

Stakeholder consultation on the Staff Working Document: "For a resilient, innovative, sustainable and digital mobility ecosystem: Scenarios for a transition pathway"

Fields marked with * are mandatory.

Introduction

The [update of the EU Industrial Strategy](#) highlights the need to accelerate the green and digital transitions of EU Industry. Among the various instruments, the Commission proposed to co-create, in partnership with industry, public authorities, social partners and other stakeholders, transition pathways for ecosystems, where needed. Priority should be given also to sectors heavily affected by the crisis, which benefit from accelerating their twin transition in order to boost their recovery. The mobility ecosystem has been recognised to be one of these critical ecosystems and therefore, it will be tackled among the first ones, by co-creating its transition pathway together with its stakeholders.

The Commission services have prepared a [Staff Working Document](#) to outline possible scenarios for a transition pathway for a resilient, innovative, sustainable and digital mobility ecosystem. This document aims to launch a co-creation process for concrete actions, milestones and commitments with all stakeholders of the mobility ecosystem.

You are invited to engage in this process by sending your input through this online consultation form.

Based on the consultation results, the Commission will organise further meetings with stakeholders in the course of 2022 to deepen the discussions and finalise the transition pathway for the mobility ecosystem.

This survey will be open until 29 April 2022. You are, however, warmly encouraged to send your responses as soon as possible to facilitate early analysis.

In case of questions about this consultation, please send an email to GROW-I2@ec.europa.eu

Organisation and personal information

* I'm giving my contributions as:

- ☐ Academic / research institution
- ☐ Business association
- ☐ Company / business organisation

- ☐ Consumer organisation
- ☐ Environmental organisation
- ☐ Trade Union
- ☐ EU institution
- ☐ EU citizen
- ☒ International organisation
- ☐ Local administration
- ☐ Regional administration
- ☐ National administration
- ☐ Other

* Country of origin of the respondent / organisation:

- ☐ Austria (AT)
- ☒ Belgium (BE)
- ☐ Bulgaria (BG)
- ☐ Croatia (HR)
- ☐ Cyprus (CY)
- ☐ Czechia (CZ)
- ☐ Denmark (DK)
- ☐ Estonia (EE)
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- ☐ Slovenia (SI)
- ☐ Spain (ES)
- ☐ Sweden (SE)
- ☐ Other ()

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SEA Europe

Publication of information

Unit GROW.I.2 will publish a report on DG GROW website with an overview of contributions and a summary of the input received. No personal information of the respondents will be published.

Link to the privacy statement:

[Privacy statement Mobility Transition Pathways consultation.pdf](#)



I agree with the personal data protection provisions

Consultation questions

You are invited to reflect the different issues and scenarios presented in the Staff Working Document for the key dimensions of Resilience, Sustainability and Digitalisation, as well as the cross-cutting issues identified. You may choose which questions you answer, and leave others empty. Please, in particular, propose concrete actions and targets. Quantifiable evidence is very much welcome.

The mobility ecosystem: opening the gate to the transition

Please read and reflect on the issues presented in sections 1 and 2 of the Staff Working Document.

What synergies can be found between the various sectors of the ecosystem in terms of solutions to the twin transition challenge (e.g. technology development, both digital and clean, investments and skills)?

2000 character(s) maximum

To successfully address the twin green and digital transition, fostering synergies across industries in the areas of technology development, investments and skills is undoubtedly important. Such cross fertilisation should be promoted not only within the “mobility ecosystem”, in particular across the full maritime value chain (e.g. manufacturers, transport and infrastructures operators) but also with other ecosystems equally relevant for Europe’s maritime technology sector, such as defense, tourism and renewable energies. While potential synergies between different mobility segments within the same ecosystem should be explored and fostered wherever it may lead to mutually beneficial outcomes, it is essential to ensure that sectorial specificities of each segment are duly factored in. While it can be argued that the maritime sector may have the same challenges as the railway or automotive industry in terms of e.g. the twin green/digital transition, in reality these challenges are fundamentally different in the way they will need to be addressed. By way of example, the waterborne transport sector is characterised by a high variety of diverse vessel types and vessel sizes, operating in a variety of trades, with each of them having their own *modus operandi* and business model. This variety requires, amongst others, a broader fuel portfolio taking account of the ship’s operating profile (e.g. short vs long-distance voyages). In this context, it is therefore important to realise that the decarbonization pathway for each transport mode and for different transport applications may be very different.

What should be considered as priority to facilitate the transition of all actors of the ecosystem, including the SMEs and how to ensure their involvement in developing a credible and coordinated project pipeline to support the twin transition?

2000 character(s) maximum

The set-up of a dedicated waterborne sectoral expert group within the broader remit of the “Mobility Ecosystem” should be pursued, in the short term, as a priority action to facilitate a structural dialogue, foster mutual understanding between all the players, including SMEs, and policymakers around the sector-specific challenges and opportunities, help identify project pipelines and develop policies to support the twin transition. In the medium term, the opportunity of setting up a “European Industrial Alliance for the maritime technology sector” should be fully explored and pursued based on the rationale that the maritime (technology) sector is an economic sector that is strategic for the EU’s key policy objectives (such as decarbonization, competitiveness, digitalization, and skills). The overall goal of such platform(s) should be to co-initiate the development of suitable instruments to safeguard Europe’s complex shipbuilding; enable shipyards to regain lost markets relevant for the European economy; make the entire maritime value chain more resilient and less dependent on Asia; tackle Asia’s competitive distortions and trade protectionism; preserve innovations; and safeguard jobs, skills and maritime know how in (remote European) maritime regions.

What additional considerations, if any, should be taken into account by all ecosystem’s actors to plan and implement an inclusive and fair transition of the mobility ecosystem, in particular for SMEs and consumers?

2000 character(s) maximum

No response.

A resilient and competitive EU mobility ecosystem

Please read and reflect on the issues and scenarios proposed in section 3 of the Staff Working Document

Do the actions listed in the staff working document comprehensively address the resilience challenges? If not, what are the gaps and what measures should be considered as a matter of priority (providing relevant data / evidence)?

2000 character(s) maximum

No. A fundamental problem not highlighted in the document is Europe's dependency on Asia on several shipbuilding segments as a result of decades of unfair competition from subsidised/below cost priced vessels sold by Asian shipyards. Since the 1980s European shipyards have been unable to protect themselves against Asia's unfair competitive distortions due to legal gaps in WTO and EU legislation. The document regrettably fails to mention that for long time European shipyards have been suffering from a unique lack of effectively applicable trade defence remedies to deter and counter market distortions and unfair practices from foreign shipbuilding nations. Existing Trade Defence Instruments on imports – in the form of anti-subsidy or anti-dumping duties - do not effectively apply to shipbuilding inter alia because ships are generally not "imported". Besides, countries like South Korea and China have been frustrating the ability of other WTO Members to seek redress through multilateral WTO dispute settlement by their failure to honour their WTO obligations of transparency with regard to shipbuilding subsidies. A key concern in this regard is that the new Foreign Subsidy Instrument proposal, as it currently stands, will not provide any relief since Article 40 (7) of the proposal would rule out from the start the applicability of the new tool in relation to sectors producing and trading goods, including shipbuilding. Effectively applicable measures against foreign unfair subsidisation and injurious pricing of vessels are therefore necessary to ensure the resilience of the European mobility system . The EU should finally reinforce cooperation with like-minded countries that share similar values and views on fair competition in shipbuilding. Free Trade Agreements could contribute to improve level playing field and market access for Europe's maritime technology companies provided they contain sector-specific provisions and are effectively implemented afterwards.

What additional or different outcome scenarios could be envisaged?

2000 character(s) maximum

- a) Preserving Europe's leadership in high-tech, high added-value markets, regaining some lost shipbuilding markets and tapping into new promising markets
- b) Boosting private and public investments into Europe's high-quality maritime products and technologies, including through demand stimulus, fleet renewal and financial support measures
- c) Closing the (longstanding) gap in trade defence for shipbuilding against foreign subsidisation and injurious pricing through effectively applicable tools tailored to the specificities of the sector.

Can you identify already existing projects or good practices to ensure resilience of the sector you represent that could benefit other sectors of the mobility ecosystem?

2000 character(s) maximum

An EU wide programme of Fleet renewal and retrofitting, inspired by existing schemes both within and outside the EU, will greatly benefit the resilience of the entire mobility ecosystem, if based on common strategic goals and principles such as linking support to added value creation in Europe.

What should be the role and responsibilities of public authorities (EU, National, Regional and local levels) to successfully address the upcoming challenges?

2000 character(s) maximum

A successful industrial strategy requires concerted action at all government levels driven by common objectives and goals taking into account the sector's specificities. For example, to secure the resilience and

competitiveness of the mobility ecosystem, all EU and national/regional/local funding instruments and support measures across the mobility ecosystem should reward investments projects that create added value in the EU, supporting local manufacturing and employment creation.

Are there specific challenges faced by individual actors of the ecosystem, in particular SMEs, that should be addressed?

2000 character(s) maximum

Yes. Access to global markets is vital source of growth for maritime technology SMEs. Due to lack of resources, SMEs have generally more difficulties however, in taking advantage of trade benefits in concluded trade agreements, such as benefits from tariff elimination, as well as in challenging third country trade barriers or defending themselves against unfair trade practices. Growth of SMEs within the maritime technology industry depends on an ambitious EU trade and industrial policy agenda being implemented with strong focus on their needs. SEA Europe welcomes initiatives aimed at providing support on how to export to extra-EU countries, including the recent "Access2Market tool" which we hope will not only make information more accessible, but also easier to understand. In addition, we encourage the EU to sign Mutual Recognition Agreements with third countries to help maritime technology companies, especially SMEs, overcome obstacles to trade, particularly related to certification procedures required by many EU trading partners.

Greening of the mobility ecosystem

Please read and reflect on the issues and scenarios proposed in section 4 of the Staff Working Document

Do the actions listed in the staff working document comprehensively address the green transition needs? If not, what are the gaps and what measures should be addressed as a matter of priority (providing relevant data/evidence)?

2000 character(s) maximum

Partly. Achieving a net zero-emission waterborne transport sector by 2050 at the latest, and at least 55% reduction of absolute emissions by 2030, entails a "race against the clock", not least because the average age of a modern maritime vessel is 21 years (albeit not uniform across vessel types). The transition towards zero-emission waterborne transport will need to address existing as well as newbuild ships. In addition, it will not only require R&D regarding (the use of) alternative fuels but will also have to take into account all means to radically improve the ship's energy efficiency and related emission efficiency (both retrofitting and newbuild). Hence, as well as making seagoing ships (both shortsea shipping and long-haul shipping) and inland vessels zero emission, the transition towards zero-emission waterborne transport will also require changes to infrastructure, ship design, shipbuilding processes, maritime equipment production ports, alternative fuel supply chain, and the wider logistical chain. In sum, to transform waterborne transport into a climate-neutral mode of transport, the sector needs – as a matter of priority – massive investments to improve production processes, scale up existing technologies into mature ones and to deploy and integrate them onboard ships in accordance with the ship's specific operational profile and the customer's needs and purposes (in addition to RDI investments).

Based on data available to you, what additional or different expected output scenarios could be set until 2030? In order to achieve these, should additional actions be prioritised?

2000 character(s) maximum

From an R&I perspective, the waterborne transport sector is committed to deliver solutions of all main ship types and services before 2030, so to be able to ensure zero-emission waterborne transport before 2050 (cPP ZEWT). However, the question on how fast the decarbonization of the water transport can be realistically achieved is dependent upon the amount of investments the sector would be able to make to scale up existing technologies, the supporting policies that the EU is planning to deploy and the financial instruments available that will be conducive to those goals. The EU should financially promote investments in climate-optimized vessels that foster economic added value, regional industrial growth & employment creation in Europe with positive spill-over effects throughout the full European maritime value chain, incl. Europe's maritime technology sector. In the current crisis recovery context and debate on strategic autonomy, EU-supported Financing Institutes should play a greater role in supporting EU companies who want to do business in the EU and create added value in Europe. In other words, it is vital to ensure, for instance, that EU funds and EIB financial support focus only on projects of real European added value (namely in terms of ship building location, employment creation and technology investments). In this respect, it is thus essential to implement a key recommendation from the recent DG MOVE Study (COWI/CE DELFT, 2021) which argues that in the context of access to green finance "priority should be given for those ship projects for which full value chain is fully developed in Europe. This ensures that all relevant European stakeholders are involved, from SMEs to large shipyard integrators, allowing for a consistent technological growth for the entire sector. And also to prioritize support to the deployment of new green technologies patented in Europe and with a European value chain".

What should be the role and responsibilities of the public authorities (EU, National, Regional and local levels) to successfully address the upcoming challenges?

2000 character(s) maximum

Public Authorities at EU, national and regional/local level should promote fleet renewal and retrofitting schemes, including recycle and build schemes, to support greening investments. Besides, authorities need to support at all levels the availability of infrastructure and the ability of the European port and waterway authorities to provide zero-emission and climate-resilient infrastructure, including onshore power supply, as well as a lean port logistic chain (i.e. reducing anchoring time and thus enabling ship speed optimization). This will be essential to enable the introduction of zero-emission seagoing ships and inland vessels, to tackle the issue of reconciling emission reduction targets with a predicted increase in European ports traffic and to stimulate the modal shift.

Technology development will be essential to achieve a greener, more sustainable EU mobility ecosystem. What type of technologies should be prioritised to deliver these objectives? What technologies could be commonly used by the three sectors constituting the mobility ecosystem? Which barriers exist to the adoption of new green and digital technologies in the ecosystem, specifically for SMEs?

2000 character(s) maximum

Climate neutral waterborne transport is a goal which needs a pathway open to various technological options and alternative fuels. Due to the large variety of ship types and ship trades, the optimal pathways to rapid emission reduction and towards the zero-emissions' ship and climate neutrality are by no means straightforward. Therefore, all options for clean technologies, alternative fuels and their optimal integration need to be researched, developed, supported and facilitated. SEA Europe, therefore, calls upon the EU to support technological neutrality and a goal-based, Life-cycle well-to wake approach (in line with the Fuel EU Maritime proposal and as opposed to the "tailpipe emissions approach" in the current Taxonomy climate criteria). This is essential in order to avoid a curtailing of (innovative) clean technologies and to stimulate a rapid development of alternative fuels for waterborne transport. Furthermore, during the transitional period, well-established fossil fuels with significant emission reduction potential will be needed and should therefore receive continued financial support (as acknowledged in the EU Ministerial Declaration "EU Waterborne

Transport Sector – Future outlook”). Existing energy converters with high efficiency should not be discredited because they have been used with fossil fuels in the past. To sum up, internal combustion engines and LNG technology, amongst others, will still play a significant role in the decarbonization of waterborne transport if utilized with climate neutral synthetic fuels in the future, leveraging current technologies and infrastructures (e.g. Bio-LNG, methane from hydrogen etc). For a number of segments, in particular for long range distances, LNG is the only available solution at present giving a number of advantages (lowering CO2 emissions, bringing down NOx, Sox and particle emissions), albeit not perfect as carbon free solution. It is a transition solution open to evolution.

Can you identify already existing projects or good practices to drive the green transition of the sector that could benefit other parts of the mobility ecosystems?

2000 character(s) maximum

The Programmed Partnership on Zero-emission Waterborne Transport in the framework of Horizon Europe is a key instrument to accelerate R&D into zero-emission waterborne transport and achieve the objectives of the European Green Deal, by developing demonstrating deployable technological solutions for the decarbonisation & the elimination of other harmful emissions from waterborne transport. In addition, the Partnership will facilitate the uptake of innovative European zero-emission waterborne transport technologies & solutions, supporting European economic growth & employment. The unique cooperation of the European waterborne transport sector, the European Commission and Member States is providing leverage for increased research and innovation activities, making Europe a frontrunner in zero-emission waterborne transport in an international context.

How to best address the issue of affordability and acceptability to meet consumers’ needs and expectations while ensuring a fair and inclusive transition?

2000 character(s) maximum

No response.

Are there specific challenges faced by individual actors of the ecosystem, in particular SMEs and social partners, which should be addressed? Apart from the envisaged measures, how else should social implications of the transition be tackled?

2000 character(s) maximum

Europe’s maritime equipment industry invests significantly in the certification and approval of its equipment, systems and technologies by Classification Societies. Typically, one maritime equipment company needs a certificate from 7 to 8 different classification societies before it can bring its product to the market and install it onboard ships. Although Article 10 (1) of Regulation 391/2009 was adopted to reduce this very expensive administrative burden, by means of a mutual recognition of classification certificates and an harmonisation of classification rules, SEA Europe regrets to note that 10 years after this adoption, no meaningful progress has been made since classification societies remain unwilling to move forward. Consequently, existing and expensive administrative burdens for the approval and certification of maritime equipment remain in place, hampering the competitiveness of Europe’s maritime equipment companies. SEA Europe calls upon the Europe Commission to make significant progress on an EU system for mutual recognition of ship classification, in order to reduce effectively the administrative burdens and related certification costs for European maritime equipment companies, namely SMEs without compromising maritime safety.

Please read and reflect on the issues and scenarios proposed in section 5 of the Staff Working Document

Do the actions listed in the staff working document comprehensively address the issues identified with regard to the ecosystem's digital transition? If not, what are the gaps, and what measures should be addressed as a matter of priority (providing data/evidence)?

2000 character(s) maximum

Partly. The European Maritime Technology Sector is a worldwide frontrunner on developments regarding connected and automated waterborne transport. Nevertheless, significant investments in research, development and innovation is essential for the further developments of technologies in digitalisation, automation and autonomy in the shipbuilding processes to secure the competitiveness of the European Maritime Technology Sector as well as to enable the sector to cope with its societal challenges. Digitalisation can indeed greatly help shipyards and equipment manufacturing in enhancing their competitiveness, e.g., by enhancing their production process but also by incorporating digital technology in their products and services. To achieve this, with the financial support from European and international programmes, the sector will be able to remain at the forefront of innovative shipbuilding and maritime equipment manufacturing. In this regard:

- a co-Programmed Partnership– similar to the one on zero-emission waterborne transport – with a dedicated EU budget to enhance R&D in digitalisation of waterborne transport will be crucial for the sector.
- Besides, a worldwide IP and data protected, cyber safe and equal level-playing field needs to be established for the benefit of the European Maritime Technology Sector in order for the existing business opportunities for maritime and ICT industries to boost Europe's competitiveness. Europe can indeed aspire to become again competitive in the building of standard ship's types, currently built in Asia, on the condition that complex ICT integration expertise remains in Europe.

Based on data available to you, what additional or different outcome scenarios could be set until 2030? In order to achieve these, should additional actions be prioritised?

2000 character(s) maximum

Digitalisation will connect smart ships and vessels as well as smart ports and smart infrastructure. It will enhance data flows. It will also lead to a higher degree of automation and autonomy, automated and autonomous systems, ship operations (both maritime and inland navigation) and remote control from the shore by 2030. The development of autonomous ships can create a competitive advantage for the European Maritime Technology Sector provided that Europe remains amongst the fastest developers and that the necessary international regulatory changes are taking place fast enough. Since the decision-making process within the IMO may take some time, SEA Europe recommends that EU should take the first concrete steps with regard to inland, coastal, offshore activities and short sea shipping, inter alia, by facilitating safe trial operations in European waters and by supporting fast development of innovative technology and cyber-safe standards.

What should be the role and responsibilities of public authorities (EU, National, Regional and local levels) to successfully address the upcoming challenges?

2000 character(s) maximum

At international level, the IMO needs to properly consider the timely adaptation of the international regulatory framework able to embrace the safety aspects, the human element aspects and the technology developments all the way up to the highest levels of autonomy level in a goal-based approach. At European /National level, a European strategy vision 'Developing a smart inland/maritime transport ecosystem' needs to be developed in the light of European Member States and classification societies having already

designated national waters areas where trials can be carried out and developing verification standards for remote navigation. This European strategy will proactively support the development of fast enabling national legislation to allow autonomy – and to create international projects for autonomous tests between several European Member States and to foster the development of distributed network for short sea shipping, offshore activities and inland navigation. SEA Europe welcomed the EU operational guidelines for safe, secure and sustainable trials of maritime autonomous surface ships. Experience gained can then feed in the IMO process to further build on international guidance to allow trials of autonomous ships in international voyages and help complete the amending process of the international regulatory instruments. An adequate framework for educating and training across Europe is moreover needed for current and future employees in shipyards and maritime equipment manufacturer companies. All relevant funding or financing opportunities, both maritime-related and horizontal, must encompass the opportunity to support technology research and development activities, putting the European Maritime Technology Sector at the forefront of developing connected and automated ships & shipping.

Technology development will be essential to achieve a smarter, digital EU mobility ecosystem. What type of technologies should be prioritised to deliver these objectives? Are there any commonalities that could be found among the three sectors constituting the mobility ecosystem? Are there barriers to the technology transfer from research institutions to industry? Which barriers exist to the adoption of new green and digital technologies in the ecosystem?

2000 character(s) maximum

There is clear difference between automated transport and connected transport and, in particular, when it concerns automation there are various levels of automation envisaged according to different ship's types and trades. The waterborne sector is expected to gradually evolve from ships with automated processes and decision support to autonomous ships able to take decisions and determine actions by themselves. However, autonomous shipping would not necessarily mean that the vessel will be unmanned, and the need for and the level of autonomy may vary according to ship's types and trade. In this regard, SEA Europe believes that interconnected and automated transport categorised in different levels of autonomy needs to be further defined and internationally agreed to ensure regulatory consistency. As mentioned, increasing automated and connected ships and shipping will trigger the need for new training programs developing new competencies requiring a transformation of skills e.g. for the crew, staff of shore support centres, as well as for employees in shipyards and maritime technology companies. In this context, SEA Europe supports a series of initiatives taken to improve the skills of crews and operators of connected and automated ships. The interaction between ships needs to be carefully assessed in order to prevent any disruption on communication and intellectual property right issues, considering that data will have to be exchanged between ships regardless of their degree of autonomy. To that end, communication systems between autonomous ships and shore/authorities need to be properly developed according to different situations such as open sea, coastal and inland navigation, port areas, or offshore operations. These communication systems will increase the overall safety and security reducing and reduce the burden of bureaucratic procedures.

Can you identify already existing projects or good practices to drive the digital transition of the sector that could benefit other parts of the mobility ecosystems?

2000 character(s) maximum

No response.

How to best address the issue of affordability and acceptability to meet consumers' needs and expectations while ensuring a fair and inclusive transition?

2000 character(s) maximum

No response.

Are there specific challenges faced by individual actors of the ecosystem, in particular SMEs, that should be addressed? What are the social implications (including for workers, consumers and passengers) inside the EU of the digital transition in this ecosystem? How do you think these implications should be tackled?

2000 character(s) maximum

Increased use of digital tools in the maritime industry is leading to an increased cyber threat due to the greater digital exposure of important and sensitive information. The reduction of vulnerability of ICT and Operational technology (OT) systems will be critical to the safe and successful operations of remote and autonomous ships - allowing the waterborne sector transformation into connected shipping. The security strategy needs to be addressed primarily from the ship digital infrastructure with well designed and implemented responsiveness to cyber threats. Whilst the International Maritime Organisation (IMO) has already issued Guidelines on maritime cyber risk management and adopted a Resolution on Maritime Cyber Risk Management in Safety Management Systems, there is a further need for common standards and common requirements to be widely covered by an international "Cyber Type Approval Certificate". SEA Europe believes that the EU should be at the forefront in developing standards and requirements to safeguard the competitive advantage of the European industry. In this regard, SEA Europe considers the guidance of the International Association of Classification Societies (IACS) on how to develop and maintain the cyber integrity of ships as a good basis to develop such a certificate which will help to clarify any related liability issues, equally on the side of the equipment installers or integrators. SEA Europe is convinced that a common share of best practices and cross-learning from related industries, including the ICT industry, and involvement of Authorities on counter-measures to reduce the vulnerability and improve responsiveness to cyber-attacks will be the most effective way to continuously increase the resilience of the entire sector.

Horizontal and cross-cutting issues

Skills

Please read and reflect on the issues and scenarios proposed in section 6.1 of the Staff Working Document

Do the actions listed in the staff working document comprehensively address the issues related to skills, including for SMEs? If not, what are the gaps, and what elements should be addressed in priority?

2000 character(s) maximum

Partly. A major challenge of the maritime technology industry is that it is one of the manufacturing sectors with the highest levels of intra-European labour mobility. The scarcity of workers with sectoral skills and the extreme specialisation of the shipbuilding work makes it necessary to move the available skilled people to work in different companies all over Europe. This is a major challenge due to the high complexity of the shipbuilding process and the large number of workers and subcontractors involved in each project, which make shipbuilding very different from other mobility ecosystem sectors. Contrary to the automotive industry where the digital and green transition will result in thousands of redundancies, the maritime technology industry is in need of attracting talent and will be able to absorb recent graduates and experienced workers (at least 230.000 people are needed in the by 2030 due to the aging workforce and business expectations). However, to be able to up and reskill these newcomers across the entire supply chain, including SMEs, it is urgent to develop EU-level joint education and training modules, which are mutually recognised in the different countries. On top of the projects mentioned in the SWD, the sectoral social partners' EU-funded

project “Upskilling Shipbuilding Workforce in Europe” (USWE) must be considered as a major step of the sectoral partners in the identification of sectoral skills gaps and needs. This project elaborated 24 up-to-date professional profiles, based on industrial needs, focusing on green and digital skills for “traditional” blue collar sectoral professions but also for new job profiles for the digital and green transition. These profiles must be urgently developed into curricula and deployed at companies and education and training centres to upskill newcomers and current workers. This should be done through a project pipeline under the umbrella of the Shipbuilding and Maritime Technology Pact for Skills.

What additional or different outcome scenarios could be envisaged?

2000 character(s) maximum

The partnership under the Shipbuilding and Maritime Technology Pact for Skills develops a strong portfolio of EU-level training schemes to be fully integrated in the regional ecosystem. These EU-level trainings and certifications will facilitate the mobility of workers and transferability of skills throughout Europe.

What unmet skill needs exist in the workforce at all levels of the ecosystem to realise the twin transition?

2000 character(s) maximum

As reported by shipyards and maritime technology companies, the lack of sectoral blue-collar skills is a common worrying issue for all European countries with a relevant shipbuilding industry. In fact most demanded profiles at European shipyards nowadays are welders and solderers, shipyard mechanics, naval painters, electricians or assembly supervisors, shipwrights, pipe fitters, mechanic turners, integrators and 3D designers, 3D printing specialists or electronics technicians. On top of this, there is also a need for bringing more engineers (electrical, mechanical, industrial, computing, system integrators) and naval architects to the maritime technology sector. It is therefore urgent to attract people to the sector and to elaborate EU training programmes to reskill and provide specific “navalisisation skills” to those coming from other sectors or non-sectoral training background. When looking at the skills needed in the next five to ten years, besides those mentioned for blue- and white-collar occupations, there is an urgent need to include additional skills in line with the digital and green transition: data analytics, system integration, use of AR/VR, AI, cybersecurity, circular economy, carbon footprint and new skills for the development, integration, operation and maintenance of new propulsion systems.

Do cultural and mind-set barriers to the twin transition exist in the ecosystem? If you identify additional barriers or needs that have not been addressed in this document, please share them.

2000 character(s) maximum

Overall, all stakeholders in the maritime technology industry, irrespectively of the country where they are located, are fully supportive and willing to make the best out of the digital and green transition.

What should be the role and responsibilities of public authorities (EU, National, Regional and local levels) to successfully address the upcoming challenges?

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Policy makers at all levels should be fully engaged in facilitating the upskilling and reskilling of the current and future workforce of the maritime technology industry, in order to secure the strategic autonomy of Europe and maximise the business opportunities offered by the digital and green transition to maritime and coastal communities and the entire Europe. At European level, policy makers should ensure facilitating EU-wide instruments to push intra-EU cooperation and secure critical knowledge, capabilities and jobs in Europe. At regional level, policy makers should engage in promoting career opportunities in the maritime

technology sector in coordination with the industry and sectoral stakeholders, facilitating the transfer of workers from other sectors, ensuring the upskilling and reskilling of the workforce and the development of up-to-date training and education programmes responding to the needs of the industry. Regional authorities should also get engaged in the EU Shipbuilding and MT Pact for Skills in order to support trans-regional cooperation and support the activities of the Pact in their respective regions.

Investment, financing & public procurement

Please read and reflect on the issues and scenarios proposed in section 6.2 of the Staff Working Document

Do the actions listed in the staff working document comprehensively and coherently address the issues identified in this area? If not, what are the gaps, and what measures should be considered as a matter of priority (providing relevant data / evidence)?

2000 character(s) maximum

Only partly. First, the waterborne sector, and in particular the maritime technology sector, is highly capital-intensive. In particular, shipbuilding is characterised by a very long lead production time. The time gap between the signing of a shipbuilding contract and the delivery of the ship is at least 2-3 years. During this time lapse, shipyards take significant risks and need substantial liquidity, notably for working capital purposes and for issuing guarantees to banks to finance the shipbuilding operations. This significant time lapse makes ship finance a niche, in which only few banks (and less and less European banks) are available. Secondly, access to finance for maritime projects remains difficult and scarce in Europe. In Europe there are different financing resources and tools available, but they are not fully fit for purpose to support the European maritime technology industry. Many European operators would rather build their vessels in Europe but the costs of building in Europe do not fit in the operators' business model inter alia due to the more stringent financing schemes in Europe (e.g. OECD disciplines on Export Credits). This means that European-built vessels are more expensive and need to be repaid in a shorter period which would not fit in many operators' business cash flows while the vessel's anticipated residual value would be higher. Thirdly, Asian and Chinese banks are likely to increase their own portfolios for shipping and shipbuilding activities even further through easier access to state finance packages. Hence, whilst European banks remain very reluctant to finance working capital, refund guarantees or invest in capital-intensive or risk-intensive maritime projects, Europe's main competitors will find more easily access to finance. Hence, contrary to European shipyards, Chinese yards will remain able to win various contracts for newbuilt ships and equipment-related projects, based on attractive state financing deals.

What additional or different outcome scenarios could be envisaged?

2000 character(s) maximum

The EU should make sure that access to finance, including sustainable finance, for (viable) maritime projects in Europe becomes attractive in order to prevent further losing ground of ship financing to Asia. A predictable and well-communicated EU policy framework, supported by a strong financing ecosystem in Europe, is key to enable for European maritime technology companies to carry out viable projects, maintain their global leadership in complex products and develop innovative cutting-edge maritime solutions which are key to implement the European Green Deal policy ambitions. This should amongst others entail adequate access to funding for R&D supporting fundamental research targeting the lower Technical Readiness Levels (TRL 1-3), funds to deploy demonstrative projects in the Technical Readiness Level (TRL 4-7), and financing solutions for legitimating sustainable investment in the higher Technical Readiness Levels (TRL 8-9). Finally, a close cooperation between policymakers, financing institutes, maritime stakeholders is necessary. Regulatory inconsistencies should be avoided not to hamper the necessary investment in technologies. To

encourage the entire waterborne sector to invest significantly in the transformation of waterborne transport into a zero-emission mode of transport, investments need to be underpinned by a regulatory framework that offers legal certainty to the entire sector.

What additional measures could further assist the phasing out of fossil-fuels financing in transport to the benefits of greener technologies?

2000 character(s) maximum

To assist the phasing out of fossil-fuels, it is essential that all the auction revenues collected under EU ETS through the inclusion of shipping, as well as the penalties for non-compliance under FuelEU Maritime, are directed towards investments in the shipping sector, including the European maritime technology sector, through a dedicated fund. Investments necessary to transform the entire waterborne (transport) sector into a zero-emission mode of transport or into a zero-emission sector will be significant, in particular investments in sustainable technologies as well as in alternative fuels. In this respect, there is a compelling need to accelerate the development and implementation of the widest range of (synthetic) fuels and technologies well in advance of 2030 and preferably as of today. At the same time, SEA Europe acknowledges that the maturity of sustainable alternative fuels as well as of the most energy-efficient technologies will take time. In addition, the use of alternative fuels, sustainable technologies and energy-efficient technologies will increase the operational costs of shipping and make 'sustainable' ships more expensive than 'traditional' ships. Hence, the revenues from the inclusion of shipping into EU ETS should be used to bridge the additional costs from operating sustainable ships. The EU should however avoid by all means the use or promotion of a single fuel option as the only available sustainable option by 2030, as such approach would definitely hamper the development of energy efficient technologies. Moreover, significant growth potential in offshore renewables (OREs) could be realised through effective financing support for RD&I and deployment investments in European maritime technology, vessels, and equipment.

What additional actions, if any, would need to be considered to reflect the specific situation and needs of SMEs within the mobility ecosystem? Are there any systemic barriers in this ecosystem to access to funding for the twin transition - particularly for SMEs?

2000 character(s) maximum

Financing and guaranteeing shipbuilding projects of specifically SME shipowners and shipbuilders (who are lacking access to finance and are offering the largest market to decarbonize) will be key. The current EIB direct lending thresholds, for instance, are too high for smaller projects and the administrative burden is disproportionately significant to access these financing schemes. To offer effective solutions for SME, EIB direct financing schemes should therefore target also smaller transactions ranging from EUR 5-50 million and simplify the administrative procedures to directly access financing.

What should be the role and responsibilities of public authorities (EU, National, Regional and local levels) to successfully address the upcoming challenges?

2000 character(s) maximum

Public Authorities should assist the maritime (technology) sector in raising awareness of all existing financial programmes that are relevant to the industry and support the development of relevant assistance or support (e.g. through the promotion of dedicated advisory services or single-entry points of information at national /regional level for maritime technology projects).

Continuation of the co-creation process and next steps

Please read and reflect on the issues presented in section 7 of the Staff Working Document

Considering all elements presented in the SWD, what specific key indicators should be used to track the successful transition in the mobility ecosystem?

2000 character(s) maximum

No response.

What indicators / data are currently collected and used by actors in the ecosystem to measure their performance with regards to the twin transition and their resilience?

2000 character(s) maximum

No response.

Which common indicators could be used to monitor cooperation among all actors or the ecosystem?

2000 character(s) maximum

No response.

What more, or different, actions would be needed in order to support the transition towards 2030 from the Commission, Member States and the stakeholders at large?

2000 character(s) maximum

The SWD shows that both the automotive and rail sectors have sectoral expert groups formally established by the European Commission to analyse their challenges, determine what is needed to maintain their leadership at global level, analyse their competitive needs and propose ways forward.

Unfortunately, there is not similar formal forum for discussion for the waterborne sector, although SEA Europe has been calling for a dedicated expert group and the renewal of the LeaderSHIP 2020 initiative. Moreover, none of the stakeholders of the waterborne sector were accepted to be part of the EU Industry Forum. In this line, SEA Europe regrets that the only “sectoral” initiative taken by the Commission over the last years, at least as reflected in the SWD, is the NAIADES III Package, focused on the inland waterways sector, which constitutes only a (limited) part of the waterborne sector. Regrettably, the inexistence of a structured communication channel and the lack of a previous reflection exercise between the sectoral stakeholders and the Commission are reflected in the Transition Pathway document and is inevitably contributing to a misconception on the relevance of the waterborne sector, its size, potential and specific needs. In this context, SEA Europe believes of utmost urgency and importance to create a discussion forum (“Expert Group”) with the waterborne sector and the European Commission in order to ensure that the challenges, needs, potential and market position of the sector are fully understood and tackled. The purpose of this Group should be to collectively identify sectoral bottlenecks, gaps, opportunities, set common objectives and adopt a shared roadmap of actions to be pursued at public (EU, member states and regional) and industry level. Synergies and coordination will need to be fostered with other existing EU platform (e.g. ESSF).

General comments

What other general comments would like to give?

2000 character(s) maximum

SEA Europe is fully supportive of this initiative to map the challenges, synergies and future scenarios of the mobility ecosystem, and is willing to get involved in the planned discussions with experts of the entire ecosystem and the European Commission. SEA Europe is nevertheless concerned that the Commission Staff Working Document (hereinafter “SWD”) does not seem to accurately reflect the strategic importance, strengths and potential of Europe’s maritime technology and waterborne sector. For example, the document is not always consistent when referring to the waterborne sector and maritime technology industry. SEA Europe represents both the integrators (shipbuilders and repairers) and the supply chain (equipment and component suppliers), i.e. 300 shipyards, 22.000 supplying and service companies and 1 million jobs. The maritime technology industry is high-tech manufacturing industry, at the core of the waterborne sector, providing front-running technologies, vessels, infrastructures and solutions. However, the SWD mentions that the transition pathway’s approach includes “users’ engagement with all actors from the value chain, including users (providing transport services)”. If this is the case, the waterborne sector includes line operators, owners, ports, offshore companies, etc. All together the European waterborne sector employs more than 5.4 million jobs (about 2.25% of all European employment) and generates over €500 billion a year (3.4% of EU GDP). Finally, the Commission should not base its understanding and estimation of the importance of Europe’s maritime technology industry by only looking at the global tonnage market share of a part of its business (civilian new ships), but on the fact that Europe is still frontrunner in digital and green maritime technologies capable of developing the solutions needed for the digital and green transition and for ensuring Europe’s strategic maritime autonomy.

Communication

Whom should we contact regarding your contribution and possible further involvement in the Mobility Transition Pathway process? We use this contact information when launching a Call for Interest for potential participants in the Stakeholder consultation workshops in the course of 2022.

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Contact

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