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Are Sustainable Cruises Possible? (Kreuzfahrt nachhaltig - geht das?) The 'Headline Law' of Cruising (Niedersachsencamp - 29. Nov 2022) Prof.Dr.Dr.Alexis Papathanassis

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Murphy's Journalistic Principle*

"If a headline ends in a question mark, the answer is no."

Batteridge's Law of Headlines** *"Any headline that ends in a question mark can be answered by the word no."*

* Götz, Andreas (1997). "The Complete Edition of Murphy's Laws". MurphysLaws.net. Archived from the original on 17 October 2018. Retrieved 12 May 2019.)
** Betteridge, Ian (23 February 2009). "TechCrunch: Irresponsible journalism". Technovia.co.uk. Archived from the original on 26 February 2009. Retrieved 12 May 2019

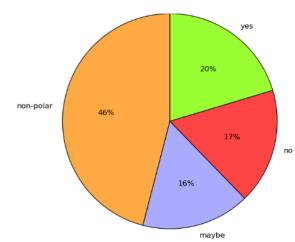
Does the "Headline Principle" work? According to the principle... and science... The answer is 'NO'

- Academia (Cook & Plourde, 2016):
 - Articles from 60 academic journals
 - Dataset of 7845 titles in all
 - 177 with in question mark
 - 95 'Yes/No' question type (No: 35,8%)
- Press (Linander, 2015):
 - 'Crawled' 13 separate news sites for a total of 26000 headlines (2000 per site)
 - 766 with question mark.
 - 413 'Yes/No' question type (No: 31,5%)

	Table 2	Frequency	of answers	to	yes/no	questions	by	discipline
--	---------	-----------	------------	----	--------	-----------	----	------------

All	Natural Sciences		Humanities		Social Sciences		
	Computer Science	Physics and Astronomy	Literature and Literary Theory	Philosophy	Psychology	Sociology and Political Science	
Yes							
54.7 %	33.3 %	87.5 %	50.0 %	_	66.7 %	52.2 %	
(n = 52)	(n = 1)	(n = 7)	(n = 2)		(n = 18)	(n = 24)	
No							
35.8 %	66.7 %	12.5 %	25.0 %	71.4 %	33.3 %	34.8 %	
(n = 34)	(n = 2)	(n = 1)	(n = 1)	(n = 5)	(n = 9)	(n = 16)	
Depends							
9.5 %	_	_	25.0 %	28.6 %	_	13.0 %	
(n = 9)			(n = 1)	(n = 2)		(n = 6)	

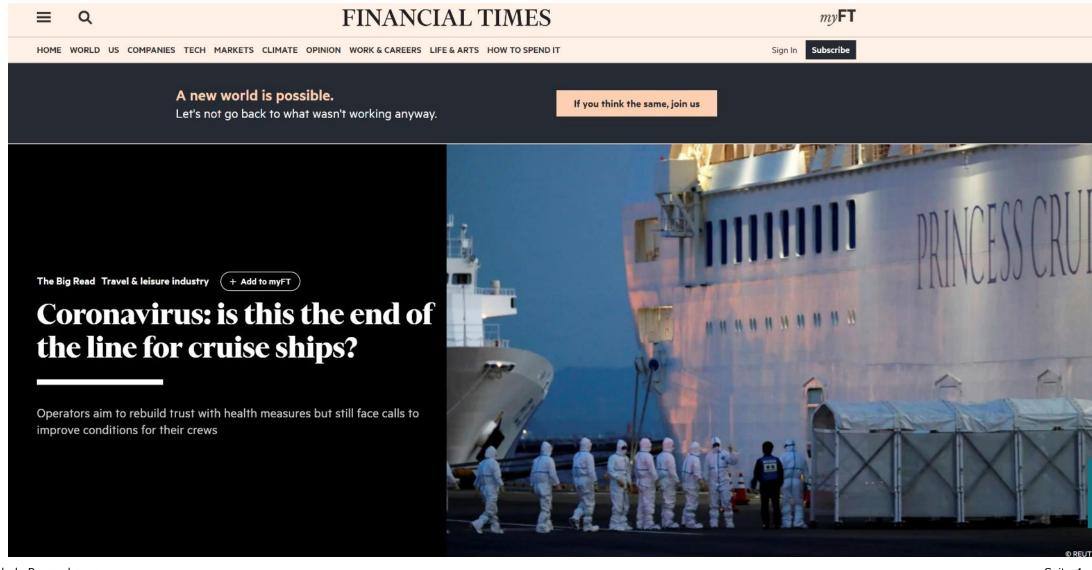
answers to headlines phrased as questions



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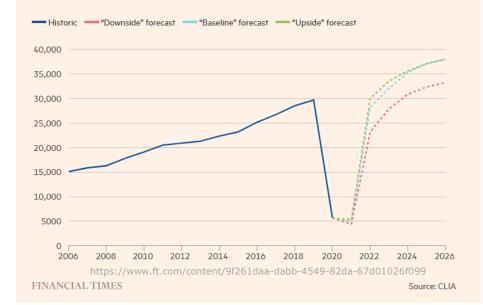
Cook, J.M., & Plourde, D. (2016). Do scholars follow Betteridge's Law? The use of questions in journal article titles. *Scientometrics, 108*, 1119-29.11.2022 Seite 3 1128. Linander, Mats (19 March 2015). "is betteridge's law of headlines correct?". calmer than you are. New York.

The End of Cruising?



"Like the tides, We will return"... This time cleaner! We can survive anything!

Cruise passenger numbers are expected to resume their long-term growth trajectory after the pandemic dip



Supply Impact*:

- 2019: Total fleet capacity = 581 K Pax
- 2020-21: Los of 8% = 532 K Pax
- 2021-22: Recovery of 6% = 566 K Pax

Demand Impact*:

- 2019: 27.5 million Pax
- 2020-21: Decrease of 74% = 7.05 million Pax
- 2021-22: Recovery of 25% = 13.9 million Pax

Revenue and Spending Impact*:

- 2019: \$27.4 B
- 2020: Decrease of 88% = \$ 3.3 B
- 2021: Recovery = \$ 6.6 B = 76% compared to 2019
- 2021 Average Pax Revenue = \$ 247 / Day = 9% less than 2019
- 2021 Average Pax Onboard Revenue = \$71 / Day = 5% less than 2019

Financial Impact (Top 3 Cruise Operators):

- 2019: Profit ≈ \$ 0,5 B / Month***
- 2020-21: 'No Sail Cash-Burn' ≈ \$1 B / Month**
- 2020-21: New Debt and Equity Capital \approx \$12 Billion ***

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Global cruise passengers, actual and forecast

* Data Sources: https://cruising.org/en-gb/news-and-research/research/2020/december/state-of-the-cruise-industry-outlook-2021, https://cruisemarketwatch.com/

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Recovery

Potential

Recovery

Risk

** https://www.cruiseindustrynews.com/cruise-news/23839-here-s-how-much-cash-the-cruise-lines-are-burning-through.html

*** https://www.ft.com/content/d8ff5129-6817-4a19-af02-1316f8defe52

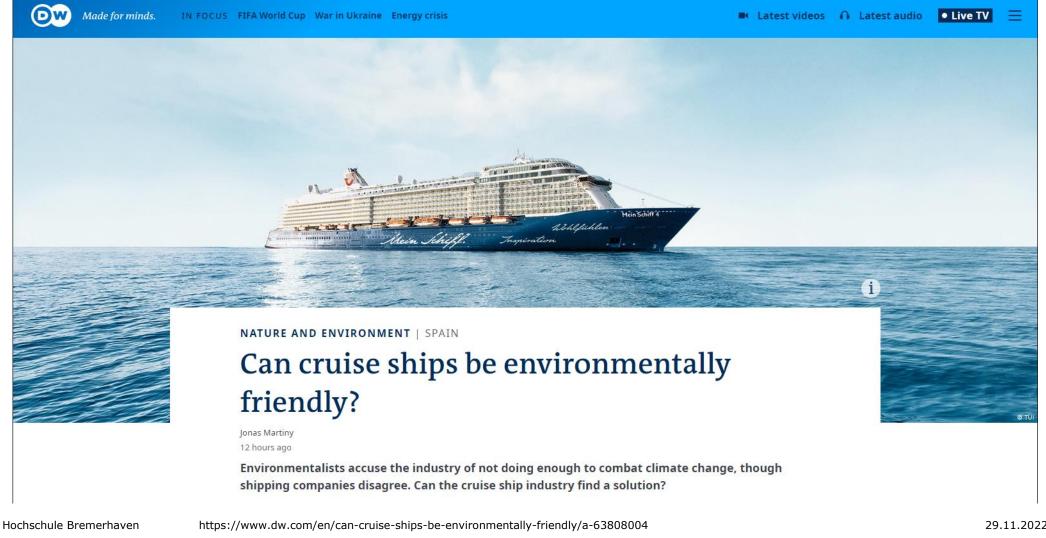
LIKE THE TIDES, WE WILL RETURN



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No In In

Deutsche Welle Headline... from Yesterday! *Can cruise ships be environmentally-friendly?*



Cruise Sustainability Headlines *Public scrutiny in the headlines... In all dimensions!*



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Ecological Dimension Answer

 "Not yet... But working on it!" (BTW: "We are not that bad!")

CO₂ emissions: Absolute vs. percentage values

World Travel & Tourism Council 2021

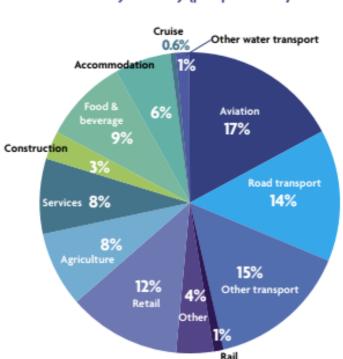


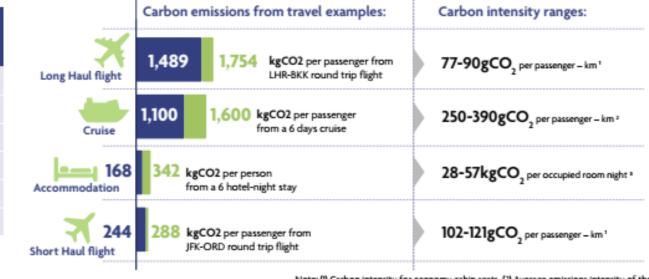
Exhibit 3: Split of tourism-related GHG

emissions by industry (pre-pandemic)²¹

Note: The above emission share has been updated for aviation by using the latest IATA's Aviation and Climate Change Fact Sheet pre-pandemic estimates. Cruise was separated from water transport by conducting a bottom-up estimation based on sustainability reports. The chart includes shares of most contributing scope 3 emission sources (e.g. agriculture). Exhibit 4: 2019 carbon emissions estimates per industry²²

Industry	Carbon Emissions (million tCO2e)
Accommodation	324
Tour Operators	N/A
Aviation	915
Cruises	27
OTAs	<1
Travel Agencies	N/A

Note: Estimates exclude Scope 3 emissions. Aviation emissions reported in tCO2. Exhibit 5: Carbon emissions from selected travel examples and overview of carbon intensity ranges²⁶



Low Range High Range

Note: (1) Carbon intensity for economy cabin seats, (2) Average emissions intensity of the world's largest cruise operator (low range) and emission intensity of the cruise ship class with the second highest intensity measure (3) Averages of Measure 1 lower and upper quartile from Cornell Hotel Sustainability Benchmarking Index (CHSB) 2021 (4) While cruise is often considered as a transport-only industry, it provides accommodation and transportation services.

Cruise ship orderbook 2021-2027: Commitment to sustainability or merely 'organic modernisation'?

	TOTALS	%									
Ship Orders (2021-2027)	107					Annual CO2 em	issions 2019				
Small and Expedition Vessels	34	32%	0	50 000	000	100 000 000	150 000.	000	200 000 00	0 25	000 000
Maistream Vessels	27	25%	Bulk carriers								
Mega Ships	46	43%	Container ships								
LNG Powered Vessels	22	21%	Tankers								
Total Inv. Cost (M \$)	62.474		Liquefied natural		_						
Total Inv. Cost / LNG-powered Vessels (M \$)	21.424	34%	gas carriers								
Average Inv. Cost / Vessel (M \$)	584		Offshore vessels								
Average Inv. Cost / LNG-powered Vessel (M \$)	931	+59%	Vehicle carriers								
Total Tonnage	9.222.705		Ferries								
Total LNG-powered Vessel Tonnage	3.640.150	39%	Cruise ships								-
Average Tonnage / Vessel	86.194		Liquefied petroleum								-
Average Tonnage / LNG-powered Vessel	158287	+83%	gas carriers						Annual C	02 emission	s 2019
Total Pax Capacity	215.151		Roll-on roll-off vessels						CO2 emiss	ions per ves	sel per year
Total LNG Powered Vessel Pax Capacity	89.851	42%	Other								
Average Pax Capacity / Vessel	2.011		o	10 000	20 000	30 000	40 000	50 000	60 000	70 000	80 000
Average Pax Capacity / LNG-powered Vessel	3906	+94%				Emissions per ve	essel per year				

Source: UNCTAD calculations, based on data provided by Marine Benchmark. https://unctad.org/news/covid-19-cuts-global-maritime-trade-transforms-industry

Data Source: https://www.cruiseindustrynews.com/cruise-news/cruise-ship-orderbook.html

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Industry size into perspective

"Too small to make a difference... unless it's positive!"

Clabal	2017	Number of Units	Cruise Fleet / Sector as a % of	Data Source
Global	Cruiseships	369		
Capacity	Airplanes	24,400	1.51%	Statista (2018a)
	Merchant Ships	52,000	0.71%	Statista (2018b)
	Hotels	184,449	0.20%	STR (2018)
	2017	Direct Contribution (mil USD)		
	Cruise Sector	\$61,020,000		CLIA (2018)
	Tourism Sector	\$2,036,000,000	3.00%	WTTC (2017)
Global	2017	Employment (Jobs /FTEs)		
Economic	Cruise Sector	1,100,000		CLIA (2018)
Contribution	Tourism Sector	118,454,000	0.93%	WTTC (2017)
	2017	Direct Contribution per Arrival / Port Visit		
	Cruise Sector	\$445.82		CLIA (2018)
	Tourism Sector	\$1.538.93	28.97%	WTTC (2017)

`If you were to close the cruise industry tomorrow, it would make zero difference to overtourism issues.' (David Dingle, Carnival U.K.**)

"The cruise industry goes to about 1,000 places. The vast majority want more tourists from us, not less." (Adam Goldstein, vice chairman of Royal Caribbean Cruises Ltd)**

"Venice alone attracts 24 million tourists annually, nearly the same number of people the entire cruise industry carried in 2017. So I mean we are quite small" (Carnival Corp. CEO Arnold Donald)

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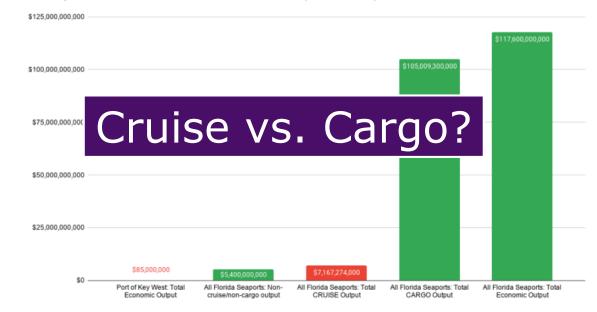
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Economic Dimension Answer

 "We fuel economies and create jobs... generally!"

Comparative economic impact of cruising... Cargo shipping and other forms of tourism more beneficial?

Economic Impact: Key West's Cruise Economy in Context of Florida Seaports Port of Key West accounts for less than 1/10th of 1% of the total economic output of Florida's Seaports



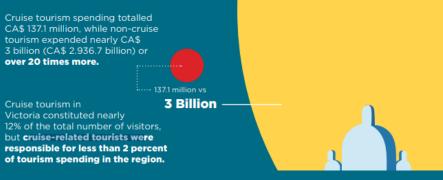
The Port of Key West accounts for less than 1/10th of 1% of the total economic output of Florida's Seaports. https://www.safercleanerships.com/news/economic-impacts-florida-seaports-and-cruise-ships-at-the-port-key-west

REPORT: New analysis exposes cruise tourism benefits as overinflated myth



Economic benefits of non-cruise tourism dwarf cruise tourism

Cruise- vs. Land-Tourism?



12% of tourists 2% of spending



Cruise passenger onshore spending is relatively low compared with overnight tourism. In Victoria, cruise passengers are estimated to have spent CA\$ 87.36 per visit, while stayover visitors spend seven times more (CA\$ 710) per visit and 2.7 times (CA\$ 237) more per day. In addition, non-cruise "day trippers" are estimated to have spent 1.6 times more (CA\$ 137.46.) per person than the average cruise passenger.

Non-cruise tourism in Greater Victoria is responsible for generating nearly 20 times more in government taxes than cruise tourism.

Caribbean Tourists Arriving by Plane Worth More to Local

Economy Than Cruise Guests

Skift

Find average per visit and per day spend for cruise and air arrivals in three tourism economies:

Samarita Shaniman, Shifi Marzh Solh, 2015 at 515 PRI FDT	Country	Cruise Arrivals	Air Arrivals Cruise Spend Per Person		Air Spend Per Person
	U.S. Virgin Islands	1,900,000	800,000	\$138-\$158 per day	\$200-\$250 per day w/o lodging
	Puerto Rico	1,356,822	8,600,413	155.62 per day	\$298.15 per day w/ lodging
Hochschule Bremerhaven	Bermuda	355,880	224,329	\$153 per visit	\$1249 per visit w/ lodging

Non-cruise tourism created nearly 31 times more jobs (37,411 vs. 1210) than cruise operations In Greater Victoria.

https://www.stand.earth/latest/ocean-protection-shipping/canadianshipping/report-new-analysis-exposes-cruise-tourism

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https://skift.com/2015/03/10/caribbean-tourists-arriving-by-plane-worth-more-to-local-economy-than-cruise-guests/

Comparative economic impact of cruising... *Can we depend on passenger-spending data?*

"Camping tourists spend twice as much as cruise tourists"**

"Results indicate that cruise passengers **spend** significantly **less** at their destinations than **other tourists**. In addition, the data indicate that cruise tourists **overestimate** their expenditure to a higher degree than other tourists" (Larsen, 2013)*

"The most obvious question is whether passengers have any money left for spending onshore given the range of **spending options onboard**" (Klein, 2009)***

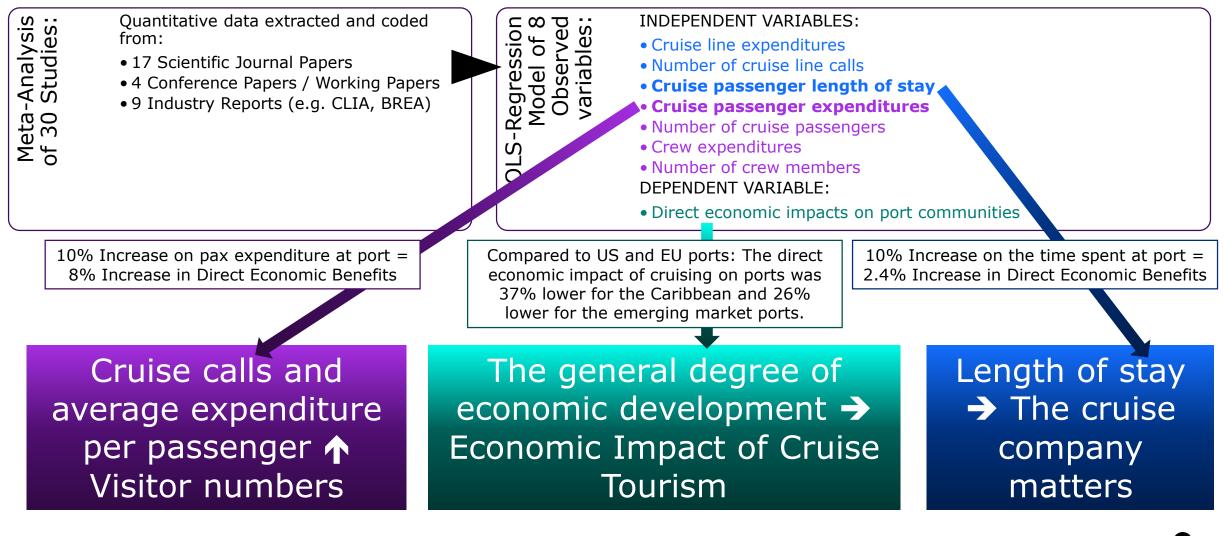
An even larger problem...is

the **uncritical acceptance** of the assumption that cruise passengers on average spend US\$100 in each and every port of call. (Klein, 2009)***

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* Larsen, S., Wolff, K., Marnburg, E. & Øgaard, T. (2013). Belly full, purse closed: Cruise line passengers' expenditures, Tourism Management Perspectives, 6: 142-148
 ** http://www.uib.no/en/news/36477/cruise-tourists-spend-less
 *** Klein; R. 2009). Keeping the Cruise Tourism Responsible: The Challenge for Ports to Maintain High Self Esteem. Online: http://www.cruisejunkie.com/icrt2.pdf

The economic impact of cruising on ports varies... A Meta analysis of the economic impact of cruises on destinations



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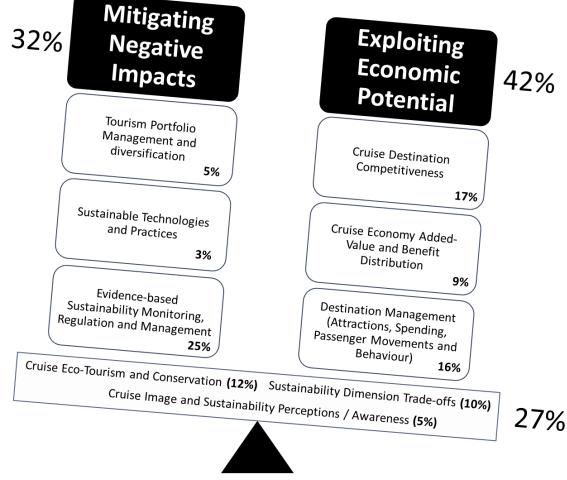
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Beyond Polarity... From 'Yes/No' to 'What', 'Why', . 'How' and 'Who?'

 "Sustainability is taking responsibility and not assigning it to others..."

WHAT? Cruise tourism sustainability – A decade of scientific research It is all about responsibility and community now... Not carbon neutrality by 2050!



The percentages reflect the proportion of published sources in the selected sample for this systematic literature review (N=151)

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Ocean Decade Laboratories A PRODUCTIVE OCEAN 31 May – 2 June 2022

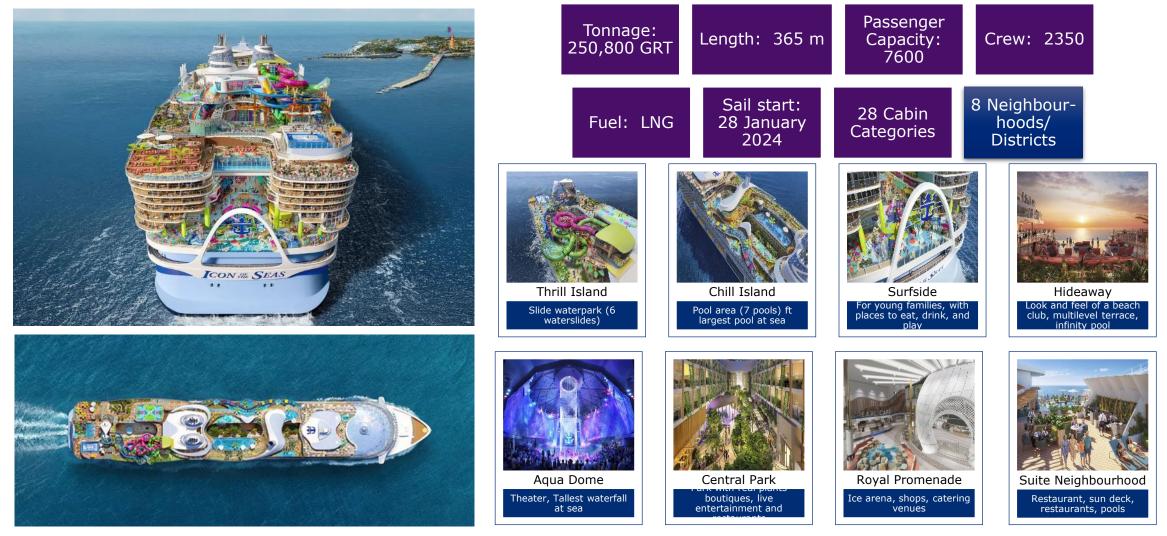


"Tourism does not manage itself and sustainability gets lost between apathy and advocacy. Empathy is what we need. We empathise with what we experience. Tourism is experience."



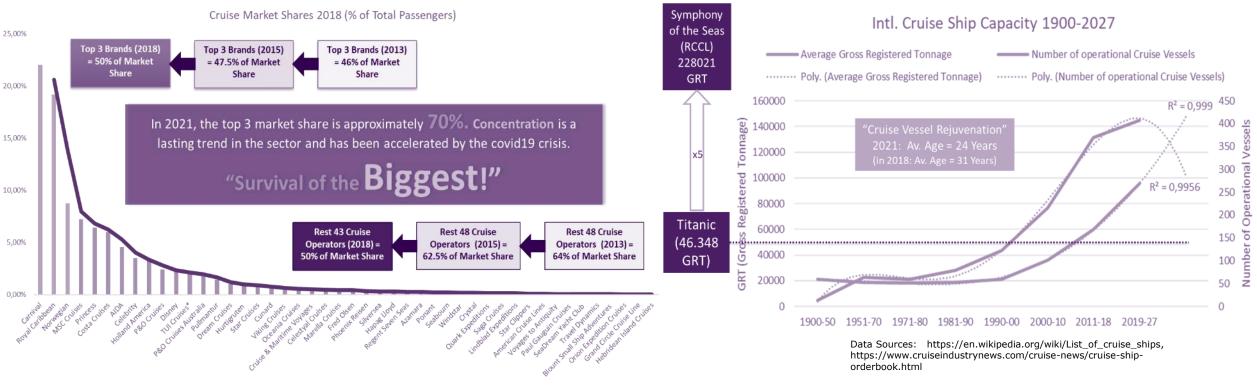
WHY? RCL's Icon of the Seas – Polarisation trend in cruising

Floating Destination: 20 decks, 8 neighbourhoods, 10.000 pax and crew



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WHY? Fewer players and larger cruise ships! *Trend acceleration due to COVID-induced fleet consolidation*



Data Source: https://www.cruisemarketwatch.com/

Fewer but larger ships and increasing market share **concentration** shift the balance of power in the supply chain. For **ports** this means higher **regional competition**

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WHY? Coopetition with ports / destinations Trend acceleration due to COVID-induced restrictions and debt

Ticket Revenue OnBoard Revenue Total Expenses Profit before Tax 10% EXPENSES 1.161€ 013 \sim 24% REVENUE 986€ 307€ 12.7% EXPENSES 1.429€ S) 01 24% REVENUE 1.242€ 395€ /12,6% 202€ EXPENSES 1.390€ ∞ $0\,1$ 1.151€ 444€ 28% REVENUE 12,7% EXPENSES 1.273€ 2021 29% REVENUE 1.034€ 422€

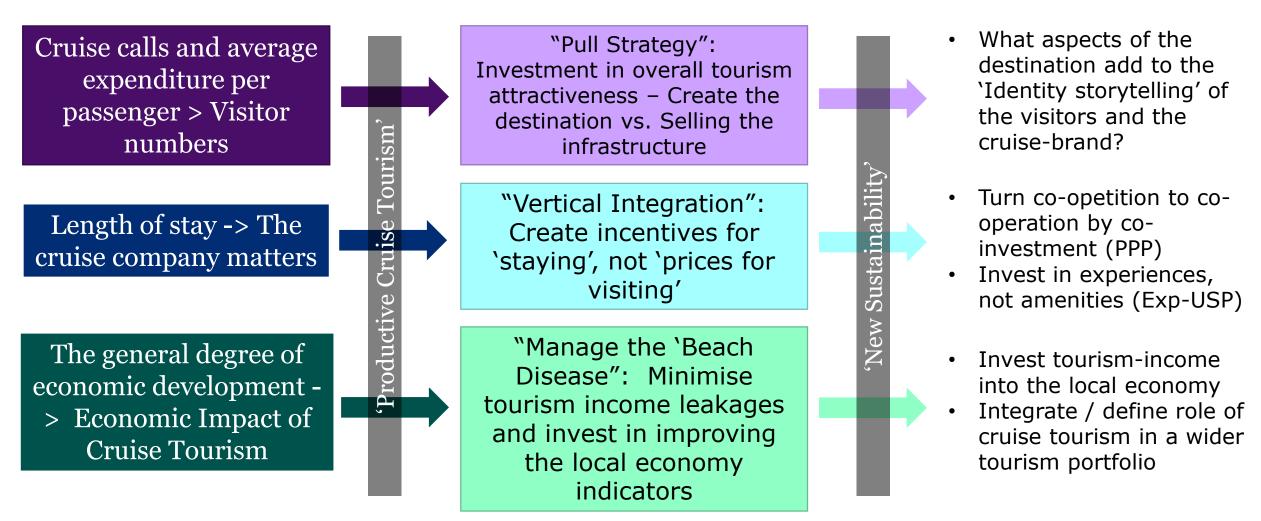
AVERAGE CRUISER FINANCIAL BREAKDOWN 2013-2021

Own Figure - Data Source: https://cruisemarketwatch.com/financial-breakdown-of-typical-cruiser/

The **Competition** on Land and **Monopolies on Board** create the premises for Captive Pricing On **Board Revenue is** vital for **economic** survival and profitability

WHO & HOW? Cruise tourism and destination management:

Critical success factors and strategic drivers



The Non-Headline Question for Today?

Remember:

- Cruise ships will sail... with or without you!
- Cruise ships will enter ports... yours or others'!
- Sustainability comes at a cost... to someone!

What are YOU going to do to contribute to more sustainable cruising?

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Thank you for your attention

