

# PIONEERS

Portable Innovation Open Network for  
Efficiency and Emissions Reduction Solutions

## D11.2 International Partners Legal and Ethical Compliance

Inge De Wolf



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## Control Sheet

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## Acronyms and Abbreviations

Acronym/Abbreviation	Meaning
WP	Work package
GHG	Greenhouse gas
T	Task
PIONEERS	Portable Innovation Open Network for Efficiency and Emissions Reduction Solution
DoA	Description of the Action
LA	Linked Action
EU	European Union
KPI	Key performance indicators
CIIF	Co-transferability Innovation and Implementation Framework

<b>TD</b>	Transfer during the project
<b>GDPR</b>	General Data Protection Regulation
<b>ULM</b>	Unified modelling language
<b>LCPA</b>	Lifecycle performance assessment

## Disclaimer

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# 1 – Executive summary

According to the Grant Agreement of EU funded projects, the international beneficiaries must carry out the action in compliance with: (a) ethical principles (including the highest standards of research integrity) and (b) applicable international, EU and national law. The compliance with ethics requirements needs to be checked during the implementation.

This deliverable, D11.2 International partners Legal and Ethical Compliance situates the potential exchange of materials with non-EU member states within the project Work Packages and Tasks and defines an approach on how to detect and deal with the exchange of (sensitive) materials. Moreover, it will serve as guideline to the project partners to use on the various compliance aspects for international partners.

## 2 – Introduction

The PIONEERS project brings together four ports with shared commitments towards the Green Deal Goals and Blue Growth socio-economic aims. In order to address the challenge of reducing GHG emissions while remaining competitive, the ports will implement green port innovation demonstrations across four pillars: clean energy production and supply, sustainable port design, modal shift and flows optimization, and digital transformation.

Within the PIONEERS consortium 46 partners work together. Of these partners, 2 are situated in non-EU countries, being:

- CANADA
- CHINA

This deliverable provides an answer to the Ethics Summary Report (document Ref. Ares(2021)2076494 - 24/03/2021) comment relating to the involvement of third countries in the PIONEERS project:

*"Canada and China are Non-EU consortium members and project materials and data will be exchanged between the partners throughout the project duration."*

The comments were made that:

*"The project includes international partners. Details on the materials which will be imported to/exported from the EU will be submitted as part of the deliverable D11.2 International partners Legal and Ethical Compliance. Copies of import/export authorisations, as required by national/EU legislation will be kept on file."*

*"The beneficiary is reminded that under the General Data Protection Regulation 2016/679, the data controllers and processors are fully accountable for the data processing operations. Any violation of the data subject rights may lead to sanctions as described in Chapter VIII, art.77-84."*



## 3 – Collaboration among EU (or EU-associated countries) and non-EU countries for the execution of PIONEERS

The PIONEERS consortium is composed of partners from 10 EU member states and promotes international cooperation by having one Chinese partner (SMU University) and one Canadian partner (Port of Montreal, international partner under PoA) in the consortium. Both international partners contribute to the project.

- 1 ADMINISTRATION PORTUAIRE DE MONTREAL (PoM) (PIC 902912958) – Canada
- 21 SHANGHAI MARITIME UNIVERSITY (SMU) (PIC 891606638) - China

### 3.1 - Partner 1: ADMINISTRATION PORTUAIRE DE MONTREAL (PoM)

#### 3.1.1 Involvement of Partner 1: ADMINISTRATION PORTUAIRE DE MONTREAL

Port of Montreal (PoM) will be the international partner to Port of Antwerp in the context of PIONEERS. PoA and PoM have a bilateral Memorandum of Understanding in which "creating a transatlantic innovation bridge" is one of the priority areas. The participation of PoM in PIONEERS reflects the ambitions in the MoU and contains more specifically contribution in WP1, T1.3. and WP8, T8.1 (and in WP2, T2.3-2.5 & WP3, T3.3 in an advisory capacity):

- innovation scouting and making sure the PIONEERS innovations are transferable and relevant to ports all over the world;
- involvement and maturing of innovation ecosystems in and around ports: connecting ecosystems through activities like hackathons.

### 3.1.1.1 Involvement in WP1: Market uptake of PIONEERS PORTable Innovations

Partner PoM is involved in task 1.3 of WP 1:

- Task 1.3 Innovation radar M7-M57 (Lead: BAL; Contributors: PoA, PoB, PoC, Venlo, CIMNE, UM, PANTEIA, PoM)

The assessment results of the most promising innovations investigated in T1.2 will be translated and classified into an innovation radar map. This map will integrate potential impacts on PIONEER's objectives, the addressed subject area and the associated timeline for implementation for each innovation into an easy-to-understand visualisation. In addition, for each innovation, the assessment results of WP1 and WP9 and the knowledge gained during the implementation processes in WP3-WP7 and the transferability assessed in WP8 will be summarised in the PORTfolio of PIONEERS recommended PORTable innovations (D1.5), which will also serve as direct input to WP2 Master Plan elaboration. The PORTfolio is a documentary of all solutions described in their implementation context with a dedicated set of attributes. In this context, LA, demonstrations in the project and especially solutions/innovations transferred during the project will be highlighted in the PORTfolio. The documentary will also be available as an online database, in which stakeholders can search and filter for specific attributes, like transferability or specific KPI results.

### 3.1.1.2 International partners Legal and Ethical Compliance, Partner 1 PoM, WP1

The role of PoM in task 1.3 Innovation radar is to deliver innovation scouting and making sure the PIONEERS innovations are transferable and relevant to ports all over the world.

These tasks are under the lead of Partner n°6 BALANCE TECHNOLOGY CONSULTING (BAL, 999421168) who assures us that the exchange of data and materials with PoM will be restricted to:

- General outcomes and conclusions as reported in the corresponding deliverables.
- In case information exchanged could potentially be commercially sensitive, this will first be discussed with the stakeholder involved. This will be logged as part of this deliverable in future versions.
- No raw data sets subject to this exercise will be shared or exchanged.

- By no means will GDPR sensitive information be shared or exchanged. All GDPR personal data will be handled in Compliance with the approach defined in D12.2 POPD requirement.

### 3.1.1.3 Involvement in WP8: Co-transferability of PIONEERS innovations, Partner 1 PoM, WP8

- Task 8.1 Adapting and applying the Innovation and Implementation Framework for co-transferability M6-M12 (Lead: VECTOS; Contributors: PoA, PoC, Venlo, MOSAIC, BAL, ICCS, EIP, UM, ALICE, PoM)

Innovation processes often focus on technical and commercial/financial aspects, while governance, organisational, operational, and regulatory systems also need to align in order to enable successful uptake at scale and the shift from 'innovation' demonstration to widespread 'solution'. For the purpose of pilot demonstrations, more relaxed conditions apply, such as innovation grants and reduced regulation. However, more stringent factors come back into focus as soon as scaling up and/or transfer to other locations are considered. WP1 will develop an innovation and business potential assessment that will be used to analyse and support the long-term prospects and scale-up of PIONEERS innovations within the ports where they are demonstrated. This task seeks to adapt and apply the framework in the context of international transfer of innovations, leading to the development and refinement of a 'Co-transferability Innovation and Implementation Framework' (CIIF) and preparation of a detailed plan for its application. This will involve:

- Selection of 'first wave' quick win TD (transfer during) and LA (linked actions) innovations as test cases for the development of the CIIF, and in preparation for the co-transferability process in Task 8.2.
- Refinement of the CIIF, in cooperation with the demonstration and take-up partners in each location, to test the framework as a means for facilitating transfer in the context of other member states and port typologies.
- Preparation of a detailed time plan for the first and second waves of co-transferability and the final review.

### 3.1.1.4 International partners Legal and Ethical Compliance, Partner 1 PoM, WP8

The role of PoM in task 8.1 (Adapting and applying the Innovation and Implementation Framework for co-transferability) is the involvement and maturing of innovation ecosystems in and around ports by connecting the different ports' ecosystems through activities like hackathons. This means their role is focussing on bringing together partners and eco-systems and less on providing input or collaboration on the Innovation and Implementation Framework itself.

These tasks are lead by partner n° 7 VECTOS GMBH (VECTOS, 900099861) who assures us that the exchange of data and materials with PoM will be restricted to:

- General outcomes and conclusions as reported in the corresponding deliverables.
- In case information exchanged could potentially be commercially sensitive, this will first be discussed with the stakeholder involved. This will be logged as part of this deliverable in future versions.
- No raw data sets subject to this exercise will be shared or exchanged
- By no means will GDPR sensitive information be shared or exchanged. All GDPR personal data will be handled in Compliance with the approach defined in D12.2 POPD requirement.

## 3.2 - Partner 21: SHANGHAI MARITIME UNIVERSITY (SMU)

### 3.2.1 Legal and Ethical Compliance of collaboration with non- EU Partner 21 SHANGHAI MARITIME UNIVERSITY

The contribution of SHANGHAI MARITIME UNIVERSITY is situated in WP3 and WP9.

#### 3.2.1.1 Involvement in WP3 PIONEERS Actions: requirements co-definition, specifications, cross-action alignment and deployment monitoring

- Task 3.1 Current State-of-the-Art, Enablers, Barriers and Challenges M1-M4 (Lead: ICCS; Contributors: ALL).

In this task, a thorough analysis will be conducted in order to collect the current practices that are followed by European ports in terms of port efficiency and sustainability, energy storage and supply, digitalization of operations and management of multimodal cargo flows. It will focus on making a comprehensive and systematic recording of the state-of-the-art, aiming to provide an up-to-date list of enablers, barriers and challenges (technological, business, environmental and societal). It will be based on desk-research including earlier studies of the EU, nationally and internationally funded projects and a range of semi-structured and unstructured interviews with key personnel of consortium and other ports that are members of PIONEERS association partners such as ALICE, IWT and UITP or otherwise related to project partners.

- Task 3.2 Identification of stakeholders, user needs and use cases M1-M6 (Lead: ICCS; Contributors: ALL).

This task will list, classify and identify the needs of the stakeholders that constitute the ecosystem of a port and its surrounding urban space. It will be stakeholder-driven and the methodology for elicitation of the complete stakeholder list will be governed by the principles of Social Science and Humanities, following a staged approach, where the first stage will involve the core port stakeholders associated with PIONEERS ports and the second will be extended to include a wider list of people, institutions, authorities and industries involved and influencing the green port

ecosystem. Next, user surveys and at least one stakeholders' workshop will be conducted in each of the four PIONEERS ports to extract the perspective of port users, and identify and validate their needs. The PIONEERS Scenarios and Personas will emerge from semi-structured and unstructured interviews with the extended list of stakeholders and will be validated with members of the Advisory Board. Based on these, suitable use cases will be described, depicting the main functions and interactions between the stakeholders and the chosen actions and demonstrations that will be developed. The use cases will be systematically developed and documented with formal representation, such as UML diagrams.

- Task 3.3 PIONEERS Co-definition of action and demonstration requirements and specifications M1-M9 (Lead: UA; Contributors: PoA, PoB, PoC, Venlo, MOSAIC, ICCS, PSA, AKKA, MJC2, AET, SEAFAR, IMEC, ENVISION, DEMEYER, PoM, SMU, MACOMI, ANT, ENGIE, INFRABEL, AL, PRO, Medrepair, VDL, ACASA, UM, PANTEIA).

In this task, a systems' engineering approach will be implemented, in order to transform the user needs and use cases into user requirements and subsequently into functional and non-functional system requirements. The system requirements will depict technical, operational, societal, environmental, legal, security and other relevant aspects of the system, while they will be prioritised based on stakeholders' feedback. Requirements will be reflected in a Requirements Traceability Matrix, that will be dynamically updated during the project and will enable monitoring of the implementation progress. Scoping documents will be generated for each PIONEERS demonstration that will include design, technical specifications, data requirements and correlation with other actions and demonstrations.

### 3.2.1.2 International partners Legal and Ethical Compliance, Partner 21 SHANGHAI MARITIME UNIVERSITY, WP3

Partner SMU will be involved in these tasks by providing input and information to collect the current practices in terms of port efficiency and sustainability, energy storage and supply, digitalization of operations and management of multimodal cargo flows from a selection of sampled ports in China. Considering their expertise and innovation on the aspects of sustainable and smart mobility development, Ningbo Zhoushan Port, Xiamen Port, and Jiangyin Port are suggested to be selected as the sample ports to be studied. As ports operate in a global market and China is a highly relevant trading partner, their input on current challenges, enablers, barriers and challenges needs to be considered.

These tasks are under the lead of partner n° 12 University of Antwerp (UA, 999902870) who assures us that the exchange of data and materials with SMU will be restricted to:

- The general outcomes and conclusions of the Current State-of-the-Art, stakeholder analysis action and demonstration requirements and specifications, as described in the corresponding deliverables. Potentially commercially sensitive information will first be discussed with the corresponding stakeholder whether it can or cannot be shared. This will be logged and part of this deliverable in future versions.
- No raw data sets subject to this exercise will be shared or exchanged.
- By no means will GDPR sensitive information be shared or exchanged. All GDPR personal data will be handled in Compliance with the approach defined in D12.2 POPD requirement.

### 3.2.1.3 Involvement in work package 9: Impact assessment and process evaluation

Partner SMU is involved in the following tasks:

- Task 9.3 Development of assessment method framework M6-30 (Lead: UA; Contributors: PoA, PoB, PoC, ICCS, PSA, AKKA, SMU, AET, ANT, UNIGE, CIMNE, UM, ALICE, PANTEIA)

In this task the assessment method will be developed. This model will determine the net benefits of the developed innovations during the project. The same model should also be used to determine the net benefits of the PORTable innovations. Next to that, in this task a separate framework will be developed which will assess how to effectively transfer port innovations to fellow ports. Based on this assessment, lessons can be learnt on how the implementation of the lighthouse port innovations in other ports can be done.

- Task 9.4 Quantification of the demonstrated port innovations M11-42 (Lead: UA; Contributors: PoA, ICCS, PSA, AKKA, UA, AET, SMU, ANT, UNIGE, LINEAS)

The evaluation of the implemented demos will be done. This means that the net benefits for each of the four pillars in the port are determined. Also, the difference between the realized net benefits and the desired future benefits are quantified. This Task will prepare and structure data from WP4 to WP7 for the analysis, will determine the net benefits and quantify how much the realized net benefits are off from the desired future scenario and will determine and collect the data needed to perform the LCPA of the different PORTable innovations in WP1.

- Task 9.5 Quantification of the transferred port innovations M31-57 (Lead: PoC; Contributors: PoA, PoB, PoC, Venlo, ICCS, SMU, CIMNE, EIP, ACASA, UM, PANTEIA)

The evaluation of the implemented PORTable innovations in the fellow ports will be done. This means that the net benefits for each of the four pillars are determined for the three fellow ports. Also, the difference between the realized net benefits and the desired future benefits are

quantified for the three fellow ports. Next to that, the transferability and scalability of these innovations from the Lighthouse port to the fellow ports are also evaluated.

#### **3.2.1.4 International partners Legal and Ethical Compliance, Partner 21 SHANGHAI MARITIME UNIVERSITY, WP9**

Partner SMU will be involved in these tasks by providing input and information on the state-of-the-art regarding Clean Energy Production, Storage & Supply, Sustainable Port Design, Modal shift and Flows Optimization and Digital Transformation in Asia/China. As ports operate in a global market and China is a highly relevant trading partner, their input on current challenges, baseline and future scenarios needs to be considered.

These tasks are under the lead of partner n° 12 University of Antwerp (UA, 999902870) who assures that the exchange of data and materials with SMU will be restricted to:

- The methodology and assessment model for the impact and process evaluation assessment will be shared. This will be logged as part of this deliverable in future versions.
- The results of the exercise to which they contribute will be shared by means of general outcomes and conclusions of the impact assessment and process evaluation. This will be logged and part of this deliverable in future versions.
- No raw data sets subject to this exercise will be shared or exchanged.
- By no means will GDPR sensitive information will shared or exchanged. All GDPR personal data will be handled in Compliance with the approach defined in D12.2 POPD requirement.

### **3.3 Exchange of project materials and data with the international partners (outside their direct involvement)**

Whereas the chapters above describe the exchange of project materials and information arising from the involvement of both international partners in the project's work packages, tasks & sub tasks, this chapter focuses on the exchange of project materials and data with the international partners where they have no direct involvement. Port of Montreal is also involved in tasks 2.3, 2.4, 2.5 & 3.3. These are subtasks where they have no direct involvement but serve only as a sounding board in order to validate the results. In general, information, project materials and data will be shared within the project consortium. However also here the following principles will be followed.

- General outcomes and conclusions of the research conducted within PIONEERS will be shared amongst all the consortium members.
- Potentially commercially sensitive information will first be discussed with the corresponding stakeholder whether it can or cannot be shared. This will be logged and part of this deliverable in future versions.

- Raw data sets (who do not fall under the GDPR regulation) subject to project research will not be shared or exchanged with the (international) project partners unless agreed amongst the data owners and (international) project partners.
- By no means will GDPR sensitive information be shared or exchanged. All GDPR personal data will be handled in Compliance with the approach defined in D12.2 POPD requirement.

## 4 - Conclusion

The comments of the Ethics Summary Report relating to the involvement of non-EU countries have been assessed. The PIONEERS project does envisage collaboration with two non-EU members, however the activities in the PIONEERS project raise no ethics issues. Should it be the case that personal data is exchanged, this exchange will follow the procedures defined in deliverable D.12.2 POPD - Requirement No.2.

## 5 - Ethical Compliance logbook for import/export of materials

Below template is to assist the author and peer-reviewer in the check of the Ethics compliance.

### Deliverable related ethical issues

*Please make the ethical compliance self-check for each of the PIONEERS Deliverable with the help of this logbook and fill in the needed information in the column "How are the guidelines applied?"*

Logbook	
<b>Project materials and data exchanged with the international partners</b>	<b>Compliance with the above mentioned principles</b>
"Define materials or datasets"	Choose an item. If yes, how are the guidelines applied