

DESCARBONIZATION OF THE PORT OF SEVILLA



BEST **CAMPUS** **SEA** **TECH WEEK** **BRETAGNE**

Maritime Safety & Security

15-17 Oct. 2024 - Brest, France

Ireland
Featured Country

Conference
Exhibition
BtoB meetings

In partnership with



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PORT OF SEVILLE

- The only inland port of Spain
- 850 hectares
- Important economic, logistics, and industrial platform in the southern peninsula (population 1.5M within 200 km).
- Technological and innovative hub
- Multimodal port: maritime, rail and road connections
- First port in railway traffic in Andalusia.
- More trains than ships: approximately 1000
- Node of the TEN-T Core Network.






Port
of **Seville**

BLUE ECONOMY SUSTAINABILITY?



- According to the European Environment Agency, transport is responsible for approximately 25% of total greenhouse gas emissions in the European Union
- Approximately 80% of global trade is maritime trade (UNCTAD, 2018)
- 70% of maritime emissions occur in the port area (Bozzo, 2015)
- Negative health effects, climate change, and other negative externalities of transport as accidents, noise, congestion, etc.


GREEN DEAL

 Objective: DECARBONIZATION OF TRANSPORT and reduction of negative externalities of transport: congestion, noise, emissions, accidents, etc. Climate neutrality by 2050.

 Sustainable and Smart Mobility Strategy (SSMS)


 Fit for 55

 Zero Pollution Package

 European Climate Law

 RePowerEU package


 Combined Transport Directive

 Trans-European Transport Network: Promote modal shift (reduce 70% of road transport and transfer it to inland waterways and trains, which are much more sustainable). Objective: reduce greenhouse gas emissions by 55% in 2030 and 100% in 2050.

STRATEGIC FRAMEWORK OF THE SPANISH PORTS SYSTEM

STRATEGIC LINES AND OBJECTIVES

ENVIRONMENTALLY SUSTAINABLE PORTS




ECO-EFFICIENT PORTS
ENVIRONMENTAL MANAGEMENT
ENVIRONMENTAL QUALITY

ECO-PROACTIVE PORTS



PROMOTE ECO-SUSTAINABLE
MOBILITY



CONTRIBUTE TO CLIMATE
CHANGE MITIGATION AND
ADAPTATION

INDICATORS

Achieve a 30% reduction in consumption
by 2030 compared to 2019

Reduction of unit external costs of transport

Produce 50% of energy through self-consumption by
2030

Achieve a 70% reduction in the carbon footprint of Port
Authorities by 2030 compared to 2019

Achieve a 70% reduction in the carbon footprint of works
carried out by Port Authorities by 2030

Achieve a 50% reduction in the carbon footprint of ports
(operators) by 2030 compared to 2019

2030 GOAL

>30%

>50%

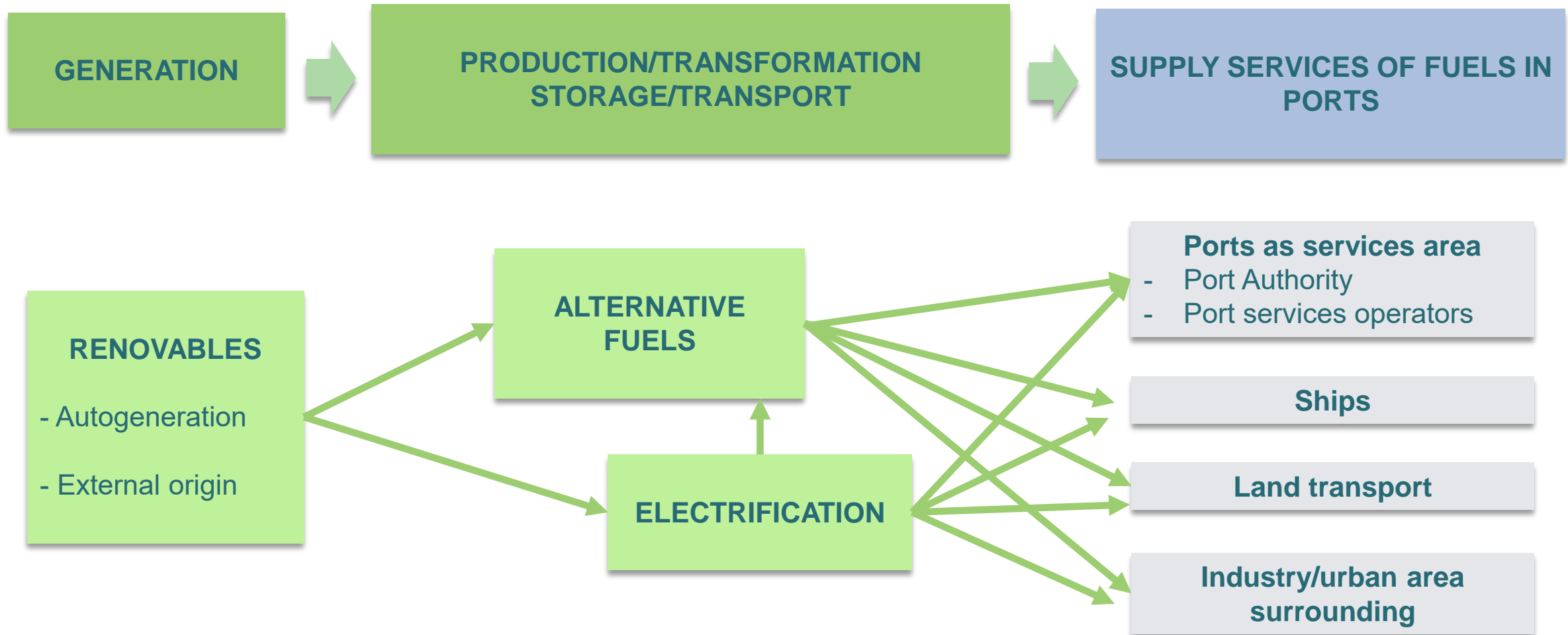
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>70%

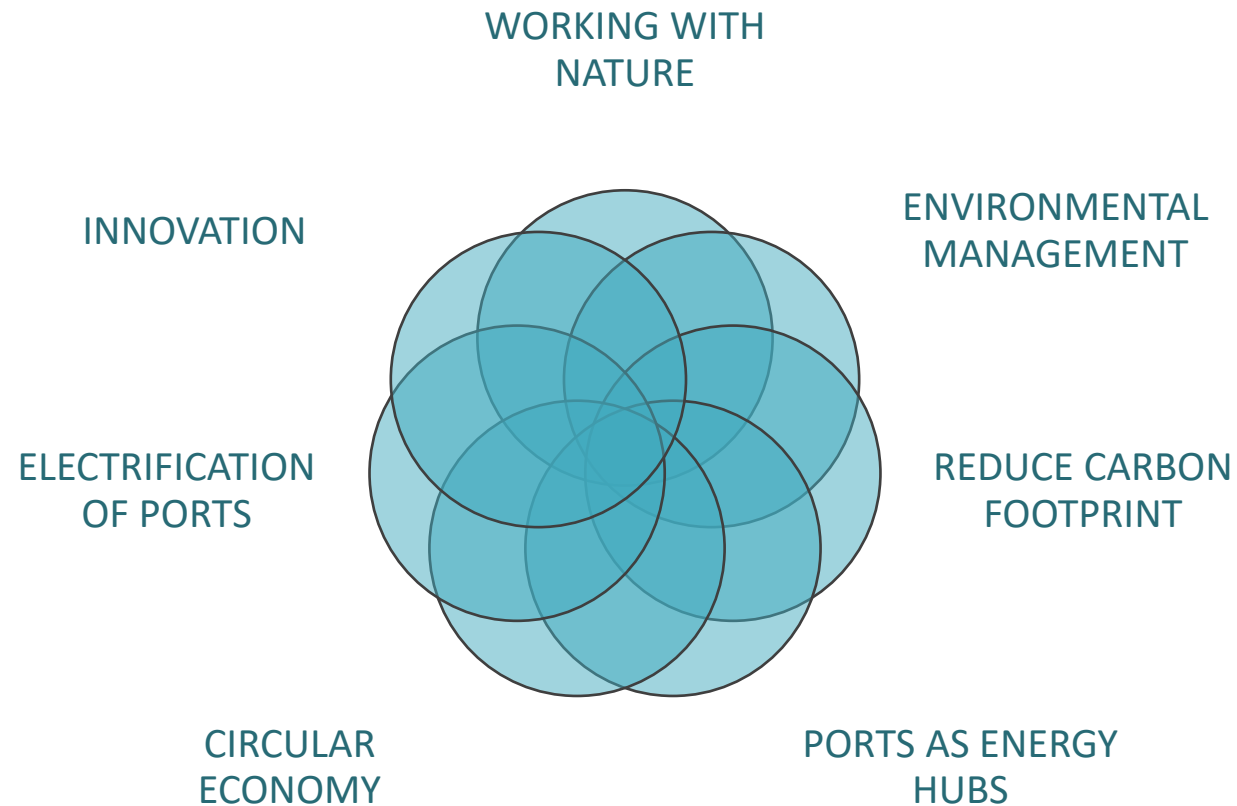
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ECO-PROACTIVITY. PROMOTE ENERGY TRANSITION



CLIMATE NEUTRALITY: ENVIRONMENTAL EXCELLENCE AS A STRATEGIC OBJECTIVE OF THE PORT OF SEVILLE



WORKING WITH NATURE: CIRCULAR ECONOMY

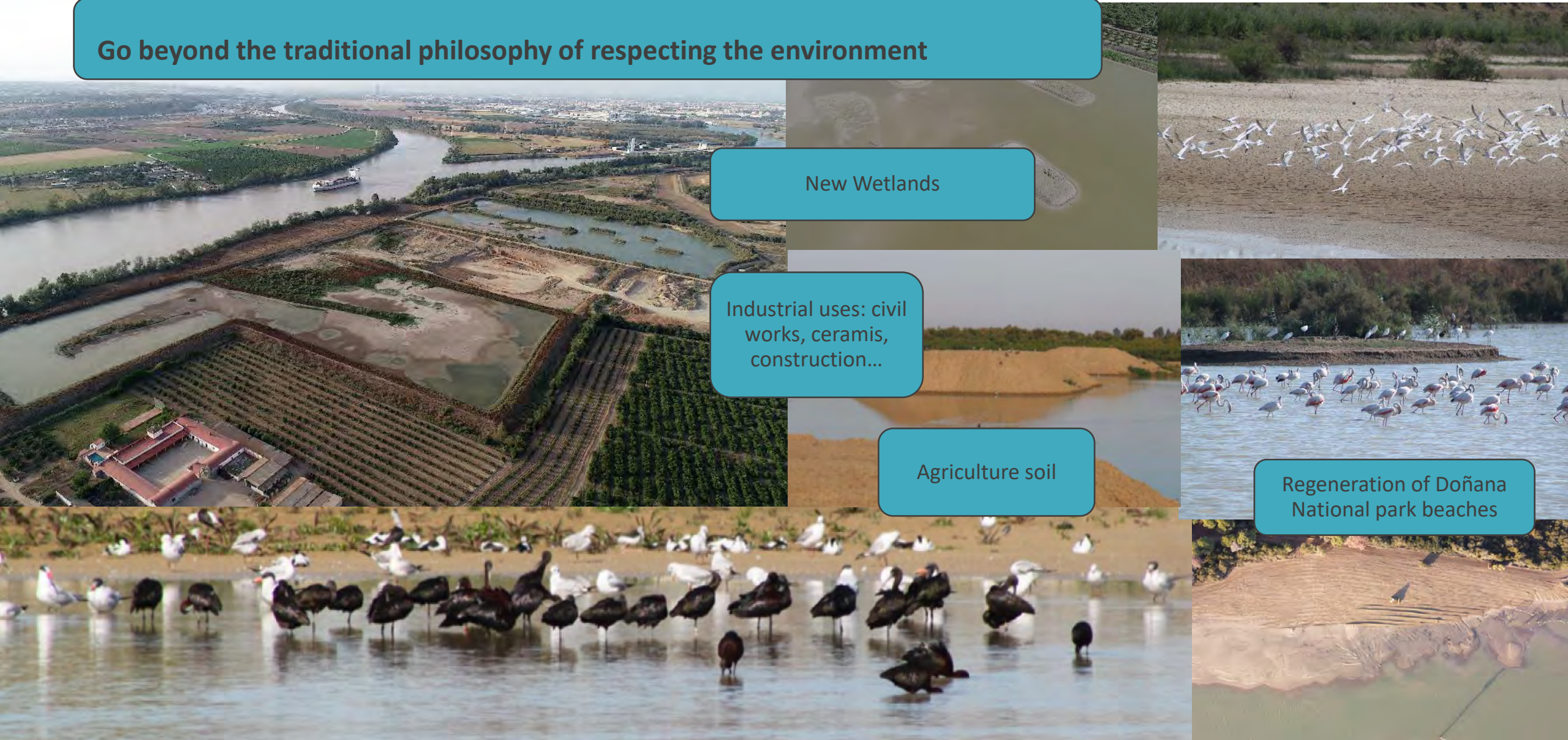
Go beyond the traditional philosophy of respecting the environment

New Wetlands

Industrial uses: civil works, ceramis, construction...

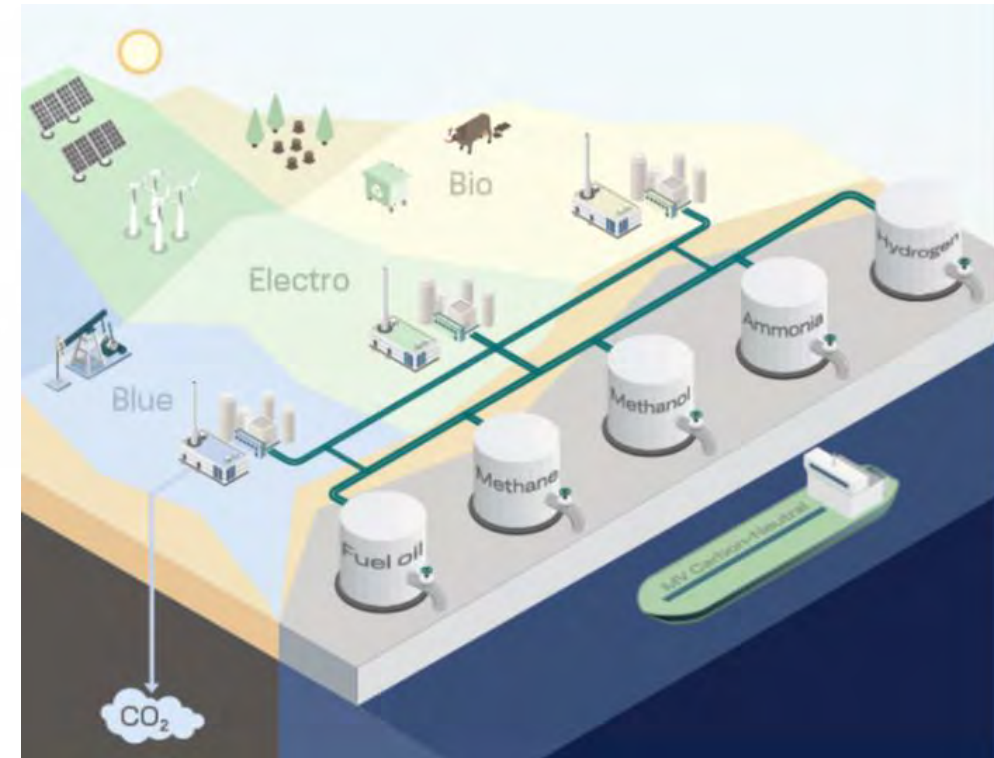
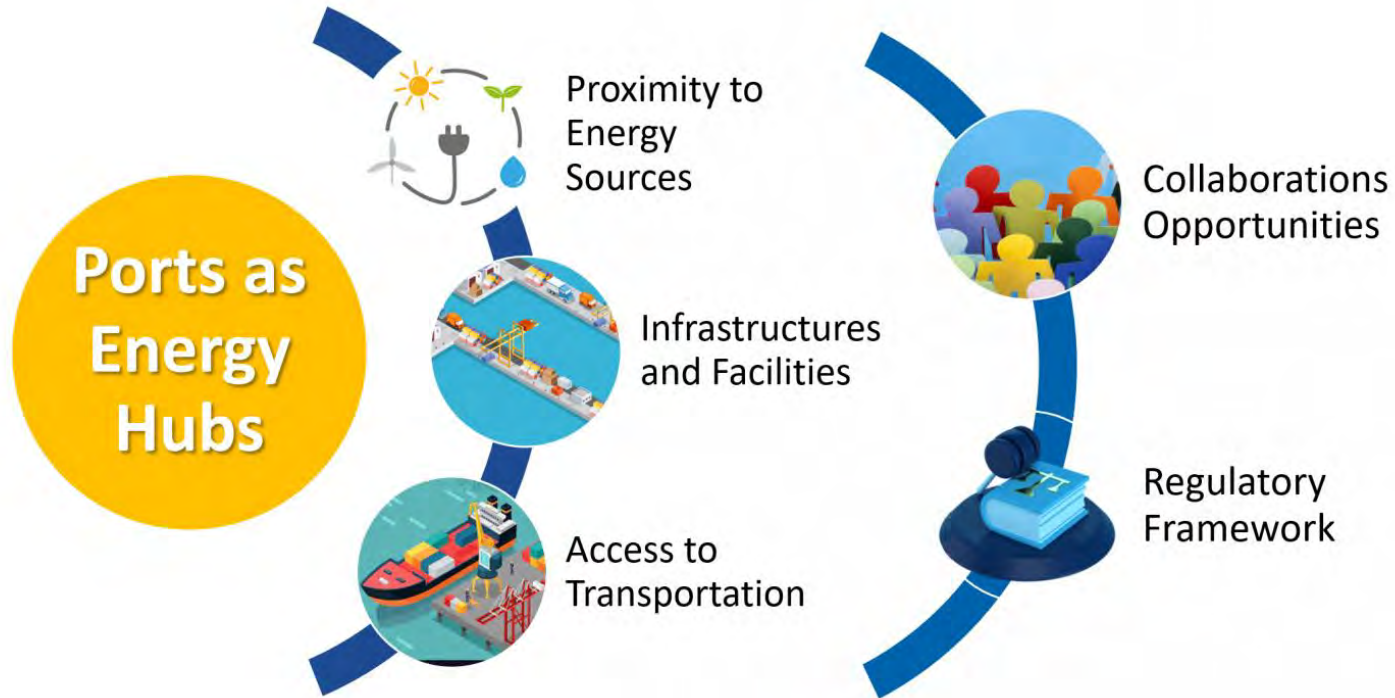
Agriculture soil

Regeneration of Doñana National park beaches





PORTS AS ENERGY HUBS




PORTS AS ENERGY HUBS



- RENEWABLE ENERGIES
- FOSTER RELATED TRAFFIC
- ENERGY COMMUNITIES
- PORTS AS H2 ECOSYSTEM
- OPS/COLD IRONING: ELECTRIFICATION OF DOCKS
- PORTS AS ENERGY HUBS: WIND ENERGY



FOSTER RENEWABLE ENERGIES COMPANIES IN THE PORT COMMUNITY



IGNIS (green ammonia)

SOLANER DOS (H₂)

H₂B₂ (electrolyzers)

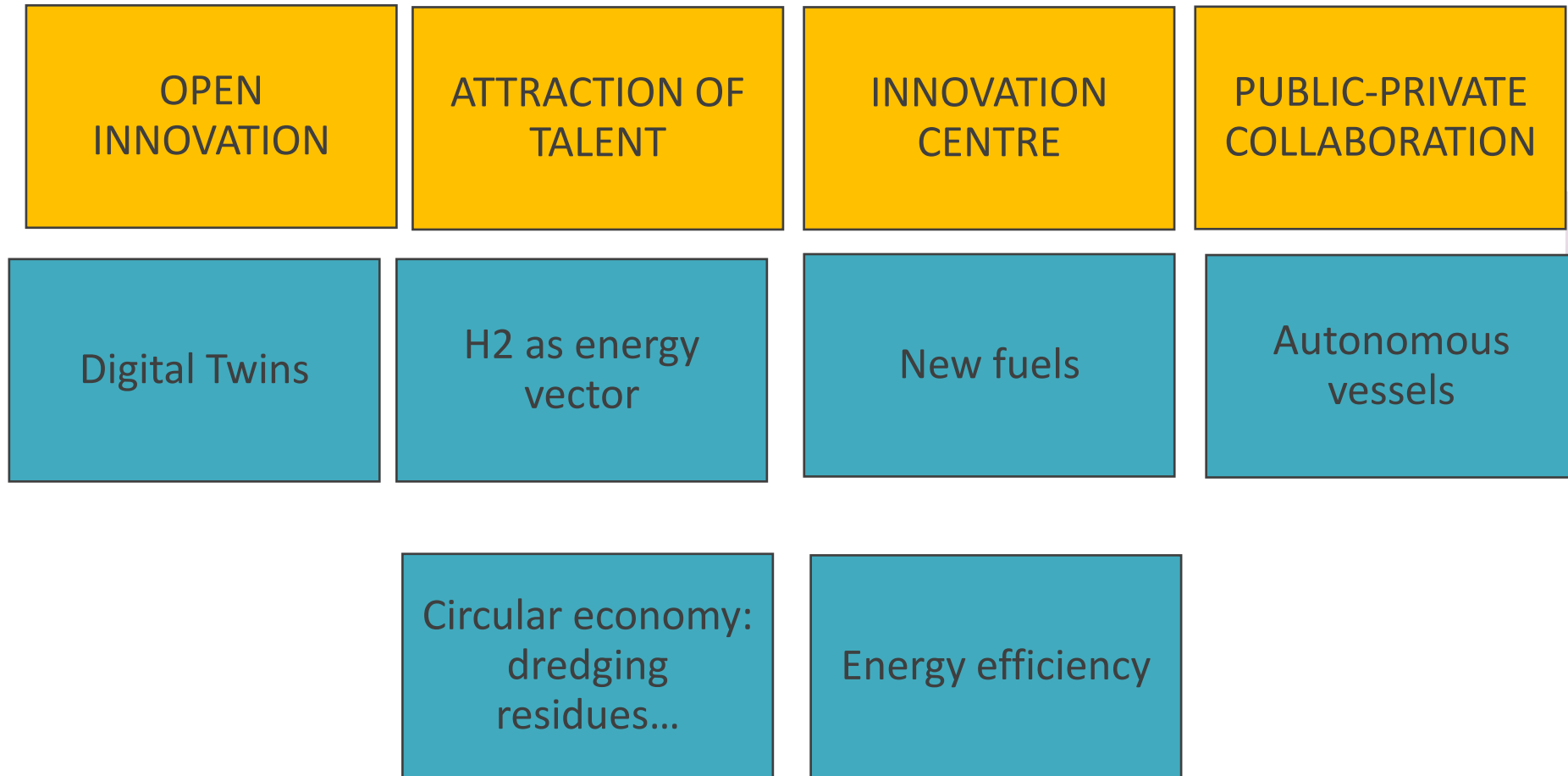
OLEOFAT (biomethanol)

Efedos (biogas y biofertilizers)

GRI (offshore wind)

TECADE (offshore wind)

DIGITALIZATION, AUTOMATION, INNOVATION:



EUROPEAN PROJECTS

DIGITALIZATION

- AIRIS
- AIRIS II
- FPSIII
- SAFARI
- IWETT
- PRISMA
- GUADALTWIN

SUSTAINABILITY

- BLUEPORTS
- PORT ACCESS
OPTIMIZATION
- DANUBIUS
- MARCOBOLO
- HYDEA
- RESIDUO0
- POTENT

REALIGNMENT OF PORT SPACES



NEW PORT DISTRICT: NET ZERO DISTRICT





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Puerto
de Sevilla

**PUERTO DE SEVILLA. EL MAR EN
EL CORAZÓN DE ANDALUCÍA**

THANKS FOR YOUR
ATTENTION

WWW.PUERTODESEVILLA.COM

STRATEGIC FRAMEWORK: LINES AND MANAGEMENT OBJECTIVES IN SUSTAINABILITY

STRATEGIC LINE 10: ENVIRONMENTALLY SUSTAINABLE PORTS



GOAL 10.1: DUE DILIGENCE IN ENVIRONMENTAL MANAGEMENT: Systematize environmental management by implementing Environmental Management Systems and integrating the achievement of environmental objectives into all management instruments of the Port Authorities



GOAL 10.2: IMPROVE THE ENVIRONMENTAL QUALITY OF PORTS: Implement initiatives to minimize the impact of port activity on air, water, sediment, soil quality, and acoustic quality. Characterization of the natural environment



GOAL 10.3: ACHIEVE ECO-EFFICIENT PORTS: Optimize water and energy consumption by implementing circular economy policies. Optimize coverage and treatment of wastewater and runoff..

STRATEGIC FRAMEWORK: LINES AND MANAGEMENT OBJECTIVES IN SUSTAINABILITY

STRATEGIC LINE 11: ECO-PROACTIVE PORTS



GOAL 11.1: PROMOTE ECO-SUSTAINABLE MOBILITY: Contribute to the reduction of external costs through eco-incentive schemes based on the environmental merit of transport operators operating in ports.



GOAL 11.2: CONTRIBUTE TO CLIMATE CHANGE MITIGATION: Implementation of energy efficiency and renewable self-consumption policies in the port. Encourage the use of carbon-neutral fuels in the port and transportation chains.



GOAL 11.3: CONTRIBUTE TO CLIMATE CHANGE ADAPTATION. Assessment of the vulnerability of port infrastructure and operations to adverse climate phenomena, evaluated through climate models. Definition of measures in planning and management instruments

CONTRIBUTE TO CLIMATE CHANGE MITIGATION: LINES OF ACTION



REDUCE THE CARBON FOOTPRINT OF PORTS.

- REDUCE THE CARBON FOOTPRINT OF PORT AUTHORITIES.
- REDUCE THE CARBON FOOTPRINT OF PORT OPERATORS.



CONTRIBUTE TO REDUCING THE CARBON FOOTPRINT OF TRANSPORT CHAINS.

- PROMOTION OF SHORT-DISTANCE RO-RO MARITIME TRANSPORT.
- BOOST TO RAIL TRANSPORT WITH ORIGIN AND DESTINATION AT THE PORT.
- DEVELOPMENT OF INFRASTRUCTURES AND SERVICES FOR ALTERNATIVE FUEL SUPPLY.



SUPPORT THE DECARBONIZATION OF THE ENERGY SECTOR.

- PRODUCTION AND LOGISTICS OF CARBON-NEUTRAL FUELS.
- SUPPORT AND PROMOTION OF THE DEVELOPMENT OF THE MARINE RENEWABLE ENERGY INDUSTRY.

REDUCE THE CARBON FOOTPRINT OF PORTS: REDUCING THE FOOTPRINT OF THE PORT AUTHORITY



IMPROVEMENT OF THE ENERGY EFFICIENCY OF THE PORT AUTHORITY

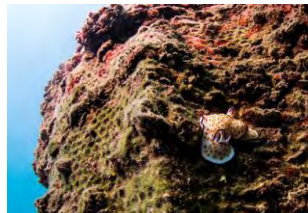
- **GOAL:** Achieve a 30% reduction in consumption by 2030 compared to 2019.
- **INVESTMENT:** 34 Million Euros
- **MEASURES:** Replacement of outdoor lighting with regulated LED fixtures. Optimization of building efficiency through actions in lighting, air conditioning, and envelope



SELF-CONSUMPTION OF THE PORT AUTHORITY

- **GOAL:** Produce 50% of energy through self-consumption by 2030.
- **INVESTMENT:** 34 Million Euros
- **MEASURES:** Installation of photovoltaic panels on roofs and available surfaces of the Port Authorities, along with batteries

REDUCE THE CARBON FOOTPRINT OF PORTS: REDUCING THE FOOTPRINT OF THE PORT AUTHORITY



REDUCE THE CARBON FOOTPRINT OF PORT WORKS

- **GOAL:** Achieve a 70% reduction in the carbon footprint of works carried out by Port Authorities by 2030.
- **MEASURES:** Include conditions in project and construction contracts to use low-carbon footprint cements and steels.

CARBON FIXATION IN PORT INFRASTRUCTURES

- **GOAL:** Ensure that new port infrastructures act as CO₂ sinks by promoting the development of ecosystems that fix calcium carbonate.
- **MEASURES:** Include conditions in project and construction contracts to use biocompatible materials and biomimetic structures that encourage the fixation of organisms with calcareous structure in maritime works.

REDUCE THE CARBON FOOTPRINT OF PORTS: REDUCING THE FOOTPRINT OF PORT OPERATORS



REDUCE THE CARBON FOOTPRINT OF PORT OPERATORS

GOAL: Achieve a 50% reduction in the carbon footprint of ports by 2030 compared to 2019.

MEASURES:

- Include conditions on energy efficiency and self-consumption in land occupancy permits and service provision titles.
- Explore new incentive mechanisms, in addition to existing ones, to encourage energy efficiency projects, the use of low-carbon footprint fuels, or individual and/or shared self-consumption.
- Promote, where possible, the granting of concessions for renewable energy generation in the port, and its subsequent marketing under a PPA within the port.

