outcomes, concerns, and any specific requirements they may have. It helps in aligning project objectives and decision-making processes with stakeholder expectations.

4. Determine engagement strategies: Based on the stakeholder analysis, appropriate strategies and approaches will be developed to engage and communicate with different stakeholders. This step will be done in collaboration with other tasks, such as the Communication and Dissemination Plan (D7.5-7) and the Technology development and exploitation plan (D7.2-D7.4).

5. Monitor and adapt: Stakeholder analysis is an ongoing process that requires regular monitoring and adaptation. As the project evolves, stakeholder interests and dynamics may change. It is important to continuously assess and update the stakeholder analysis to ensure effective stakeholder management.

Stakeholder analysis provides insights and guidance for decision-making, risk management, and building positive relationships with stakeholders. By understanding their perspectives and involving them in the process, organizations can increase the chances of successful outcomes and long-term sustainability.

5 Stakeholder engagement

The way in which the WHISPER partners will engage with stakeholders in general is outlined in the Communication and dissemination plan (Deliverables D7.5-7), where the approach and strategies for effectively engaging with stakeholders throughout a project, initiative, or organization is outlined.

However, the first step of communication applies directly to the creation of the WHISPER database, which falls under this deliverable. WHISPER will use different engagement validation mechanism for stakeholders to enter this list:

- Partner consent after info reception.
- Voluntary registration on the website.

Partner consent after info reception refers to our approach of contacting the stakeholders identified in the networking database by WHISPER partners, whereby we introduce the project generally and invite them to receive further information or participate in other activities planned for the target audience in question.

To facilitate first contact with potential stakeholders, a standard invitation letter will be drafted and shared with all consortium partners. A link to an on-line registration form will be embedded in this letter to allow stakeholders to subscribe (opt-in) to the WHISPER platform. The process if further depicted in Figure 6.

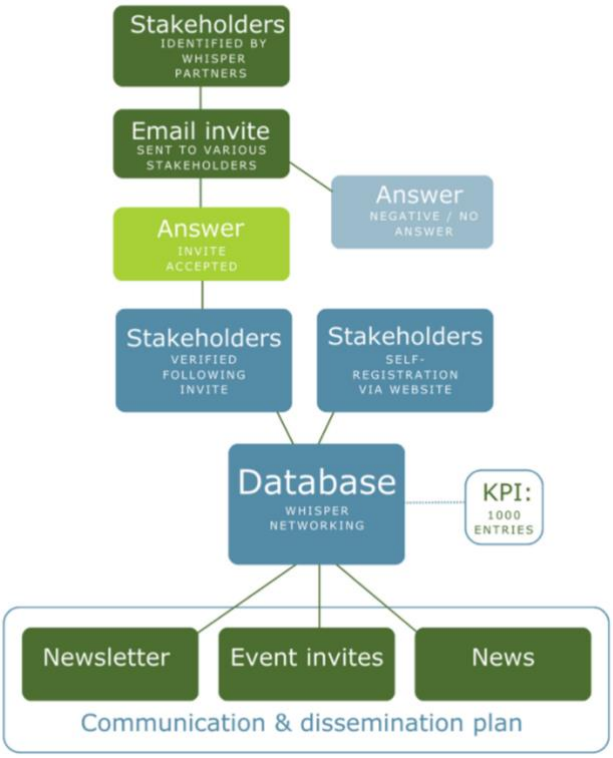


Figure 6 - Validating stakeholders for engagement.

Conclusion

The value and supply chain definitions and the stakeholder database are valuable tools for the implementation of the WHISPER project and are integrated into different formats in several work packages and tasks. The WHISPER supply chain and value chain is defined in Chapter 1, categorized in line with Michael E. Porter's Value Chain Definition.

The main stakeholders in the WHISPER value chain are defined as: Policy and regulatory audiences; Business / industry audiences; Multipliers; and Academic groups. And these four categories are further delineated in Chapter 3, *WHISPER stakeholders: The value chain.*

A Stakeholder database has been created, which all partners will participate in contributing to throughout the project period. A thorough database, with special care given to categories outside the WHISPER consortium's networks, will ensure a systematic outreach and efficient messaging to all stakeholders and the project's target audiences. The database will furthermore be analysed, categorising stakeholders in order of relevance and importance to the project. The process of this is further explained in Chapter 4.

It is important that this gathering of information be done in a systematic manner, with special regard to protecting personal information, in accordance with GDPR regulations.

Stakeholder gathering and analysis is an ongoing process throughout the WHISPER project, allowing the consortium to establish sustainable, two-way communications, efficient communication and dissemination of information, as well as establishing collaboration with the most relevant experts and stakeholders.

The task leader and project coordinator oversee the managing and updating of the stakeholder database, with contributions from all consortium partners.

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