



Cruise Port Rotterdam

Economic impact of the cruise industry



Introduction

In recent decades, the cruise industry has shown extremely dynamic growth worldwide, in Europe, and at Rotterdam. Globally, for example, passenger numbers increased from around 17.8 million to 29.7 million in the period from 2009 to 2019, and thus at annual cumulative growth rates of around 5.3% (CLIA 2021). Within the tourism industry, cruising has thus acquired a special position; and it is also increasingly at the center of public interest.

The cruise industry has proven its resilience throughout its more than 50-year history. Covid 19 caused a massive cut. But when cruises returned to operations in July 2020 its recovery quickly picked up speed. In the rather cautious baseline forecast, passenger volume is expected to recover and surpass 2019 levels by the end of 2023. In the upside forecast, passenger volume is expected to recover to 101% of 2019 levels a year earlier, by the end of 2022. In all three scenarios, passenger volume is projected to recover in excess of 12% above 2019 levels by the end of 2026.



Rotterdam, for which the port represents a central economic factor, the cruise offer is an additional channel that contributes to the attractiveness of the location and additional revenues and promotes innovations in various areas (such as the supply of ships with shore power or the use of alternative fuels).

The study on the regional economic impact of cruise shipping in Rotterdam is conducted by the Cruise Port Rotterdam in collaboration with the independent industry consultant Oliver P. Mueller under supervision of Prof. Dr. Axel Schulz and Dr. Angelika Bucerius from the Faculty of Tourism Management at the University of Applied Science Kempten, Germany. All figures, calculations and estimates based on data and surveys taken among cruise lines, guests, crew and suppliers during the 2022 season supported by company figures and public statistics and have been verified with relevant parties and market figures.

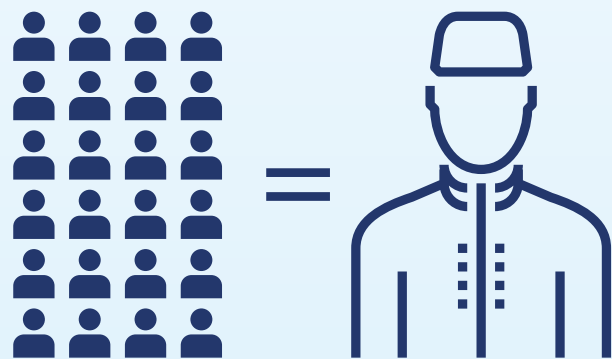
The most relevant factor in terms of scope, which is examined, comprises the expenses of the shipping companies at Cruise Port Rotterdam, which are required for the operation of such complex means of transport and for the implementation of the business model: Central areas are, for example, fees for the use of the port, the purchase of food, beverages and fuel as well as expenses for the repair and maintenance of the ships.



Public perception often focuses on the expenditures of passengers visiting Rotterdam on the occasion of their cruise. Passengers who start or end their journey locally book a hotel room, for example, and travel within the city by cab or local public transport. Transit passengers whose ship stops in Rotterdam may use their stay to visit a museum or other cultural institution or shop at local retailers. The temporary demand of between 300.000 and 350.000 visitors per year represents a relevant economic factor even for Rotterdam and the region, especially for the most affected sectors of hospitality, retail and leisure.

Furthermore the purchasing power of crew members also plays a role in the economy of the port city of call. Depending on the class of the cruise ship, its crew comprises between 500 and well over 1,000 people, who generate sales at least during their shore stays. On average, this turnover is systematically lower per crew member than for passengers: The context of the visit is different and, moreover, a much smaller proportion of the crew visits.

CRUISE TOURISTS ADD VALUE BEFORE, DURING AND AFTER SAILING



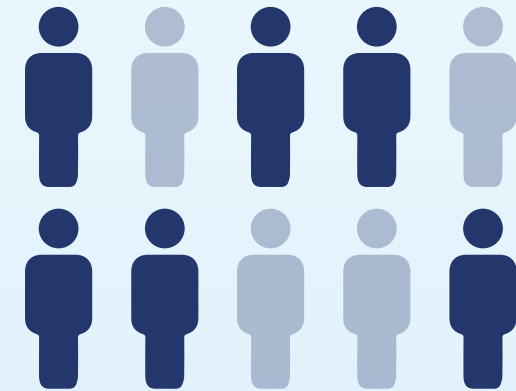
**Every 24
cruisers**
worldwide supports
one full-time
equivalent job

Source: The Global Economic Contribution of Cruise Tourism
in 2019, BREA



Cruisers spend
an average of
\$750 USD
per passenger in
port cities over the
course of a typical
seven-day cruise

Source: The Global Economic Contribution of Cruise Tourism
in 2019, BREA



6 in 10 people
who have taken a
cruise say that they
have returned to a
destination that they
first visited via
cruise ship

Source: CLIA SPI Survey, November 2021

Source: CLIA



Impact overview

To quantify the economic significance of the cruise sector, the following model is detailing the impacts arising from the spending of these cruise visitors. This study show the scope of economic impacts in terms of direct, indirect and induced effects in regards of cruise ship calls in Rotterdam.

Direct Impact Impacts (business sales, jobs, income, and taxes) created directly from spending by visitors to a destination within a discreet group of tourism-related sectors (e.g. recreation, transportation, lodging).

Indirect Impact Impacts created from purchase of goods and services used as inputs (e.g. food wholesalers, utilities, business services) into production by the directly affected tourism-related sectors (i.e. economic effects stemming from business-to-business purchases in the supply chain).

Induced Impact Impacts created from spending in the local economy by employees whose wages are generated either directly or indirectly by visitor spending.

Additional impacts of the cruise industry affects:

Employment Jobs directly and indirectly supported by visitor activity (includes part-time and seasonal work).

Personal Income Income (wages, salaries, proprietor income and benefits) supported by visitor spending.

Value Added (GDP) Revenue minus intermediate consumption.

Local Taxes City Taxes generated by visitor spending. This will include local sales, bed and other revenues streams of local governmental authorities.

State Taxes Tax revenues generated by visitor spending. This will include sales, income, corporate and other assessments of state government.

Executive summary

In this study examines the regional value added contribution of the cruise industry to the Rotterdam economy in 2022. Based on data from official statistics and company data, cruise lines and surveys, we find the economic impact per call between 1.1 and 1.7 Million euro depending on the vessels size and passenger volume.

Two sources of value added attributable to the cruise industry are considered in the analysis: 1) regional spending by shipping companies operating at the location; 2) spending by visitors and crew members on site. Comparisons with other studies show that the results of the present study are plausible in their magnitude and that the procedure for analyzing the regional effects is robust.

All together cruising contributes to the preservation and expansion of Rotterdam's infrastructure and promotes economic growth and employment. Cruise ship passengers strengthen demand in the local retail trade, public transport, and cultural offers. Rotterdam's attractiveness and prominence is enhanced worldwide.



Main categories

of cruise ships calling Rotterdam

This index divides the calls in three main categories of vessels by passenger in double occupancy (pax), ship length in meters (m) and gross tonnage (gt) of the unit.

A

1.500 to 1.750 pax, 600 to 750 crew with up to 270 m length and under 75.000 gt

B

2.500 to 3.000 pax, 800 to 950 crew with up to 295 m length and 100.000 gt

C

4.000 to 4.500 pax, 1.000 to 1.300 crew with up to 320 m length and over 125.000 gt





Dues & Services

When calling the port cruise ships are charged with certain daily fees for the usage of quay and port facilities.

Dues are determined by the number of linear meters (quay) and per tonne of the gross tonnage/water surface (port).

In addition a cruise line pays the terminal fee for associated services like passenger handling and International Ship and Port Facility Security Code (ISPS) while the ship is moored.

A

Quay, Port & Terminal

€ 30.025,-

B

Quay, Port & Terminal

€ 47.500,-

C

Quay, Port & Terminal

€ 62.000,-

Port call costs that are universal and not determined by size or pax numbers include the following estimates per visit:

Stevedores, maintenance, technicians, parts, etc. have not been specifically approached in this respect.

For the supply and delivery of fresh water on average, a rounded € 6.00 per ton of water is paid. The delivery amount will differ per ship, an estimate can be calculated of this expenditure. The average delivery is around 1,000 tons and goes up to 2,000 tons in a few cases.

Bunkering ships take Marine Gas Oil (MGO) with 0.1% sulfur emissions. It is measured in metric tons (Mts). For a small ship (200 meters and 12 decks) an intake of 550 Mts can be estimated (figures 2022). For a ship of 4,500 passengers this is at least 1.5 times higher, for this calculation the aforementioned 550 Mts for all categories is calculated to € 750,000. An average rate of approx. € 1,350 is applied per Mts. In addition, a fixed amount of approximately € 7,500 is calculated for the delivery barge.

Pilot	€	8.000,-	
Mooring	€	2.500,-	
VTs tax	€	2.500,-	
Waste handling	€	2.500,-	
Unforeseen	€	<u>2.500,-</u>	
			€ 17.750,-

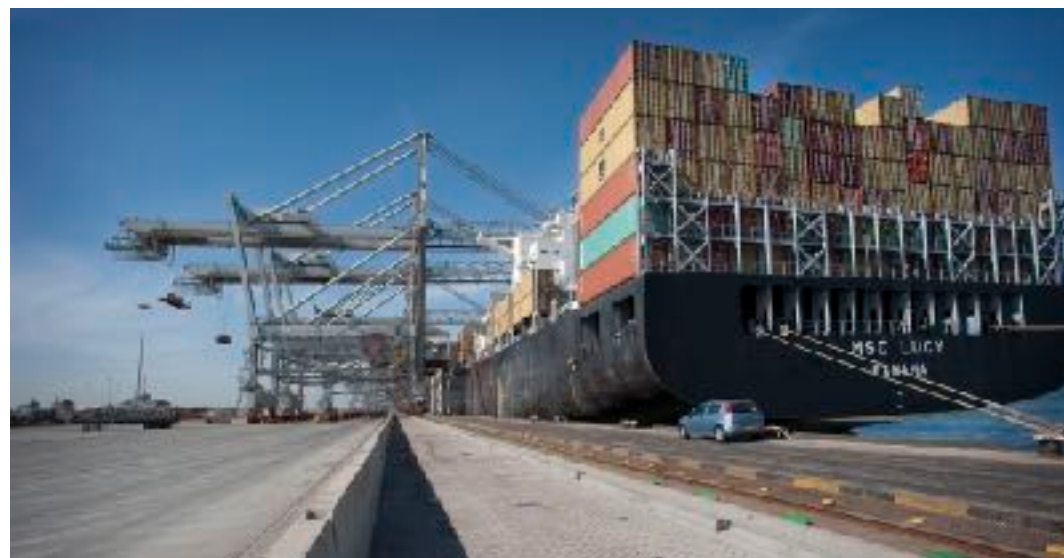
Fresh water			€ 6.000,-
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Bunkering	€	742.500,-	
Barge	€	<u>7.500,-</u>	
			€ 750.000,-



Provisioning a cruise ship covers a wide range of food and beverage for the included passenger and crew facilities as well as revenue outlets and shops. Furthermore the restocking of daily use housekeeping items and general maintenance is summed up to an estimate of **€ 40,-** per passenger per diem.

The calculation (pax x night x per diem) is based on a cruise length of 7 nights with a modest average percentage of **25%** for local purchase, while on heavy loading one easily finds two trucks with meat, one with fish and one with vegetables from local suppliers.



A

Total $1.750 \times 7 \times \text{€ } 40,-$
= € 490.000,-
Local revenue (25%) € 122.500,-

B

Total $3.000 \times 7 \times \text{€ } 40,-$
= € 840.000,-
Local revenue (25%) € 210.000,-

C

Total $4.500 \times 7 \times \text{€ } 40,-$
= € 1.260.000,-
Local revenue (25%) € 315.000,-



Tours & City visits

Approximately **50%** of the passengers go on tour organized by the cruise line and fully sourced locally. This involves trips to Rotterdam, Delft, The Hague, Schoonhoven and Amsterdam. The average duration is 4 to 6 hours. An average net of € 45,- per pax local purchasing (bus, guide, tickets) is used. In addition tour passengers spend an estimate of € 65,- (€ 25,- souvenirs, € 25,- food & beverage, € 10,- on additional transport and € 5,- miscellaneous). **A total of € 110,-**

45% of passengers do not go on a pre-booked tour and explore the city of Rotterdam on their own. Expenditure estimate € 30,- spent on museums/attractions and an estimate an additional € 85,- (€ 35,- shopping, € 30,- food & beverage, € 15,- on transport and € 5,- miscellaneous). **A total of € 115,-**

A small percentage of about **5%** remains on board consequently no estimate in this calculation.

A

Tours	€ 96.250,-
Individual	€ 90.620,-
On Board	€ 0,-

€ 186.870,-

B

Tours	€ 165.000,-
Individual	€ 155.250,-
On Board	€ 0,-

€ 320.250,-

C

Tours	€ 247.500,-
Individual	€ 232.875,-
On Board	€ 0,-

€ 480.375,-



Turnaround Calls

In contrast to the above at turnaround calls all passengers leave the ship and new passengers board the vessel on the same day for cruises to and from Rotterdam.

As most cruise lines source their guests internationally at least 50% of the guests spend time prior or post their cruise in town utilizing their own car or public transport for the way to and from the port and spending at least one night at a local hotel.

The estimate spend on parking/transportation € 100, hotel € 75,-, food and beverage € 50,- and € 25,- miscellaneous sum up to a **total of € 250,-**



A

Total 875 pax x € 250,-
Local revenue € 218.750,-

B

Total 1.500 pax x € 250,-
Local revenue € 375.000,-

C

Total 2.250 pax x € 250,-
Local revenue € 562.500,-



Ships Crew

Crewmembers off duty also have the opportunity to go ashore for recreation and grocery shopping.

Recent studies (Vaya for Barelona, 2018) calculate the amount spend in an average port of call per crew member at **€ 25,-**

In turnaround ports this number doubles as additional shopping for clothing and consumer goods is more common with a spending of **€ 50,-**

At average 50% of crew members spend time ashore.



A

Port of call	
300 crew x € 25,-	€ 7.500,-
Turnaround	
300 crew x € 50,-	€ 15.000,-

B

Port of call	
400 crew x € 25,-	€ 10.000,-
Turnaround	
400 crew x € 50,-	€ 20.000,-

C

Port of call	
500 crew x € 25,-	€ 12.500,-
Turnaround	
500 crew x € 50,-	€ 25.000,-

Total Impact

of cruise ships calling Rotterdam

The grand total of the data from all segments consolidated for either a turnaround operation or a port of call visit.



A

Port of call

€ 1.120.645,-

Turnaround

€ 1.160.025,-

B

Port of call

€ 1.361.750,-

Turnaround

€ 1.426.500,-

C

Port of call

€ 1.643.625,-

Turnaround

€ 1.738.250,-



Source



Cruise Port of Rotterdam



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Underlying studies

Contribution of Cruise Tourism to the Economies of Europe 2017. CLIA, 2018.

Economic impact of cruise activity: The case of Barcelona.
Vayá, E., Garcia, J. R., Murillo, J., Romaní, J., & Suriñach, J., 2018

Economic impact of international cruise visitors to the US. Tourism Economics, 2019

Economic impact of the port of Hamburg. Fraunhofer CML, 2021

Global Economic Contribution of Cruise Tourism. BREA, 2019

Global Market Report. CLIA, 2020

SPI Survey. CLIA, November 2021

State of the Cruise Industry Outlook. CLIA, 2021

State of the Cruise Industry Outlook. CLIA, 2022.

Tourism Economics. CLIA, 2022

Pictures

Aida Cruises, Holland America Line, Rotterdam Partners 2022 (Hannah Anthonysz, Jan Bijl, Iris van den Broek, Vincent van Dordrecht, Claire Droppert, Ossip van Duivenbode, Guido Pijper, Robin Utrecht, Miranda Vijfinkel, Kunst Vliegwerk, 500 Watt), Royal Caribbean International

Appendix

Extract from Cruise Lines International Association (CLIA) annual reports on the global cruise community 2022.

CLIA represents more than 90% of the world's ocean-going cruise capacity, as well as nearly 60,000 travel agents and agencies from around the world. The travel agent and agency members represent the largest network of travel professionals specializing in cruise travel. The organization's global headquarters are in Washington, DC, with regional offices located in North and South America, Europe, and Australasia.



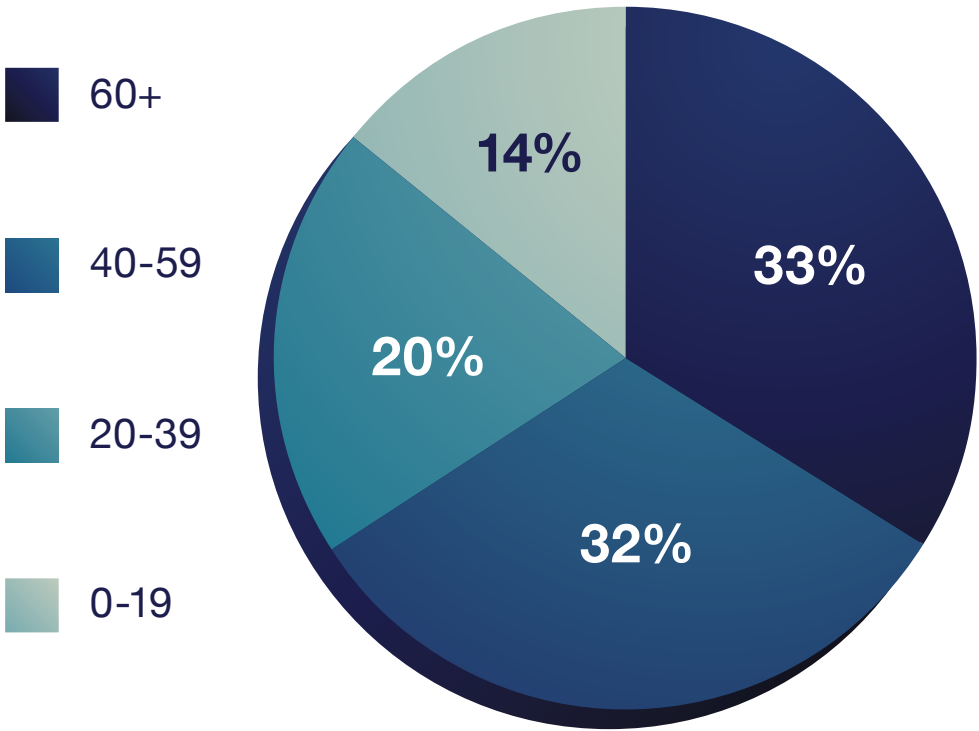
FACTS AND TRENDS

A Popular Vacation Choice at Every Age

47.6 Average age of cruise tourist

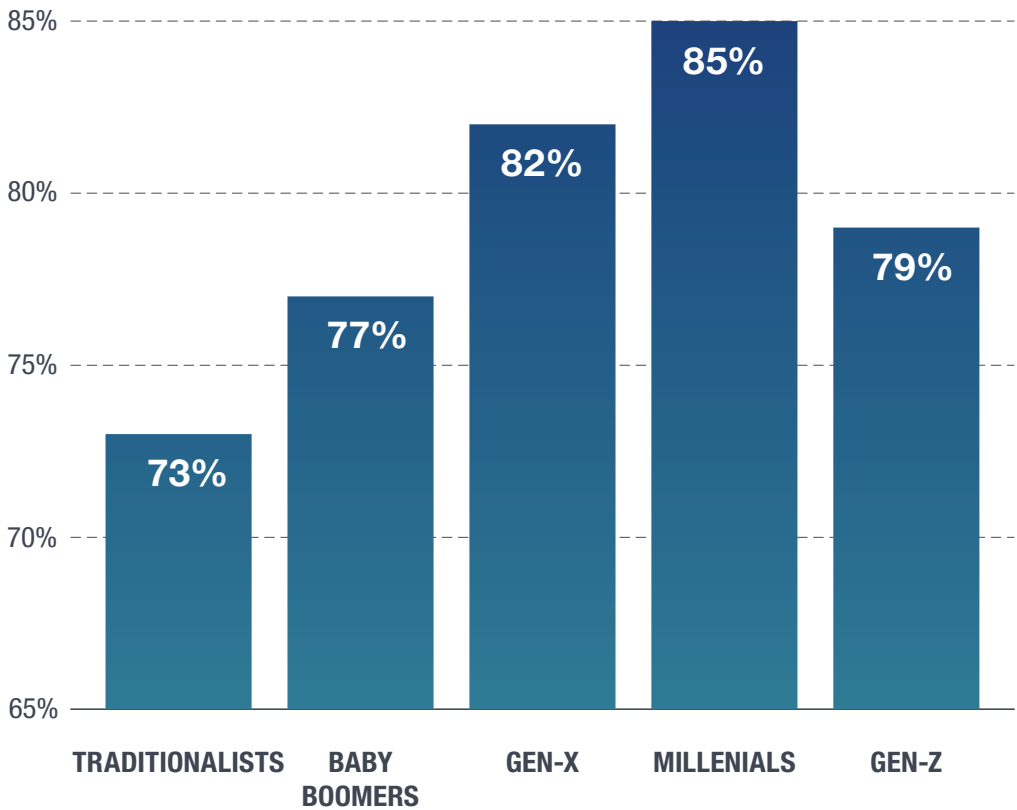
Millennials are the most enthusiastic cruisers of the future

Cruise Tourist Age Averages from 2018-2020



Source: CLIA Global Market Report, 2020

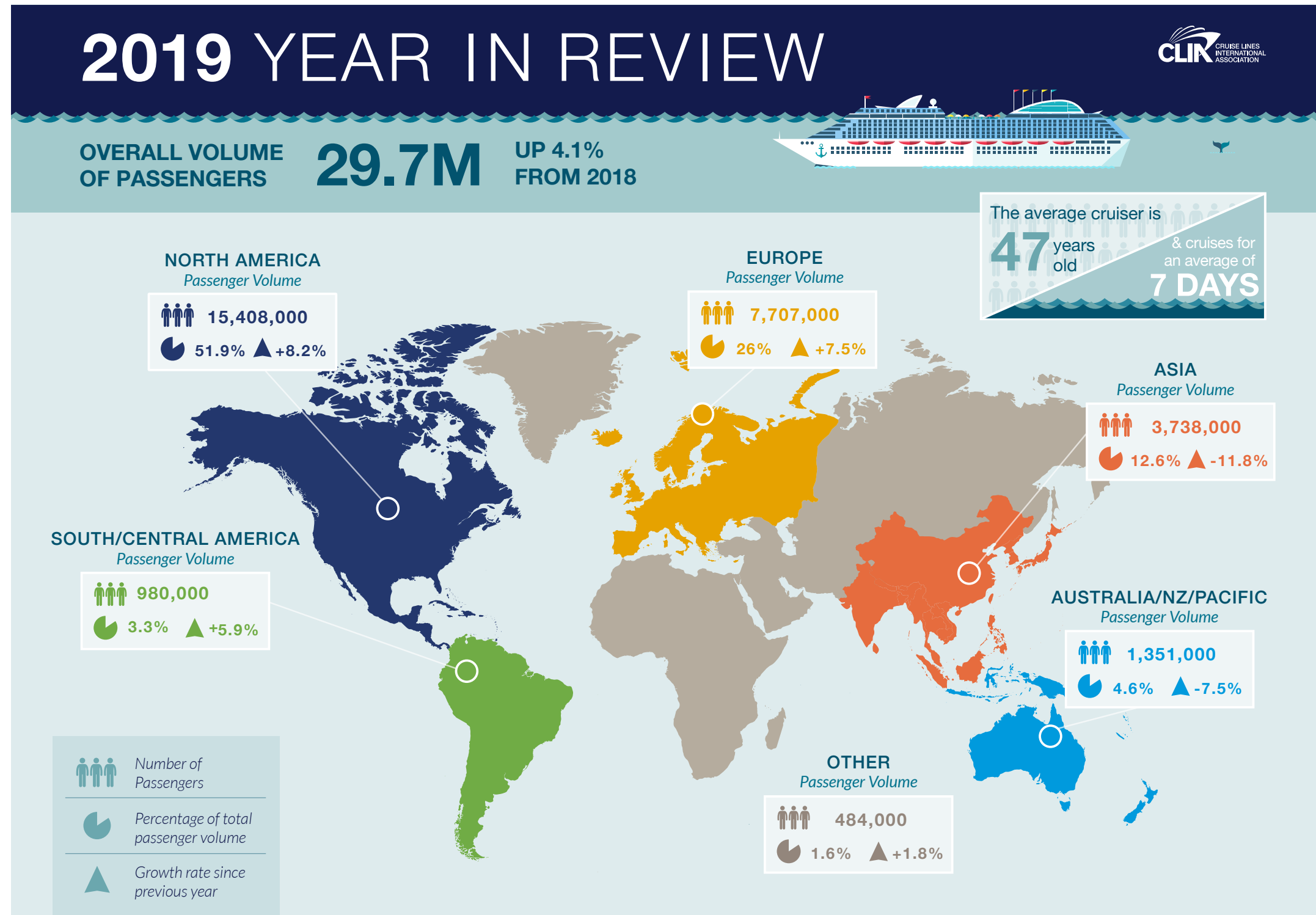
% of Cruise Passengers Who Plan to Cruise Again



Source: CLIA Global Market Report, 2020

Source: CLIA

PRE-PANDEMIC OVERVIEW



Source: CLIA

PRE-PANDEMIC GLOBAL IMPACT

TOTAL ECONOMIC IMPACT

\$154.46B



2019 ECONOMIC IMPACT



1,166,213 JOBS



\$50.53B WAGES & SALARIES



\$72.02B DIRECT PURCHASES



29.7M PASSENGER EMBARKATIONS



\$385 AVERAGE SPENDING IN PORT BEFORE BOARDING A CRUISE



\$100 AVERAGE SPENDING WHILE VISITING DURING A CRUISE

THE CRUISE INDUSTRY'S ECONOMIC IMPACT IS FAR-REACHING

#1 Services and Government



#2 Transportation



#3 Wholesale & Retail Sales



#4 Manufacturing



#5 Finance, Insurance & Real Estate (FIRE)



#6 Agriculture, Utilities & Construction

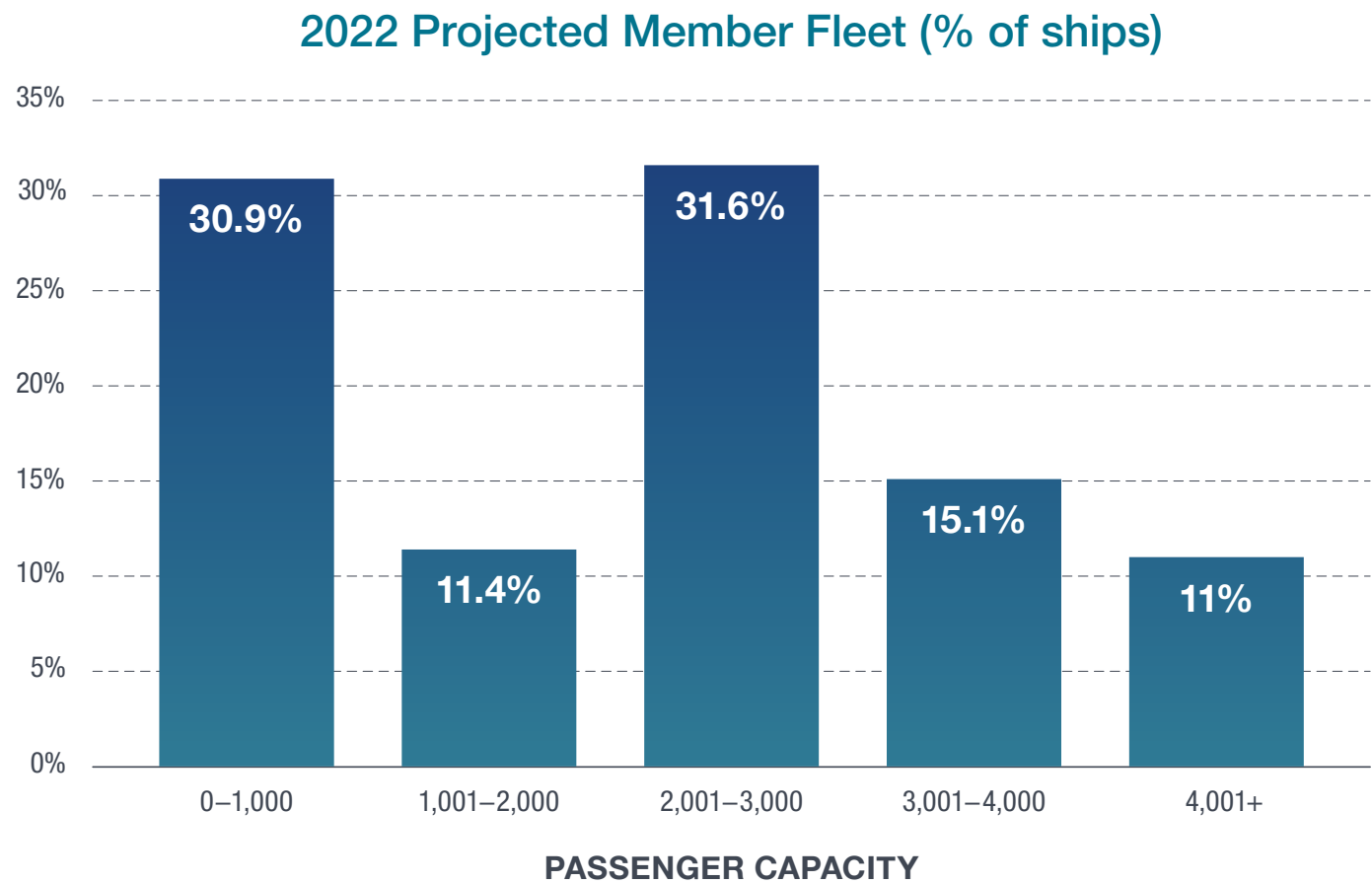


PANDEMIC IMPACT AND RECOVERY

2022 CLIA Ocean-Going Member Fleet

272 ships projected
in operation in 2022

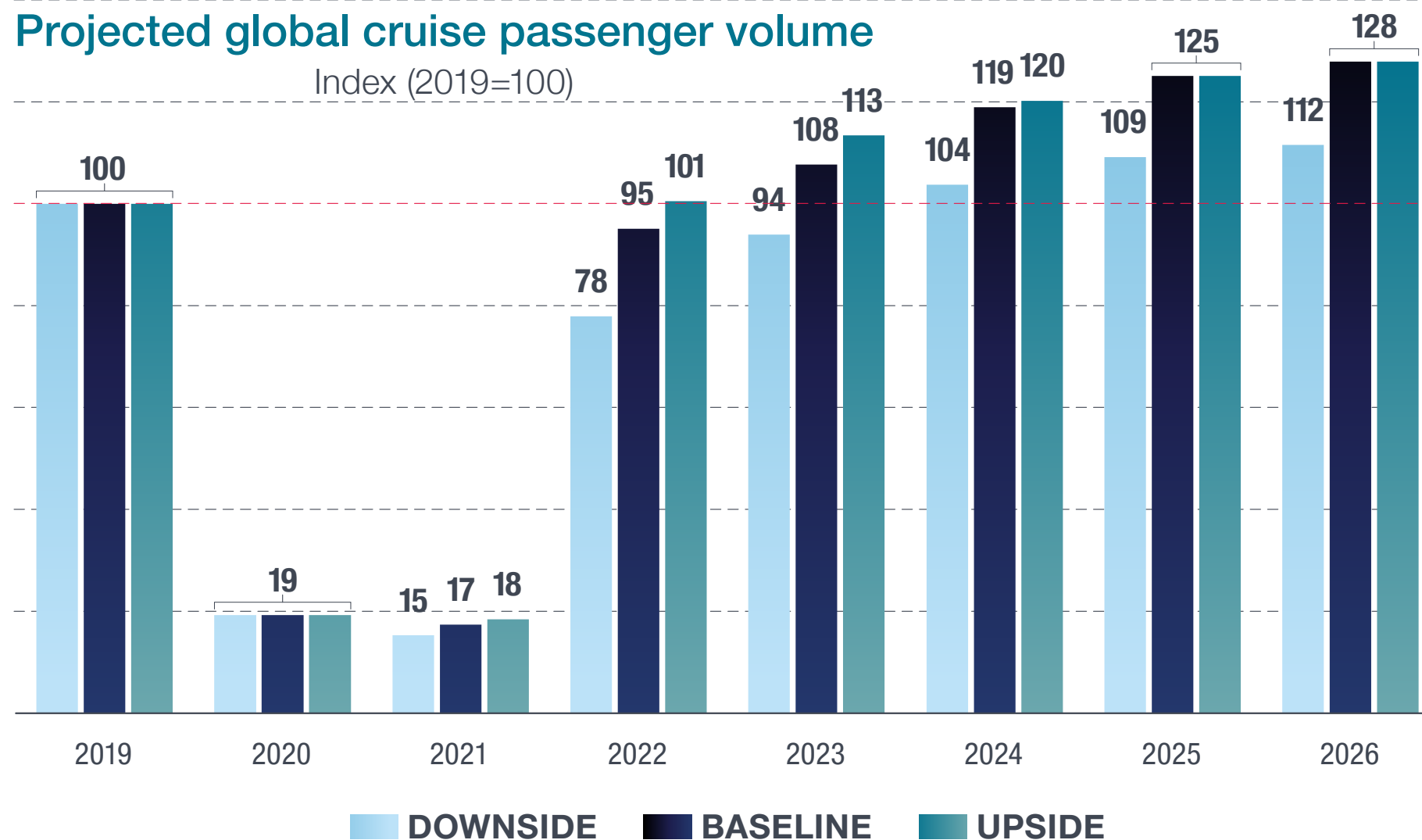
2,126 average
passenger capacity



Source: CLIA

PANDEMIC IMPACT AND RECOVERY

2022 is a Pivotal Transition Year for the Cruise Industry, with Full Recovery Projected in 2023



Source: CLIA