



European flagship Action for cold ironING in ports



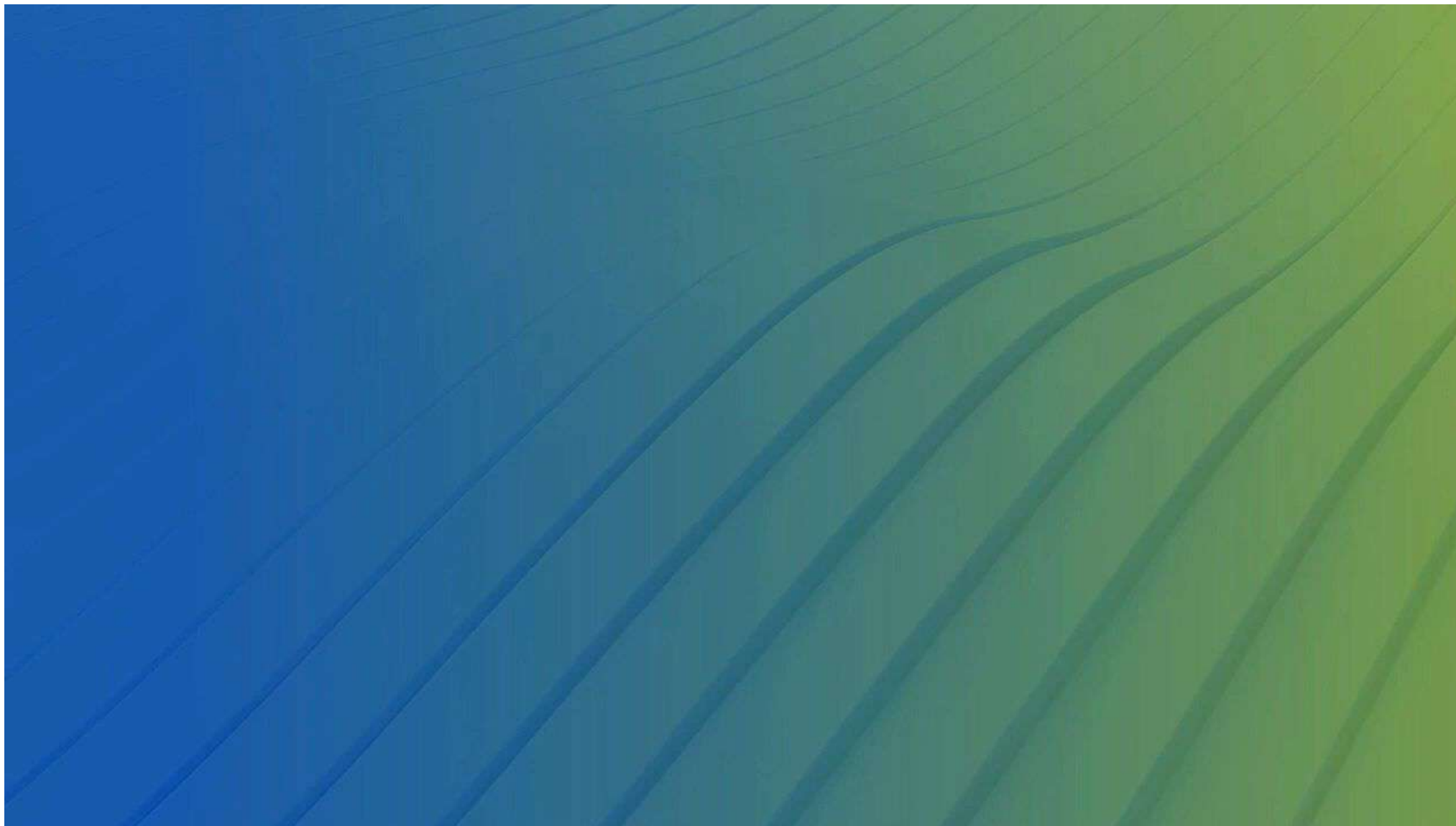
Co-financed by the Connecting Europe
Facility of the European Union

EALING - Recommendations for a harmonised framework on OPS in EU ports

BILOG 2022, PIACENZA

11 NOV 2022





Co-financed by the Connecting Europe
Facility of the European Union

Youtube link: <https://www.youtube.com/watch?v=aRgtrB5TySg>



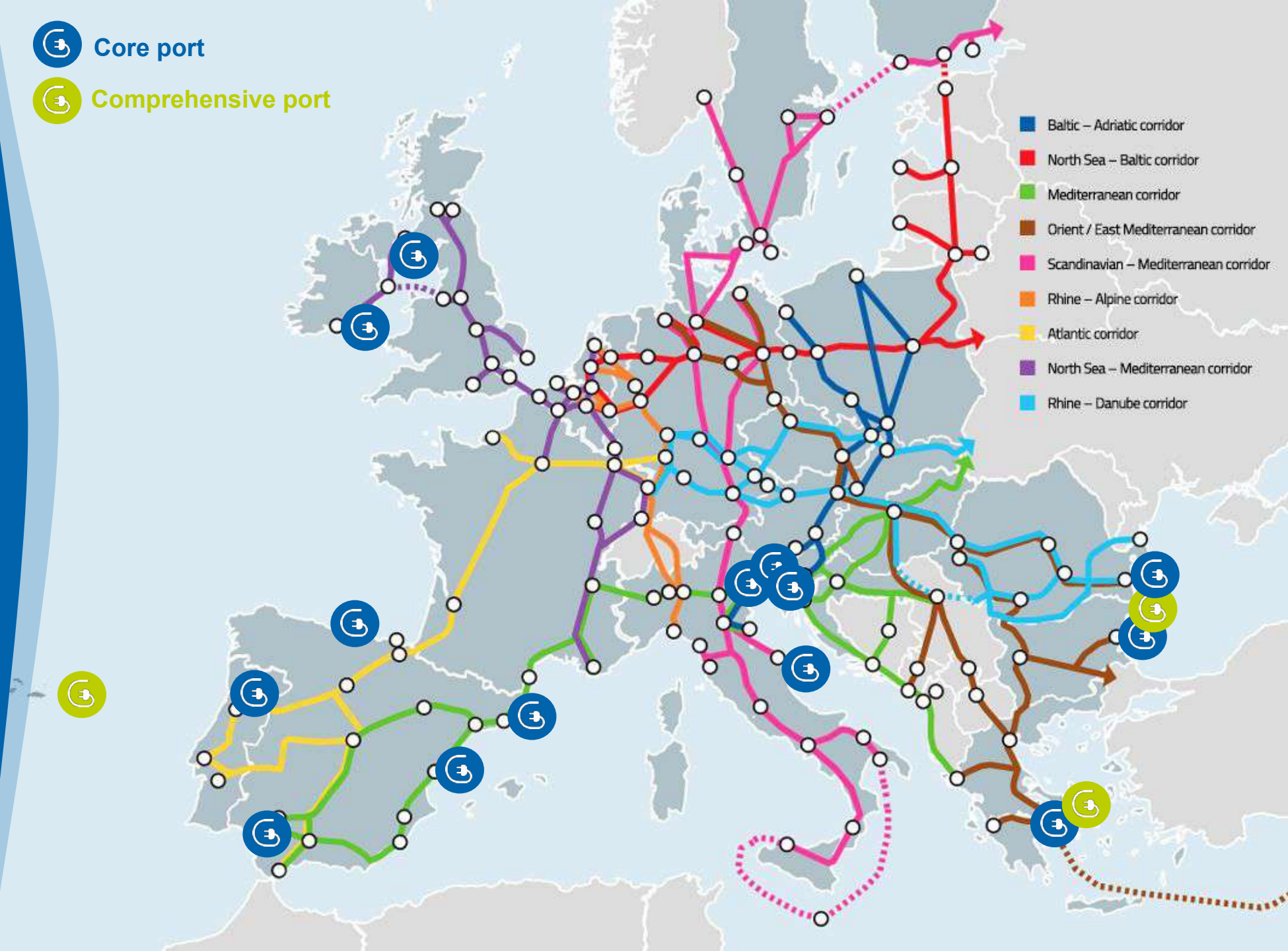
Core port



Comprehensive port

16 EU ports:

- Port of Valencia (Spain)
- Port of Barcelona (Spain)
- Port of Huelva (Spain)
- Port of Gijón (Spain)
- Port of Venice and Chioggia (Italy)
- Port of Ancona (Italy)
- Port of Trieste & Monfalcone (Italy)
- Port of Burgas (Bulgaria)
- Port of Varna (Bulgaria)
- Port of Constanta (Romania)
- Port of Piraeus (Greece)
- Port of Rafina (Greece)
- Port of Koper (Slovenia)
- Port of Leixões (Portugal)
- Ports of Açores (Portugal)
- Port of Dublin and / or Cork (Ireland)





Executive Report on Ports Questionnaire

Results of the Survey on OPS at European Ports

List of the surveyed ports

NAME OF THE PORTS	COUNTRY	TOTAL SURVEYED PORTS
ALGECIRAS, BARCELONA, CEUTA, FERROL, GIJÓN, HUELVA, LAS PALMAS DE GRAN CANARIA, MÁLAGA, MOTRIL, PALMA, SANTANDER, VALENCIA	SPAIN	12
ANCONA, BARI, BRINDISI, CHIOGGIA, LA SPEZIA, LIVORNO, MONFALCONE, NOGARO, ORTONA, PESARO, TRIESTE	ITALY	11
ALEXANDROUPOLIS, CHANIA, IGOUMENITSA, MYKONOS, PATRAS, PIRAEUS, RAFINA	GREECE	7
AVEIRO, CANIÇAL E PORT SANTO, FIGUEIRA DA FOZ, FUNCHAL, LEIXOES, LISBON, PORTOS DOS AÇORES	PORTUGAL	7
CONSTANTZA, MANGALIA, MIDIA	ROMANIA	3
BOURGAS, VARNA	BULGARIA	2
AARHUS, RONNE	DENMARK	2
SETE, TOULON	FRANCE	2
DUBLIN, GALWAY	IRELAND	2
ANTWERPEN	BELGIUM	1
PLOCE	CROATIA	1
MALTA FREEPORT	MALTA	1
AMSTERDAM	THE NETHERLANDS	1
KOPER	SLOVENIA	1
KAPELLSSKAR, NORVIK, NYNASHAMN, STOCKHOLM	SWEDEN	1

54 ports surveyed, from 15
EU Member States

E

D

C

B

A – GENERAL INFORMATION



Discovering the Port Questionnaire – structure

A – GENERAL INFORMATION

It provides information to know the type of port or terminal under study (traffic type, governance model, etc.).

B – TECHNICAL ASPECTS RELATED TO OPS

It includes technical data regarding the status of OPS implementation in the participating ports.

C – SPECIFIC REGULATORY AND ADMINISTRATIVE ASPECTS

It collects information on the relevant regulatory aspects at EU / national level and administrative procedures.

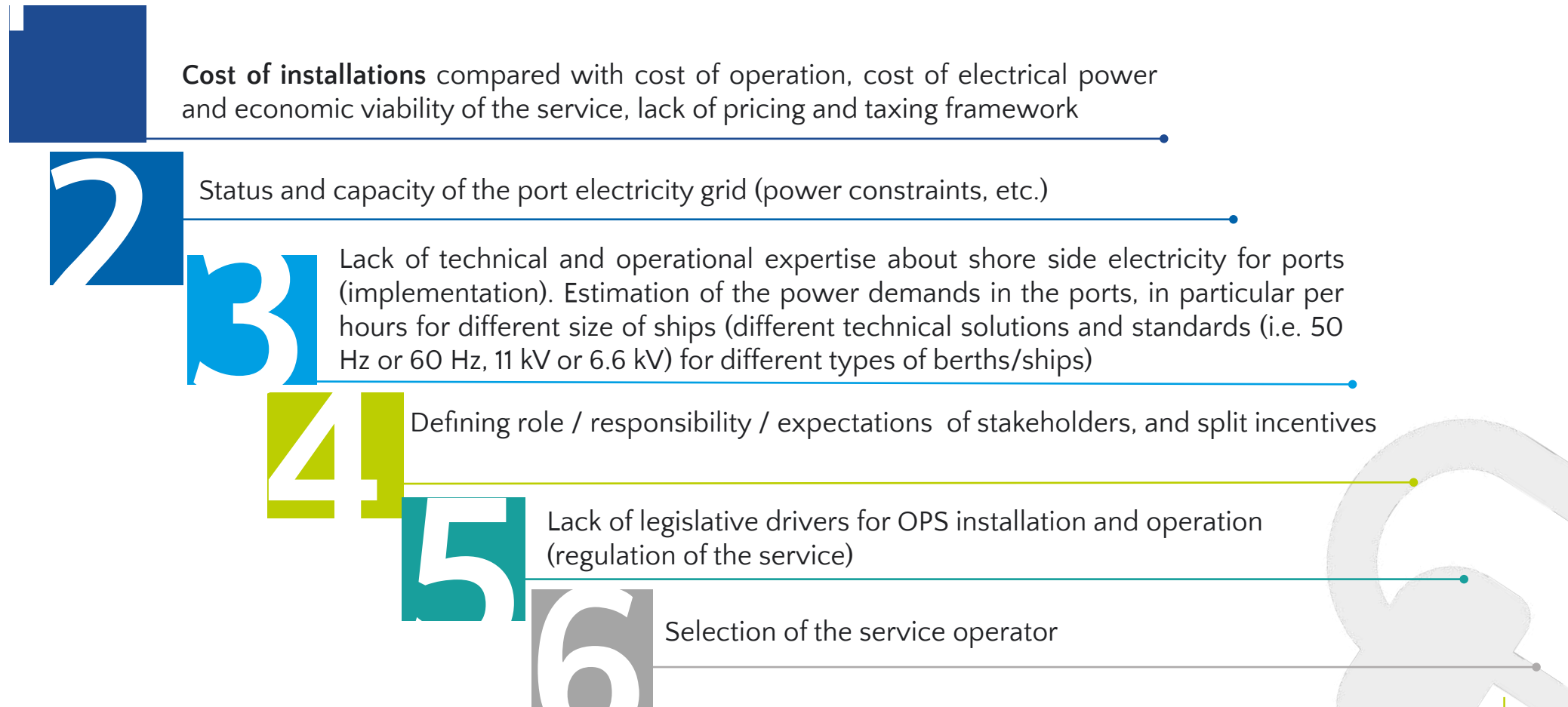
D – OTHER ASPECTS (SUCH AS FINANCING, BUILDING FACILITIES AND RESOURCES)

It provides information on other related aspects, such as financing or incentives schemes, barriers at construction level, and training needs and profiles.

E – ADDITIONAL INFORMATION

It includes additional information freely provided by the respondent.

Main technical/operational/financial difficulties in planning and implementing OPS solutions



Note: Open question.

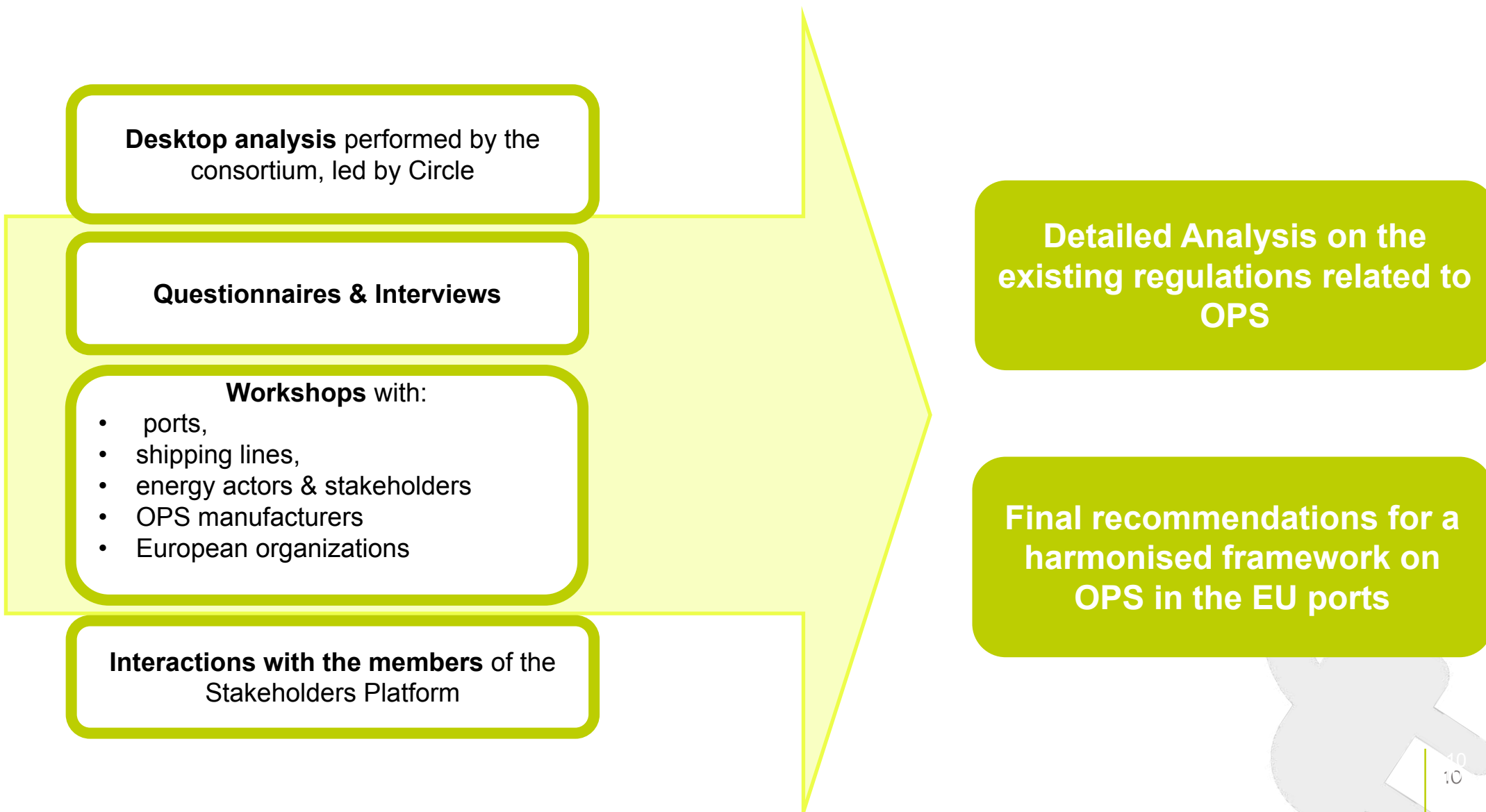
Recommendations

Milestone 6. Final recommendations for a harmonized framework on OPS in EU ports

1	SCOPE OF THE REPORT	9
2	POLICY AND LEGAL SCOPES.....	10
2.1	OVERVIEW OF CURRENT AND FORTHCOMING EU REGULATIONS	10
2.2	OUTLOOK OF RELEVANT EUROPEAN ORGANISATIONS	14
2.3	MAIN FINDINGS FROM THE DETAILED ANALYSIS OF EXISTING NATIONAL/REGIONAL/LOCAL REGULATION IN EALING PORTS	18
2.4	RECOMMENDATIONS FOCUSED ON THE POLICY AND LEGAL SCOPE.....	21
3	TECHNICAL SCOPE	23
3.1	OVERVIEW OF THE TECHNICAL WORK PERFORMED BY EUROPEAN AND INTERNATIONAL BODIES AND THE MAIN CHALLENGES HIGHLIGHTED.....	23
3.2	OUTLOOK OF THE ENERGY SUPPLIERS AND MAIN CHALLENGES HIGHLIGHTED	26
3.3	OUTLOOK OF THE SOLUTION PROVIDERS AND MAIN CHALLENGES HIGHLIGHTED.....	28
3.4	MAIN CHALLENGES HIGHLIGHTED BY PORT AUTHORITIES.....	30
3.5	RESULTS OF THE EALING PORT AND SHIPPING QUESTIONNAIRES: MAIN TECHNICAL CHALLENGES HIGHLIGHTED.....	31
3.6	RECOMMENDATIONS FOCUSED ON THE TECHNICAL SCOPE.....	32
4	ECONOMIC SCOPE	37
4.1	OVERVIEW OF THE SSE EUROPEAN MARKET	37
4.2	MAIN FINDINGS RELATED TO THE ECONOMIC SCOPE FOR SSE.....	44
4.3	RECOMMENDATIONS FOCUSED ON THE ECONOMIC SCOPE.....	52
5	ENVIRONMENTAL SCOPE	54
5.1	OUTLOOK OF GREEN ENERGY PRODUCTION FOR SSE.....	54
5.2	OVERVIEW OF ENVIRONMENTAL ASPECTS REGARDING SSE INSTALLATIONS.....	55
5.3	ENVIRONMENTAL CERTIFICATES AND MONITORING AND REPORTING SCHEMES	56
5.4	ENVIRONMENTAL LEGAL FRAMEWORK AFFECTING THE CONSTRUCTION AND OPERATION OF SSE INSTALLATIONS.....	59
5.5	RECOMMENDATIONS FOCUSED ON THE ENVIRONMENTAL SCOPE	61
6	SOCIAL SCOPE.....	62
6.1	OVERVIEW, FINDINGS, AND CHALLENGES RELATED TO THE SOCIAL SCOPE	62
6.2	RECOMMENDATIONS FOCUSED ON THE SOCIAL SCOPE.....	66



Harmonised Framework for the electrification of the participating TEN-T maritime ports



Note: the following slides contain some of the recommendations collected from key EU port and shipping stakeholders and the EALING consortium partners to bring forward the deployment of SSE infrastructures in European ports.

The report including the full compilation of the recommendations will be published on the EALING website in the following days.

Recommendations – policy and legal scope

- Simplify and harmonise administrative burden at the national, regional, and local levels to build and operate SSE infrastructures.
- Facilitate the involvement of port authorities in the development and operation of their electricity distribution system to provide the necessary quantities of electricity to their end-users.
- Increase the intensity of public funding. In this sense, the revenues raised via EU ETS could be used to fund SSE installations.
- Include tax exemption for electricity provided to vessels at berth in the revised Energy Taxation Directive.

Recommendations – technical scope

SSE connection at vessels	<ul style="list-style-type: none">• There should be some standardisation or guidelines regarding the position of the SSE connection for each type of vessel.• Appropriate training is needed, especially on safety aspects regarding shore-ship compatibility• There is a need for technical and regulatory harmonisation when implementing SSE connection on board. <p>IMO guidelines under preparation are expected to provide support on these issues.</p>
Tender processes	<ul style="list-style-type: none">• Mandating joint ventures in the tender processes may not be a good approach.• Experts should validate the feasibility; requirements do not need to be very detailed.
Regulations and standards	<ul style="list-style-type: none">• Promoting regulatory sandboxes that allow designing and testing SSE services .• Improving the international standard for Shore Connection (IEC/IEEE 80005), example including Shore side Battery Charging and Shore Power Banking.
Assessment of power demand	<ul style="list-style-type: none">• Load forecasting models will be needed .• Define proper power demand values to size the SSE infrastructure: Load forecasting models, and energy survey-based power demand estimation will be needed.

Recommendations – economic scope

- Develop a Cost-Benefit Analysis before implementing any SSE infrastructure to avoid the misallocation of limited resources .
- Consider the following aspects in any feasibility study): demand evaluation; customized/tailored contract; electricity pricing and opportunities; competitors; market and financial evaluation; evaluation of economic cost-benefit; and impact assessment of shore side electricity in port/local economic profile.
- Create additional funding mechanisms (e.g., maritime fund under the EU ETS) to cover a bigger part of the needed investments. Existing mechanisms (Connecting Europe Facility, Recovery Funds) are not sufficient to reach the desired deployment.
- Increase the percentage of funding in existing mechanisms. 30-40% is still too little for the important investments needed in European ports.
- Have a permanent and comprehensive EU-wide tax exemption for the use of SSE in ports under the Energy Taxation Directive, which would put it on an equal footing with electricity generated on board ships and produced from tax-free marine fuel combustion.
- Encourage the application of port fee rebates for shipping companies at the ports at the EU level.

Recommendations – environmental scope

- Promote the creation of an environmental certificate addressed to shipping lines, focused on the use of electricity when at berth, following the example of ESI, Green Award, CSI, or Blue Angel label, etc.
- Encourage the registration of ships in the Clean Shipping Index (CSI) for vessels equipped with SSE so that to rebates in the participating European ports.

Recommendations – social scope

- Incentivise, at the European Commission level, interaction, and collaboration between all the stakeholders, especially the shipping companies, port authorities, solution providers .
- Involve the public in the port's plans for the provision of SSE, and enhance public awareness of benefits of SSE.
- Create at the port level a specific working group involving all the operational stakeholders to ensure the proper coordination and management of the facilities.
- Work closely with universities and vocational training centres to cover the training profiles needed for SSE operations.

Thanks!



European flagship Action for coLd ironING in ports

Contacts in Activity 1:

Reza Karimpour, karimpour@circletouch.eu

Alexio Picco, picco@circletouch.eu

Jorge Miguel Lara López, jlara@fundacion.valenciaport.com

Nikos Moutsios, nmoutsios@oceanfinance.gr

Discover more at

www.ealingproject.eu



**Co-financed by the Connecting Europe
Facility of the European Union**