

# Hellenic Chamber of Shipping

## Development of a sustainable strategy for Greek passenger shipping industry & fleet renewal

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June 2019

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# Concept paper's background and scope

**Greek passenger shipping industry, represented by the Hellenic Chamber of Shipping (HCS):**

## Upon considering the:

## And the alignment of fleet renewal initiative with:

## Wants to:

A

### Role and Contribution of Greek passenger shipping industry

- Connectivity of 116 islands and 14.6% of Greek population
- Provision of humanitarian aid, civil protection and strategic defense
- Promotion of economic growth, tourism and employment

B

### Need for extensive fleet renewal and limited ability for self-funding

- Need for renewal is driven by the aging fleet, combined with the upcoming environmental directives
- Limited self-funding ability is caused by the size of required investment, the narrow timeframe and the consecutive years of industry's recession

*Non-exhaustive*

### EU values, policies, transport strategies and funding principles

- Social and territorial cohesion
- Equal access
- Peace and security
- Balanced economic growth
- Reduction of social and economic disparities
- Safe, sustainable and connected transport
- Shift to low carbon economy
- Low-emission mobility
- Removal of bottlenecks in transport
- Enhance strategic sealift capabilities for defense and rapid deployment

**Explore the opportunities for EU co-funding on fleet renewal initiative, which is of primary importance for Greece and European Union**

### 1<sup>st</sup> step

- Confirm awareness and common understanding of EU stakeholders regarding the role and contribution of the industry and the challenges faced
- Collaborate with EU authorities to investigate relevant funding opportunities

**Concept paper's scope**

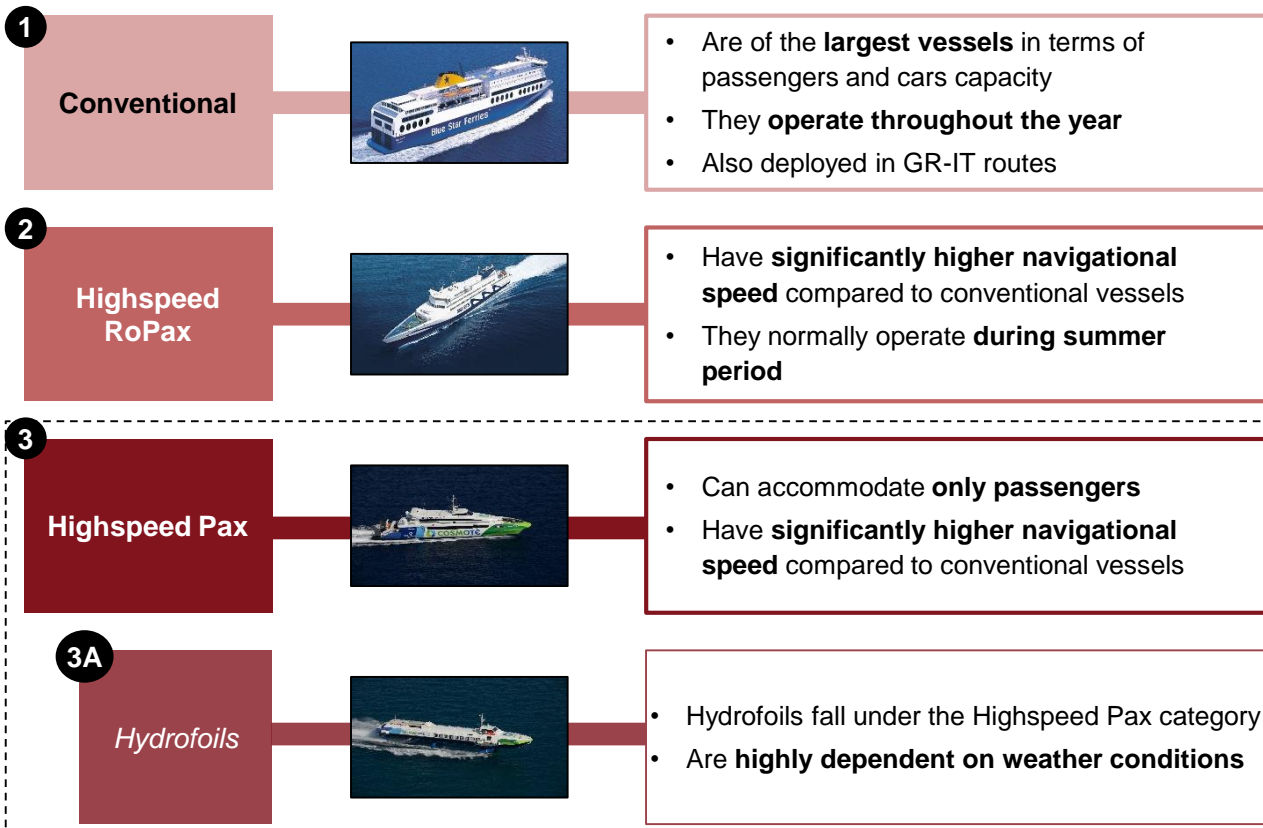
## Concept paper structure

Section	Contents included / analysis performed
<b>1</b> <b>Role and contribution of passenger shipping industry</b>	<ul style="list-style-type: none"><li>• Significance and size of passenger shipping industry in Greece compared to other EU countries</li><li>• Connectivity of Greek population due to the geographical dispersion of Greece heavily depends on sea transportation</li><li>• Range and volume of transportation activity performed (passengers and goods transported)</li><li>• Importance of passenger shipping industry for emergency response in crisis situations and strategic sealift</li><li>• Direct and indirect contribution of this industry to the economy, employment growth of the islands and country</li></ul>
<b>2</b> <b>Necessity, drivers and strategy for fleet renewal</b>	<ul style="list-style-type: none"><li>• Mapping of the existing passenger fleet and analysis in terms of type, age and renewal priority</li><li>• Impact assessment of upcoming environmental directives on the fleet renewal strategy</li><li>• Preliminary sizing of the required investment for fleet renewal</li></ul>
<b>3</b> <b>Alignment of fleet renewal initiative with EU values and funding principles</b>	<ul style="list-style-type: none"><li>• Alignment of fleet renewal scope with EU values, principles, transport policies and strategic priorities</li><li>• Compatibility of initiative with EU funding principles and objectives</li><li>• Review of key market players' past financial performance and their limited ability to self-fund the required investment for fleet renewal</li></ul>

# Passenger fleet terminology

Explanatory, for reader's understanding

## RoPax



## Open-deck ferries



- They are usually deployed in **landbridge routes**
- They connect short distance ports (<18 NM)
- They operate throughout the year
- They have limited passenger and car capacity

- In this document the term **RoPax** refers to vessels deployed in long and medium distant routes and consists of three categories, namely Conventional, Highspeed RoPax and Highspeed Pax
- Also, the term **“Passenger Shipping Industry”** refers to the two categories, RoPax and Open-deck ferries

## **Role and contribution of Greek passenger shipping industry**

Necessity, drivers and strategy for passenger fleet renewal

Alignment of fleet renewal initiative with EU values and funding principles

# Role and contribution of Greek passenger shipping industry: Key facts and figures

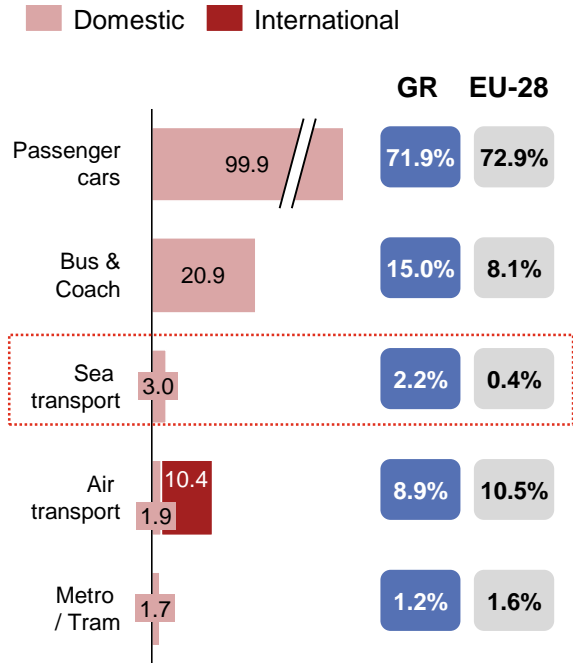
## Chapter summary

### Greek Passenger shipping industry:

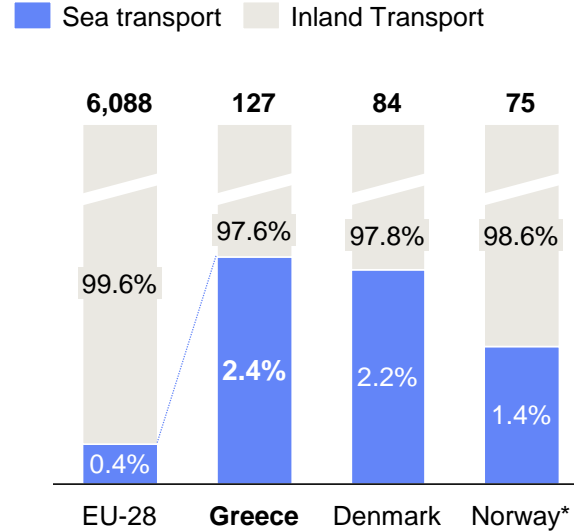
<p><b>Is of unique importance for Greece and EU</b></p>	<ul style="list-style-type: none"> <li>In 2017, served the most EU sea passengers among EU-countries</li> <li>Is the 2<sup>nd</sup> most popular means of domestic public transport in Greece, in terms of passenger volumes</li> </ul>	<p><b>17.4%</b> of total EU sea passengers</p>	<p><b>2.2%</b> of country's total passenger volumes (EU-28 average:0.4%)</p>
<p><b>Represents the motorways of the sea, ensuring cohesion, connectivity and equal access</b></p>	<ul style="list-style-type: none"> <li>More than <b>160 scheduled RoPax routes and ~35 landbridge routes</b> ensure direct connectivity with and between ~140 different ports and 116 islands</li> <li>Many routes are performed under <b>Public Service Obligation (PSO)</b> framework as they do not attract commercial interest for the provision of transport services</li> </ul>	<p><b>~1.4 million islanders</b> are served</p>	<p><b>~73</b> Non-commercially attractive routes (PSO)</p>
<p><b>Sustains inhabitability of islands</b></p>	<ul style="list-style-type: none"> <li>Goods and passengers are transported on <b>an uninterrupted basis throughout the year</b></li> <li>Is the only means of communication with the mainland for the majority of islands, as <b>only 22 islands have civilian airports</b></li> </ul>	<p><b>For 94 islands</b> is the only link to the mainland</p>	<p><b>~90%</b> of consumer goods transported by RoPax vessels</p>
<p><b>Protects GR and EU sovereignty and territorial rights</b></p>	<ul style="list-style-type: none"> <li>Greece together with Cyprus <b>is the southernmost border of the EU</b></li> </ul>	<p><b>“The effective transportation of forces and military equipment relies on civil resources and infrastructure”</b> NATO, Civil preparedness (2018)</p>	
<p><b>Enables rapid response in crisis situations and strategic sealift</b></p>	<ul style="list-style-type: none"> <li>RoPax vessels were deployed for the <b>transport of refugees</b> from the Greek islands to the mainland</li> <li>Assisted in <b>rapid evacuation operations of civilians</b> during Libyan and Lebanon upheavals</li> </ul>	<p><b>More than 1 million refugees</b> transported between 2015-2016</p>	
<p><b>Has significant contribution in economic growth and employment</b></p>	<ul style="list-style-type: none"> <li>In 2016, direct and indirect contributions to Greek <b>GDP was ~9.2%</b> (€16.1 bln.)</li> <li>In terms of employment, direct and indirect contribution of the industry reached <b>~9.7% of total Greek workforce</b> (~349,000 FTEs)</li> <li>Key pillar of island economies, where 43% of total workforce is employed in the areas of transport, tourism and trade</li> </ul>	<p><b>9.2% of GDP</b> is the contribution of passenger shipping industry</p>	<p><b>349,000 FTEs</b> is the total industry's contribution in employment</p>

# Sea passenger volumes are 2.2% of the country's total, a ratio which is 5.5 times the EU-28 average

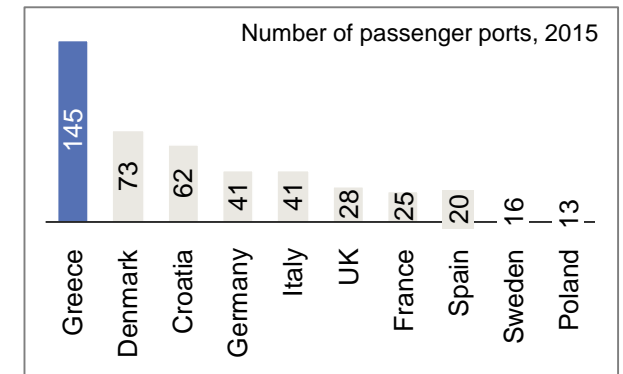
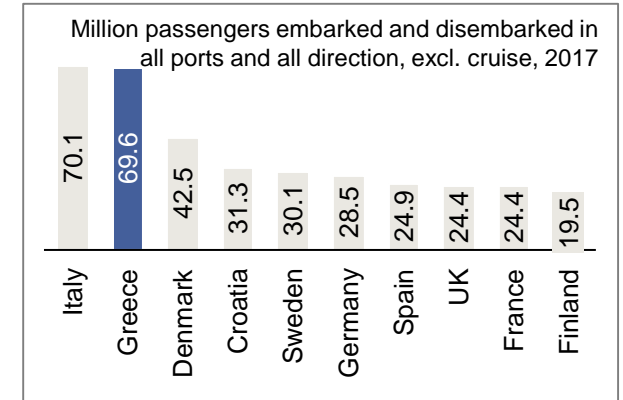
**Modal split of GR passenger volumes**  
Billion Passenger-kilometers



**Modal split of passenger volumes (%)**  
Inland vs. Sea | Billion Passenger-kilometers



\*Although not included in EU-28 average, Norway has been added for comparison purposes

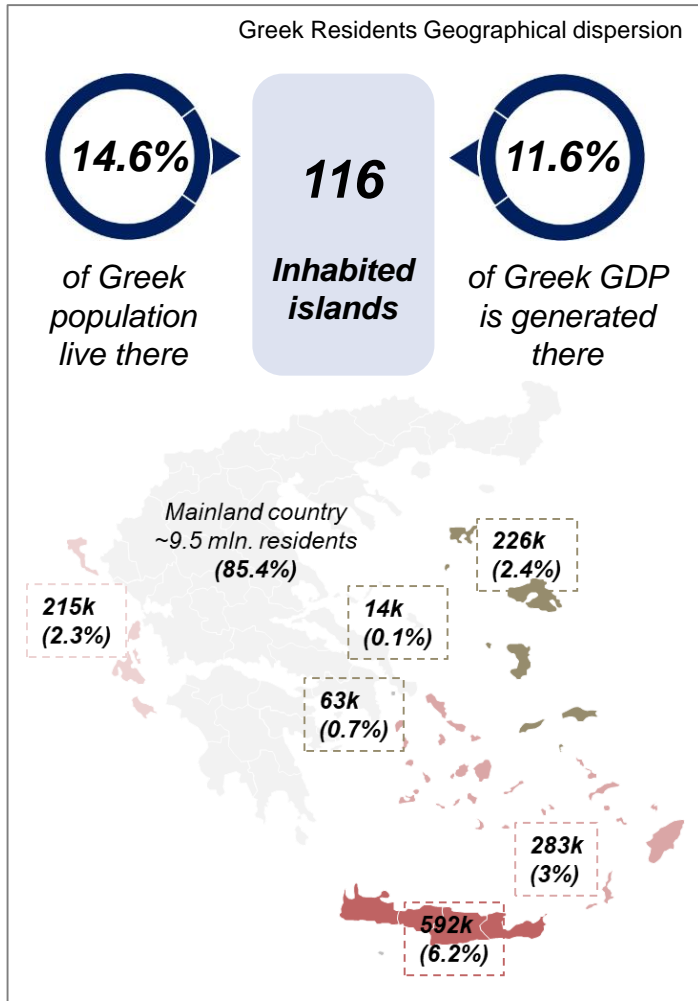


- **Sea transport is the 2<sup>nd</sup> most popular means of domestic public transport**, in terms of passenger volume
- **Accounts for 2.2% of country's total passenger volumes**, while the **EU-28 average is 0.4%**
- Ratio between inland and sea transport volumes, is significantly above the EU-average and other insular countries such as Denmark and Norway

Sources: International Civil Aviation Organization (ICAO), Ministry of Transport (Norway, Denmark), Eurostat, SEEN

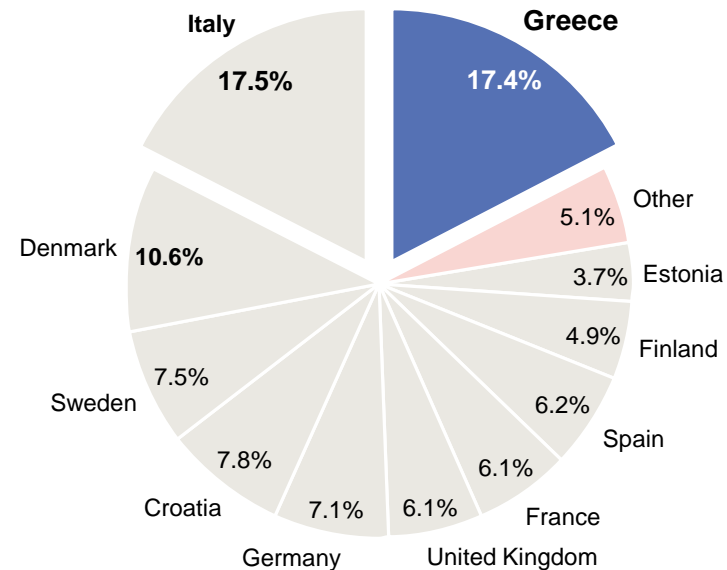


**Above is driven by the country's geography, with ~15% of its population dispersed on 116 islands – Indicative of the country's insular morphology is that Greece accounts for ~17% of total EU sea passengers**



- Greece has 116 inhabited islands where more than 1.4 million people live, accounting for ~14.6% of Greek population
- Sea passengers in Greece account for 17.4% of total EU-28 sea passengers, ranking Greece, together with Italy, the first among EU-28 countries
- More than 65% of tourist income is generated from the islands

**% of EU Sea passengers per EU-28 country | Top countries**  
Passengers embarked and disembarked in all ports and all direction, excl. cruise (2017)



Sources: Eurostat, ELSTAT, SETE (Tourism's contribution to the Greek economy 2016-2017)

**More than 160 scheduled<sup>1</sup> routes are required in order to ensure direct connectivity with and within ~140 different ports and 116 islands – Many of them are supported under PSO contracts**

**Connectivity among ~140 ports and 116 islands**

- RoPax vessels under scheduled routes directly serve 84 ports & 66 different islands
- **These routes ensure connectivity for an additional number of more than 50 inhabited islands** which are served from other vessels through inter-island non-scheduled routes
- In addition, open-deck ferries connect more than 20 ferry-crossings

Region	No. of ports served by RoPax	No. of islands served by RoPax
South Aegean	48	40
North Aegean	16	11
Crete	5	1
Ionian	5	5
Argosaronic	6	5
North Sporades	4	4
<b>Total</b>	<b>84</b>	<b>66</b>

**>160 different routes (excl. ferry-crossings), with 73 of them under PSO framework**

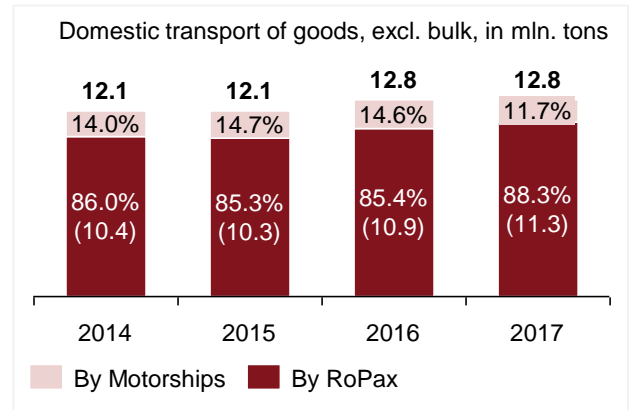
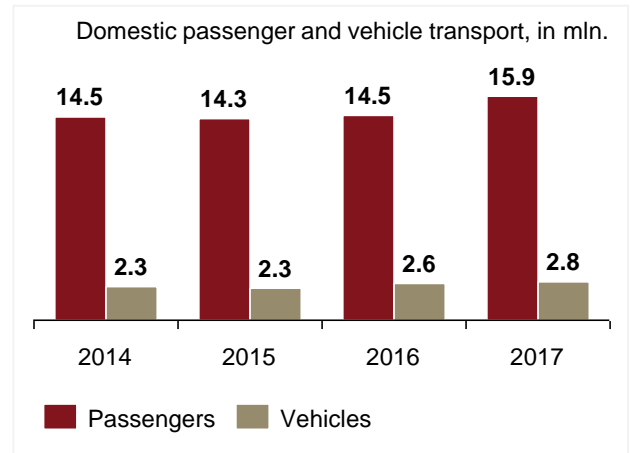
- Country's insularity creates the need for numerous routes, non-commercially attractive, which require PSO support to remain economically viable

Region	Total routes	PSO routes
Aegean	155	67
Ionian	11	6

**Routes under PSO framework**

- PSO framework refers to remote islands with limited passenger flows, which do not attract commercial interest for the provision of transport services
- In order to retain connectivity and enhance living standards of islanders, the EU has developed the framework of Public Service Obligation (PSO) services
- Under this framework, the public authorities are able to charter passenger vessels to serve specific routes

**~16 mln. passengers, 2.8 mln vehicles and 12 mln. tonnes of goods per year only by RoPax**



1) Scheduled routes are the routes planned in annual basis based on specific timetable per period and represent the vast majority of passenger volumes and destinations served – However, additional, non-scheduled, routes serve mainly inter-island connections

Sources: HCS data, ELSTAT, Ministry of Interior

***In reality, passenger fleet is the extension of inland motorways and railways, ensuring connectivity and supplies for ~1.4 mln. people and inhabitation of 116 islands***

**Sea transport, consistently ensures:**

**Connectivity and Accessibility**

- For 116 islands and more than 160,000 people, passenger ships are the only means of transport, as an airport infrastructure does not exist
- Even in islands where airline access exists, major passenger volumes continue to be served through ships
- Maritime transport is necessary for islanders in order to have access to health, education and public services – Most islands, apart from the larger ones, do not have such facilities and are served either by neighboring islands or mainland

Region	Inhabitants (000)	Number of inhabited islands
Islands with Airport	1,235	22
Island w/o Airport	157	94
<b>Total</b>	<b>~1,392 (14.6%)</b>	<b>116</b>

**Supply of goods and trade flows (exports)**

- ~90% of consumer goods are transported by the passenger fleet, in a consistent and timely manner
- Islands with air transport are also dependent on passenger ships for supply of essential goods
- The above, not only requires an adequate fleet, but also requires frequent and consistent services (eg. fresh produce), even in “off-peak” periods
- Ships are a vital part of Greek and EU supply chain network and the cornerstone of the island economies, as they transport the locally produced goods, enabling the development of commercial, agricultural and manufacturing activities

**For 94 islands, ships are the only link to mainland**

## ***Besides serving the regular transportation activity, the strategic position of Greece makes the passenger fleet crucial for emergency response in crisis situations***

- Greece together with Cyprus is the southernmost border of the EU
- Its coastline reaches about **17,000 km**, and corresponds to about **50% of total Mediterranean coastline**

### **Emergency Response**

- Passenger fleet is one of the only means to provide rapid response in crisis situations in Greek islands and the Mediterranean
- Passenger ships are an integral part of civil emergency planning, which foresees the ability to transport rescuers and/or equipment
- For example, they are the only means to ensure rapid mass evacuation of islands
- Furthermore, the fleet is capable of providing mass humanitarian aid both to islands and neighboring countries - A role further strengthened by the “politically neutrality” of Greece

#### **Libyan Civil war (2011)**

- 8 Greek vessels performed round voyages between Benghazi and Southern Mediterranean transferring ~18k nationals of PRC, Brazil, Venezuela and Vietnam along with several hundred Europeans

#### **Libyan Civil war (2014)**

- Three Greek ships incl. 1 RoPax were deployed to Libya to evacuate workers at its embassy in Tripoli as well as several hundred Chinese and European Nationals together with government officials
- Also in 2014, Libya's Council of Deputies was accommodated on a Greek passenger vessel, anchored off the coast of Tobruk, eastern Libya.

#### **Lebanon war (2006)**

- Several Greek ferry boats were deployed to Lebanon and evacuated ~3,500 Greek citizens, as well as large numbers of nationals of the European Union, US and other western countries.
- Several Greek passenger ships were also used by other western countries, such as France and Sweden, in order to evacuate their nationals from the area, due to the proximity and neutrality of Greece to Lebanon.

#### **Cephalonia, GR earthquake (2014)**

- More than 1,000 earthquake victims were accommodated in a RoPax vessel

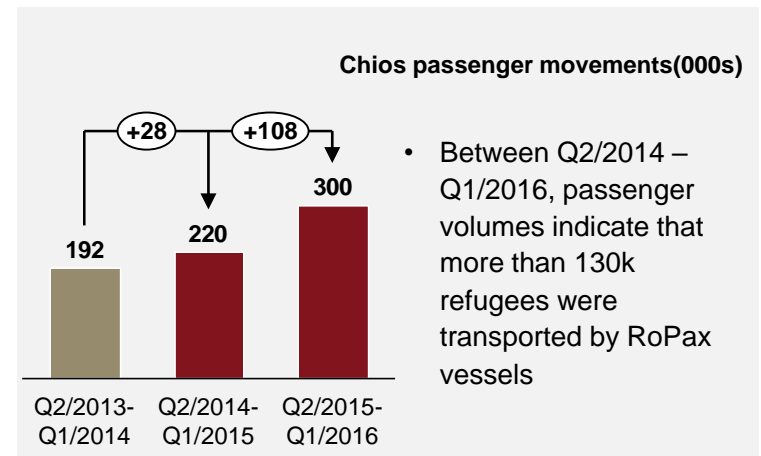
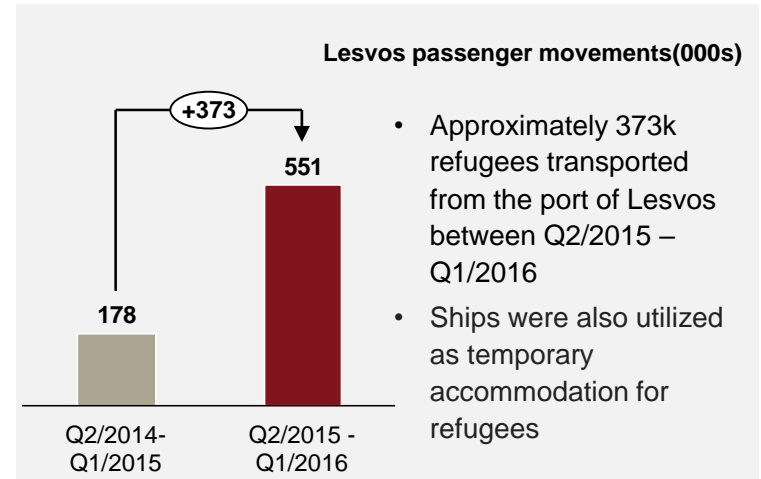
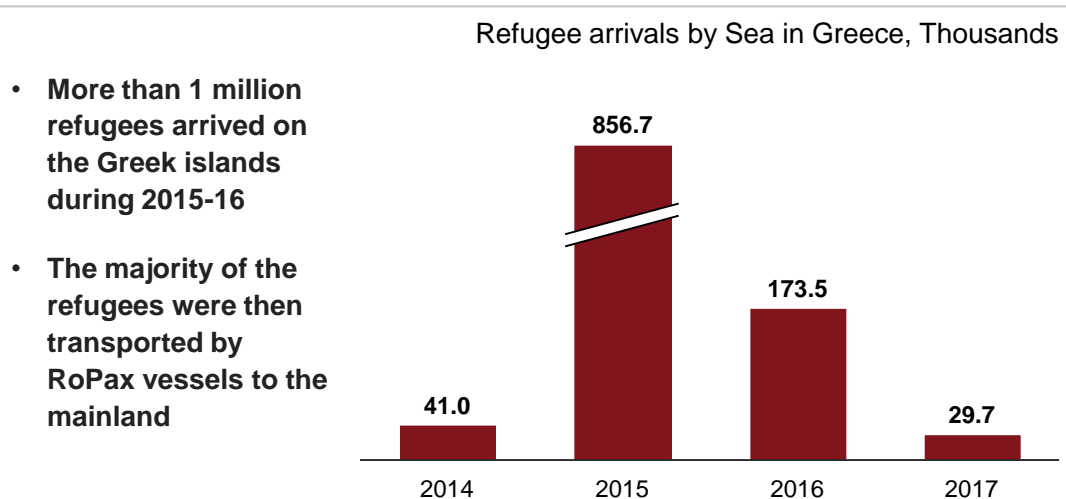
#### **Kalamata, GR earthquake (1986)**

- Following the Kalamata earthquake, in 1986, food and essential supplies were delivered within the day, with Hydrofoil vessels

# ***The role of passenger shipping in emergency response was specially notable during the Syrian conflict, when passenger ships promptly transported more than 1 million refugees***

## **Case Study - Refugee crisis**

- Greece, as the primary entry point and transit country for refugees entering Europe has continuously suffered from refugee flows, especially during periods of political uncertainty around Mediterranean
- Especially during the Syrian conflict, all refugee flows towards Europe transited Greece and the Greek islands, namely Lesvos, Samos, Chios, Kos, Crete and Leros.
- The passenger fleet made significant contributions in transporting refugees either to the mainland or to bigger islands, under emergency conditions



Sources: ELSTAT, UN Refugee Agency

## Moreover, the Greek passenger fleet is a means of sealift for defense, humanitarian aid and refugee evacuation

### Strategic Sealift

- Passenger fleet is the only civil means of transport which can rapidly transport forces and equipment by sea (**Strategic Sealift**) in the Aegean and Eastern Mediterranean - The importance of civil transportation for military mobility is highly and practically recognized both by NATO and EU
- However, the capability of civil fleet to provide effective transportation depends both on the number of ships as well as fleet specifications (size, speed, technical specifications, vehicle / passenger capacity)



#### **EU also acknowledges the role of civil transport for military mobility**

**The European Defense Fund will complement other EU programs, in particular the budget of €6.5 billion earmarked for the Connecting Europe Facility to enhance the EU's strategic transport infrastructures to make them fit for military mobility**

Source: NATO



#### **NATO consistently recognizes, supports and promotes the role of Civil transportation for Military mobility and Alliance Defense**

##### **NATO, Civil preparedness (2018)**

***“The effective transportation of forces and military equipment relies on civil resources and infrastructure”***

##### **NATO Review magazine (2019)**

“Under Article 3, all Allies are committed to building resilience, which is the combination of civil preparedness and military capacity.

***“This involves supporting continuity of government, and the provision of essential services in member states and civil support to the military”***

##### **NATO, Strategic Sealift (2014)**

***“NATO member countries have pooled their resources to assure access to special ships, giving the Alliance the capability to rapidly transport forces and equipment by sea”***

##### **NATO’s baseline requirements (2016)**

In 2016, at the Warsaw Summit, *Allied leaders committed to enhancing resilience by striving to achieve seven baseline requirements for civil preparedness:*

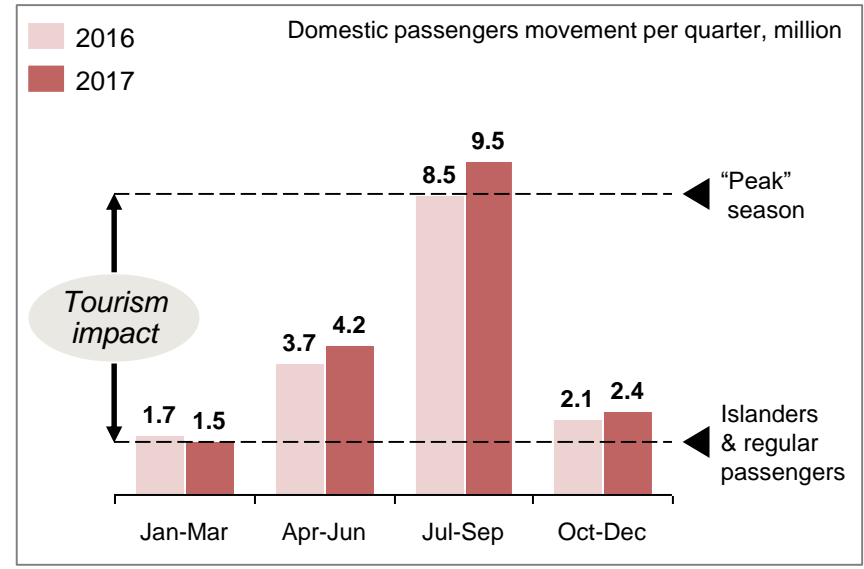
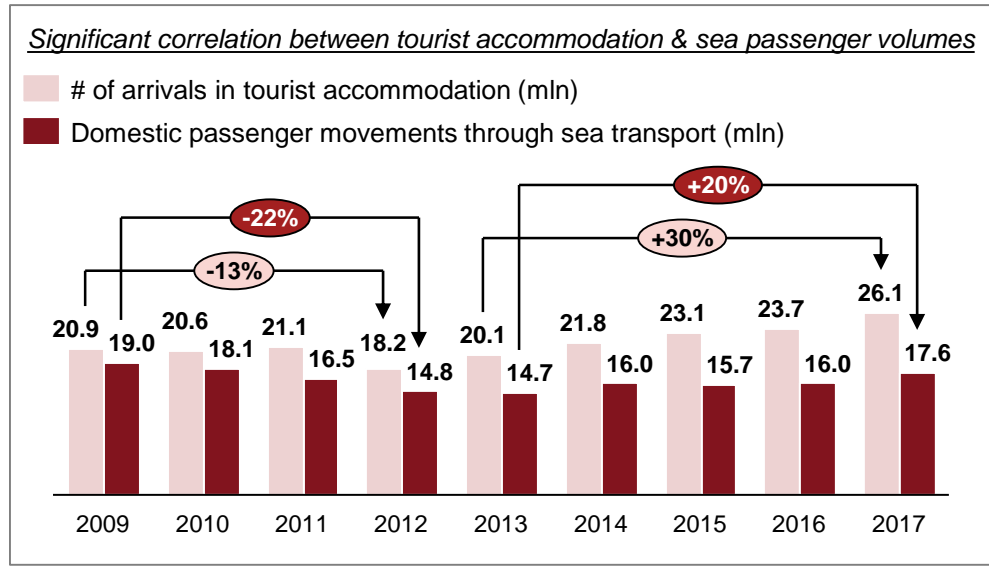
- 1) assured continuity of government services;
- 2) resilient energy supplies;
- 3) ability to deal effectively with uncontrolled movement of people;**
- 4) resilient food and water resources;
- 5) ability to deal with mass casualties;
- 6) resilient civil communications systems;
- 7) resilient civil transportation systems**

***This commitment is based on the recognition that the strategic environment has changed, and that the resilience of civil structures, resources and services is the first line of defense for today’s modern societies.***

**Furthermore, the passenger shipping industry serves a significant portion of the tourist flows, predominantly during the summer months**

- Except for islanders and regular passengers, RoPax routes serve as a pillar for tourism growth, by transferring the majority of Greek and foreign tourists
- According to SEEN, during 2017, 65% of passengers were tourists, with 35% of them being from other countries
- Tourist flows cause a “peak” period, for which adequate fleet capacity is required, in order to retain an satisfactory quality of service

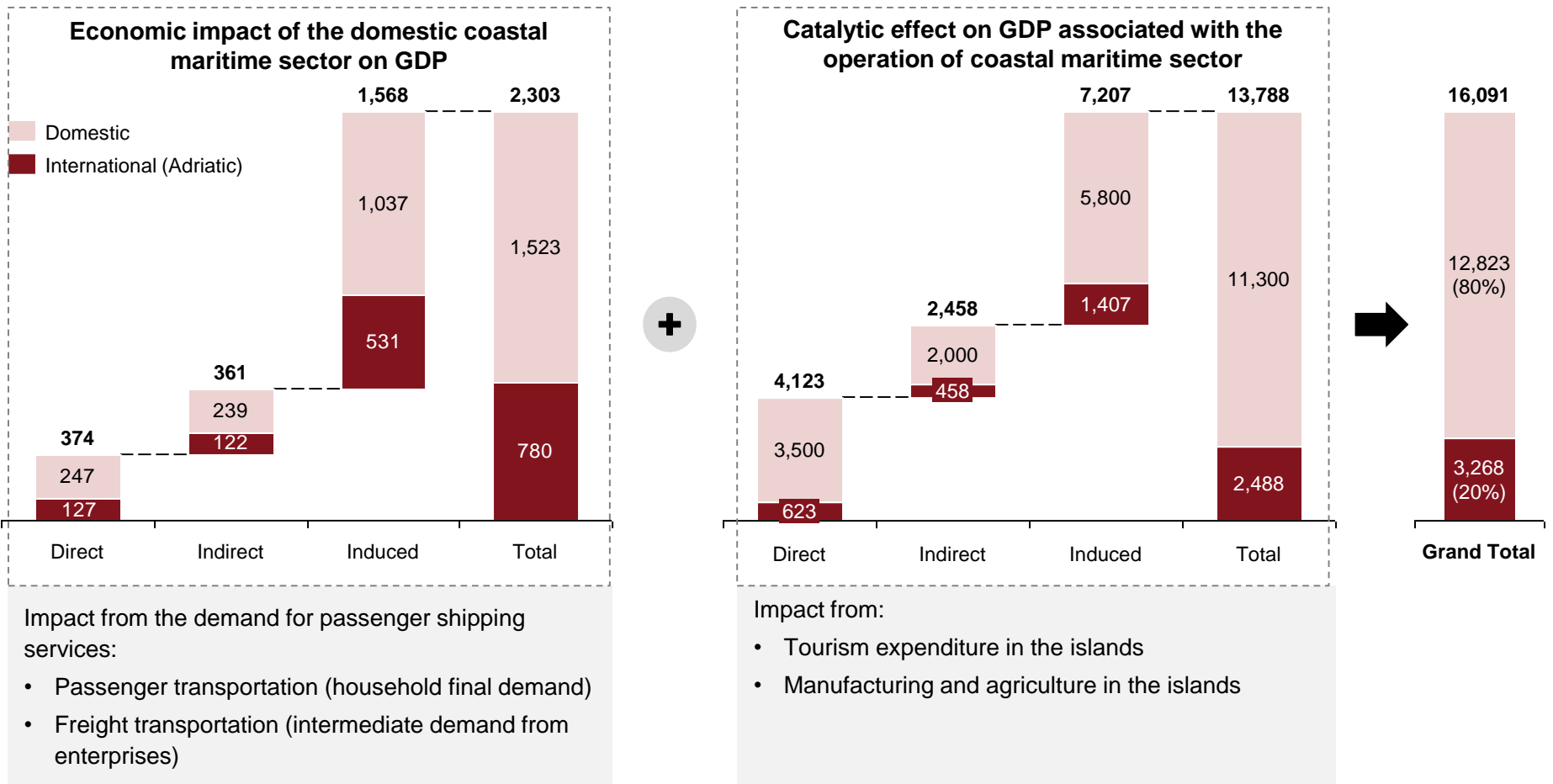
Region	Passengers (in mln.)			
Islanders and regular passengers	6.2			
Tourists, out of which:	11.4			
	<table border="1"> <tr> <td>Foreigners</td> <td>4.0</td> </tr> <tr> <td>Greek</td> <td>7.4</td> </tr> </table>	Foreigners	4.0	Greek
Foreigners	4.0			
Greek	7.4			
<b>Total</b>	<b>17.6</b>			



Sources: ELSTAT, SEEN presentation, World Bank | PwC analysis

***As result of its key role in transportation and tourism, the passenger shipping industry has a significant financial contribution in the GR economy, estimated to be over 9.2% of GDP (€16.1 bln.)***

**Greek Passenger shipping industry financial contribution - 2016 (in million €)**

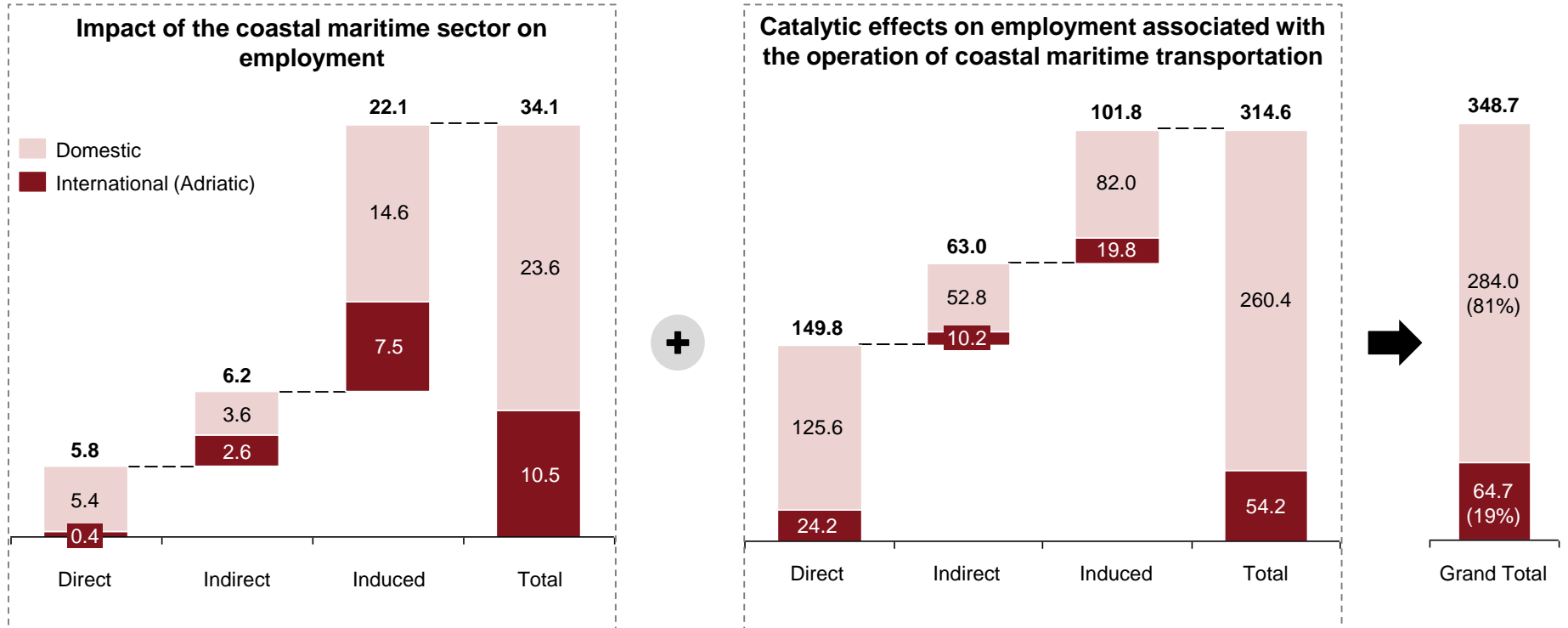


Source: Foundation for Economic & Industrial Research (IOBE) study



***In terms of employment, the total contribution from the industry reaches ~350.000 FTEs\*, equal to 9.7% of total employment in Greece***

**Greek Passenger shipping industry employment contribution – 2016 (in '000s)**

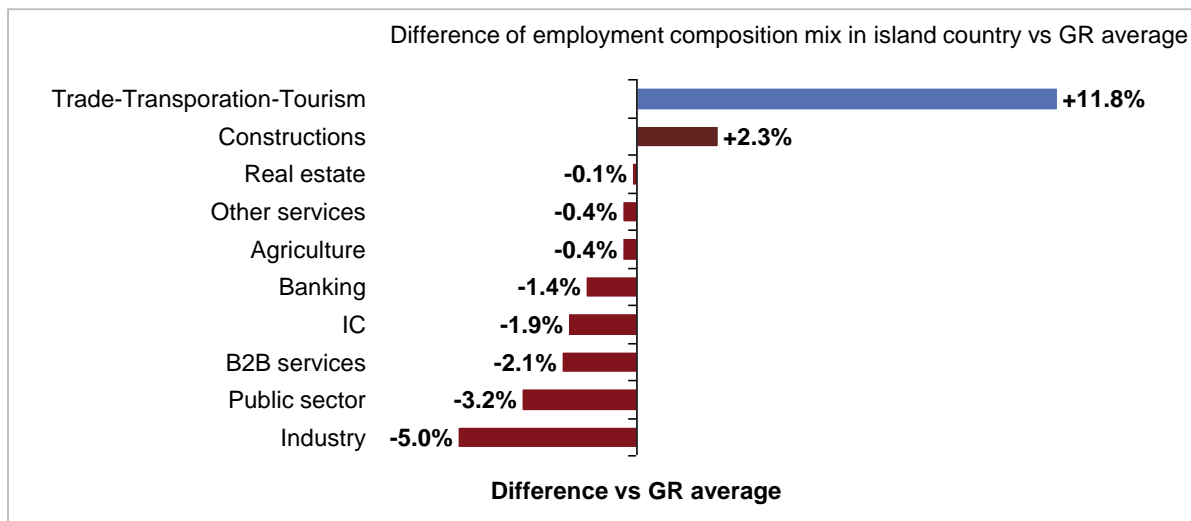
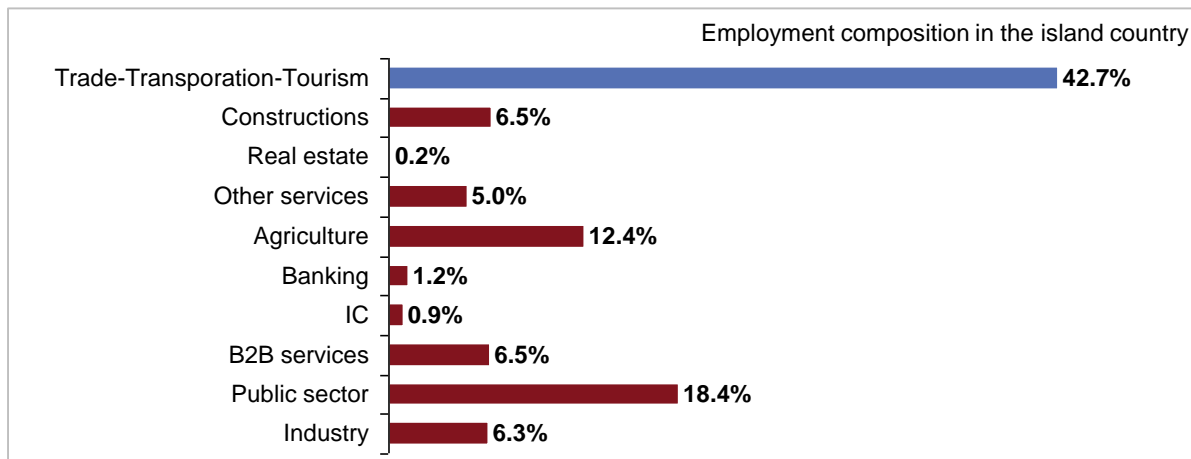


- For 2016, total industry contribution reached ~350.000 FTEs<sup>1</sup>, equal to 9.7% of total employment in Greece
- 80% of the industry's contribution relies on the domestic passenger shipping activity

## ***Finally, passenger shipping is the main source of income and employment for islanders and fundamental pillar of the local economies***

### **Employment composition in the Greek island regions per sector**

- Tourism, trade, transportation and agriculture are the economic sectors with the strongest contribution to the economic activity of the island regions
- **~43% of the employees in the island country are employed in the areas of transport, tourism and trade, ~12% above GR average**
- **The island regions of Greece represented in 2016 11.6% of Greek GDP and 13.4% of GR employment**



Sources: ELSTAT, IOBE study

Role and contribution of Greek passenger shipping industry

**Necessity, drivers and strategy for passenger fleet renewal**

Alignment of fleet renewal initiative with EU values and funding principles

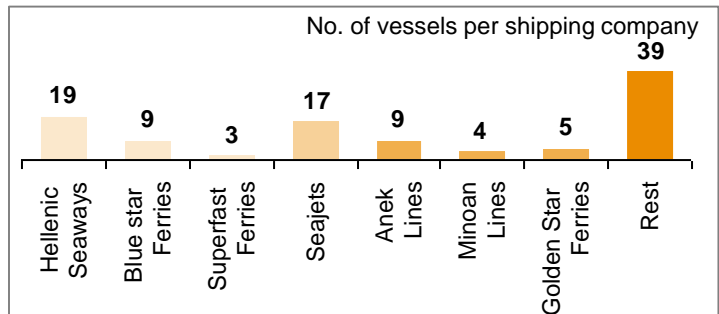
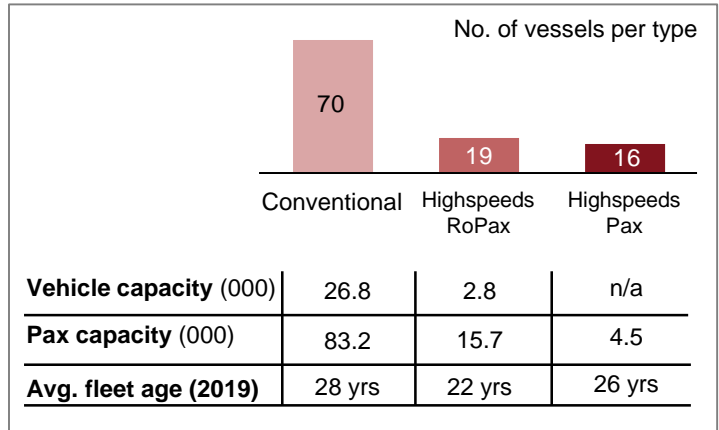
**The passenger fleet comprises of ~195 vessels, split into 105 RoPax vessels with a capacity of ~103k passengers and ~90 open-deck ferries which serve more than 30 landbridges**

**RoPax and open-deck fleet overview**

**A RoPax vessels**

- Greek passenger shipping consists of a total of **105 RoPax vessels**, divided into **three categories**, namely, Conventional, Highspeed RoPax and Highspeed Pax (i.e. Hydrofoils)
- Total passenger capacity is **~103k** and vehicle capacity is **~30k**
- **Conventional vessels are the oldest**, with an average age of **28 years**
- In 2019, **34 shipping companies** operated in the RoPax industry, of which **five operate ~54%** (57 vessels) **of the total number of vessels**
- The Attica group brands operate ~30% of the total number of RoPax vessels
- SeaJets, is the 2<sup>nd</sup> largest company in terms of number of vessels, operating mainly Highspeed vessels followed by ANEK Lines with 9 conventional ships
- From the remaining **27 companies**, **20 of them are single vessel companies\***

\* Companies which own one vessel each



**B Open-deck Ferries**

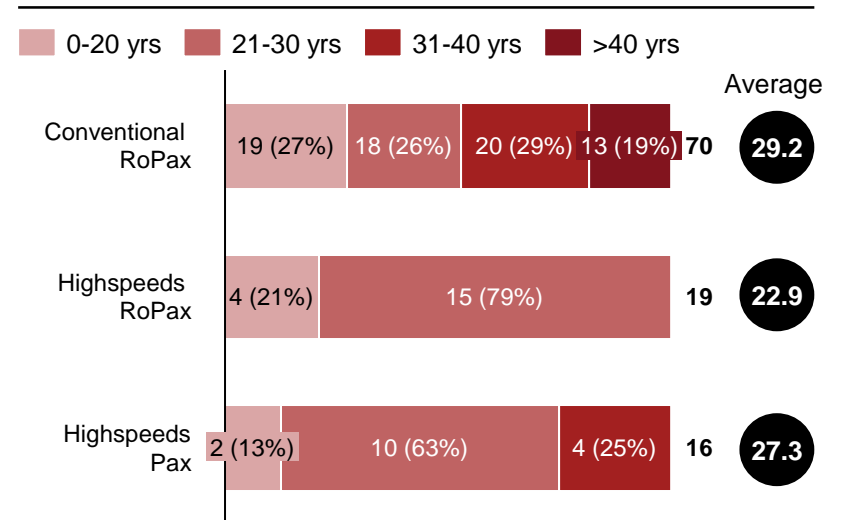
- Open-deck ferries serve **~1935 operating lines** with a fleet amounting to approximately at **~90 vessels**
- **Average distance between the ferries' ports** is approximately **7 nautical miles (NM)**, ranging from 1 to 18 NM.

Source: Hellenic Chamber of Shipping

# Greek passenger shipping industry has a relatively old fleet – 35% of the fleet is over 30 years old

- In 2020, average fleet age will be ~28 years - 75% of fleet will be >20 years old, while the 1/3 of fleet will be >30 years old
- 50% of Conventional RoPax vessels will be over 30 years old and 13 of them between 40 – 47 years old
- Highspeed RoPax are newer, with majority between 20-30 years old
- The older (>30 years old) Highspeed Pax vessels, are hydrofoils

RoPax Fleet age per category in 2020



**Withdrawal of age limit legislation** – but always accompanied by additional inspections and requirements to ensure passenger safety - was necessary for retaining the required fleet numbers in order to adequately serve the country's requirements

Law 2932/2001, Article 3

2001

- Upper cap for passenger vessels age was set to 35 years

Law 4150/2013, Article 37

2013

- Upper cap for passengers vessels was set to 30 years

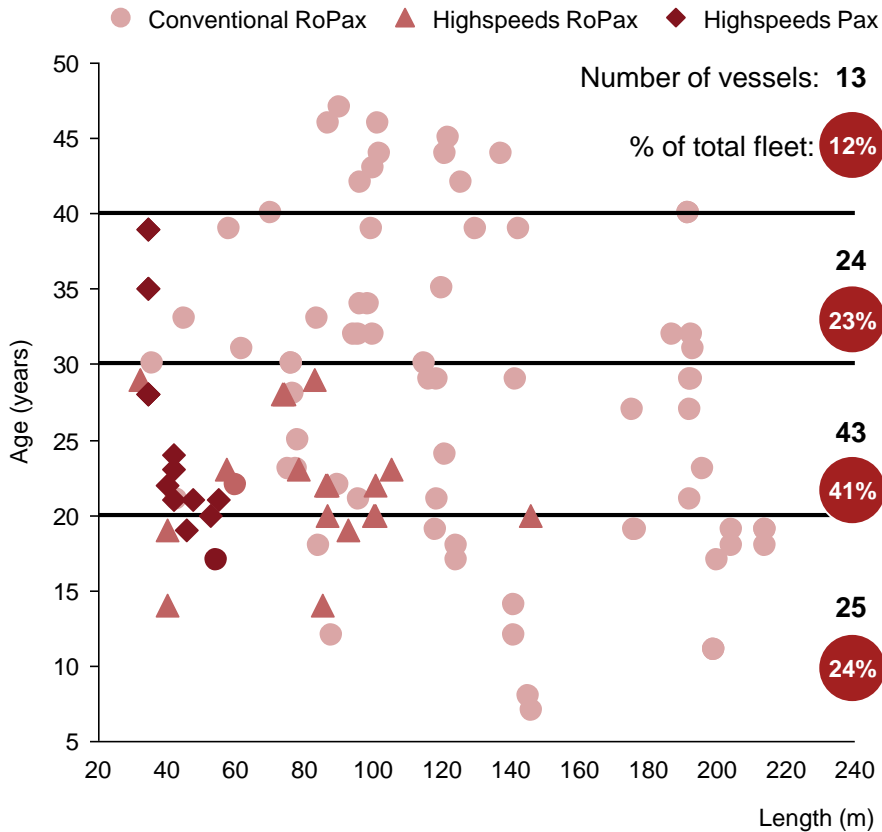
Presidential decree 104/2016

2016

- Upper cap for vessels age (30 years) ceases to be into force
- Vessels >30 years old must undergo specific inspections yearly

**However, fleet renewal cannot be further postponed - In order to retain current level of services, social and economic contribution, an imminent plan for fleet upgrade must be initiated**

**Vessels' age in 2020, per type and length**



**Fleet renewal needs and priorities, on a Business-as-usual perspective**

Preliminary estimation of HCS<sup>1</sup> & SEEN<sup>2</sup>, based on industry practices

Renewal priority	Comments
1 Immediate <sup>1</sup>	<ul style="list-style-type: none"> <li>13 conventional vessels with age over 40 years (5 of them are owned and operated by single vessel companies)</li> <li><b>Renewal should be initiated immediately</b></li> </ul>
2 To be gradually <sup>1</sup> replaced by 2030	<ul style="list-style-type: none"> <li>24 vessels (4 Highspeed Pax and 20 Conventional RoPax) with age between 30-40 years</li> <li><b>Gradual replacement to be initiated, in order to be completed until 2030</b></li> </ul>
3 To be initiated <sup>1</sup> from 2030	<ul style="list-style-type: none"> <li>25 Highspeed (15 RoPax and 10 Pax) and 18 Conventional with age between 20-30 years</li> <li><b>Replacement must be initiated around 2030, by priority based on age and type of vessel</b></li> </ul>
4 No need for renewal before 2040	<ul style="list-style-type: none"> <li>19 Conventional and 6 Highspeed (4 RoPax, 2 Pax)</li> <li>Based on current market status, this segment has a remaining useful life above 20 years and no renewals are expected until 2040</li> </ul>

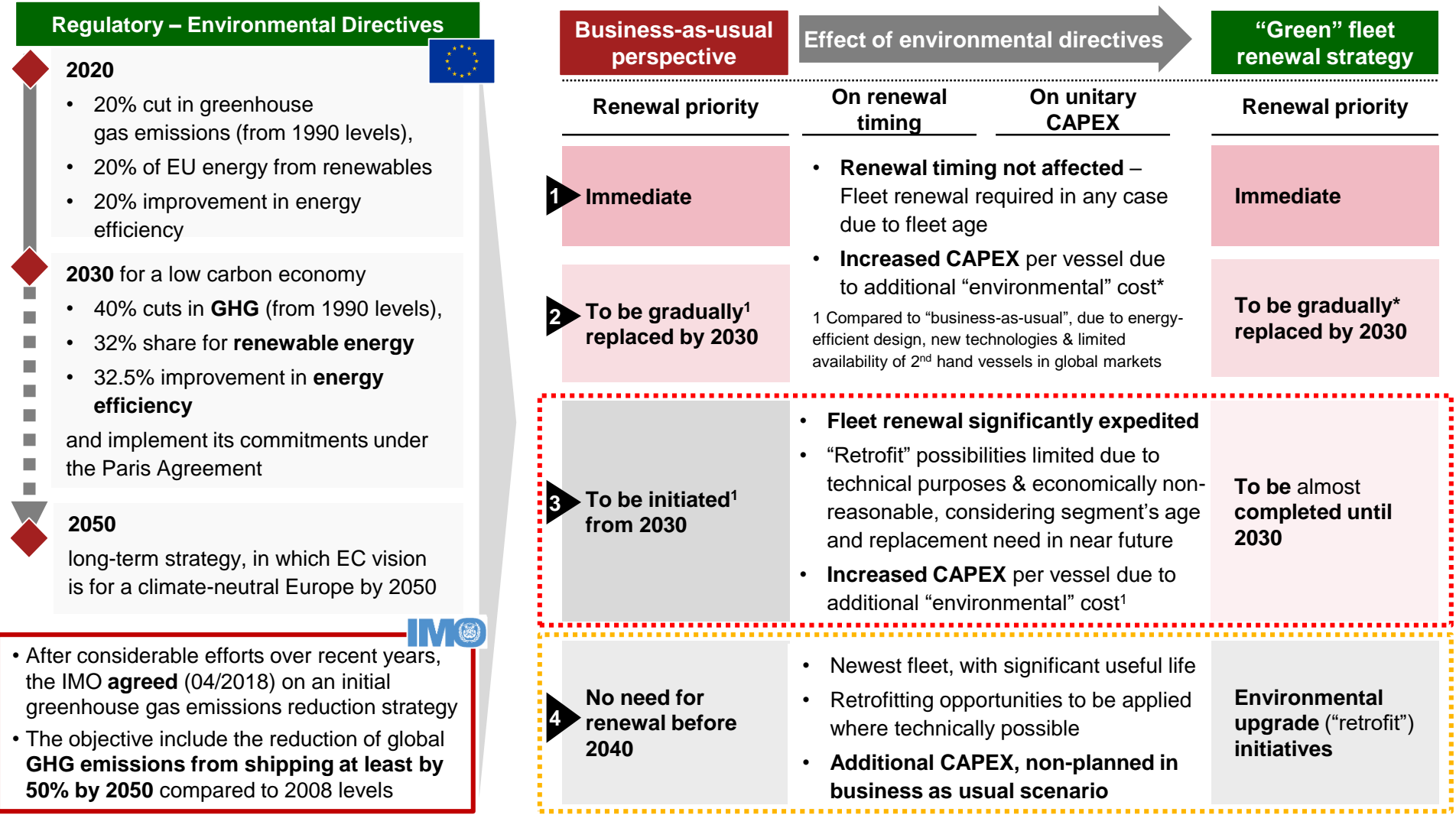
<sup>1</sup> All the above assume that 40 years is the average age for vessel replacement

\*Development period, ranging between 2 to 4 years, combined with the required availability of fleet, especially during peak periods, requires the immediate initiation of renewal, in order to be completed gradually, according to the above objectives

<sup>1</sup>HCS: Hellenic Chamber of Shipping

<sup>2</sup>SEEN: Association of Passenger Shipping Companies

**However, the upcoming environmental directives are directly linked with fleet specifications and sustainability and must be incorporated in any fleet renewal strategy**



**Required fleet renewal can be implemented in two stages within the next decade - Total required investment is expected to be up to €4.5 bln., based on preliminary industry estimates**

		RoPax fleet renewal strategy			Open-deck Ferries
Fleet segments per vessel age in 2020		> 30 years	20 – 30 years	< 20 years	
<b>Fleet renewal strategy 2020-2030 - Preliminary</b>		Immediate renewal	Gradual renewal, to be completed until 2030	Mainly upgrade (“retrofit”) opportunities to be examined	<ul style="list-style-type: none"> <li>Investment sizing has not been performed</li> <li>Required CAPEX is considered significantly lower than RoPax</li> </ul>
Effect of environmental regulations on:	Renewal timing acceleration	x	✓	x	<ul style="list-style-type: none"> <li>90 vessels in total, with the majority (&gt;50) less than 20 years old</li> <li>The average age of this fleet type is ~17 years</li> <li>Selective renewals and environmental upgrades have to be examined</li> <li>Due to their smaller size and the short distances they travel (&lt;20 NM) <b>might be the ideal candidates for full electrification</b></li> </ul>
	Additional CAPEX per vessel	✓	✓	✓ For upgrades	
<b>Reduction of activity’s environmental footprint</b>					
<b>Number of vessels</b>		37	43	25	
<b>Indicative renewal cost* (€ mln.)</b> <i>SEEN Preliminary estimate based on Market Prices</i>		Up to € 2.0 bln. 	Up to €2.5 bln. 	Not estimated 	

- Renewal cost is based on preliminary estimates, the assumption of fleet renewal with new buildings, which will incorporate environmentally-friendly technologies and energy efficient design. The total amount depends on the exact number of vessels to be renewed, the type of ships which will be built and technologies to be used which is also affected by the available infrastructure
- The aim is to provide an initial sizing of required investment and of the available timeframe to be completed**



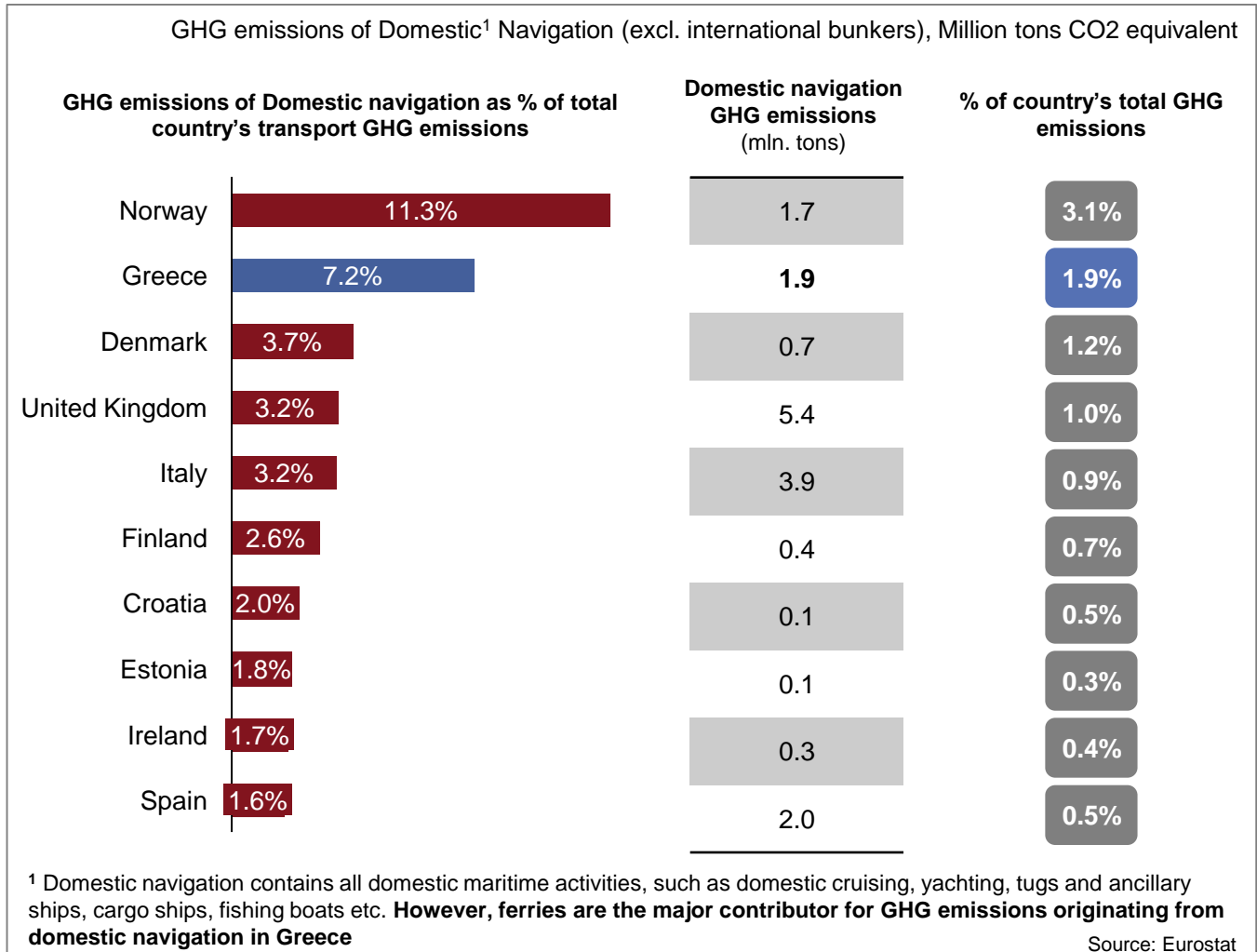
## ***Fleet renewal will have a significant environmental benefit as the passenger shipping industry accounts for 1.9% of total GHG emissions in Greece***

- Passenger shipping industry has a noteworthy environmental impact
- Greenhouse gas emissions from domestic navigation amount to **~1.9 mln. Tons CO2 equivalent**
- **GHG emissions are 7.2% of total transportation GHG emissions in Greece, ranking Greece 2<sup>nd</sup> among EU countries**
- Furthermore, **Domestic navigation emissions account for 1.9% of total GHG emissions in Greece**

**Fleet renewal with energy-efficient and low or zero-emission vessels would have a noteworthy environmental benefit for Greece and EU**

EU and International Maritime Organization (IMO) have already pinpointed and acted on the need to reduce GHG emissions from Transportation

Achievement of IMO targets is translated, at least, in reduction of GHG emissions by ~900,000 tons CO2 equivalent

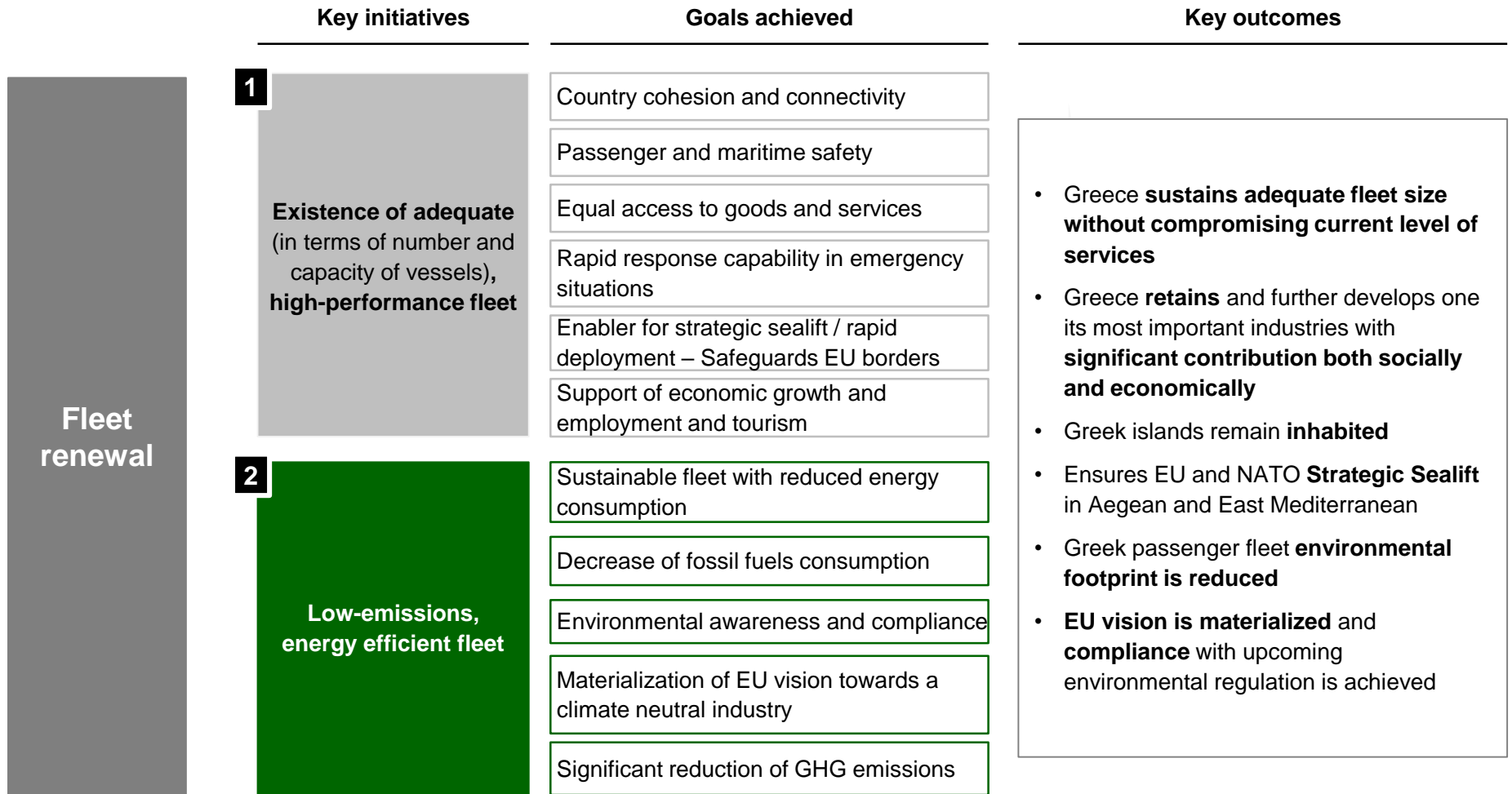


Role and contribution of Greek passenger shipping industry

Necessity, drivers and strategy for passenger fleet renewal

**Alignment of fleet renewal initiative with EU values and funding principles**

**Successful and timely renewal will achieve a) the retention of fleet size, consistent service frequency, high quality of services, maritime safety and b) significant reduction of the environmental footprint**



## Goals to be achieved make the initiative aligned with EU values, transport policies and directives

EU Goals	EU Transport policies	EU Transport strategic directives
<ul style="list-style-type: none"> <li>• <b>Promote peace</b>, its values and the well-being of its citizens</li> <li>• <b>Offer freedom, security</b> and justice without internal borders</li> <li>• <b>Sustainable development</b> based on <b>balanced economic growth</b> and <b>price stability</b>, a highly competitive market economy with <b>full employment and social progress</b>, and <b>environmental protection</b></li> <li>• <b>Combat social exclusion and discrimination</b></li> <li>• Promote scientific and technological progress</li> <li>• <b>Enhance economic, social and territorial cohesion and solidarity among EU countries</b></li> <li>• Respect its rich cultural and linguistic diversity</li> <li>• Establish an economic and monetary union whose currency is the euro.</li> </ul>	<p><b>Safe, sustainable and connected transport</b></p> <ul style="list-style-type: none"> <li>• To ensure <b>the smooth, efficient, safe and free movement of people and goods throughout the EU</b> by means of integrated networks using all modes of transport</li> <li>• Deals with issues as wide-ranging as <b>climate change</b>, passenger rights, <b>clean fuels</b>, and cutting customs-related red tape at ports</li> </ul> <p>Supports transport systems to meet major challenges (selective):</p> <ul style="list-style-type: none"> <li>• <b>Sustainability:</b> transport still depends on oil for most of its energy needs, which is environmentally and economically untenable</li> <li>• <b>Air quality:</b> by 2050, the EU must cut transport emissions by 60% compared with 1990 levels, and continue to reduce vehicle pollution</li> <li>• <b>Infrastructure:</b> the quality of transport infrastructure is uneven across the EU</li> </ul>	<p><b><u>EU low emission mobility strategy</u></b></p> <ul style="list-style-type: none"> <li>• Increasing the efficiency of the transport system by <b>encouraging shift to lower emission transport modes</b></li> <li>• <b>Speeding up the deployment of low-emission alternative energy for transport</b>, such as advanced biofuels, electricity, hydrogen, renewable synthetic fuels and removing obstacles to electrification</li> <li>• <b>Moving towards zero-emission vehicles</b></li> </ul> <p><b><u>Reducing emissions from the shipping sector</u></b></p> <ul style="list-style-type: none"> <li>• Monitoring, reporting and verification of CO2 emissions from large ships using EU ports</li> <li>• <b>Greenhouse gas reduction targets for the maritime transport sector</b></li> <li>• Further measures, <b>including market-based measures, in the medium to long term.</b></li> </ul>

**DG MOVE:** The Commission's aim is to promote mobility that is efficient, safe, secure and environmentally friendly, serving the needs of citizens and business

### GR Shipping industry facts



# The funding needs for development of environmentally-friendly and low-emission fleet is already recognized and supported by specific EU funding instruments

INDICATIVE | NON-EXHAUSTIVE

**G** Grants    **L** Loans

## **G** Connecting Europe Facility (CEF) support to Motorways of the Sea (MoS) – *The maritime pillar of the TEN-T*

Designed to remove bottlenecks in the EU's transport system, through the establishment of more efficient and frequent high-quality maritime-based logistics services between Member States. Supported areas are:

- Compliance with 2015 MARPOL Annex VI (Regulations for the Prevention of Air Pollution from Ships) across fleets operating in Sulphur Emission Control Areas (SECAs)
- Establishment of viable network for alternative fuels, including development of relevant technologies, infrastructures, safety provisions, and regulatory frameworks for alternative fuels
- Development of technologies to tackle operational pollution such as exhaust gas cleaning systems and on-board water treatment systems
- Implementation of critical port infrastructures and intermodal links, both sea side and land side

**Currently in the case of vessels' environmental upgrades whether newbuilding or not, only the environmental upgrades are eligible for grant under CEF - MoS**

## **G** Cohesion Fund support for transport infrastructure projects under CEF

Eligible are member States whose Gross National Income (GNI) per inhabitant is less than 90 % of the EU average. Priorities are:

- Supporting the shift towards a low-carbon economy in all sectors
- Promoting sustainable transport and removing bottlenecks in key network infrastructures by:
  1. Supporting a multimodal Single European Transport Area by investing in the TEN-T
  2. Developing and improving environmentally-friendly (including low-noise) and low-carbon transport systems, including inland waterways and maritime transport, ports, multimodal links and airport infrastructure, in order to promote sustainable regional and local mobility;

## **L** European Fund for Strategic Investments (EFSI)

With no specific target allocated by sector, EFSI can support operations consistent with European Union policies, recognizing the importance of investments in transport infrastructures. Supported areas include:

- Greening of maritime and inland waterways infrastructure, fleets and vehicles, including LNG for ships or barges, alternative fuels, including electric mobility for cars.

## **L** Green Shipping Guarantee Programme (EIB)

- **Green Shipping Financing Tool**, aims at accelerating the implementation of investments in greener technologies by European shipping companies.
- The program is intended to finance shipbuilding projects including new vessels, conversion and retrofitting of vessels that promote sustainable transport and environmental protection including Climate Action initiatives

**Above funding instruments expire on 2020 but will be renewed with new budget for the 2021-2027 period**

## EU shipping companies have already received grants and loans for “environmental” upgrade

### INDICATIVE CASE STUDIES

#### Brittany Ferries case

##### New financing under the Juncker Plan

- In 2016, as part of the investment plan for Europe ("Juncker Plan") and the Connecting Europe Facility (CEF), the EIB and Societe Generale signed a **€150 million guarantee framework agreement to support shipbuilding, and the modernization of existing vessels for sustainable transport and the protection of the environment**, in line with the objectives of the Paris Sustainable Innovation Forum 2015.
- In 2017 EIB, Societe Generale and Brittany Ferries successfully signed the first green financing (under EIB's €750 mln. Green Shipping Guarantee) in the maritime transport sector for the construction of an LNG powered ferry
- Societe Generale acted as the main arranger of the **€142.6 million financing for the acquisition of the Honfleur ferry** commissioned by Brittany Ferries, which includes a tranche of **€49.5 million fully guaranteed by the EIB**

#### Grant for Scrubber Projects

- In 2015 five ferries received **€48 mln. in EU grants** to support the installation of scrubber systems for ECA compliance
- €18 mln. have been awarded to the Grimaldi Group's Finnlines Plc, €9 mln. To DFDS, €8 mln. To Stena Line, €7 mln. To Brittany Ferries and €6 mln. To Scandlines
- **The grants came as part of the EU's Connect Europe Facility's (CEF's) Motorways of the seas program**

#### Balearia case

- Baleària Eurolineas Maritimas has **received a grant of €11.8 mln.** from the European Commission to retrofit five of its ferries to run on LNG
- The project was compliant with the objectives of EU Regulation in terms of **sustainability, cohesion and efficiency, as well as support maritime transport's decarbonisation**
- Also, enabled Balearia to **reduce CO2 and NOx emissions**, while at the same time to eliminate the release of sulfur and particulate matters

***Beyond the environmental scope no other funding calls have been performed for the shipping industry – However, EU funding instruments scope is aligned with fleet renewal objectives***

**NON-EXHAUSTIVE**

**Funding instruments with objective aligned with fleet renewal initiative**

**Cohesion Fund**

- The Cohesion Fund is aimed at Member States whose Gross National Income (GNI) per inhabitant is less than 90% of the EU average (Greece is eligible). It aims to reduce economic and social disparities and to promote sustainable development.
- New cohesion policy and budget is under formation, with a budget of €373 billion in commitments for 2021-2027

**CEF Transport**  
(additional to MOS)

- The **Connecting Europe Facility (CEF) for Transport** is the funding instrument to realise European transport infrastructure policy. It aims at supporting investments in building new transport infrastructure in Europe or rehabilitating and upgrading the existing ones.
- New budget for CEF Transport will be launched for period 2021 – 2017, expected up to 12.8 bln. (without Cohesion Fund contribution)
- The focus would shift to decarbonisation and making transport connected, sustainable, inclusive, safe and secure.

**EU Defense Fund**

The European Defense Fund will €6.5 billion earmarked for the Connecting Europe Facility to **enhance the EU's strategic transport infrastructures to make them fit for military mobility**

**Specific funding for sea transport and vessels development, on top of the “environmental” part of investment, has not been identified in projects’ scope or past calls for proposals, probably due to:**

- Special and rare case of Greece, among EU, due to its geomorphology
- Lack of similar requests from other EU peers
- Self-funding ability of Greek passenger shipping industry for previous investments

Source: European Commission website

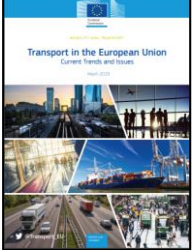
***Lack of specific funding “calls” can be explained by the special nature of Greece – Scope of this paper is to emphasize awareness and to communicate the challenges faced together with funding requirements***

**Transport in the European Union – current trends and issues**

**April 2018 – issues identified**

- 1 Road Safety: high fatality rates
  - 2 Rail freight and passenger traffic
  - 3 Rail infrastructure
  - 4 Air: implementation of the law on the restructuring of the civil aviation authority
  - 5 Investment in infrastructure
  - 6 Quality of port infrastructure
- 

**March 2019 – issues identified**

- 1 Road safety: high fatality rates
  - 2 Rail freight and passenger traffic
  - 3 Rail infrastructure
  - 4 Air: implementation of the law on the restructuring of the civil aviation authority
  - 5 Airport infrastructure
  - 6 Port infrastructure
  - 7 Financing investments in infrastructure
- 

In the two most recent DG-MOVE reports “Current Trends and Issues”, in Greek section, fleet renewal challenges were not included  
**However, the aging fleet and the need for renewal are a vital issue for Greek and EU transport, which must be addressed**

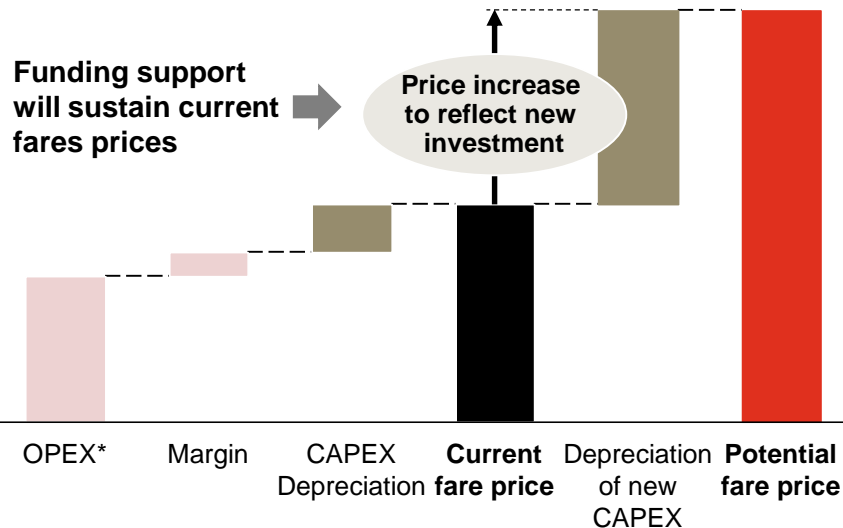


## EU funding will be crucial to support future investments, in order to avoid price shock in a market of already limited investment capacity

- The three main elements which define fares prices are **OPEX costs, CAPEX depreciation and required margins**, plus pass-through fees (eg. taxes)
- Majority of existing vessels to be renewed are almost depreciated**
- The fleet renewal is a CAPEX - intensive initiative and **many of the**

**vessels requiring immediate replacement** operate mainly on routes with **limited commercial interest** (meaning that passenger movements are expected to be limited)

- Therefore, **the renewal of these vessels without funding support, combined with current and past market performance, will inevitably lead to significant fares increase**



Increased fare prices may **reduce sea transport attractiveness** and lead to modal shift and/ or reduction of certain islands population/ tourism activity

Selected Companies with Public Financial statements

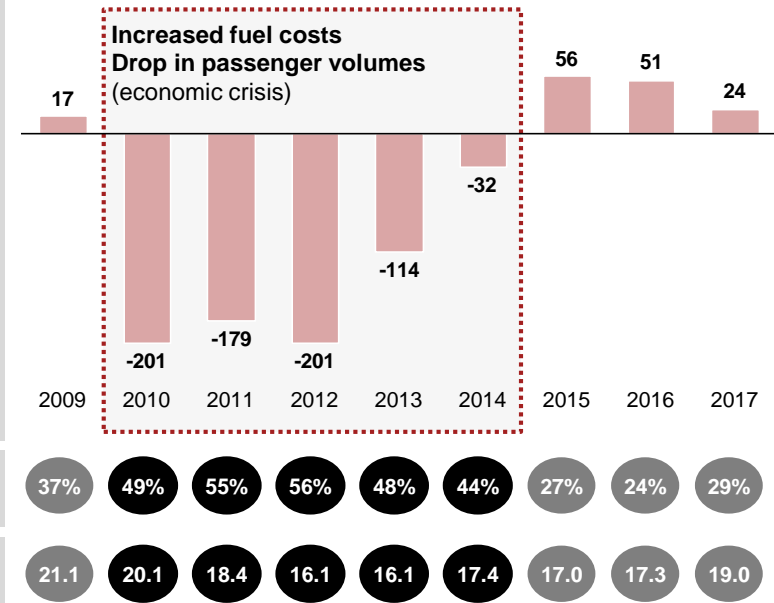
Earnings Before Tax (EBT)  
2009 - 2017  
€ mln.

Fuel ÷ Revenue %

Million passengers\*

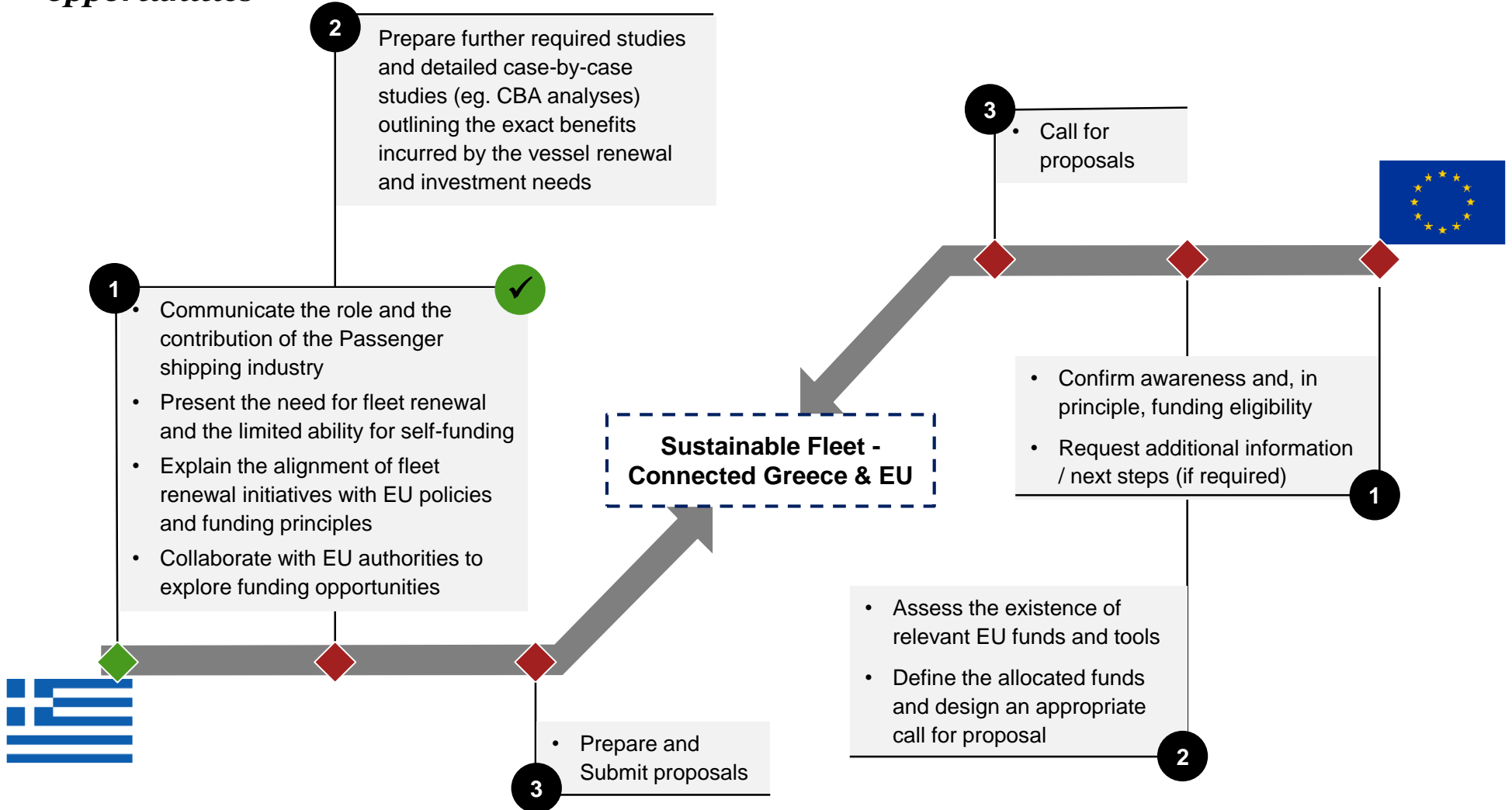
\*Domestic & International

### Significant losses of the industry during past decade



Companies include: 1) ANEK lines 2) Blue Star Ferries 3) Hellenic Seaways 4) Minoan Lines 5) Superfast ferries 6) NEL lines (shutdown in 2014)

**Having explained the importance of Greek passenger shipping and the challenges faced, the Hellenic Chamber of Shipping wants to collaborate with EU authorities to assess potential funding opportunities**



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