

STRUCTURAL COOPERATION MARITIME EDUCATION & TRAINING NETWORK (MET-NET)

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Future-proof skills for the maritime transport sector

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The maritime transport sector plays a critical role in the global economy, and the need for future-proofed skills and competencies is essential to ensure safety, efficiency, and competitiveness. Project SkillSea has made significant strides in addressing the skills gap in the maritime sector by developing innovative educational materials and methods to improve the quality of maritime education and training (MET).

The project has laid the groundwork for the Maritime Education and Training Network (MET-NET), a structural cooperation initiative focused on enhancing collaboration and knowledge sharing among METs in the maritime industry. The network addresses challenges identified by the SkillSea project and capitalises on cooperation among education providers.

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1. Introduction

The EU SkillSea project is a four-year initiative aimed at ensuring that European maritime professionals possess the necessary digital, green, and soft management skills for the rapidly changing maritime labour market. Developed by the industry's social partners, the European Community Shipowners' Associations (ECSA) and the European Transport Workers' Federation (ETF), the project brings together a consortium of maritime education providers, shipping companies, shipowners' associations, maritime trade unions, and national maritime authorities from 16 countries in Europe.

Technology and digitalisation are transforming the shipping industry, and the emergence of 'smart ships' is creating a demand for a new generation of highly skilled maritime professionals. Europe is a traditional global source of maritime expertise, and the SkillSea project aims to ensure that the region's maritime professionals have the necessary skills and qualifications to meet the demands of the rapidly changing industry.

The need for a sustainable skills strategy for European maritime professionals is driven by the need to address the challenges facing the maritime industry, such as the increasing use of technology, the shift towards sustainable practices and the safety of operations, and the need to improve the efficiency and competitiveness of the sector.

This guide is intended to provide an overview of the structural cooperation within the SkillSea project. It explores the role of education partnerships in the maritime industry, the benefits of structured cooperation between European maritime education and training centres (METs), and the creation of the MET Network (MET-NET).

2. Structural cooperation

2.1 Understanding the role of structural cooperation between Maritime Education and Training institutes (METs)

Structural cooperation between METs can solve issues that METs alone cannot, by facilitating the sharing of resources and expertise among different educational institutions and by creating opportunities for collaboration and cooperation among stakeholders in the maritime industry.

One of the key issues that structural cooperation can help to solve is the lack of alignment between the skills needs of the industry and the education and training provided by METs. By working closely together, METs can share information and resources and collaborate on curriculum development to ensure that their programmes are aligned with the latest developments in the maritime industry, and that students are learning the skills that are most in demand.

Another issue that structural cooperation can help to solve is the lack of mobility for maritime professionals. By working together, METs can identify and address the barriers to mobility for maritime professionals, such as differences in qualifications and certifications, and they can also create opportunities for joint programmes or exchanges of staff and students. This can help to increase the mobility of maritime professionals and can also help to address skills shortages in the sector.

The lack of cooperation platforms between educational providers, competent authorities, and industry to discuss skills gaps/needs and tools to anticipate changing needs has been identified by the SkillSea project as one of the main challenges to be solved.

Structural cooperation among SkillSea partners has been set up during the project's lifetime as one of the main outcomes of Work Package 2 – Future-Proof Education and Training. The cooperation and the activities created within the network increases knowledge sharing, builds trust and inspires further developments and progress, thus contributing to increased learning and professional mobility within the sector.

The structural cooperation includes European METs and draws in their clusters and industry connections for sharing knowledge and best practices.

2.2 Structural cooperation activities within SkillSea: current examples

- ***'Good practices to enhance mobility' workshop series.***

As part of WP2, and the effective use of the SkillSea consortium, a workshop about student mobility was held to capture stakeholders' input on maritime mobility and identify the best practices to overcome barriers to mobility. The 'Good practices to enhance mobility' workshop, held on 20 June 2022, brought together 29 participants from different organisations across Europe. The aim was to share their knowledge and experiences, to learn from one another, and discuss good practices to enhance mobility within the maritime sector.

- ***Cooperation with SIMAC on assessment of the Bsc Nautical Science Education at NTNU***

The collaboration between NTNU and SIMAC on the assessment of the BSc Nautical Science Education at NTNU was facilitated thanks to the structural cooperation developed within SkillSea. This involved establishing a review board with representation from similar study programmes internationally to provide feedback on the quality and relevance of the programme. The goal was to improve the programme's measurables, such as student satisfaction, graduation rates, and gender equality, among others.

- ***Consideration of other project cooperation amongst partners, e.g., the COVE call under Pact for Skills***

In this particular project, a consortium is being formed, and the work packages for the project application are being developed. The cooperating partners include SEA Europe, FORO MARITIMO VASCO, South Denmark European Office, University of Southern Denmark, SIMAC, and SESG. This cooperation was established among partners who met and connected through SkillSea, with the goal of upskilling the shipbuilding and maritime technology workforce in Europe.

- ***Staff mobility***

Universitat Politècnica de Catalunya, NHL Stenden University of Applied Sciences, Svendborg International Maritime Academy, Chalmers University of Technology, and the University of Rijeka, have established a Maritime Staff Mobility Programme. The programme enables each partner to send a teacher, and potentially also administrative or managerial staff, to each of the partners annually, with the purpose of increasing knowledge, sharing best practices and experiences, and exploring new approaches and learning methods. The staff exchanges started in 2022 and are expected to prepare for student exchanges within the next one to two years. This programme is one of the examples of the benefits of cooperation and knowledge sharing within SkillSea.

- ***SkillSea partners ENSM and STC Group intensify collaboration for maritime education***

SkillSea partners École Nationale Supérieure Maritime (ENSM) and Scheepvaart en Transport College (STC Group) have signed a Memorandum of Understanding to strengthen their collaboration in maritime education and training. The partnership aims to advance key areas such as energy transition, ship digitalisation, and skill development in collaboration and leadership. As part of the Erasmus+ programme, ENSM and STC will facilitate the exchange of students and professors between France and the Netherlands, fostering knowledge and expertise sharing. This move marks the beginning of enhanced cooperation between European MET providers, stemming from the SkillSea project.

3. Maritime Education and Training Network (MET-NET)

3.1 Presenting MET-NET

The Maritime Education and Training Network (MET-NET) is the umbrella body for education providers in the maritime transport sector. MET-NET has a responsibility to facilitate, produce, and disseminate reciprocal knowledge crucial to sustain maritime European skills and competencies involving all stakeholders, and provide a platform for supporting knowledge sharing, good MET practices based on cooperation between METs and stakeholders.

The MET-NET's objectives include:

1. Enhancing cooperation and mobility among maritime stakeholders to support knowledge sharing and good practices
2. Improving the quality of training and education in the maritime transport sector
3. Promoting a wide variety of skills (e.g., green skills, digital skills, language skills, safety), including e-learning options to enhance accessibility and flexibility in education provision
4. Developing common learning objectives and outcomes on future developments
5. Developing innovative and future-proofed skills and qualifications for maritime professionals

The MET-NET is a collaborative effort between education providers, research institutes, training centres, and industry in various European countries. As an inclusive and transparent network, the MET-NET fosters cooperation, knowledge sharing, and reciprocity among all stakeholders in the industry.

The MET-NET offers a range of benefits to its members, including access to knowledge and tools for sustainable improvements of MET provision, effective upskilling to bridge the gap between METs and the industry, and opportunities for collaboration and networking with other stakeholders in the sector. Members are also invited to sign the MET-NET Pledge, which commits them to upholding the MET-NET's values of excellence, innovation, and inclusivity, as well as promoting cooperation, knowledge sharing, and reciprocity in the maritime industry.

3.2 Purpose

The MET-NET supports members delivering/receiving relevant future-proof maritime education and training and being a knowledge bank with direct access to relevant partners and stakeholders for strategic cooperation.

- ***Vision***

Ensuring that Europe retains a world-leading access to maritime skills and experience for improved competitiveness, through strategic cooperation between key stakeholders (maritime shipping industry, unions, research, education and training institutes, public authorities) increase safety at sea and unify high European standards of maritime training.

- **Mission**

Support the development of a sectoral skills strategy and a blueprint for implementation relying on a number of results ready to be applied from the EU SkillSea project, at the regional/national level as well as to be sustained at the European level.

Create a future hub for knowledge and innovation platforms for seafarers, governmental and non-governmental agencies, and academic and industrial specialists in the maritime sector.

MET-NET is an essential tool in providing a catalyst and the cohesiveness of efforts that focus towards a common goal, a close cooperation to improve and update programmes to cover new requirements and technologies applied to the shipping industry providing mutual benefits to all participants.

To facilitate, produce, sustain, and disseminate the flow of reciprocal knowledge crucial to maritime European competencies involving all stakeholders with a need for expedient and future-proofed maritime knowledge and skills. Major trends and impacts, like green technology and digitalisation, are a particular focus of the SkillSea knowledge hub and its work because of their critical role in the shipping industry.

3.3 Pledge

“We pledge to sustain maritime skills and competencies through promoting excellence, innovation, and knowledge sharing between stakeholders throughout the network.”

The MET-NET Pledge is the first step in creating structural cooperation. Signatories to the pledge will be making clear their support for MET-NET values. They will have the opportunity to access knowledge and tools promoted within the alliance for sustainable improvements of MET provision and effective upskilling to bridge the gap between METs and the industry.

The MET-NET Pledge is a commitment made by signatories to support the sustainable development of maritime skills and competencies in Europe. By signing the pledge, education providers, research institutions, and training centres express their support for the MET-NET's values and objectives and commit to working collaboratively to achieve them.

Signing the pledge is a significant step for organisations seeking to demonstrate their commitment to the sustainable development of maritime skills and competencies. By joining the MET-NET and signing the pledge, organisations gain access to a network of education providers with a shared vision of promoting excellence, innovation, and knowledge sharing in the maritime industry. Members can collaborate on projects and initiatives, share best practices and expertise, and contribute to the development of sustainable maritime skills provision.

3.4 Core values

MET-NET fosters cooperation, knowledge sharing and reciprocity. This ambition is achieved through working together to create a transparent network and social capital. MET-NET works with everyone (inclusivity) sharing the pledge, values and thematics based on innovation and quality.

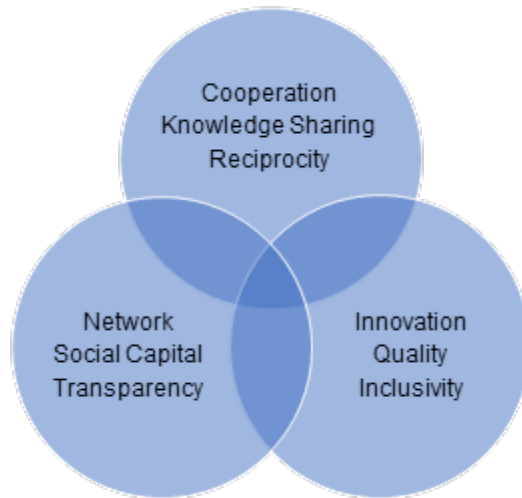


Figure 1: MET-NET core values

The core values of the MET-NET include cooperation, knowledge sharing, and inclusivity. The MET-NET recognises that the sustainable development of maritime skills and competencies requires the active participation of all stakeholders in the industry, including education providers, research institutions, training centres, and industry. By fostering cooperation and knowledge sharing among these stakeholders, the MET-NET aims to promote the development of innovative and future-proofed skills and qualifications for maritime professionals.

Inclusivity is a crucial value for the MET-NET. The organisation seeks to be an inclusive platform for all stakeholders in the maritime industry, regardless of their size, location, or level of expertise. The MET-NET recognises that diversity and inclusivity are critical for innovation and excellence and seeks to promote these values in all its activities.

By upholding these core values, the MET-NET aims to promote sustainable development in the maritime industry, enhance the quality of MET provision, and contribute to the development of innovative and future-proofed skills and qualifications for maritime professionals.

3.5 Benefits for members: Vocational and Higher Education Institutions and students

Benefits for Vocational and Higher Education Institutions and students:

- Strong focus on improving employability and competitiveness for European maritime professionals
- Platform for cooperation between educational providers and possible liaison with, competent authorities, industry and NGOs, etc.
- Direct dialogue with broad cross-section of the industry on skills update for curricula revisions and training offers (upskill, reskill) – cross-country knowledge access and sharing, connection points to industries across countries, information on stage of development
- Faster knowledge development by pooling knowledge and building trust – no one knows

everything, all know something (best practice on trends, content, teaching methods like problem-based learning, innovation, various module sizes, VR, blended and workplace-mixed, etc., assessment methods including digital aspects)

- Exchange and upgrade lowest educational level
- Wider adaptation of digital systems for improved communication/exchanges of best practice, facilitate cooperation with stakeholders
- Access to templates, transparent learning outcomes and prepared educational packages on relevant skills, with guides on adaptation and transferability to various target groups, contexts etc.
- Close collaboration to develop SkillSea's work packages for continuous relevance
- Joint presentations on new knowledge or insights
- Solving transferability issues and facilitating mobility of ideas, staff, students for increased learning and professional mobility – identify and work to remove obstacles
- Possible development of aligned learning outcomes, joint programmes, and possible additional gain from future courses
- Proactive consultation on regulatory framework
- Shared voice for consultancy in relevant matters, committees, etc.
- Inclusion of non-founding members in revision and adaptation of tools, strategy, etc.
- Access to tools, e.g. from the specific strategies planned in the SkillSea project (VET recognition tool, tool for assessing potential strategic partners, etc.)
- Increased opportunities for student mobility and direct cooperation projects with industry

3.6 MET-NET and SkillSea

The SkillSea project has played an essential role in addressing the maritime sector's skills gap by developing innovative educational materials and methods to improve the quality of MET institutions. However, the SkillSea project is due to end, and there is a need to ensure that the positive outcomes achieved during the project are maintained and expanded. A skills gap has been identified in certain future areas, such as the use of hydrogen or ammonia fuels, which cannot yet be addressed because the industry has not made definitive decisions on these technologies. Once such decisions have been made, the MET-NET can begin developing specific learning outcomes and objectives to help close the identified skills gap.

The work methodology of the SkillSea project is visualised through the SkillSea Wheel (Figure below). In continuing the legacy of the SkillSea project, the MET-NET aims to keep this wheel turning, with a particular emphasis on the developing and sustaining phase. The sustaining phase of the SkillSea Wheel is crucial as it ensures that the innovative educational materials and methods developed are implemented, maintained, and improved over time. In this way, the MET-NET will play a vital role in sustaining the momentum created by the SkillSea project and ensuring the continuous improvement of MET. This continuous cycle, facilitated by the MET-NET, will allow for a dynamic and timely response to any future skills gaps that may arise in the maritime sector.

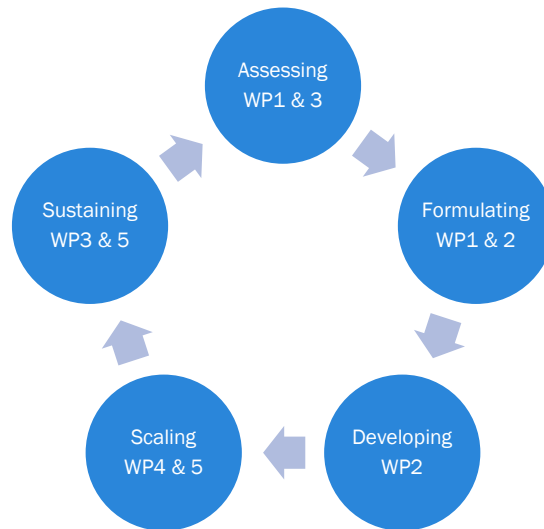


Figure 2: SkillSea Wheel

The MET-NET presents a unique opportunity to carry on the legacy of the SkillSea project through the provision of a platform for cooperation and knowledge sharing among MET institutions and other stakeholders in the maritime sector. Through the MET-NET, MET institutions have access to easily accessible knowledge and tools for continuously updating educational material and upskilling the workforce. Furthermore, the MET-NET is an ideal platform to capitalise on the cooperation among education providers to overcome persistent challenges identified by the SkillSea project. The MET-NET provides a unique opportunity for MET institutions to share best practices and experiences on learning methods, new systems, and approaches.

To achieve its goals, the MET-NET needs to stimulate participation among MET institutions and other stakeholders in the maritime sector. MET-NET encourages MET institutions to involve in future EU innovative projects. By promoting the MET-NET as a European instrument for the exchange of relevant (EU)-funded research results, MET institutions can benefit from the latest research and best practices in the field.

In conclusion, the MET-NET is an ideal platform to support the goals and objectives of the SkillSea project. MET institutions can use the MET-NET to gain access to easily accessible knowledge and tools for continuous updating of educational material and upskilling of the workforce. By participating in the MET-NET, MET institutions can capitalise on the cooperation among education providers to overcome persistent challenges. Therefore, we recommend that the MET-NET be promoted as a means to achieve the objectives identified by the SkillSea project.

4. Conclusion

Cooperation plays a crucial role in the maritime sector, where the safety and efficiency of global shipping operations depend on the coordination and collaboration of various stakeholders to provide the right skills and competencies to the market. The MET-NET is an example of a cooperation initiative derived from the SkillSea project.

The SkillSea project has created structural cooperation making effective use of the project consortium. It is focused on education and aims to develop more structured cooperation between MET institutions to define learning objectives and outcomes on new skills needs. By sharing knowledge and expertise among METs, this structural cooperation can help develop educational packages to update and upgrade all levels of maritime education, training and certification for maritime professionals. This cooperation is vital for ensuring a high-quality workforce and enhancing safety in the maritime industry.

From a much broader perspective, the structural cooperation is helping to build the foundation for the MET-NET that would take place beyond the project's lifetime. The MET-NET connects organisations involved in maritime education and research to develop together with the maritime industry education, which promotes the development of the maritime transport sector. By bringing together key players in these areas, the MET-NET aims to facilitate the creation of new knowledge and the sharing of best practices.

This type of cooperation is critical for knowledge sharing, driving innovation in the maritime sector, and ensuring stakeholders are well-informed about the latest developments.

Working together enhances the health and safety of seafarers and drive progress in this critical industry.

