

Newbuilding Requirements: Passenger Ferries

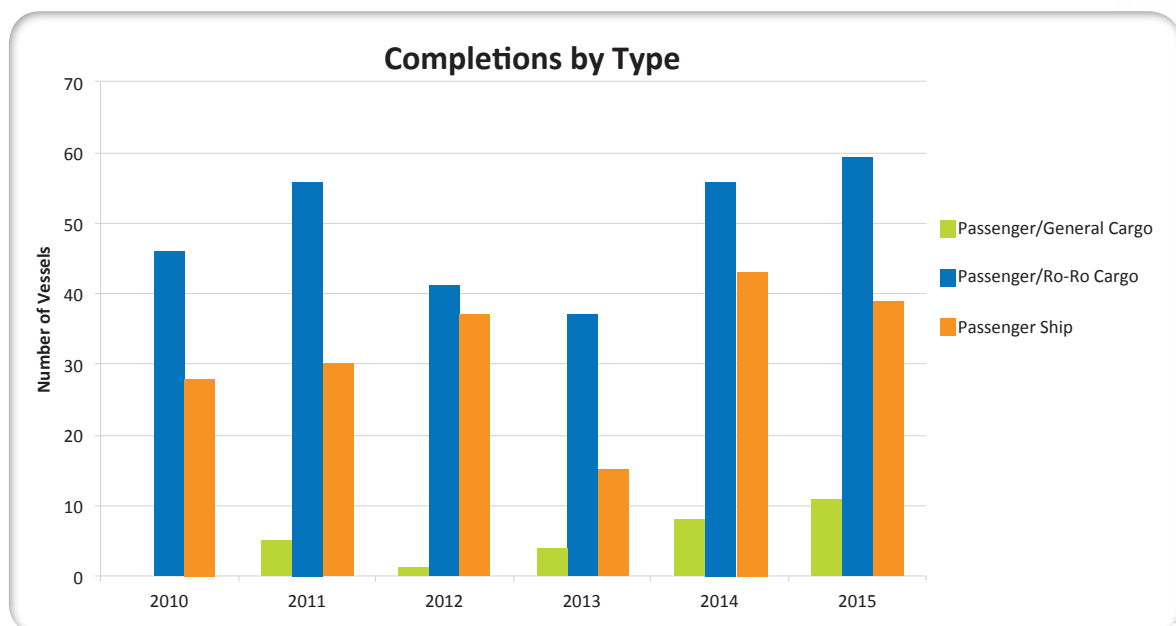
Passenger Ferry Market

The Passenger Ferry sector includes Passenger/Car ferries and pure Passenger vessels with no Ro-Ro facilities. Passenger/Car ferries account for the majority of vessels in this sector, and are defined as vessels which have a passenger capacity in excess of 50 people and where vehicles can be driven on and off a car deck or passenger vessels without RO-RO facilities connecting two places on a regular basis. The vessel must also have a high ratio of passenger capacity to cargo lane length. These ships are designed to link transport networks, particularly in sparsely populated areas, as efficiently as possible. For countries such as Norway, Canada and the countries on the Adriatic Sea, Passenger/Car ferries provide a vital transport link between otherwise isolated communities. Passenger/Car ferries are also utilised to link different countries' transport networks, e.g. across the English Channel. In this instance, the Passenger/Car Ferry sector in particular, is in direct competition with airlines which often provide faster connections for travellers.

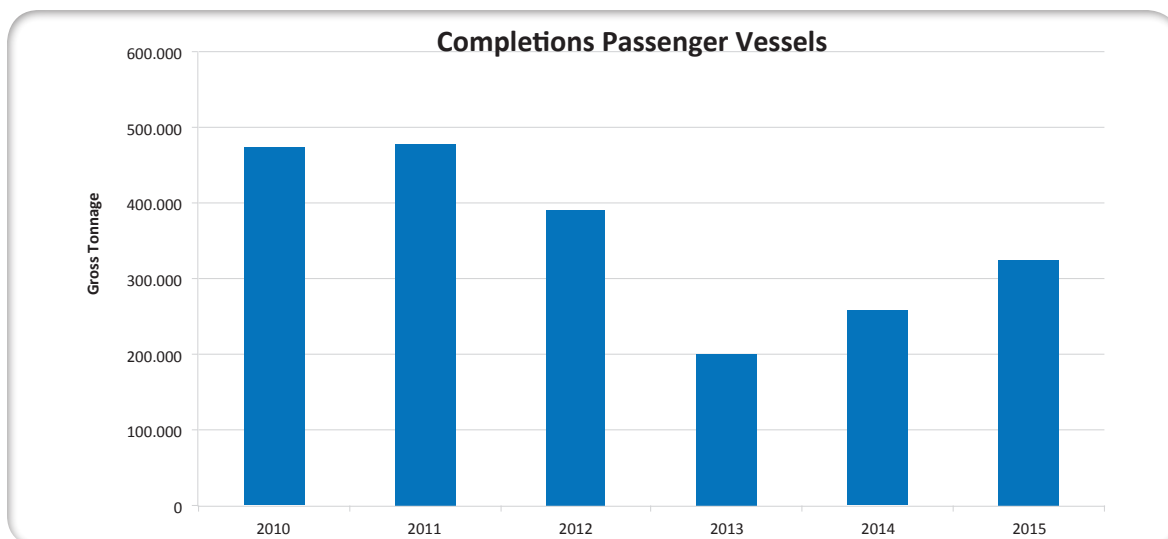
The passenger ferry market is fairly mature, and growth in passenger volumes in key markets has been sluggish. However, a lack of newbuilding investment in recent years has limited passenger ferry deliveries, and with the fleet remaining fairly steady for a number of years, gradual demand improvements have tightened the market.

Demand

Expansion in passenger volumes in Europe, a key sector for the passenger ferry market, has been very limited in recent years and volumes have failed to fully recover to the 2008 peak. In 2015, passenger volumes reportedly hampered due to the economic difficulties in Russia, which placed pressure on the ferry market in the Baltic. Elsewhere, passenger volumes in Asia, an important emerging region for the sector, have been increasing at a moderate pace in recent years. The expansion of coverage by low cost airlines, particularly in the European and Japanese domestic markets, has limited growth in passenger ferry volumes to some extent.



Source: SEA Europe



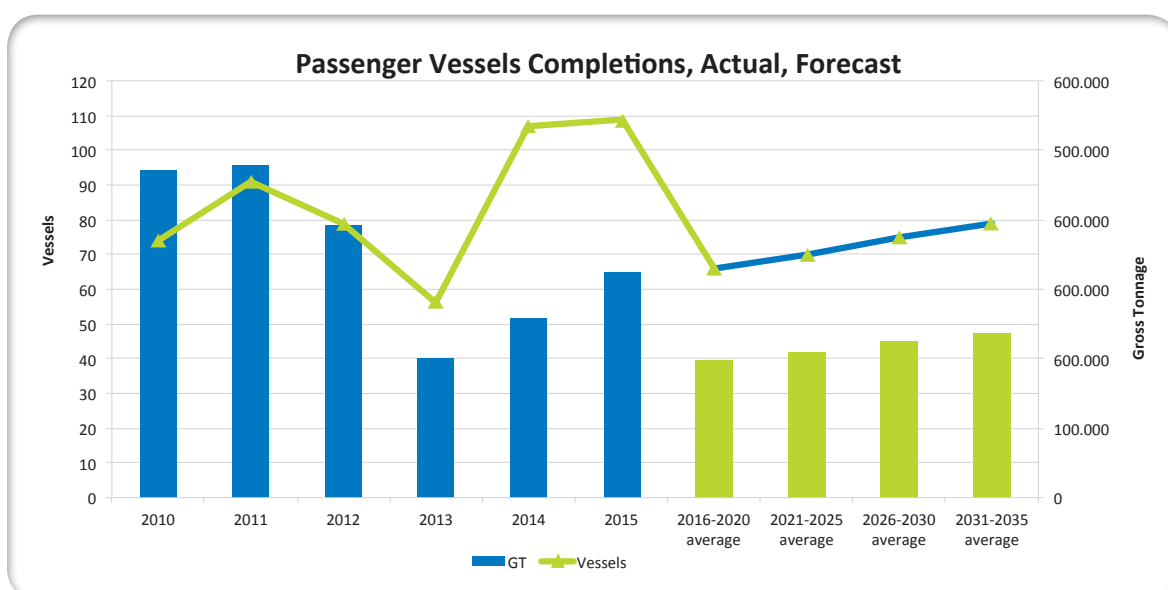
Source: SEA Europe

Medium Term

In the medium term, demand growth in the Passenger Ferry sector is projected to average 1.8% p.a. Passenger volumes are expected to expand, partly driven by increasing Asian volumes, although questions over the strength and sustainability of growth in Asia remain. There is also the potential for an increased demand on US-Cuba routes. Meanwhile, the potential introduction of a gap on SO_x emissions globally and NO_x in ECAs is expected to support fleet renewal going forward. Between 2018 and 2021, passenger ferry contracting is expected to be average 66 p.a.. The use of LNG as a fuel in the Ferry sector appears likely to continue to increase gradually as infrastructure is developed. Also design with batteries to store energy are becoming more popular.

Long Term

Ordering of fuel-efficient and “greener” designs in order to comply with environmental regulations is expected to increase in the long term. Overall, more moderate demand growth of 1.8% p.a. is expected for the Passenger Ferry sector.



Source: SEA Europe

Newbuilding Requirements: Cruise Ships

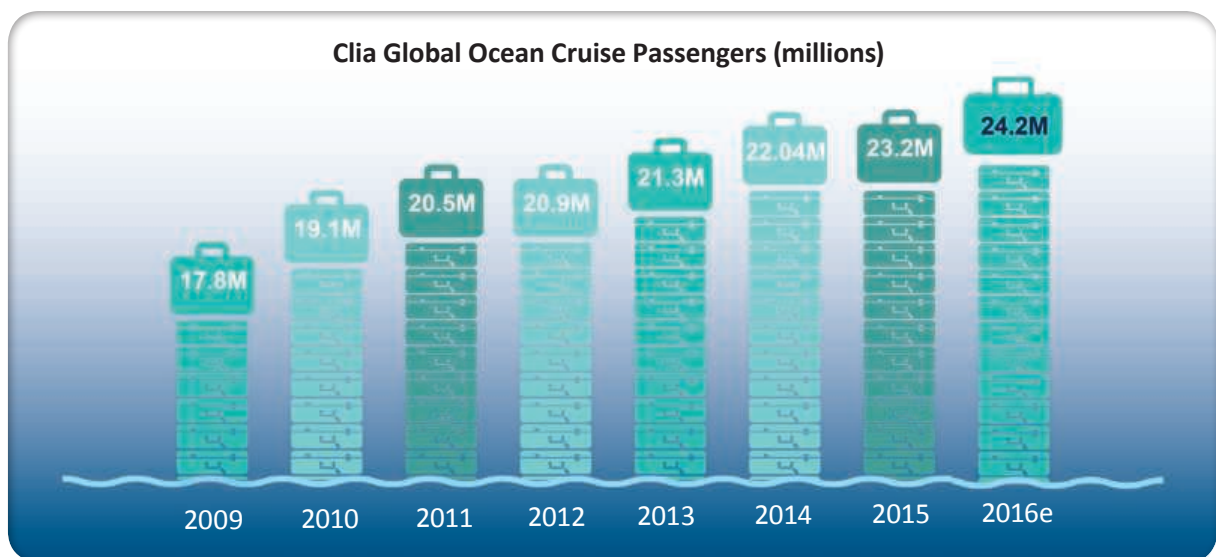
Industry Overview

The cruise industry is the fastest growing segment of the travel industry - achieving more than 2,100% growth since 1970 when an estimated 500,000 people took a cruise.

Growth strategies to date have been driven by larger capacity new builds and ship diversification, more local ports, more destinations and new on board/on-shore activities that match demands of consumers.

For instance, the financial crisis of 2008-2009 has not impacted the demand for cruises. Three major trends have particularly shaped the cruise market since its emergence:

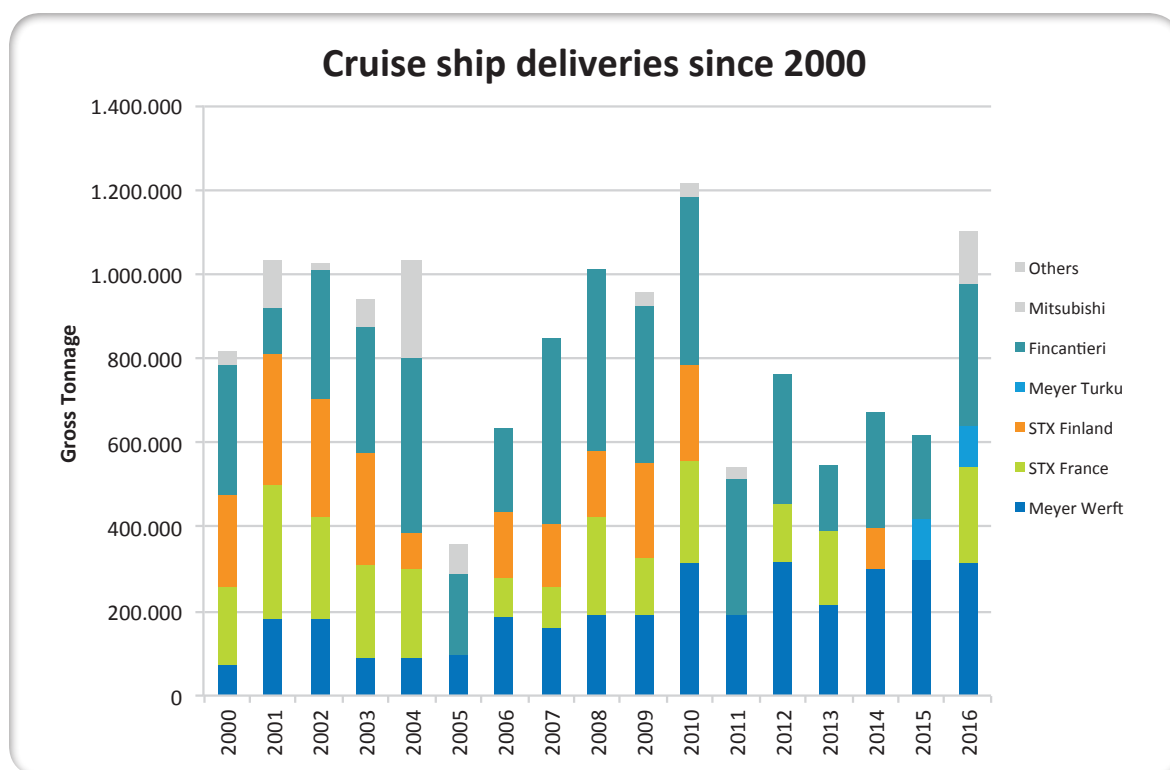
- **Amenities.** The cruise ship has an important part of the cruise experience since it also represents a destination in itself. An increasing amount of amenities are being offered both on the ships and as shore experiences.
- **Massification.** The principle of economics of scale and the development of a wider customer base has incited the development of larger cruise ships.
- **Concentration.** The industry has a high level of ownership and market concentration. Carnival and Royal Caribbean are the two main cruise lines of the market. The Caribbean and the Mediterranean account for about 70% of the global annual deployment of cruise capacity.



Source: CLIA

Deliveries

In 2015, six ships were delivered with a total of 617,500 GT and 15,700 lower berths. In 2016, this figure rises to 9 vessels with a total of 1,101,500 GT and 27,000 lower berths.



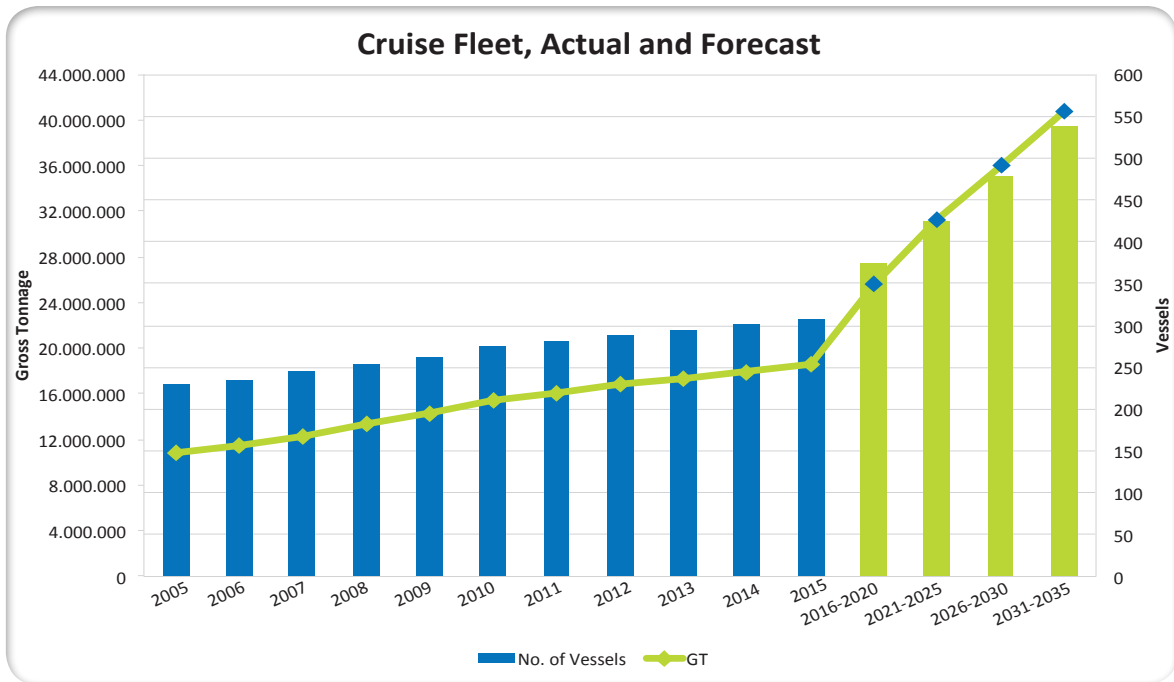
Source: SEA Europe

Orderbook

The current orderbook for cruise newbuildings features 66 confirmed vessels on order (not including options etc.), with a total capacity of 175,243 lower berths and a total order of 7,065,459 GT. The cruise shipbuilders have orders until 2025.

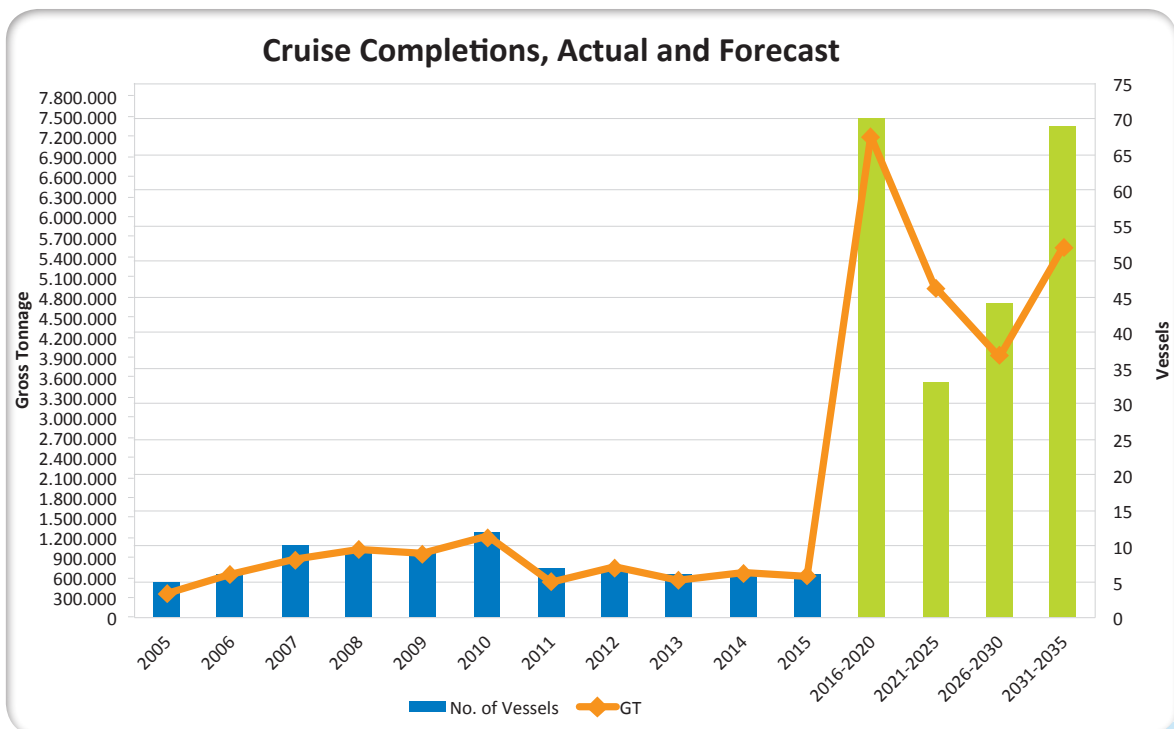
Based on a set of reasonable assumptions on average vessel life, and a rising average size for new-buildings, then the number of extra vessels required (in addition to the current orderbook) to meet the projected cruise demand, is approximate 10-12 vessels in the following years.

Cruise ship demand will continue, as in the past, to be partly supply-driven, with the introduction of new ships, new itineraries, and new themes promoting customer interest and sales. Long term trends will continue to be subject to short-term factors, but will be linked to underlying trends in international tourism, economic growth and population development.



Source: SEA Europe

Note: The bars represent CGT, while the line represents number of vessels.



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Newbuilding Requirements: RO-RO

CAR CARRIERS

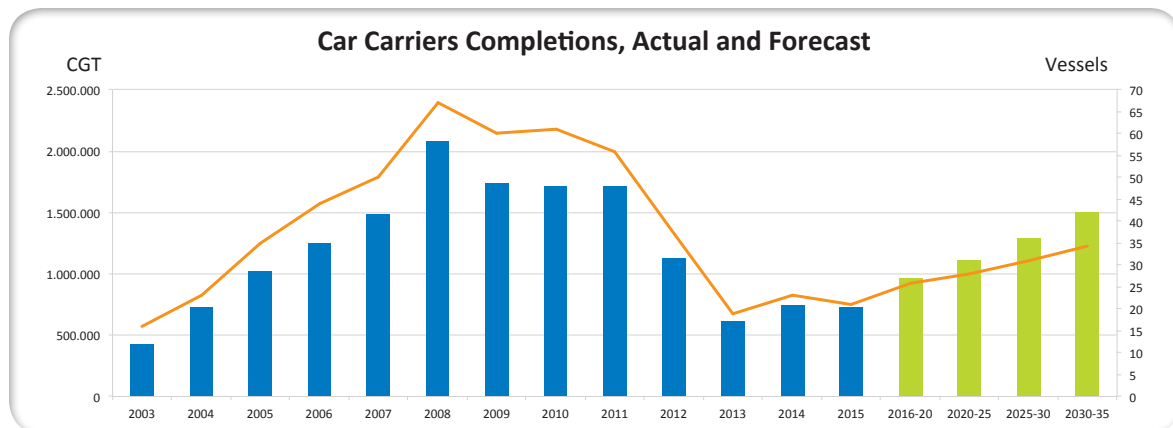
The PCTC (Pure Car & Truck Carriers) market conditions have remained under significant pressure the past five years characterised by limited growth in seaborne car trade resulting in overcapacity and weak charter rates. Despite increased imports into developed regions such as North America and Europe supported by strong growth in vehicles sales, weaker economic growth in developing economies has impacted the imports significantly and hence the overall seaborne car trade volumes.

By the end of December 2015, the PCTC segment totaled 839 vessels with combined capacity of 38,5 mln GT or 22,44 mln CGT. Since 2003, 512 vessels have been delivered with a total capacity of approximately 15,4 mln CGT. An annual average of 40 vessels. Looking at the fleet age structure approximately 52% of the fleet is <10 years and approximately 21% 20+ years. Looking at capacity (CGT), the same group of vessels, however, only represents approximately 60% and 12%.

Going forward, the PCTC market conditions will likely experience slight improvements albeit it is still challenged and under pressure as seaborne car trade growth is expected to remain relatively subdued in the short-term due to remaining weaknesses in emerging economies. Despite growing projections for global seaborne car trade largely supported by increasing shipments into emerging markets, the economic environment and outlook in Europe and continued pressures on emerging economies could potentially inhibit growth and influence the decisions to demolish the existing ageing fleet and could impact the future demand requirements. The occurrence and potential wider popularity of the sharing economy is also foreseen to have an impact of future vehicle sales and seaborne car trade. The tendency to relocate assembly plants closer to target markets is also likely to impact future long haul demand growth and result in fluctuating seaborne car trade volumes. Despite continued efforts to reduce land borne vehicle traffic that could potentially support increasing short-haul seaborne car trade demand, the PCTC market is to some extent disadvantaged of the rather expensive trailer units (high capital and maintenance costs and port dues) and is competing with other modes of transport and more flexible vessel designs that are becoming more popular in recent years, i.e. the risk of either a modal shift or the loss of cargo to other operators and vessel types remains.

Despite some of the reservations emphasised above, SEA Europe foresees that the car carriers fleet requirement will remain steady or experience slight increases in the years ahead with an annual fleet growth of 1% on average. The level of newbuild requirements is expected to stabilize at an annual average of 30 vessels or 1,2 mln CGT. with a focus on larger PTCT. Given the large number of vessels with an age of 20+ years and assuming an average scrapping age of 25-30 years, 160-170 vessels are clear demolition candidates in the short term. As an annual average of 40-45 vessels are expected to be scrapped towards 2035, the newbuilding requirements are foreseen to primarily be driven by replacements needs.





Source: SEA Europe

Note: The bars represent CGT, while the line represents number of vessels.

RO-RO VESSELS

The RO-RO market is exiting a long period of contraction (2009-2014) characterised by a decreasing fleet size, an ageing fleet with few new buildings, weak charter rates and general difficult market conditions resulting in a decrease in number of owners/operators (most RO-RO vessels are owned and operated by the same company) and consolidation. A trend that is expected to continue. The top 20 owners own and operate approximately 45% of the fleet measured in numbers amounting to approximately 60% in terms of total capacity.

Despite the current situation in today's major segments, it seems like the market conditions have started improving and the RO-RO market has mostly balanced capacity to market demand. However, there are regional variations, while changing trade patterns and larger vessels will impact the market going forward. Today's RO-RO market is concentrated in Europe, North Africa and the Black Sea. Non-European markets still do not have a sufficient influence on the RO-RO sector to spur serious demand. However, this is expected to change in the medium to long term.

By the end of December 2015, the RO-RO segment totalled 624 vessels (above 100 GT) with combined capacity of 9,6 mln GT or 7,86 mln CGT. Since 2003, 207 vessels have been delivered with a total capacity of approximately 3.7 mln CGT; an annual average of 16 vessels. Looking at the fleet age structure, more than 60% of the fleet is 15+ years and 45% 20+ years. Looking at capacity (CGT), the same group of vessels, however, only represents approximately 38%. Hence, fleet renewal of especially smaller vessels is becoming a problem.

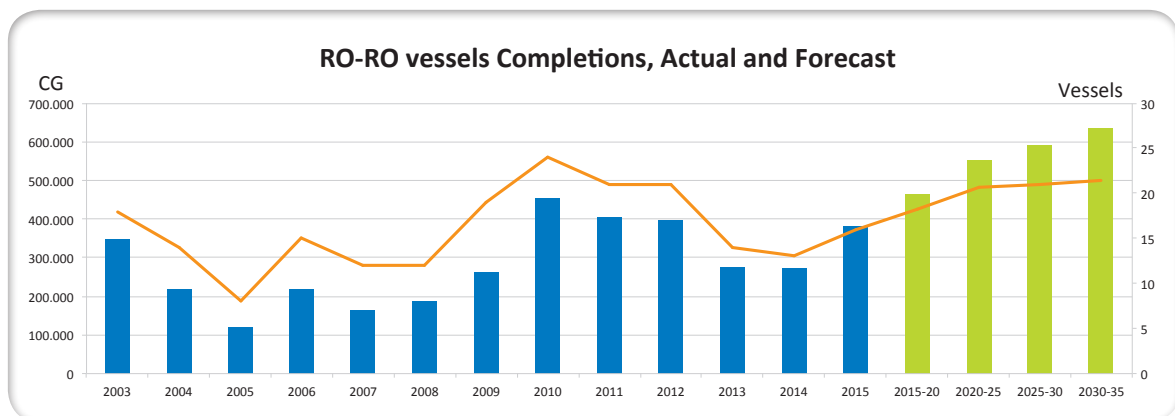
Going forward, a number of important factors are likely to impact the RO-RO market of 2016 and onwards. The emission control legislation has been and will continue to be a game changer. In the short term, a period of fleet optimisation, optimisation of services, increasing investments in emission abatement technologies and migration of tonnage which is either too small or too old for investments is foreseen. Economies of EU countries and the countries at its periphery have been going through a long period of negative or minimal growth and weak demand. The situation started to change in 2014 with the improving economic conditions in most European countries. However, risks to UK and European economic growth stemming from 'Brexit' could have a limiting impact on future demand growth.

Despite continued efforts to reduce land borne vehicle traffic and the potential for a sustained period of low oil prices that could potentially support increasing RO-RO demand, the RO-RO market is to some extent disadvantaged of the rather expensive trailer units (high capital and maintenance costs and port dues) and is competing with other modes of transport, i.e. the risk of either a modal shift or loss of cargo to container operators, as it is a cheap(er) alternative, remains. Despite

improving market conditions and continued consolidation, financial constraints among remaining owners/operators could eventually hamper contracting. The increasing needs of short-sea transport will influence the need for replacing the existing ageing fleet and could impact the future demand requirements. As in other segments a clear and similar trend towards larger ships is seen. However, current reception facilities and infrastructures in relevant ports put some limitations on the possibilities to expand the capacity of newbuild vessels. Geopolitical problems, wars, seasonal fluctuations and restrictions including sanctions have had a detrimental effect on the Baltic and Black Sea market and could affect the potential in the MENA region as the Mediterranean market is sensitive to geopolitical shocks (civil war in Syria, conflicts in Libya, etc.). A number of new markets and new opportunities are expected. Continued growth of the south-east Asian RO-RO market, more demand in the MENA region and Arabian gulf, increase of activity in the Caribbean.

Despite some of the reservations emphasised above, SEA Europe foresees that the RO-RO fleet requirement will be at modest levels in the years ahead with an annual fleet growth of 1-2% on average. In combination with a rising demand, the modest growth is likely to result in a better fleet utilisation.

The level of newbuild requirements is expected to stabilise at an annual average of 20 vessels or 0.55 mln CGT with a focus on larger RO-RO's. Given the large number of vessels with an age of 20+ years, 270-300 vessels are clear demolition candidates in the short term. As an annual average of 40-45 vessels are expected to be scrapped towards 2035, the newbuilding requirements are foreseen to be primarily driven by replacements needs.



Source: SEA Europe

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