



Cruise 4.0: A 'Hands-On' View on Current Trends and the Future



Prof. Dr. hc Alexis Papathanassis

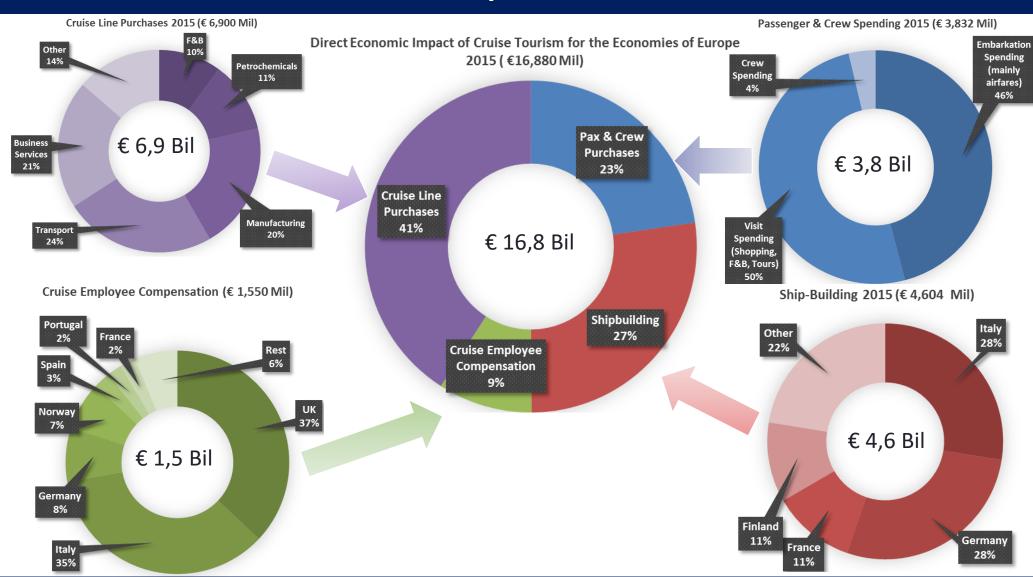
8. Rittal-Branchentag Schiff & See 2017 Hamburg (Germany) 9th May 2017



Cruise Tourism... A Booming Sector!

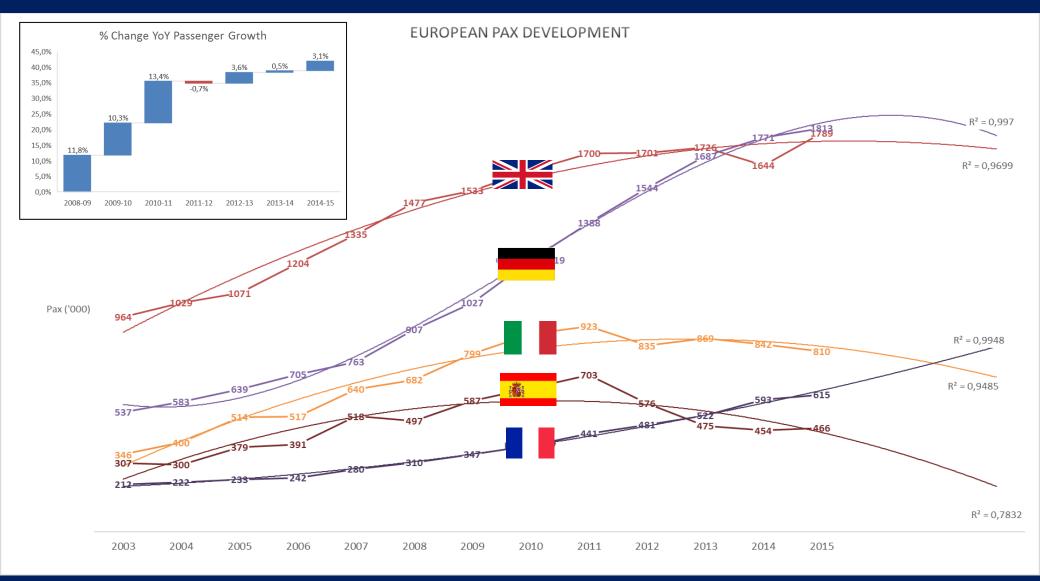


Direct Economic Impact of Cruise Tourism for the Economies of Europe 2015



^{*} Data Source: CLIA Europe Economic Impact Reports 2012-2016 – Online: http://www.cliaeurope.eu/media-room/clia-europe-economic-contribution-report

Cruise Passenger Development Main European Markets



My 'Hands-On'-Theory of Cruise Management Cruise Growth Sustainability...

Content Management

Distribution Control

Brand Protection

Offering & Innovation

Bargaining Power

Capacity Risk Management

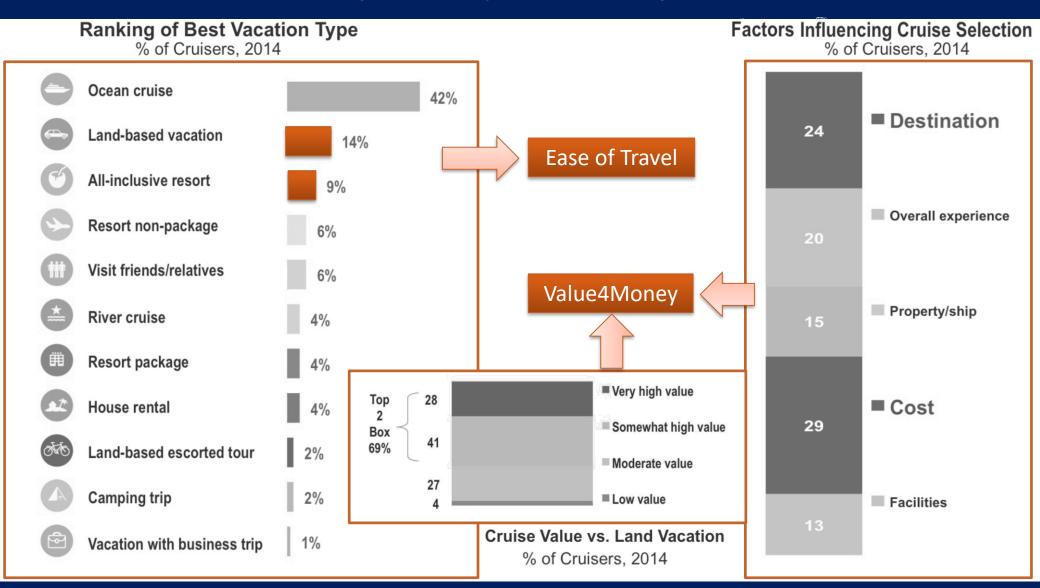
Automation and Productivity

Economies of Scope and Scale

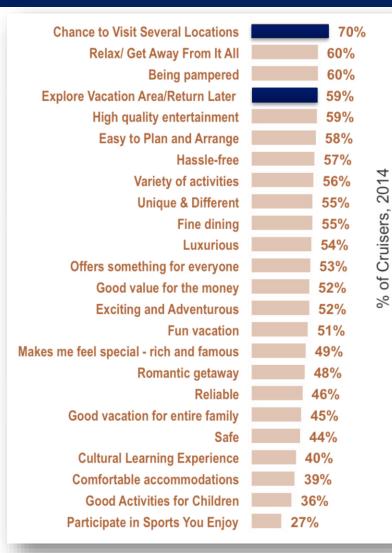
Demano

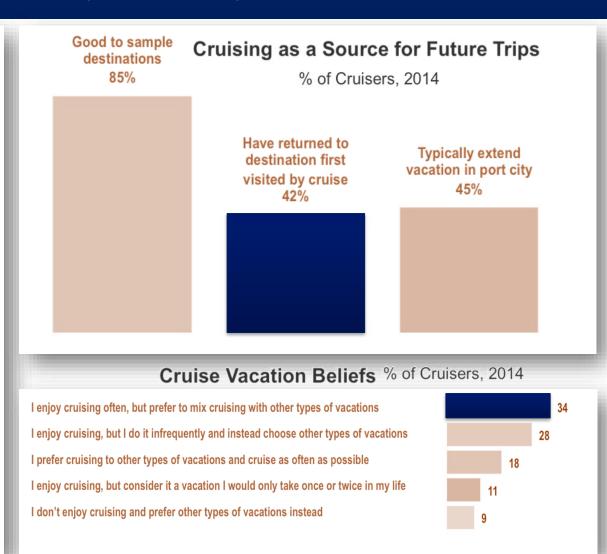
Supply

Cruise Guest Motives* Value-for-Money PLUS Ease of Travel

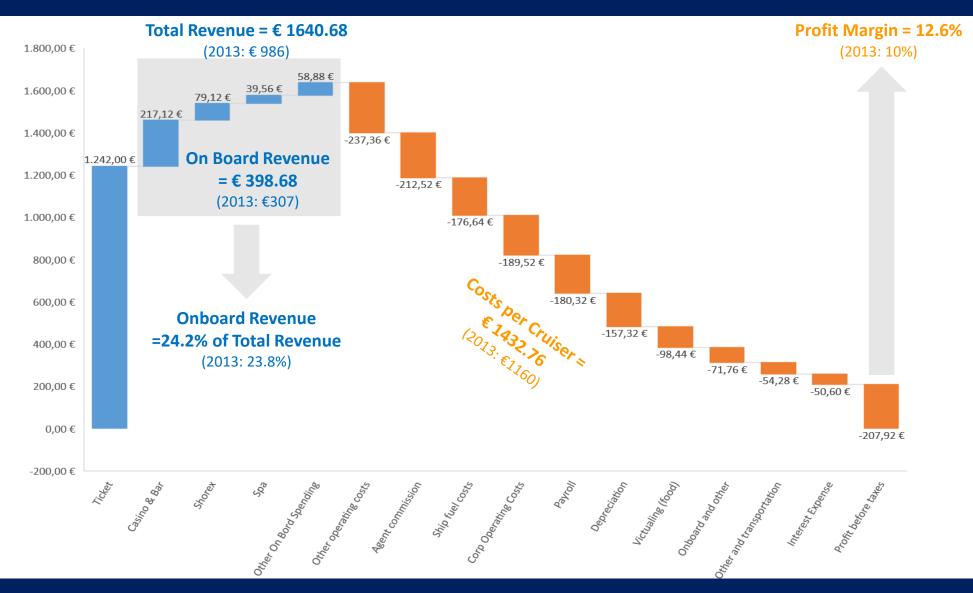


Cruise Guest Motives* Hybrid Customers... Competitive Scope Extension!





Average Cruiser 2015 Financial Breakdown*



Intl. Cruise Capacity 2015: Big 3 = 57% of Vessels / 79% of Pax Capacity



Cruise Growth is mainly supply-driven and sustaining it



Cruise Demand Offering and Innovation...



ADWEEK

BRAND MARKETING AGENCIES DIGITAL TV / VID

CREATIVITY

Royal Caribbean Courts Millennials by Promising Them an Anti-Cruise That Won't Suck

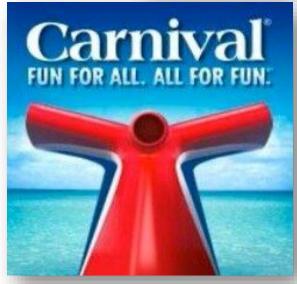
Because this is not the Caribbean. Or is it?

By David Gianatasio | October 19, 2015

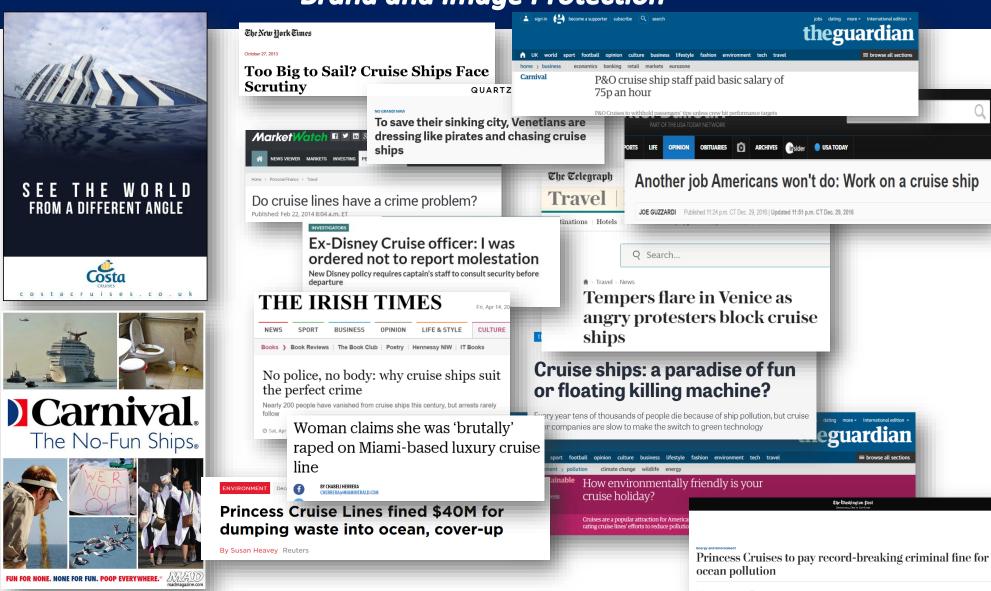




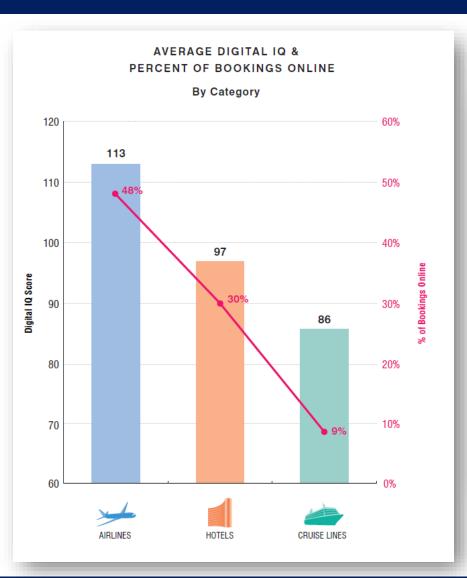


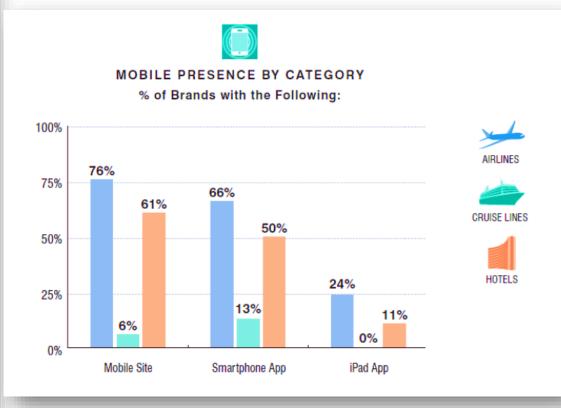


Cruise Demand Brand and Image Protection

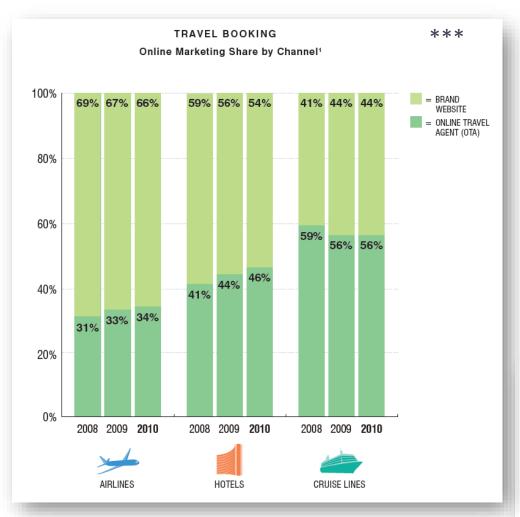


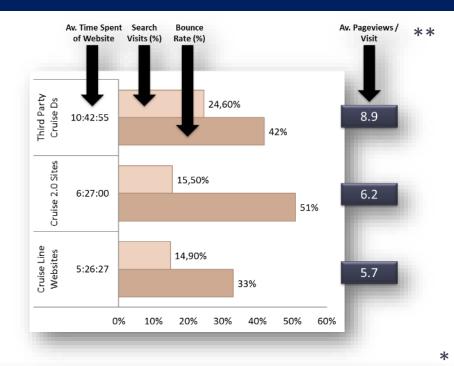
Cruise Sector Digital IQ Content & Booking Process Complexity = Human Agents

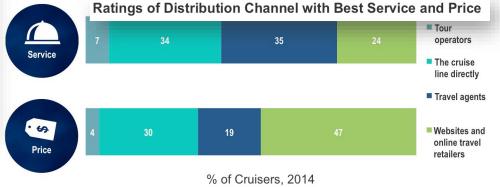




Distribution Democratisation Cruise Booking Process Complexity & Third Parties







^{*} CLIA (2015). 2014 North American Cruise Market Profile Report. Online: http://www.cruising.org/docs/default-source/research/clia_naconsumerprofile_2014.pdf

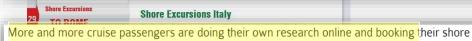
^{**} Source Data: Alexa.com

^{***} Galloway, S. (2011). L2 Digital IQ Index: Travel. Available Online: http://www.l2thinktank.com/research/travel-2011. Access Date: 12.06.2011

Cruise Demand <u>Distribution Control and Content Management</u>



Cruise lines had kept the shore excursions business under strict control; it was in fact their most profitable ancillary product. Exclusivity contracts with travel agents and on-destination companies closed the circle, making it impossible for local operators to reach the cruise customers before they got off the ship.



excursions independently, skipping the travel agent and the cruise line.

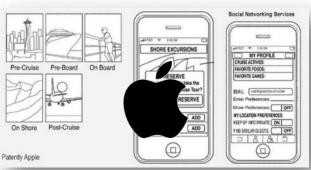
Unsurprisingly, cruise lines have started to lose ground to local operators as standard, 45-passenger,

over-priced excursions seem obsolete and unappealing compared to more local, personalized and economical independent operators tours.



ProPublica includes a ship-by-ship accounting for about 300 vessels. For any specific ship he or she might sail, a traveler can see a track record dating back to 2010.







Booking online is complex due to the vast number of ships, ports, destinations, cabin categories, etc. We have built a more intuitive way for consumers to search, discover and plan/book their cruise.

A cruise is definitely a social experience but so far social has been neglected by most OTAs. Cruise me helps you to connect with the cruise community, your friends and family and even other passengers who travel on the same ship. We enhance your travel experience before, during and after your cruise.

Technological Innovation will be the main competitive arena

for the cruise sector...

And the 'Share of

Passenger Wallet'

will be the prize.



(MONEY-) SMART CRUISE SHIPS

Just Gimmicks?!

Both bionic arms' movements are terned after the graceful Roberto Bolle Anthem of the Sea's BIONIC BAR is made up of 2 robotic arm bartenders a principal dancer with American WAYS TO RECEIVE YOUR DRINK AFTER ORDERING VIA AN APP: SHAKEN NOT STIRRED 1,000 MUDDLE STIR SHAKE STRAIN 21 TOTAL MIXERS: 8 SODAS 41,600 MAN HOURS 6 JUICES is how long it took to make and test Makr Shakr's 3 SYRUPS robotic bartenders-you could build approximately SUGAR, MINT, LIMES & LEMONS as guests can CUSTOM ORDER drinks by INGREDIENTS and POUR ORDER royalcaribbeanpresscenter.com

Cruise Supply Robo-Cruises!



Dancing Bionic Bar on
Anthem of the Seas (Royal
Caribbean)
https://www.youtube.com/w

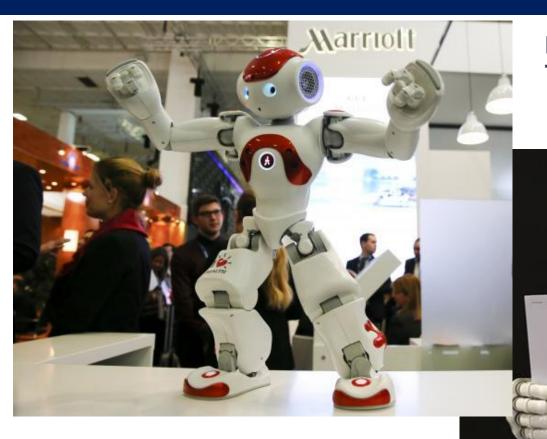
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Fusing Technology & Entertainment: Inside Two70

https://youtu.be/Ns2QJ k2--Rk

Cruise Supply Mario... Robotic Cruise Host



Robot hostess puts IT in international Tourism Fair https://www.youtube.com/watch?v=fljHh__UnPA

Meet Connie, the Hilton robot concierge https://www.youtube.com/watch?v=ghbS-aTYw14

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PROOF OF CONCEPT

AIDA

- ALDEBARAN

Travelzoo Survey Results 2016

"Robophiles and Robophobes: Britons Divided over Use of Robots in Travel"

Comfortable with Robots in Travel



http://photos.prnewswire.com/prnh/20160303/340125-INFO

Advantages outweigh disadvantages

Top 5 reasons to use robots in travel	% who see it as a reason	Top 5 reasons not to use robots in travel	% who don't see it as a reason
Deal with data faster	81%	They take away jobs	75%
Don't tire Deal with languages Save time for human colleagues Better memory/ recall	81%	Too impersonal	75%
	79%	Won't get slang/irony/ cultural nuances	70%
	77% 76%	Not creative enough Make humans lazy	68% 60%

However, in three European countries the main disadvantage is as strong as the main advantage France: 80% said it was good they didn't tire, 80% thought they were too impersonal Germany: 88% said it was good they didn't tire, 87% thought they were too impersonal UK: 78% said their speed dealing with data was good, 78% thought they wouldn't get slang/irony

And in unemployment hit Spain, fear of losing jobs to robots outweighed all advantages (so Spain is optimistic about robots overall but unemployment is a worry)

http://photos.prnewswire.com/prnh/20160303/340126-INFO

Cruise Supply Smart Cruise Ships: RCL Anthem of the Seas



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http://www.telegraph.co.uk/content/dam/Travel/le adAssets/32/61/Bionic-Bar_3261528a-large.jpg



system.com/fileadmin/user upload/News/2016 0219-Sinus-Award-2016/dancing-screens.jpg

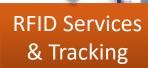


Ship-**Dedicated** App

http://www.royalcaribbeanblog.com/2014/10 /05/99-days-of-quantum-royal-ig



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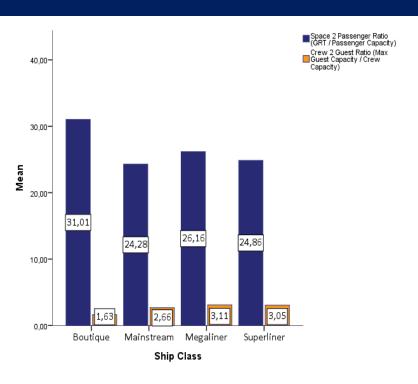


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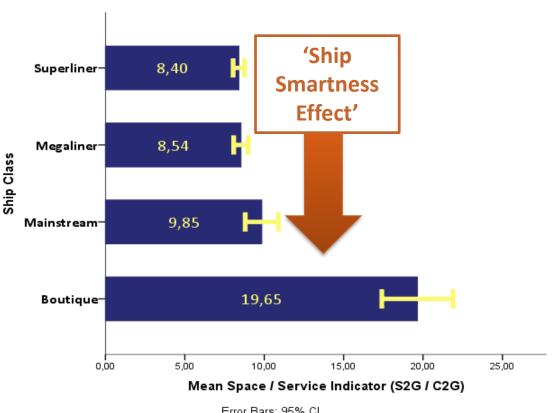


Robotic

Pax-Space & Pax-Crew Ratios... A Look through 264 Vessels!



Average 26 GT per Passenger (Guest or Crew) Average 1 Crew to 3 Pax:



Error Bars: 95% CI

RCL's Anthem of the Seas and Quantum of the Seas are the ONLY Megaliners with a Space-Service Indicator of over 10

So where does this leave us?! Cruise Business 'Techno-Oligarchy'

Cruise 4.0 Effects:

- Supply-Side:
 - Mega-Smart Ships:
 - Technology and Ship-building Barriers
 - Capacity Space Optimisation
 - Revenue Cost Optimisation
 - Downward Vertical Competition (esp. Ports) To maximise 'share of wallet' / Onboard revenue
- Demand-Side:
 - 'Shake out' of SME Cruise Operators ('differentiate or die')
 - ICT-enabling of distribution and reduction of capacity risk (for large vessels)
 - Upward Vertical Integration (esp. Online Retail) To capture market share



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