Port of Seattle



Port of Seattle

Commission Retreat

July 29, 2020

Port of Seattle

2020 Commission Budget Retreat Agendas
July 29th 8:30 – 12:45
August 6th 8:30 – 11:45

To be in accordance with the Governor's 'Stay at Home' order and Proclamation 20-28, the public may listen to the full meeting live via phone by calling (425) 660-9954, meeting ID: 841799251#. There will be no public comment during this meeting.

The purpose of this retreat is to receive input from industry experts and to review our internal SWOT analysis in preparation for the 2021 budget season. Commissioners will also discuss individual budget priorities.

July 29, 2020
Industry Analysis and Port-wide SWOT

8:30 am **Opening Remarks and Goals for the Day** *Steinbrueck & Metruck*

8:45 am **Industry Experts Analysis:** Will COVID fundamentally change the way that people travel and trade in any long term/permanent manner? What does 'recovery' look like in 2021?

- Aviation – 45 minutes
  - Mark Pearson, VP Real Estate, Delta Airlines. Steinbrueck contacted Scott Ingham, who secured Pearson's agreement to speak
  - Stephen Van Beek, head of North American Aviation for the Steer Group, a global consultancy

- Cruise – 30 minutes
  - Luis Ajamil, Bermello Ajamil Partners. His firm has advised for Port for many years.

- Maritime/Real Estate – 30 minutes
  - Irwin Park with Madison Bay, expert on Ballard/Interbay
  - Matt Anderson with Heartland. He is managing the Port's RE Strategic Plan update and did our plan in 2016, and was the consultant lead on our 2000 Harbor Industrial Lands study. His firm also did work for the state on the Armory project.

11:00 am *Break*

11:10 am **Preliminary CIP Maritime/EDD Funding Analysis** *Metruck Thomas, Morrison*

12:30 pm	**2021 Commission Budget Priorities** • Commissioners 6 minutes each	*Pritchard*
1:00 pm	**Closing Remarks and Next Steps**	*Commissioners & Metruck*
1:30 pm	**Adjourn**	

August 6, 2020
CIP and Levy Discussion

8:30 am	**Opening Remarks and Goals for the Day**	*Steinbrueck & Metruck*
9:00 am	**Brad Tilden, Alaska**	
9:45 am	**CIP and post-COVID planning**	*Metruck*
10:45 am	*Break*	
11:00 am	**2021 Levy Discussion**	*Metruck, Thomas*
11:45 pm	**Closing Remarks and Next Steps**	*Commissioners & Metruck*
12:00 pm	**Adjourn**	

Attending
- Steve Metruck
- Commissioners and Commission Office Staff
- Dan Thomas, Michael Tong, Kelly Zupan, Elizabeth Morrison
- Lance Lyttle, Borgan Anderson
- Dave McFadden
- Stephanie Jones Stebbins
- Elizabeth Leavitt
- Katie Gerard
- Dave Freiboth
- Dave Soike
- Pete Ramels
- Bookda Gheisar
- Mike Merritt
- Larry Ehl
- Pearse Edwards
- Glen Fernandes

Commission 2020 Budget Retreat Part 1

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Puget Sound Business Journal – July 17, 2020

‘NOT THIS YEAR OR EVEN NEXT SUMMER’

Facing travel bans and passenger health concerns, airline recovery may take years

With airline passenger traffic volumes rising in Seattle and other major U.S. cities over the past two months, top airline executives and analysts who follow their companies caution that a full recovery remains a long way off.

“We’re on an uptick. But none of us thinks it’s going back to where it was,” Alaska Air Group CEO Brad Tilden warned during a recent airline industry webinar.

In 2019, Alaska carried an average of 133,000 passengers daily across the U.S. That cratered to 4,000 daily passengers during the worst part of the pandemic in March and April.

In early July, Alaska carried 45,000 people a day across the country, Tilden said.

“We’re building back. I don’t think we believe we’re going to get there this year or even next summer.”

Airline industry analysts agree, but remain heartened.

“Traffic over the (July 4) holiday weekend was better than it has been since around March 18,” Cowen and Co. Managing Director and veteran airline analyst Helane Becker said. “There were three days (out of four) when the number of passengers screened by the Transportation Security Administration exceeded 715,000. We’re a lot better than I expected we’d be by now.”

Still, Becker, who predicts that daily volumes might rise to 1 million passengers daily for Thanksgiving and Christmas holidays, said that despite recent optimism, she continues to believe it will take three to five years before 2019 airline traffic levels return.

CFRA Research analyst Colin Scarola told clients that while some believe a robust recovery is underway, no significant turnaround will come soon because people still don’t feel comfortable traveling. “If recent polls are remotely accurate, more than 40% of Americans are uncomfortable flying during the pandemic,” Scarola said.

Cowen’s June consumer polls found most people still don’t want to fly until 2021, Cowen said.

Scarola said that means that any recovery will stall in the second half of 2020, leaving airlines burning more cash than they’re bringing in from ticket sales, “especially as business trips remain a no-go for many employers.”

Raymond James Managing Director and airline analyst Savanthi Syth said her firm's June traveler survey also showed only 45% intend to return to the skies within a few months of the pandemic subsiding; 36% said they'd wait six months.

Syth told clients the modest recovery began stalling in July's first two weeks, because of the surge of infections that have pushed the pandemic daily case numbers to new records in Washington state – 1,100 new daily cases on Tuesday – and Florida, Texas and California.

Buoyed by June passenger upticks, Alaska, Delta and United had added hundreds more flights for later this summer and fall and returned grounded jets to service after parking hundreds this spring. Those plans are being scaled back now as traveler unease grows.

Bainbridge Island aviation analyst Scott Hamilton, of Leeham, never stopped being uneasy.

"Although more passengers are flowing through airports and airlines are adding back service, airplane order deferrals continue. Airline bankruptcies do, too," Hamilton told his clients.

Among them, Level, a low-cost Austrian airline, and Romanian budget carrier Blue Air, will likely end its six orders for 737 Max jets.

LATAM Argentina also ceased operations, while its parent LATAM Airlines Group, AeroMexico and Colombia's Avianca all entered bankruptcy proceedings.

It's a nightmare for Boeing and Airbus. After years of record sales, both slashed production and will shed a combined 30,000 workers.

Scarola said another recovery factor – prices for tickets sold – also "is being overlooked."

Scarola said fare prices fell 29% year over year in May as too many airlines battled for too few passengers. "Some investors expect leisure fares to rapidly increase in the second half, but we doubt it," Scarola said.

At least 14 states, including New Jersey, New York and Connecticut, now require out-of-state visitors to undergo 14-day quarantines. Bookings for the past two weeks have dropped, Syth said, and summer fares are dropping, not rising.

Becker canceled her vacation, refusing to self-quarantine.

Scarola said one example of pricing pressure on the downside is Alaska rival JetBlue Airways' launch of 30 leisure routes to capitalize on consumers' intense desires for domestic vacations after lockdown. Southwest made a similar move, as the carriers fight for smaller market share.

Still, increasing airplane flights are raising the hopes at Aviation Technical Services, whose Everett-based business has dropped 40% since March. ATS maintains and overhauls Southwest and Alaska jets: More planes flying means more work in the months ahead, CEO Matt Yerbic said.

Airline Industry Online – July 20, 2020

Novel Coronavirus Shakes Up Global Airline Industry

by Cathy Buyck

In keeping with his motto "Stay strong. We will get through this crisis and keep the world connected," the International Air Transport Association (IATA) director-general Alexandre de Juniac did not want to sound too pessimistic when briefing media earlier this month on the recovery prospects of the industry. Yet, his message was gloomy. "This crisis could have a very long shadow. Passengers are telling us that it will take time before they return to their old travel habits. Many airlines are not planning for demand to return to 2019 levels until 2023 or 2024," he warned, as he shared the results of a survey of leisure and business travelers in 11 countries, conducted in February, April, and June on behalf of IATA. Eighty-four percent of passengers—or more than 8 out of 10— surveyed in June are afraid to travel until Covid-19 is contained, up from 74 percent in February, and just 45 percent said that they will travel again in the first months after the pandemic subsides. In early April, 61 percent said that they would. About two-thirds see less travel in their future—be it for vacation, visiting friends/relatives, or business.

Research from global consultancy ICF echoes IATA's findings. Its surveys of aviation sector participants and travelers from across the world conducted in late March/early April and in late May/early June show that views on the recovery have become markedly more pessimistic. Industry stakeholders expect a much slower recovery to pre-crisis activity levels. Where in late March/early April most anticipated the recovery to take six to 12 months,in late May/early June the majority of respondents (56 percent) put the recovery timeframe at more than two years. Within that category, 28 percent of respondents answered between two and three years, 24 percent answered between three and four years, and 4 percent expected the recovery to take longer than four years. As for consumers, regardless of location or reason for traveling, almost everyone (95 percent) expressed different attitudes about traveling in the wake of the Covid-19 pandemic. "It is clear that the road to recovery is not going to be smooth—or rapid," ICF's consultants concluded.

Worst Year in Aviation History

For sure 2020 is set to become a dismal year for airlines financially, as the pandemic and relating travel restrictions or bans, border closures, and quarantines bring an abrupt end to a decade of steady profitability. Globally, airlines can expect to lose $84.3 billion this year, for a negative net profit margin of 20.1 percent, according to IATA's latest outlook, released in early June. IATA expects revenues to fall 50 percent, from $838 billion in 2019 to $419 billion this year. Passenger revenues will likely collapse to $241 billion, about a third of last year's level.

Passenger numbers will roughly halve to 2.25 billion, roughly equal to 2006 levels, which would equate to an average net loss of $37.54 per passenger. During the height of the financial crisis, in 2008, operators incurred an average loss of $10.49 per passenger. “Financially, 2020 will go down as the worst year in the history of aviation,” commented de Juniac. “On average, every day of this year will add $230 million to industry losses.”

IATA’s projections assume no second wave of Covid-19 cases and thus end-of-year figures could prove worse owing to the continued rise of the number of infections—from 5.9 million reported cases on May 31 to 12.8 million reported cases on July 13, according to World Health Organization (WHO) data. “There is a lot to be concerned about,” stressed WHO director-general Tedros Adhanom Ghebreyesus during a July 13 media briefing. “The virus remains public enemy number one, but the actions of many governments and people do not reflect this,” he said, warning that if people don't follow basics the pandemic will get “worse and worse and worse.”

Europe Upholds Fractured Approach to Travel Restrictions

Several countries, regions, or cities that overcame the first peak of the outbreak and eased lockdowns and now see an increase of new infections have begun to reinstate restrictions or quarantines. In Europe, the situation changes almost daily, as each government applies its own rules for travel to and from non-EU countries but also within the bloc, wreaking havoc on airlines’ schedules as they unground part of their fleets and restore networks. “This has effectively led to a patchwork system of travel restrictions and border controls throughout Europe, which may remain in place for weeks or months to come,” Airlines for Europe (A4E) and ACI Europe lamented in a joint statement. “As a result, there is very little clarity and significant uncertainty on which citizens can travel where,” the European airlines and airports trade groups said.

For Thomas Reynaert, managing director of A4E, the situation “is also creating an uneven playing field within Europe at a time when our sector is still struggling for survival.” IATA projects Europe’s airlines to lose $21.5 billion in 2020 and account for among the top three worst-affected regions, globally. Passenger demand is set to decline by over half, according to IATA’s forecast.

Eurocontrol data show that some 13,378 flights operated in the European network on July 13. That equates to about 37 percent of 2019 levels, though it represents a welcome increase on the 4,679 flights that took place a month earlier. Ryanair, which grounded up to 98 percent of its fleet, reclaimed its pre-coronavirus leadership position and operated 1,006 flights. Three low-cost carriers rank in the top five in terms of movements, Ryanair, Wizz Air, and EasyJet. Only one EU legacy airline, Germany’s Lufthansa, features in the top five despite most of the bloc’s flag carriers—including Air France, Austrian Airlines, airBaltic, Finnair, KLM, SAS, and TAP Air Portugal—having received generous financial support packages from their governments.

Generous Government Aid But Not to All Airlines

State aid made available to airlines due to Covid-19 topped $120 billion by early June, IATA analysis reveals. However, not all governments, mainly in Asia, Latin America, and Africa, have shown a willingness or an ability to afford s supporting their airlines in the same fashion, leaving operators cashless. “Several airlines have already entered bankruptcy protection or administration since the start of the pandemic, including Aeromexico, Air Mauritius, Avianca, South Africa’s Comair, LATAM Airlines, Thai Airways, and Virgin Australia. With all of them, the failure to secure financial support from their governments was the main driver,” pointed out Brendan Sobie, founder of Singapore-based independent aviation consulting and analysis firm Sobie Aviation. He added he expects all seven to successfully emerge from bankruptcy or administration and survive following restructurings.

A handful of other airlines have ceased operations entirely and are in the process of being liquidated—Austria’s Level Europe and sister airline Level France, Germany’s SunExpress Deutschland and Thailand-based NokScoot—“but they were small subsidiaries of much larger parents that continue to operate,” Sobie told AIN.

He warned that a few more Asian budget airlines could shut down, joining NokScoot, including some of the nine airlines that operate under the AirAsia brand. “Asia’s independent LCCs are currently at a disadvantage because thus far the bailout packages by Asian governments have only benefitted full-service airlines and their LCC subsidiaries,” Sobie asserted, adding that governments might still step in on behalf of LCCs. For example, AirAsia expects to secure government loan guarantees in Malaysia and the Philippines, helping to support an overall restructuring that also includes a planned equity sale and renegotiated aircraft lease agreements.

According to IATA predictions, airlines in the Asia-Pacific region will be the hardest hit by the coronavirus crisis of any global region, with losses expected to total $29 billion for 2020. The association expects Asia-Pacific passenger demand to fall 53.8 percent year-over-year.

Forbes – July 20, 2020

Can Insolvencies Be Avoided In The Face Of $3.4 Billion Losses For Airport Retailers?

Anyone who thinks that downtown retailing is having a hard time during the Covid-19 era needs to visit any airport in the U.S. Retail and restaurant concessionaires there are on their knees thanks to forced closures and travel bans.

Losses that started mounting from March are expected to balloon to $3.4 billion by the end of 2021 if no mitigating action is taken according to a newly-published forecast from the Airport Restaurant and Retail Association (ARRA).

Even with extra seat capacity being returned into the American domestic network this summer, the picture is decidedly downbeat. ARRA's report, called "The Survival and Revival of Airport Shopping and Dining," says that the businesses it represents "regardless of size will quickly be facing solvency issues."

The association adds: "The current trajectory... will usher in a wave of permanent restaurant and retail closures that will turn bustling airports once pulsing with energy into 'ghost towns' even after travel recovers."

The latest scheduled seat data from analyst OAG for the week starting July 13, show that the U.S. market is down 46% versus late January—before coronavirus cases led to a lockdown in Wuhan and other cities in China.

Show Up For Young Absentee Voters

OAG's chief analyst John Grant said in a blog post: "Last week's significant capacity increases from both American Airlines and United Airlines could not be repeated for a second week, although American adding a further 200,000 plus seats a week into the market reflects some confidence in future demand. It also places the airline ever closer to taking back the number one position from Southwest Airlines."

"**Flights are not passengers"**

Throughout June, Southwest has been the world's leading airline for scheduled capacity, but American Airlines has been quickly restoring routes. But ARRA rightly points out that "flights are not passengers: traffic still will not recover this year."

According to Airlines For America, in the week ending July 12, domestic air travel was down by 71% while international—which attracts higher-spending passengers—was down by 90%. Looking at passengers processed by Transportation Security Administration airport checkpoints, daily July traffic had yet to break 80,000 by mid-month. Last year at this time, daily numbers were at the 2.5 million level, so ARRA could be right on its forecast.

Down down down: ARRA estimates put cumulative losses at $3.4 billion by the end of 2021.

While the recent uptick in passengers is welcome, the report warns that "reopening too soon is a recipe for financial disaster." ARRA says: "This is potentially worse than being closed at extremely low passenger volume as costs that can be eliminated when stores and restaurants are closed are now incurred, and grow at a faster rate than the underlying sales." Typically restaurants cannot return to profitability until they recover at least 85% of sales, and the story is similar for retailers.

Nonetheless, some retailers are attempting a restart. Hudson, a powerful player in the market, has begun a reopening program of its stores, despite Covid-19 turning a 2019 first quarter operating profit of $15.1 million into a loss of $76.3 million for the same period this year. How its stores perform will not be fully evident until third quarter results come in. Food travel retailer SSP increased its revenue from North America in the six months to March, but that is likely to be the last growth spurt for a while.

Reopening a bit at a time

How can airport stores and eateries open and still remain financially viable? By reopening in a smarter way, at a measured pace says ARRA—preferably starting with stores that directly meet traveler needs, like coffee, quick-service and convenience outlets, followed by bars and full-service restaurants.

This makes sense, but it also creates problems for those units that will remain closed until passenger numbers pick up strongly. The variable nature of Covid-19 infection rates in the U.S. and spikes in Florida, California and Texas, mean that a big traffic pick-up is not around the corner. The uncertainty has made Goldman Sachs revise its passenger forecasts through 2022 and it does not now expect 2019 passenger numbers to be reached until at least 2023.
That is a long wait for businesses to reopen. Yet the ARRA report suggests that “at our current 25% traffic level, nearly 75% of current program space can be considered surplus.” Retailers are hoping that American airports will get to 35% of 2019 traffic this summer, and 50% before the end of the year.

At these traffic levels, opening every shop and restaurant would dilute each one’s earning power and risk the viability of them all. In the report, ARRA argues that opening “an appropriate number” of stores based on traffic would give those businesses a fighting chance of being profitable. Closed units, even with minimum annual guarantee (MAG) waivers, would face significant hurdles and have to service debt.

Way too much concession space

“Concessions programs developed over the past decade were sized during a period of high enplanements and tremendous anticipated traffic growth,” notes ARRA. “Current leases were proposed and negotiated in anticipation of this growth. The result is that there is too much space.”

ARRA has put forward four solutions for airport landlords to consider in the knowledge that they face concession challenges for at least three years. They can be summarized as follows:

- **Deactivate units and suspend leases**—including payment of MAGs—until passenger traffic is back to a viable level. Leases and rents simply restart for the balance of the term.
- **Airports buy out leases**, or portions of them, through purchase of concessionaire assets. The space can be re-tendered as required.
- **Concessionaires give back spaces** to the airport with no penalty. The lease is cancelled and all obligations end.

- **Do nothing different.** Either airports demand restaurants and retailers open their stores or they let them remain closed, but demand MAG payments. In these cases the risk of bankruptcy is high.

Several major airports have already agreed to temporary rent waivers this year including Atlanta Hartsfield-Jackson, Los Angeles World Airports, Miami International. The Cares Act 2020 already provides $10 billion worth of grants to shore up airports and their concessionaires with at least 30 major U.S. gateways gaining assistance. Rent waivers could therefore extend into 2021 if current low-traffic conditions persist and become chronic.

Is structural change inevitable?

Covid-19 has resurrected calls worldwide for the retail concession framework at airports to be overhauled so that there is a more balanced and responsive formula for rent and/or profit sharing when things go wrong.
In France, at Group ADP, and Germany, through Frankfurt Airport Retail, for example, joint venture models between airport landlords and retailers exist where the risks and the rewards are shared. In the U.S. the entire aviation financial eco-system is in need of a reset, believes ARRA.

The association says: “If we contemplate that U.S. aviation traffic may not recover for three years, we must also contemplate structural revisions to the industry. The system needs help to support the services and experience our customers have come to expect. We need to think through as partners how that will work. It’s time to begin the conversation.”

Delta Air Lines

July 29, 2020

Safe Harbor

Statements in this presentation that are not historical facts, including statements regarding our estimates, expectations, beliefs, intentions, projections or strategies for the future, may be “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995. All forward-looking statements involve a number of risks and uncertainties that could cause actual results to differ materially from the estimates, expectations, beliefs, intentions, projections and strategies reflected in or suggested by the forward-looking statements. These risks and uncertainties include, but are not limited to, the material adverse effect that the COVID-19 pandemic is having on our business; the impact of incurring significant debt in response to the pandemic; the possible effects of accidents involving our aircraft; breaches or security lapses in our information technology systems; disruptions in our information technology infrastructure; our dependence on technology in our operations; the performance of our significant investments in and commercial relationships with, airlines in other parts of the world; failure to comply with the financial and other covenants in our financing agreements; labor issues; the effects of weather, natural disasters and seasonality on our business; the effects of an extended disruption in services provided by third parties; the cost of aircraft fuel; the availability of aircraft fuel; failure or inability of insurance to cover a significant liability at Monroe’s Trainer refinery; the impact of environmental regulation on the Trainer refinery, including costs related to renewable fuel standard regulations; our ability to retain senior management and key employees; damage to our reputation and brand if we are exposed to significant adverse publicity; the effects of terrorist attacks or geopolitical conflict; competitive conditions in the airline industry; interruptions or disruptions in service at major airports at which we operate; the effects of extensive government regulation on our business; the impact of environmental regulation on our business; the sensitivity of the airline industry to prolonged periods of stagnant or weak economic conditions; and uncertainty in economic conditions and regulatory environment in the United Kingdom related to the exit of the United Kingdom from the European Union.

Additional information concerning risks and uncertainties that could cause differences between actual results and forward-looking statements is contained in our Securities and Exchange Commission filings, including our Annual Report on Form 10-K for the fiscal year ended Dec. 31, 2019 and, our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020. Caution should be taken not to place undue reliance on our forward-looking statements, which represent our views only as of July 14, 2020, and which we have no current intention to update except to the extent required by law.

DELTA

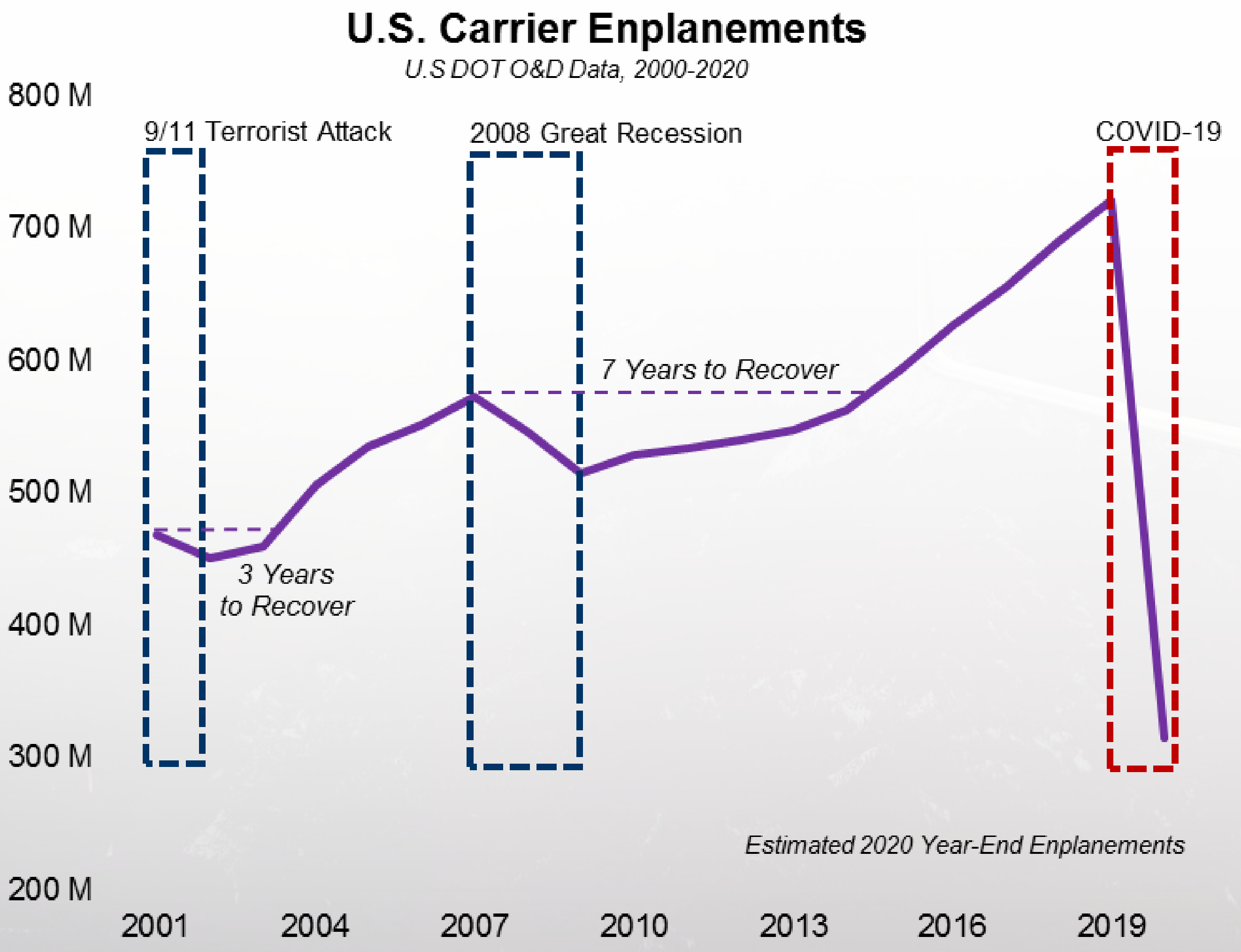
Current Environment

- COVID-19 has had an unprecedented impact on Delta’s business
- Delta’s response to this crisis has been focused on **three key priorities**:
  1. Protecting the health and safety of employees and customers
  2. Preserving financial liquidity
  3. Defining Delta’s recovery path
- Demand has recovered from mid-April lows, driven by domestic leisure travelers, but has flattened with the rise in COVID-19 cases
  - International improvement expected to lag Domestic by 1 to 2 quarters
  - Industry experts expect 2021 demand to be **~20-30% smaller than 2019**
  - Return to 2019 revenue levels not expected until **at least 2023**
- Principal financial goal is to reduce average daily cash burn to zero by year end
  - Daily average cash burn of $27 million in June, a significant improvement from peak burn rate in late March and initial expectations

Note: The company defines cash burn as net cash from operating activities and net cash used in investing activities, adjusted for (i) net redemptions of short-term investments, (ii) strategic investments, (iii) net cash flows related to certain airport construction projects, (iv) proceeds from financing arrangements that are reported within investing activities, (v) CARES Act grant proceeds, and (vi) other charges that are not representative of our core operations, such as charges associated with our voluntary separation and early retirement programs.

Current Environment

- COVID-19 has impacted the industry more profoundly than 9/11, the Great Recession



Delta: Aggressive Self-Help Measures to Preserve Cash

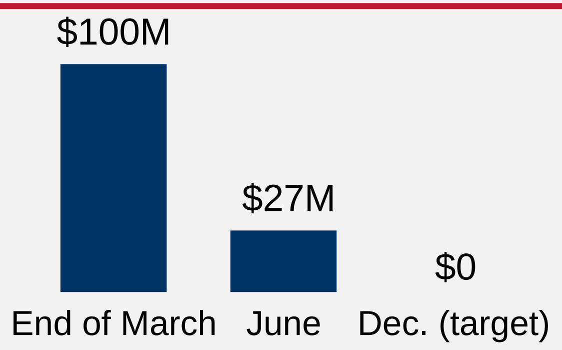
Cost Reductions

- June quarter total expenses declined by $5.5 billion or 53% over prior year; expect to achieve a similar 50% reduction in the September quarter
- Labor savings driven by **25% reduced work schedules** and more than **40% of workforce taking voluntary leaves**
- More than **17k employees have taken voluntary retirement/separation packages**, equivalent to more than 20% of the non-pilot workforce
- Consolidated airport facilities, including the temporary closure of concourses and Sky Clubs, and announced temporary and indefinite suspensions of service in certain markets
- Reduced contractor and discretionary spend

Cash Preservation

- Expense reduction has driven significant improvement in daily rate of cash burn
- Reduced CapEx by ~$3.5 billion (77%) in 2020
  - Deferred new aircraft deliveries, aircraft mods, IT initiatives and ground equipment refresh
- Extending payment terms with airports, vendors and lessors

Average Daily Cash Burn

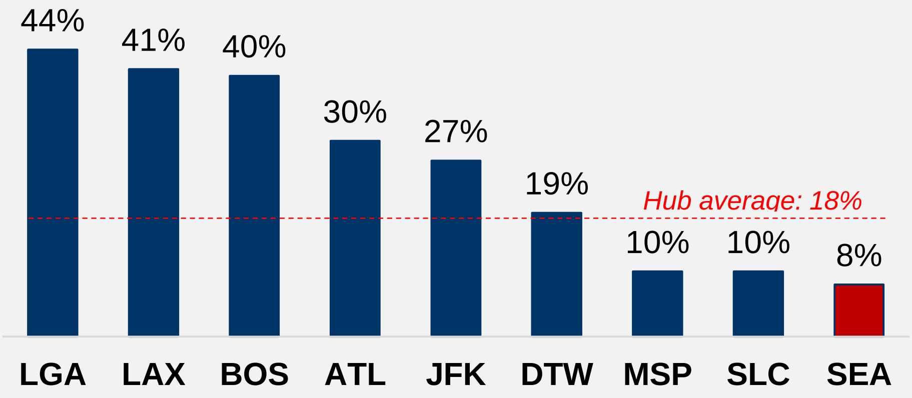


Airports: Aggressive Self-Help Measures to Preserve Cash

O&M/CapEx

- Delta's hub airports began eliminating operating costs in March, including shuttering concourses where possible; average savings of ~18%
- ATL, BOS, DTW, JFK, LGA, LAX, MSP, SLC have all closed terminals and **strategically cut CapEx projects** during the COVID-19 crisis

O&M Reduction: 2Q



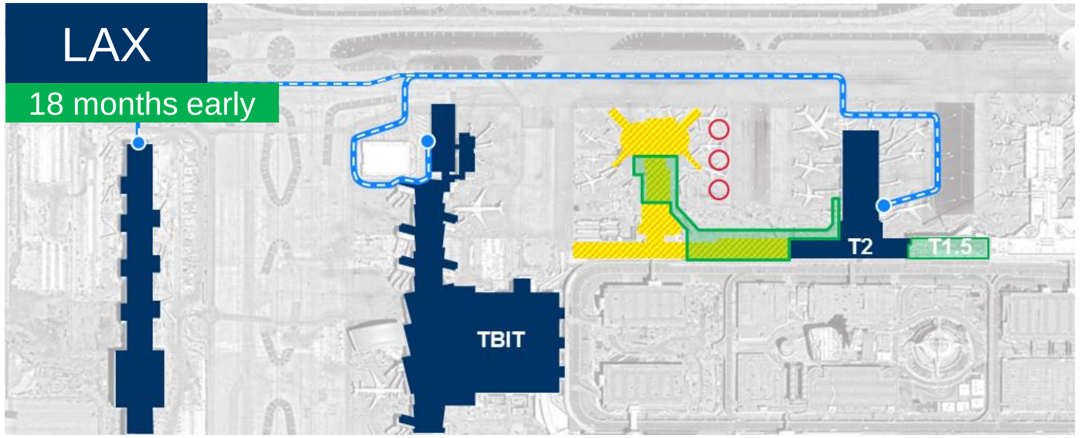
Payroll Impact

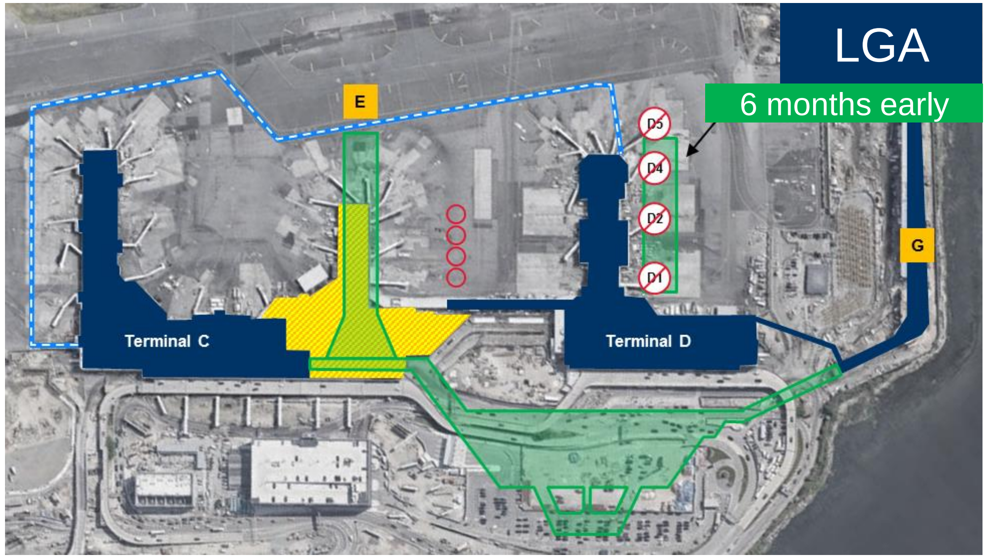
- Some of our hub airports have saved costs through payroll cost-cutting measures
  - LAX granted >350 employees severance through a voluntary early retirement package
  - DTW has completed **~20% reduction** in at-will headcount; discussions with union population, including voluntary retirement packages, are ongoing
  - Additional cuts of contractor services
- Airports have discretion to reduce headcount by 10% under the provisions of the CARES Act

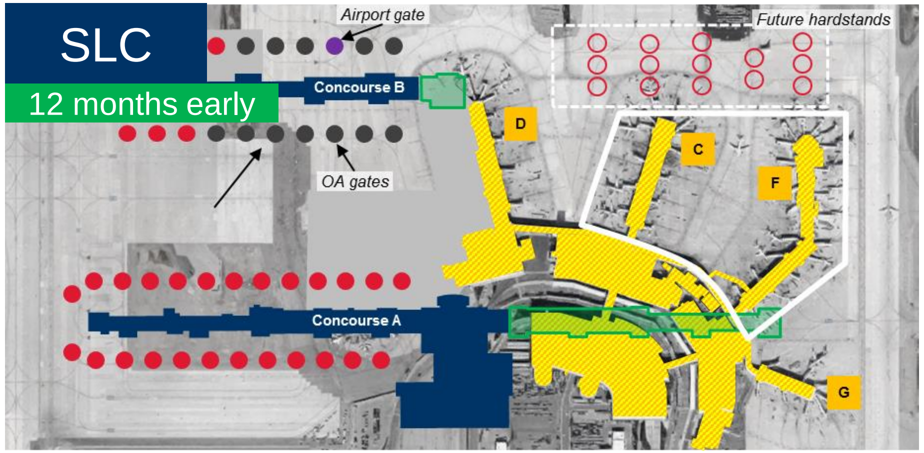
DELTA

Acceleration of Strategic Capital Projects

- Delta is supportive of opportunistic, phased airport expansion to deliver enhanced efficiency to complete capital projects
  - Construction at LGA, LAX and SLC has been accelerated a year on average thanks to our opportunistic response







Recovery is Dependent Upon Partnership

- The timeline for industry recovery to pre-COVID-19 levels remains unclear
- Operating cost reductions and capital preservation in the near-term are key to weathering the storm
- Lower traffic levels do provide a “silver lining” to be opportunistic with core strategic longer-term initiatives
- Airline recovery is the key driver to airport recovery and we must strive to align our goals and initiatives focusing on:
  - The health and safety of our passengers and employees
  - Long-term financial stability

SEA and the Aviation Industry: Managing the Uncertain Recovery

Stephen D. Van Beek, Ph.D.

Director and Head, North American Aviation

Steer: Employee owned transportation management consultancy

For further details, please contact:

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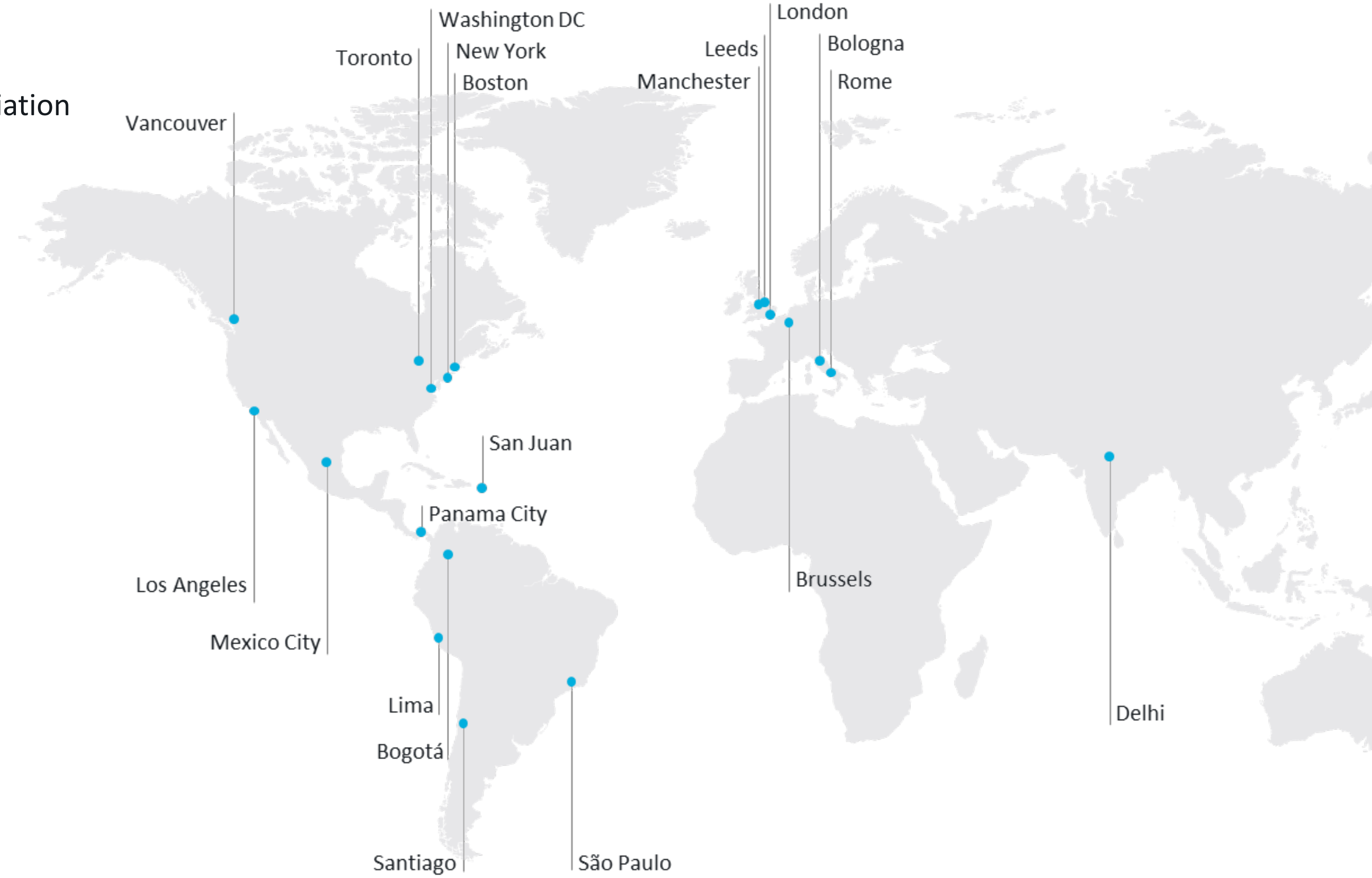

Steer
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Alexandria, Virginia 22314
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Today's Agenda:

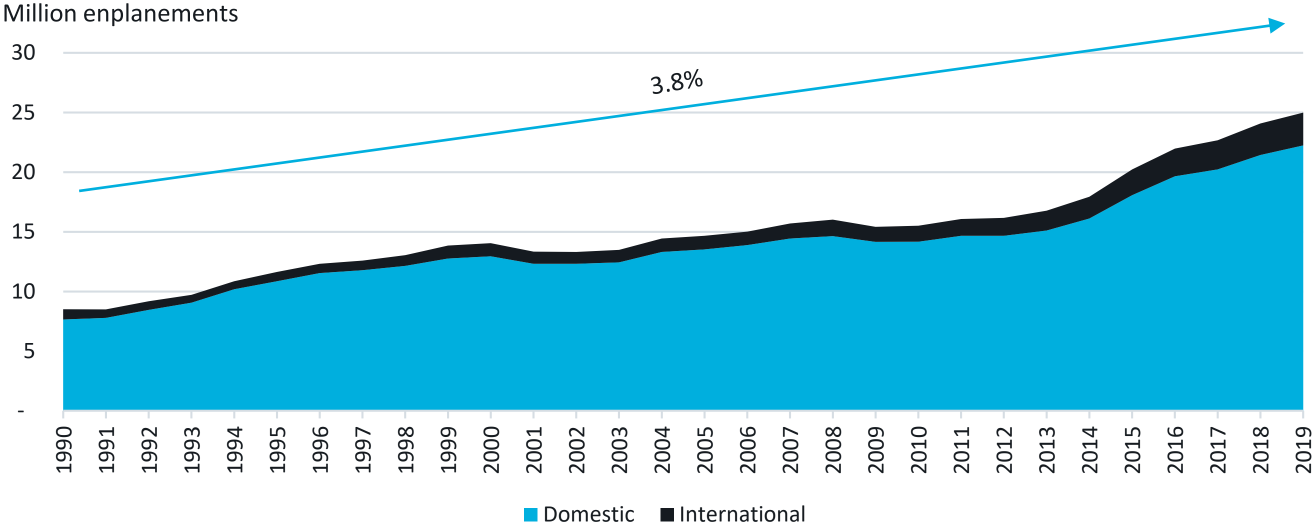
- Introduction
- The Strength of SEA pre-Coronavirus
- Airport Industry SWOT July 2020
- Six Variables to Track During the Post-Lockdown, Pre-Vaccine Period
- The Forecast and the Coronavirus
- Strategic Partnerships
- Financial Challenges and Actions

SEA traffic has been growing (3.8%) stronger than U.S. average for Large Hubs (2.5%)

- Seattle-Tacoma International Airport (SEA) has experienced a CAGR of 3.8% in the last 30 years.
- Its strong regional economy is the base for a strong origin and destination market as well as serving as a hub airport for 2 airlines.
- The last 5 years were particularly strong with SEA growing annually at 5.4% across the domestic and international markets.
- 2019 shows an average growth of approximately 4% across both segments.

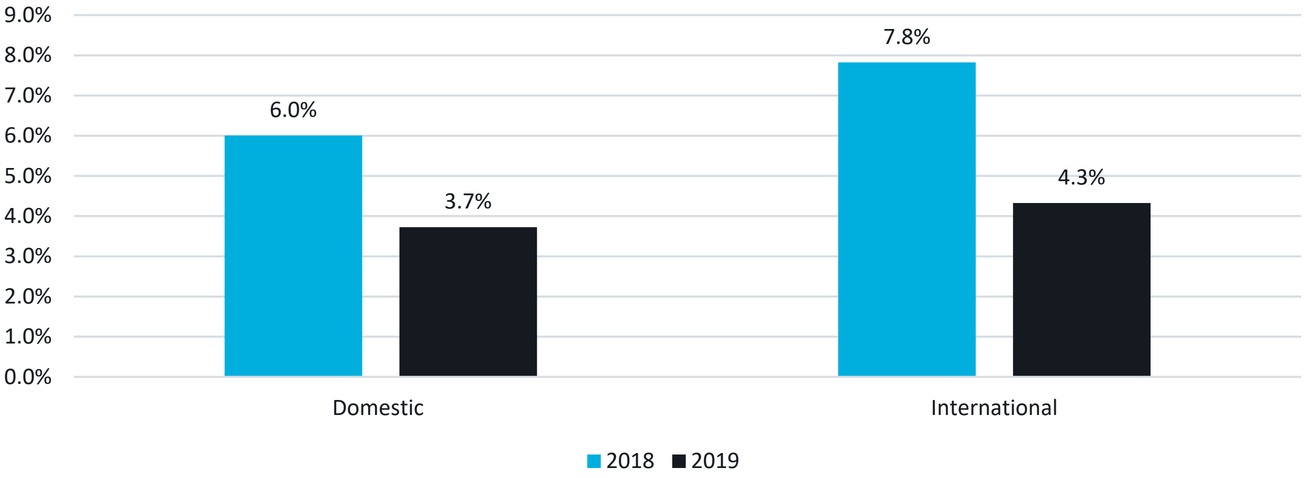
Seattle – Historical Figures 1990-2019 – T-100

Million enplanements



Seattle – Year on Year Growth 2018-2019

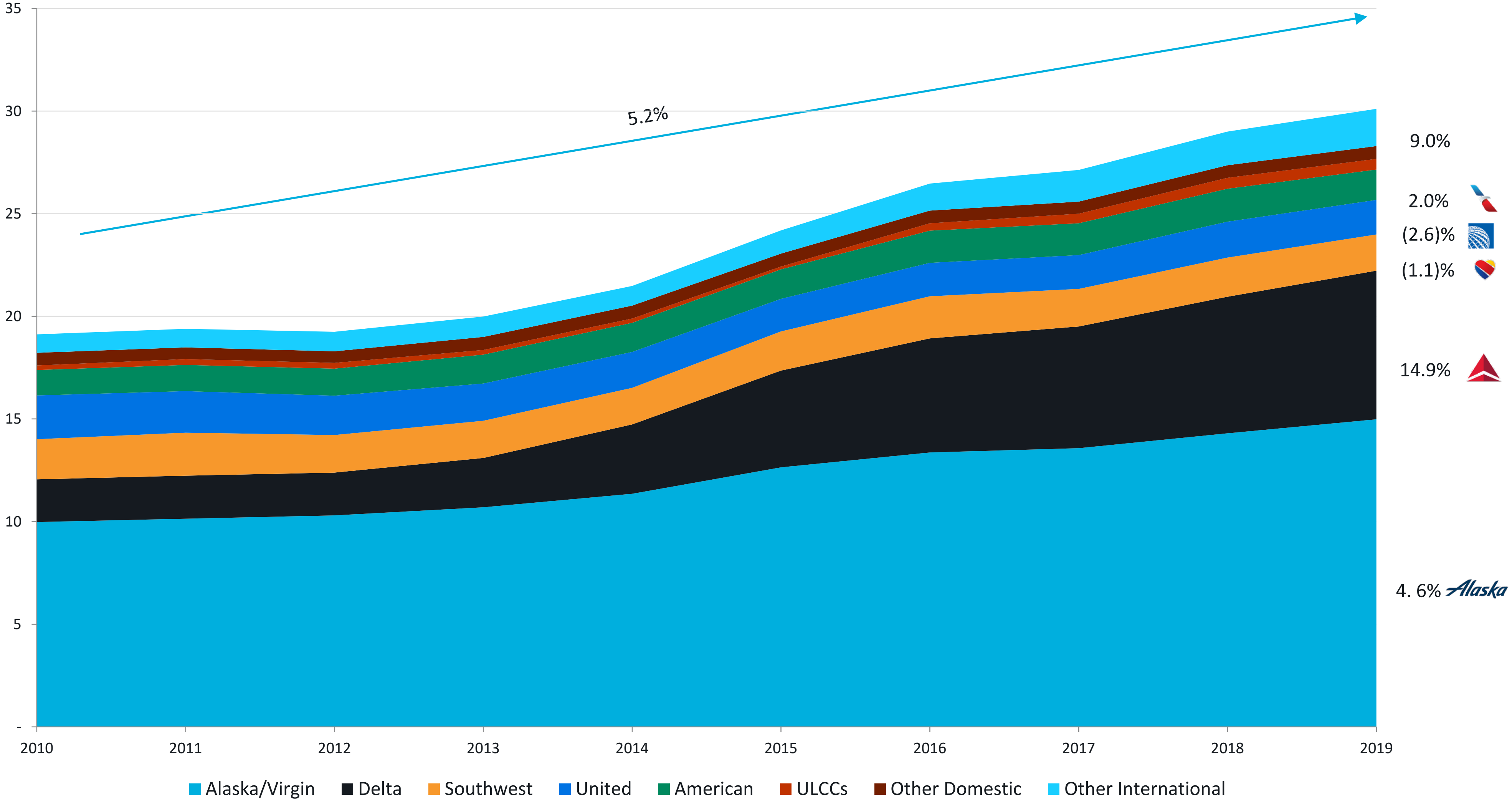
%



Source: FAA, BTS, Steer

10 years of growth has been driven by economics, competition and inbound international service

Seattle – Historical Figures 2010-2019 – T-100
Million enplanements

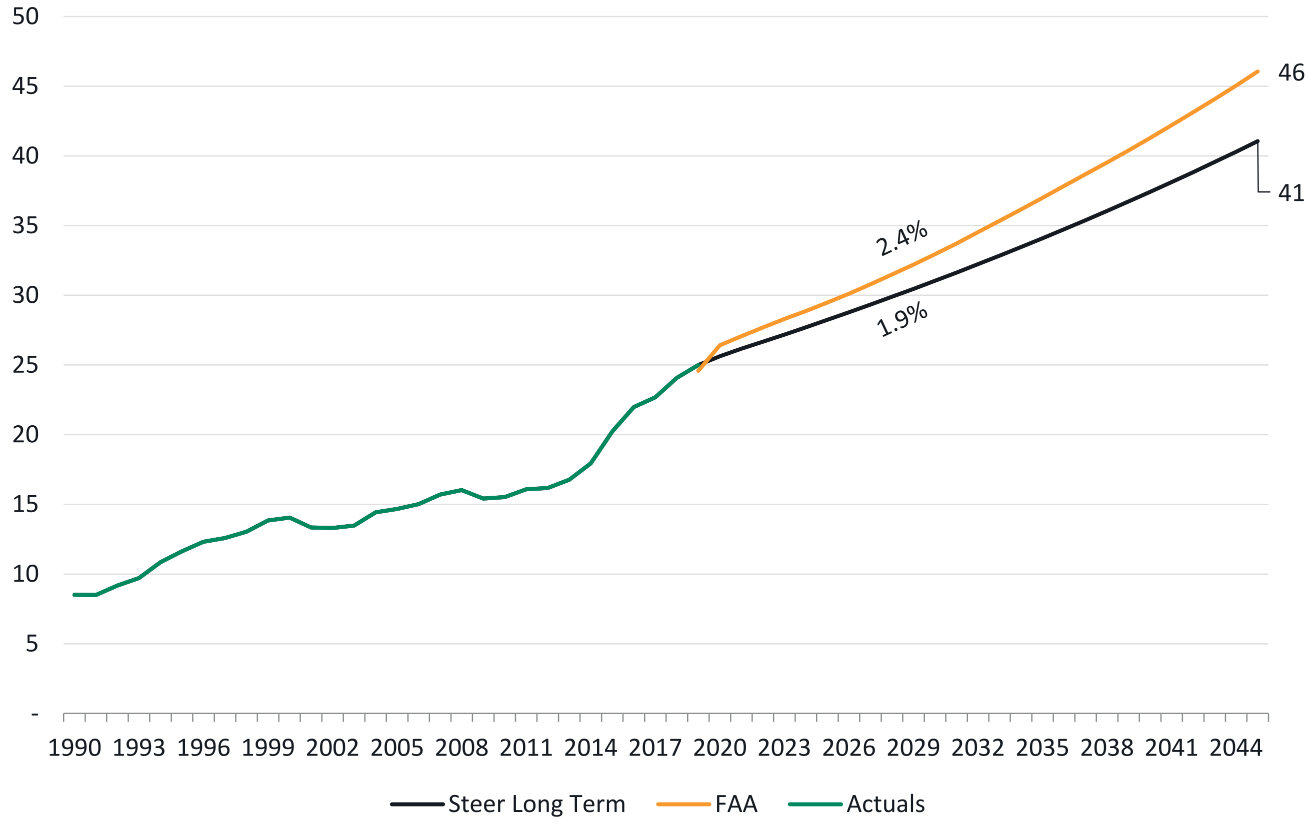


Source: OAG, Steer

SEA pre-COVID forecast was expected to reach 41m enplanements in 2045

- Steer has developed a top-down, high level pre-COVID traffic forecast for SEA based on:
  - Historical figures from T-100
  - Domestic segment using a linear regression model based on U.S. GDP
  - International segment using on a linear regression model based on a blended GDP (outbound US, Canada, China, etc.)
- FAA Terminal Area Forecast **January 2020** expected an increase of 2.4% p.a. to 46m enplanements in 2045 – as well as an 8% increase in traffic in 2020.
- **Steer's long-term linear model is forecasting 41m enplanements in 2045 (1.9% CAGR).**

Traffic Forecast 2019-2045 – FAA vs Steer
Million enplanements



Source: FAA, BTS, Steer

steer

The Airport Industry's July 2020 SWOT

Strengths
- CARES Act relief provides unprecedented financial support to industry
- **Regional economic strength bodes well for post-vaccine period and recovery**
- **Competitive airline market, with strong hub airlines, will likely lead to SEA outperformance**
- Low fuel prices reducing aviation costs
- Liberalization / global traffic diversification

Opportunities
- Available capacity permits allows some airport projects to be expedited during traffic lull
- **Inexpensive money can provide refinancing and investment savings**
- **Increase in airport parkers could increase much-needed nonaeronautical revenues**
- Contactless technologies potentially add efficiencies and resiliency to airports and their passengers
- Second round of aviation relief legislation?

Weaknesses
- **Historically deep and lengthy passenger declines challenge industry airport finances**
- Pre-vaccine, social distancing period challenging for hubs, which aggregate passengers into airline banks
- **Airline parking of aircraft and furloughs likely to stretch out time of recovery**
- International traffic hit especially hard
- Connectivity to smaller airports in decline, exacerbating loss of smaller, regional jets

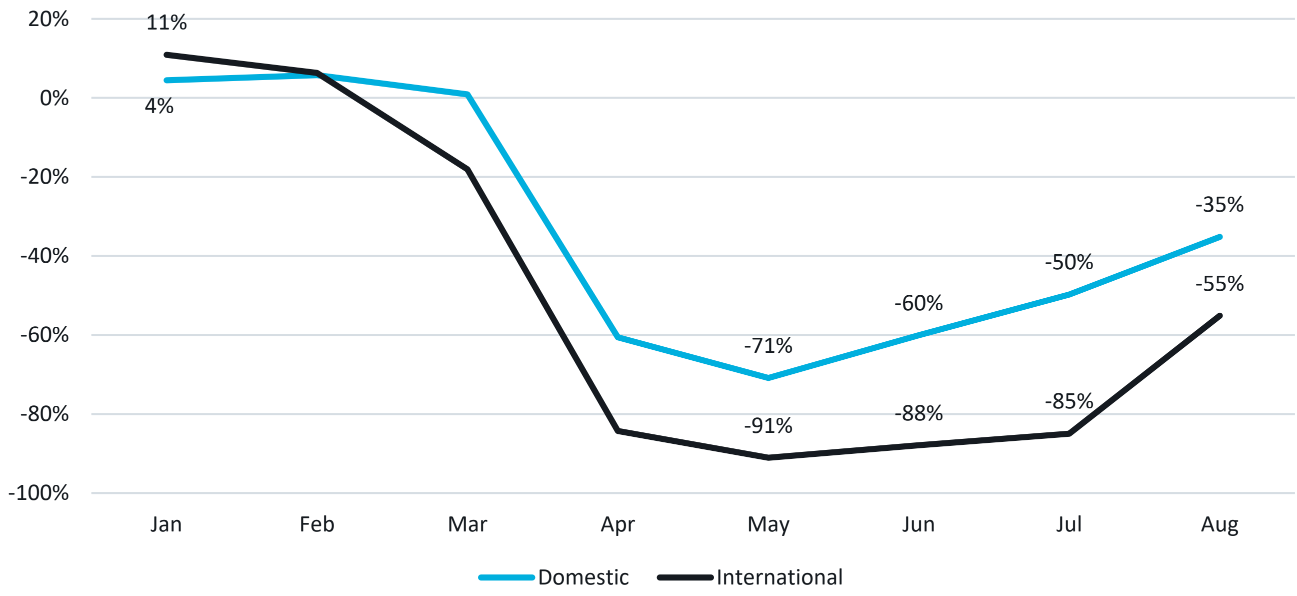
Threats
- Extended peak and/or second wave of Covid-19
- Lack of recovery "bounce"
- Reversal of trend of air service liberalization and tightening of visa policy
- **Some business travel doesn't return**
- **Airline competition could decline with mergers and partnerships**
- Airport & Airway Trust Fund in precarious shape to fund aviation infrastructure once budget discipline returns

Domestic capacity is recovering faster and is at 50% of 2019 levels in July

- International departing capacity from SEA in July 85% lower than July 2019, however domestic capacity is experiencing a faster recovery with June being already 60% vs 2019 levels and July expected to be approximately 50%.
- Scheduled capacity is a very volatile measure at this time therefore the August metric could be overestimated at the moment.
- Among SEA airlines Jetblue , Spirit and Untied appear to be lagging the recovery curve while Alaska is best positioned (see July recovered capacity)

SEA Departing Seat Capacity as for Friday 17 July 2020 versus 2019 – OAG

% Change



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Alaska	6%	5%	1%	-64%	-69%	-52%	-46%	-30%
Delta	11%	12%	1%	-62%	-72%	-68%	-54%	-37%
Southwest	-11%	-8%	-11%	-24%	-59%	-53%	-49%	-39%
United	-2%	4%	1%	-76%	-91%	-91%	-71%	-54%
American	-17%	-14%	-14%	-56%	-80%	-76%	-55%	-51%
Spirit	-13%	-10%	-6%	-62%	-96%	-92%	-81%	-85%
jetblue	-2%	23%	8%	-75%	-84%	-94%	-71%	-48%
Frontier	-6%	7%	34%	-24%	-71%	-59%	-32%	-21%

Source: OAG, Steer

Six variables to track over the post-lockdown to recovery period…

Coronavirus
Spread and Severity

Regulatory
Restrictions

Consumer
Confidence

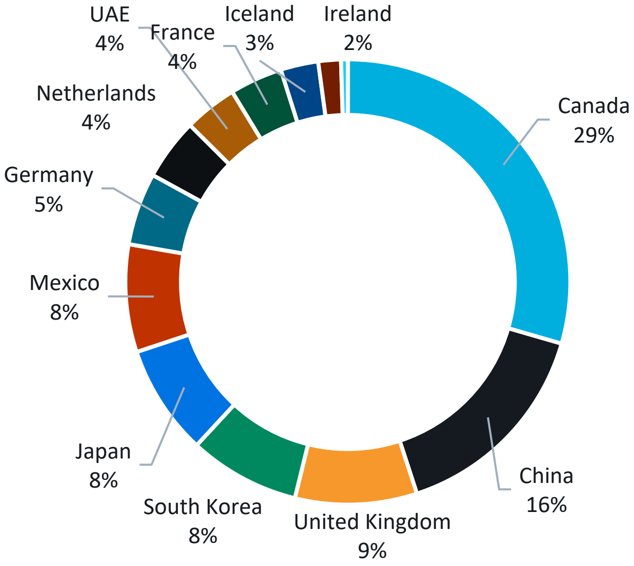
Economy
Regional, National, and Global GDP

Airline Supply and
Aircraft in Service

SEA Airline
Competition

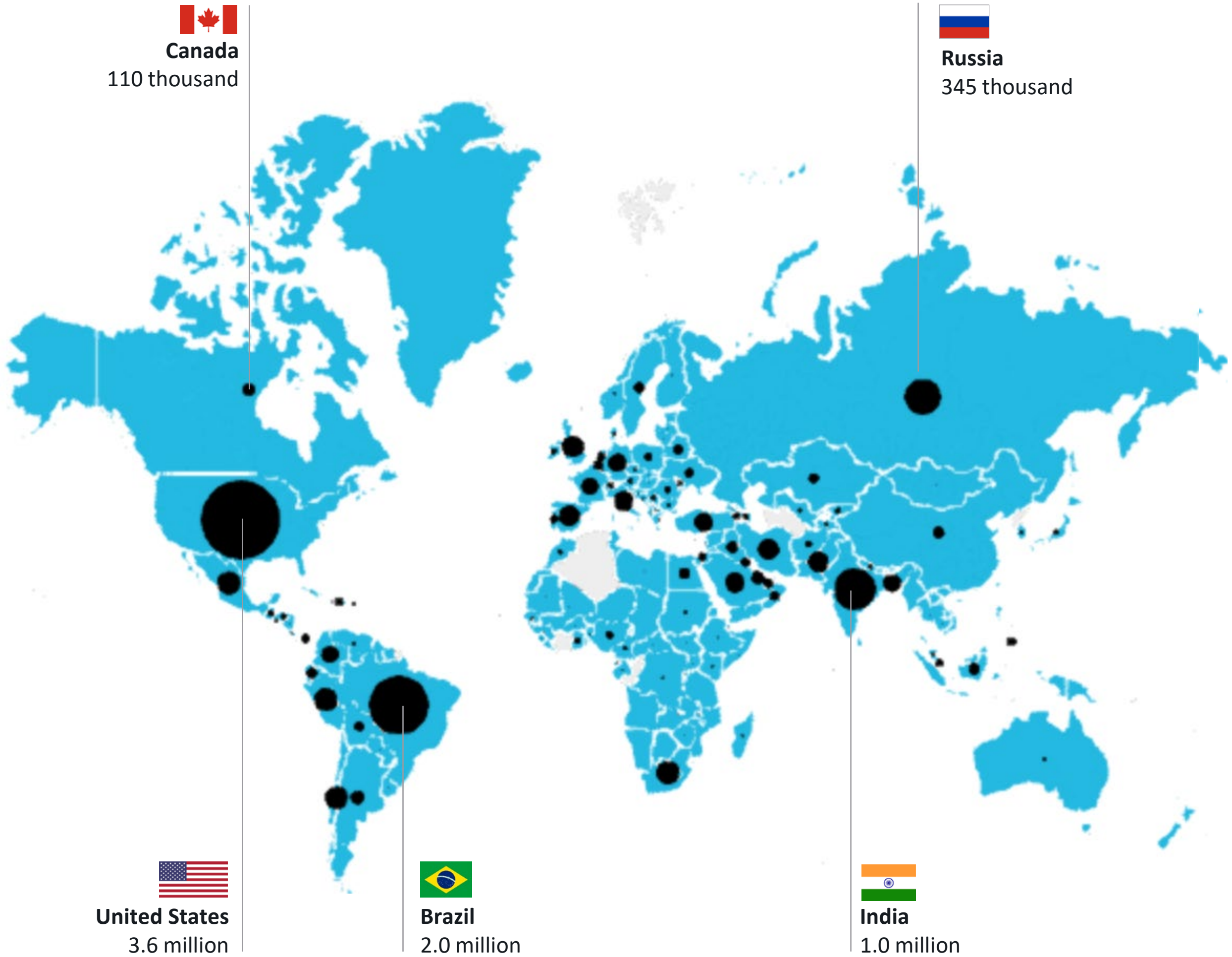
SEA's key international markets served from SEA are poised to grow quickly once restrictions are lifted

- International destinations account for about 11% of the total departing capacity in 2019. The main international destinations are Canada (29%) and the Chinese region (16% combined for Taipei, China, Hong Kong)
- Europe accounts for approximately 27% with the UK (9%) being the top European destination.



COVID-19 Outbreak Map

● Cumulative Reported Cases (as of July 18th, 2020)

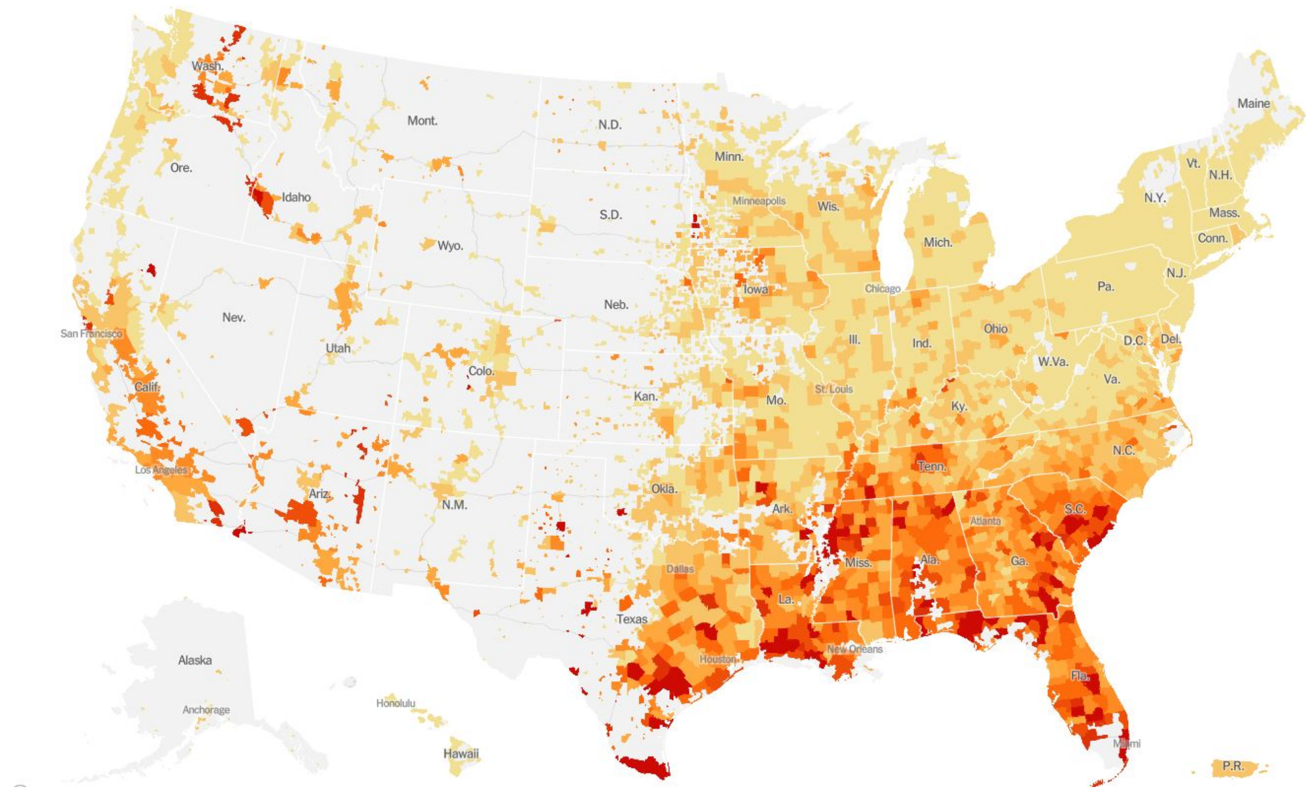


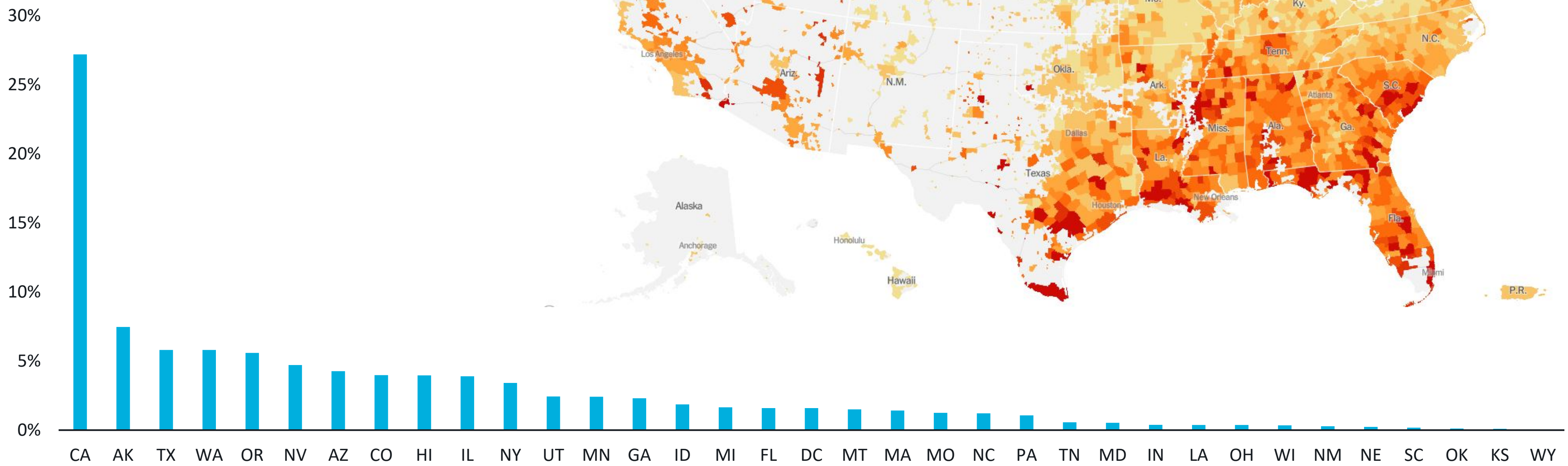
Source: OAG, Steer

Domestic traffic to West Coast is a leading source of traffic at SEA

- Domestic traffic is concentrated on West Coast destinations and California in particular.
- The West Coast is beginning to experience growth again in its numbers, causing additional uncertainty.
- California accounts for approximately 27% of the departing capacity at SEA.
- Texas, a state hit hard recently, accounts for 6% of domestic traffic.

Coronavirus in the U.S. (July 20, 2020, New York Times)



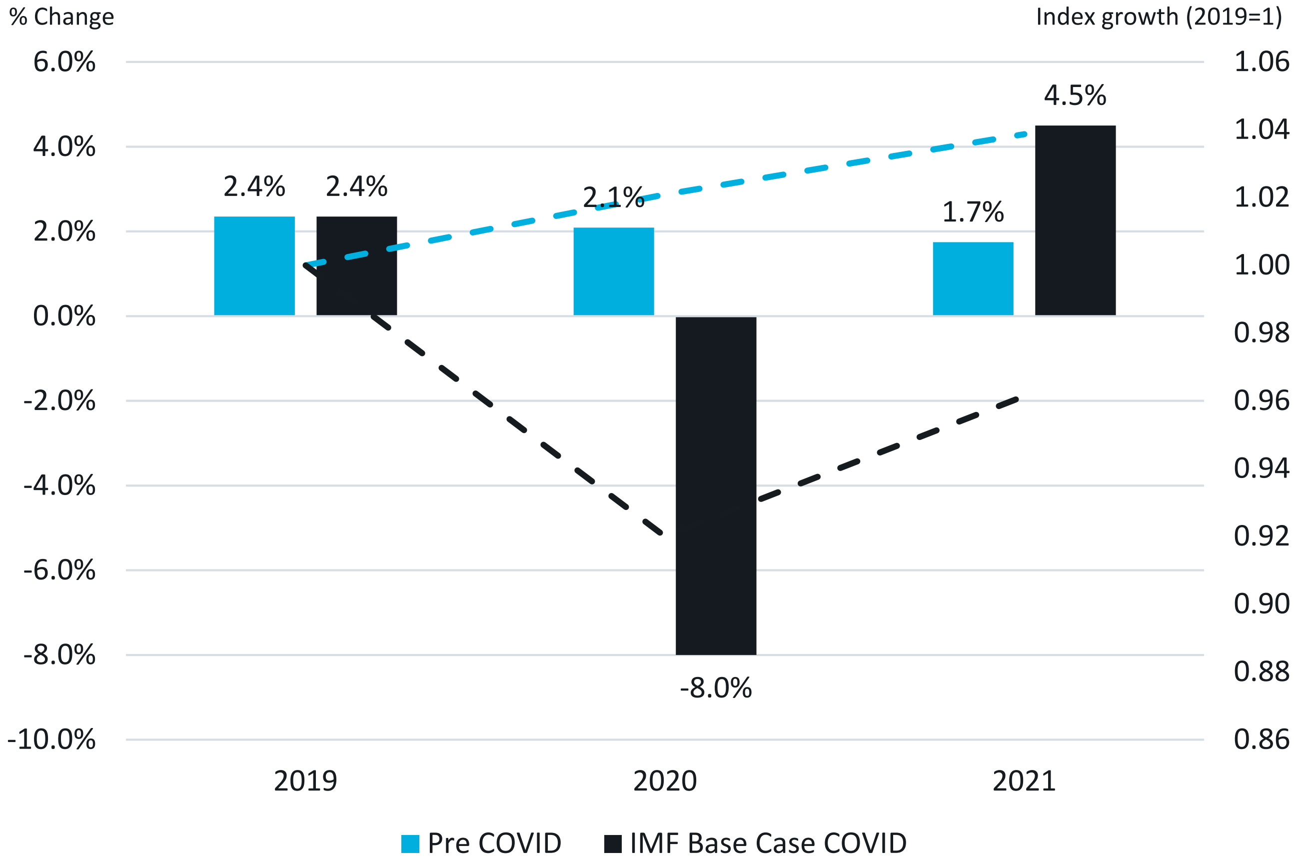


Source: OAG, Steer

The impact of COVID to global economy will be strong and lasting

- The latest IMF projections (June 2020) for the global economy are assuming a strong recession in 2020 across all nations and a slow recovery path to pre-COVID levels.
- United States GDP is expected to decrease by <u>8%</u> in 2020 and to recover by <u>4.5%</u> in 2021.
- The chart on the right shows the pre-COVID forecast as well as the indexed growth in 2021.

United States GDP projections pre vs post COVID – IMF June 2020



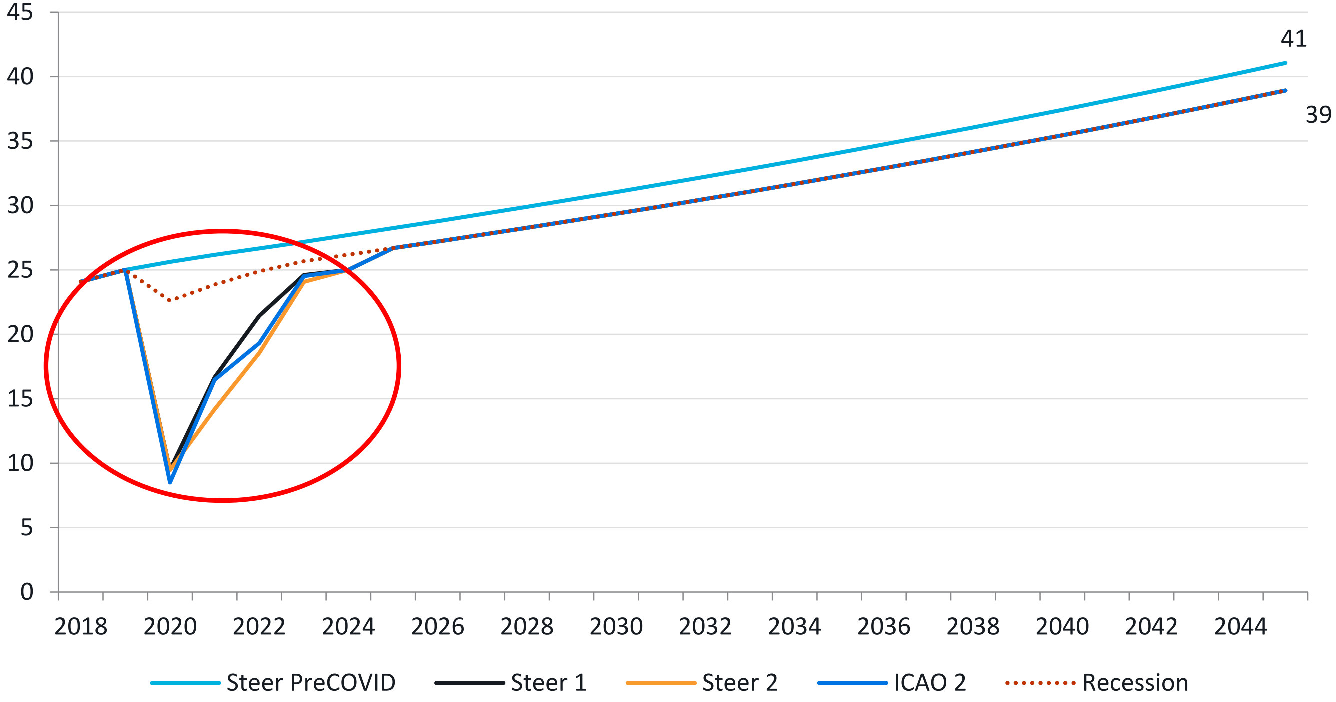
Source: IMF, Steer

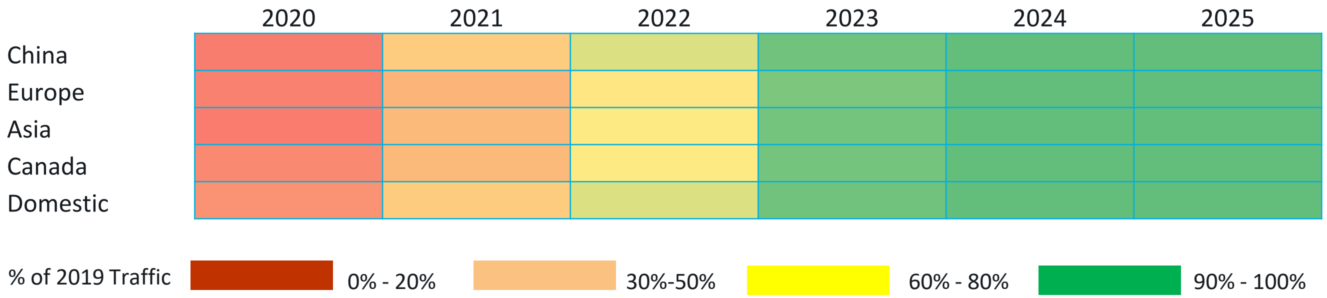
Post-COVID forecast is expected to recover to 2019 level by approximately 2024

- We overlaid the new GDP assumptions for each nation on the linear regression model used for the pre-COVID forecast in order to obtain a ‘re-based’ long term traffic forecast (red dotted line).
- Together with the impact of a slower economy we need to measure the impact of 2020 lockdown and restrictions, national closures and behavioural changes.
- We made assumptions at regional level on the speed of recovery to 2019 levels as well as to the 2020 loss in traffic.
- The chart on the left shows a couple of potential Steer Scenarios, with Steer 2 assuming a prolonged impact of restrictions with a potential second wave.
- ICAO’s recent scenario is also presented as a comparison.
- The table below shows a high level summary of the different recovery path assumed for each region.

Source: Steer

Traffic Forecast Pre – Post COVID - Steer
Million Enplanements

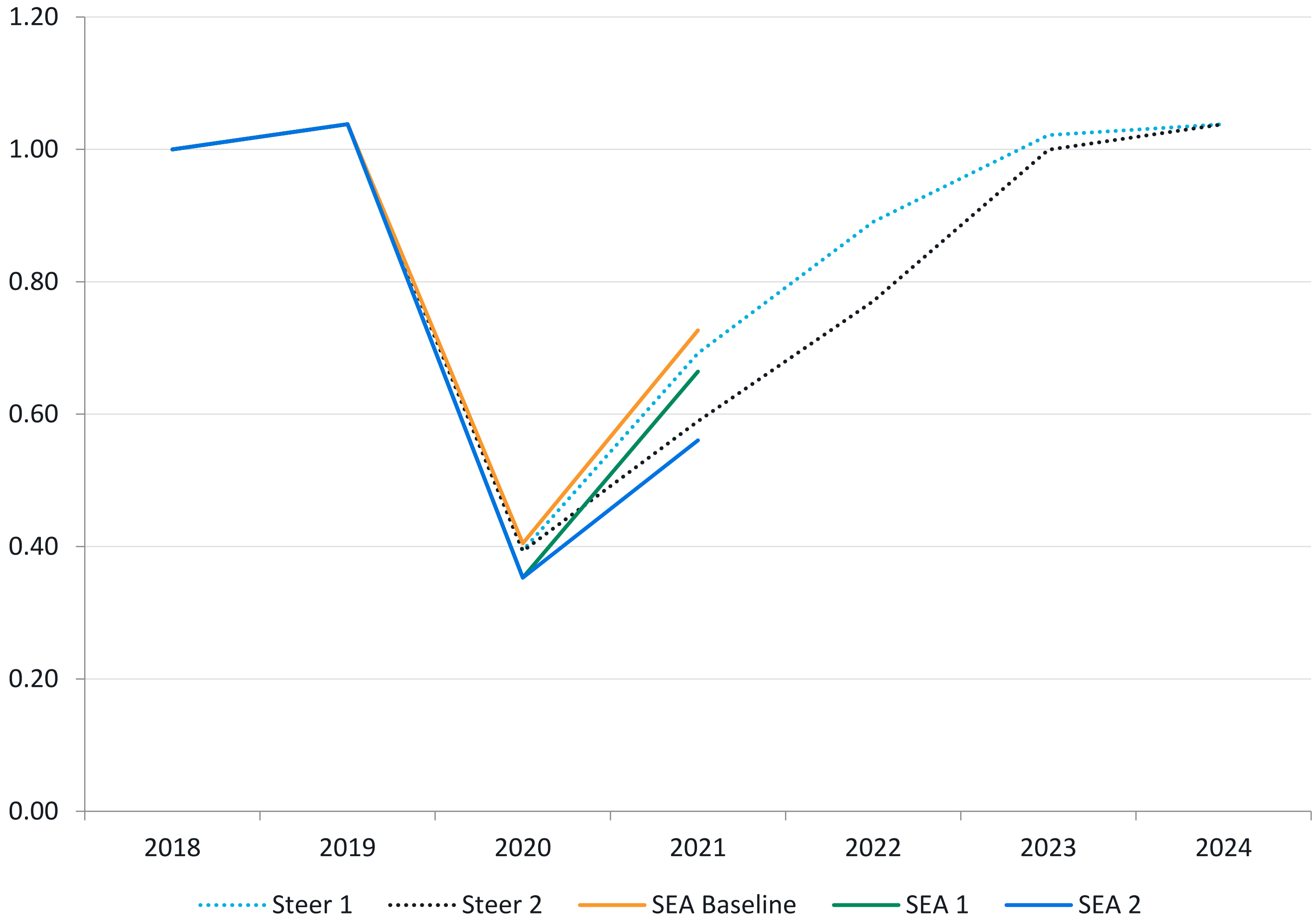




SEA Forecast Scenarios are in line with Steer Forecast for 2020 and 2021

- SEA Baseline scenario is comparable to the Steer 1 Forecast, decreasing of approximately 60% in 2020 at total annual level. 2021 is assumed to be at 70% of 2019 levels.
- **SEA 1 and SEA 2 scenarios are slightly more pessimistic on 2020 traffic volumes; however, SEA 2 recovery trajectory seems more in line with Steer 2 (prolonged effects of COVID/second wave).**

Steer COVID Forecast vs SEA Scenarios
Index growth (2018=1)

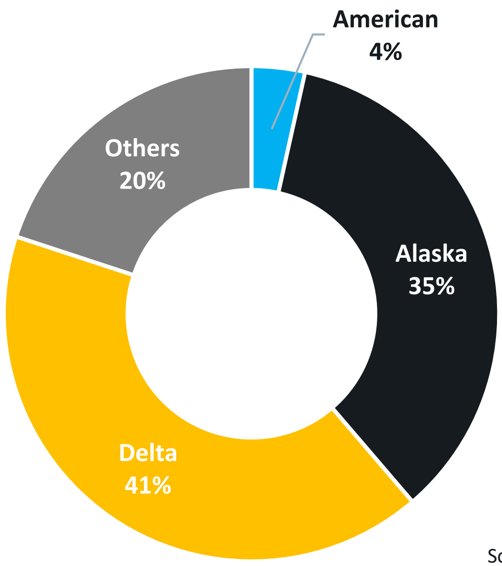


Source: SEA, Steer

American partnering with Alaska and JetBlue to Better Compete in SEA and BOS

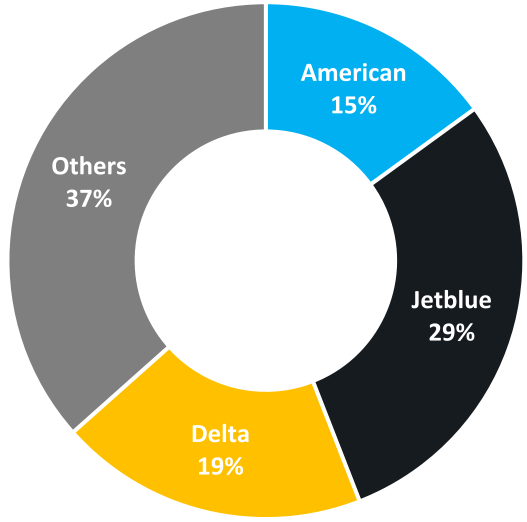
- As airlines attempt to right-size capacity and focus their attention to their hubs, they will look at partnerships to extend their reach beyond markets they want to serve individually.
- The American-Alaska partnership will give American flyers access to Alaska's extensive West Coast network and Alaska flyers will gain access to American's broad international and domestic network.
- Two American flights Bangalore (Fall 2020) and London-Heathrow (Spring 2021) are examples where Alaska will feed domestic passengers to American flights.
- This partnership is like one between American and JetBlue in Boston.
- In both markets, American competes with Delta; the partnerships enable them to "sell but not fly."

SEA Market Share by Airline 2019 (Domestic & International)



Source: Steer, Alaska

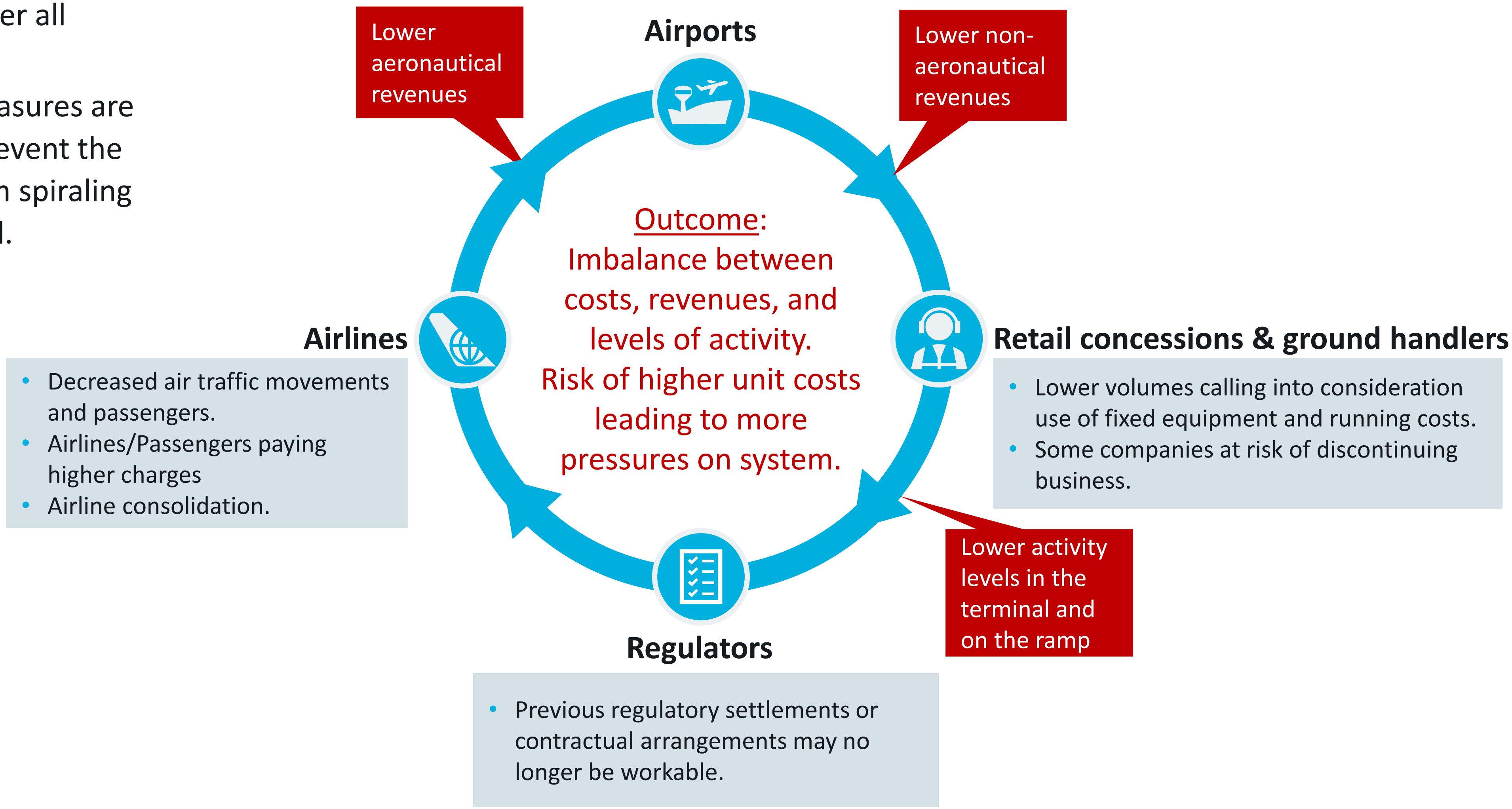
BOS Market Share by Airline 2019 (Domestic & International)



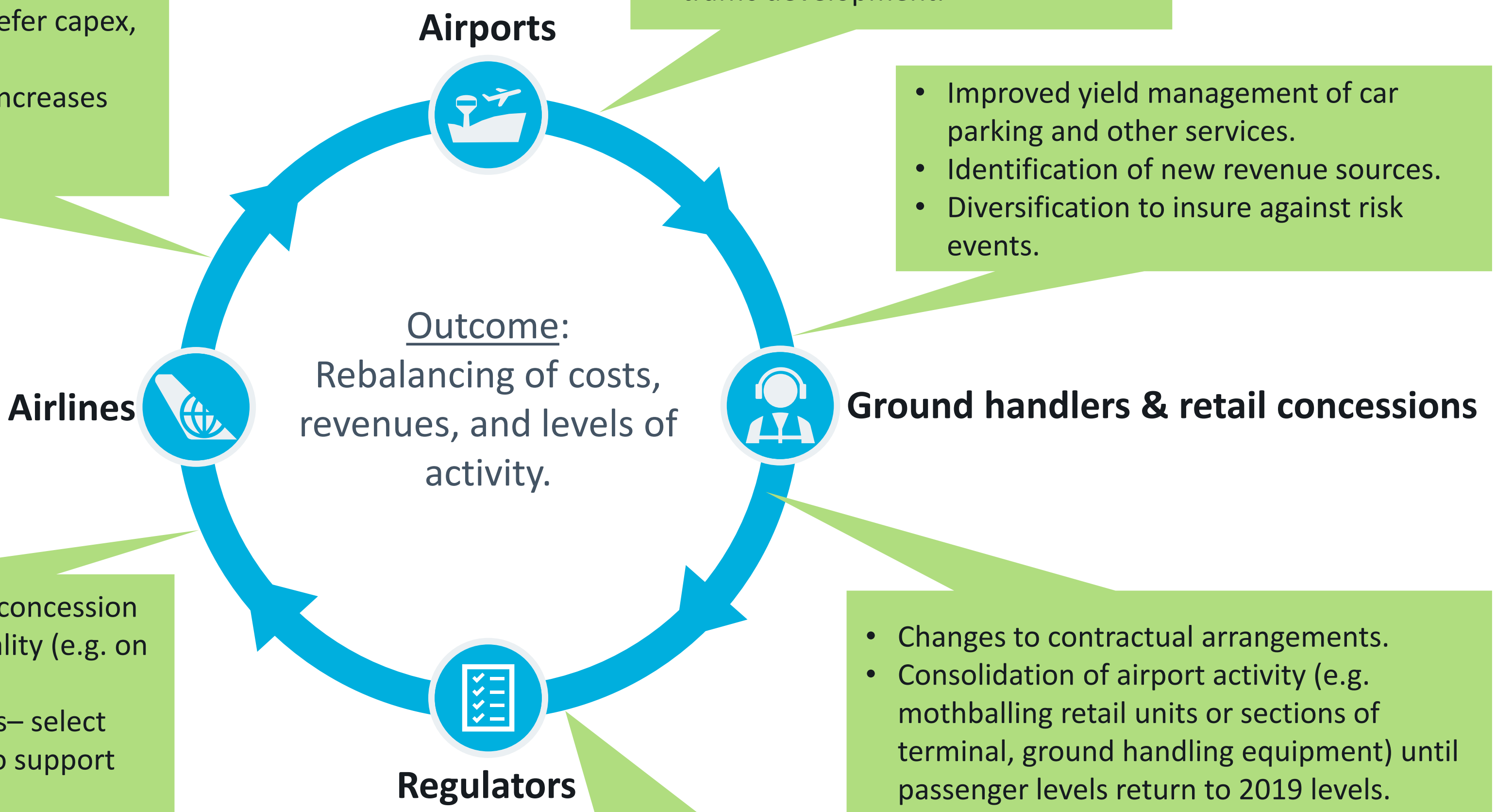
Spiral of reduced activity

Lower levels of activity are likely under all scenarios.

Proactive measures are needed to prevent the situation from spiraling out of control.



Actions to prevent the spiral



Airports:

- Financial restructuring.
- Reshaping of charges in favor of traffic development.

- Airports reduce staffing levels and defer capex, more flexible staffing arrangements.
- Seek to minimize or offset any cost increases resulting from additional screening requirements or similar.

Ground handlers & retail concessions:

- Improved yield management of car parking and other services.
- Identification of new revenue sources.
- Diversification to insure against risk events.

- Changes to contractual arrangements.
- Consolidation of airport activity (e.g. mothballing retail units or sections of terminal, ground handling equipment) until passenger levels return to 2019 levels.

Airlines:

- Reopening regulatory settlements or concession agreements to reflect new market reality (e.g. on level of charges or capex obligations).
- Passing higher unit costs on to airlines– select airports may even need to discount to support traffic recovery.
- Airports may need to use a stabilization fund to bridge the gap.

Regulators:

- Additional transitional federal aid
- Reform of airport financial regulation (e.g., PFCs)

Cruise Industry News – July 20, 2020

Early for Protocols for U.S. Cruising, Says Donald

Without guests sailing from U.S. ports and a surge in COVID-19 cases in some parts of North America, Arnold Donald, CEO of Carnival Corporation, said it's not the right time to be releasing health protocols.

"We are all working on it. Internally, I assume (the CDC) are looking at things as well. The time will come when the U.S. society is in a better place to be socially gathering," he told Cruise Industry News

"I think we've got to let this thing play out a bit so we are thinking about it in the right context at the right time.

"Having said that, we are engaged with scientists and medical experts around the world, and we continue to reach out to the CDC as well, to make certain we are informed to develop protocols just as we did in Germany."

Germany is where cruising is about to get going, as Carnival's AIDA brand is set to have three ships back sailing in August.

"So when the time is right and we can function in a way that is in the best interest of public health, we are prepared to do so," Donald said, noting the industry will pool resources and ideas across companies.

"We're not sailing any guests. We're monitoring, we're being informed by experts around the world. We work very closely with some of the best minds in the world. There is no reason to be talking about a lot of protocols if we're not sailing anybody."

Meanwhile, research and best practices to battle COVID-19 are constantly changing.

Donald pointed to temperature checks. "A lot of science will tell you the temperature checks are indeterminate and not necessarily a good screen. Now, a lot of people do them because it gets people comfortable. This stuff is constantly evolving. To be a chatterbox right now about protocols doesn't make a lot of sense."

Donald said it was simple. That when the company sails again, it will be in a way that serves the best interest in public health, operating in a way that aligns with society.

Travel Weekly – July 13, 2020

Cruise lines say loyalty will lead them back

During Carnival Corp.'s business update last week, a Wall Street analyst asked whether the brands that were particularly tarnished by media coverage in the early days of the pandemic, such as Princess Cruises, were suffering more in terms of bookings.

The answer was no. CEO Arnold Donald said that not only was Princess not doing worse than other Carnival Corp. brands but was "trending with all the other brands in the industry."

Wall Street might not understand this, but it doesn't come as a surprise to travel advisors who understand how strong cruise line loyalty can be.

"What we noticed in our sales numbers is that Princess has remained strong since that incident," said Vicky Garcia, COO of Cruise Planners, No. 24 on Travel Weekly's 2020 Power List. "It did not affect them. Princess has a very loyal following, so they almost went into a reactionary mode and said, 'I'm going to be even more loyal because they got so beat up.' They were so loyal they wanted to defend and support it." In fact, Cruise Planners data shows that Princess 2021 departures are up 11% over the same time last year and almost 40% versus the same time two years ago.

It is this level of loyalty to brands and to cruise vacations in general that has cruise line executives confident that past cruisers will be the ones to bring the industry back once ships can start sailing again. It is that confidence that also prompted Donald to declare during the call with analysts that Carnival expects demand to be "more than adequate to fill ships in a staggered restart" with fewer ships sailing, citing the two-thirds of its global guests, 8 million each year, that are repeat cruisers, and the company's active database of nearly 40 million past guests over its nine brands.

According to CLIA's 2020 State of the Cruise Industry Outlook, 82% of cruisers say they are likely to book a cruise as their next vacation. While that survey was done before the pandemic, UBS Investment Bank recently asked 94 cruisers in the U.S. about their "inclination to cruise again" and found that, while the sample is small, the survey showed that over 85% of respondents are "likely to cruise again," while less than 5% say they "will not or [were] unlikely to cruise again." The remainder say they "will not cruise for a long time."

Of the cruisers surveyed, 56% expect to take a cruise in the next 18 months, and 16% said they expect to wait until there is a vaccine. Expectations for cruising this year remain somewhat low, the survey found, with 13% of those surveyed expecting to cruise in the next six months.

A reliance on past cruisers and customer loyalty, however, will not long sustain an industry with more than 100 new ships on order through 2027, which Donald acknowledged.

"That doesn't mean we don't have work to do once we start cruising with much larger volumes of capacity to attract new-to-cruise," he said. "Of course, we will have work to do, but right now the brands are strong, the bookings are encouraging, and with the staggered start we're going to have in the resumption of cruising, there should be plenty of pent-up, latent demand with previous cruise-goers to fill the ships."

Washington Post – July 6, 2020

Two cruise giants assembled a panel of health experts to give them a path back to sailing

Two of the world's largest cruise operators have teamed up to assemble a panel of health experts to help them meet the coronavirus-related requirements of authorities around the world.

Royal Caribbean Group and Norwegian Cruise Line Holdings, which include several cruise lines, planned to announce the Healthy Sail Panel on Monday morning.

The combined expertise of the group's members — including epidemiologists and former leaders of federal agencies — reveals how complex a feat it will be for major cruise lines, which stopped sailing in March, to stage a safe comeback. The timeline shows there are no quick answers: The group started meeting in June and hopes to deliver a plan by the end of August. Major cruise lines that operate in the United States have paused operations until mid- to late September.

"Obviously everybody wants to start, but we've made it very clear we won't start until we and the experts and authorities agree it's the appropriate thing to do," said Richard Fain, chairman and CEO of Royal Caribbean Group. "And we've taken the steps to try and enable ourselves to do that."

Both Royal Caribbean and Norwegian had been working to bring in expert advisers and decided to join forces, although they are fierce competitors in all other areas.

"We want to make sure that we do everything possible, without exception, without any shortcuts, [to show] that cruising is safe," said Frank Del Rio, president and CEO of Norwegian Cruise Line Holdings. "And we think that the panel is going to help inform us in how to do that."

Co-chairs of the panel are former Utah governor Mike Leavitt, who served as administrator of the Environmental Protection Agency and secretary of Health and Human Services under President George W. Bush, and Scott Gottlieb, former commissioner of the Food and Drug Administration under President Trump. Neither is new to cruising; both said they have sailed before.

The group also includes Julie Gerberding, a former director of the Centers for Disease Control and Prevention who is now chief patent officer at the pharmaceutical company Merck; Helene Gayle, who spent 20 years at the CDC and is now CEO of the Chicago Community Trust, and other experts in public health, infectious disease, pandemic preparedness, epidemiology, hospitality and cruise operations.
A no-sail order extended by the CDC in April expires July 24; it calls for cruise lines to submit detailed plans to "prevent, mitigate and respond to the spread of covid-19 on board cruise ships."

Leavitt said the expert group has broken its work into two phases, first finding improvements that cruise lines can use as they craft their responses for the CDC and later looking for innovations that could require more time and research.

"All of the cruise lines have to present plans, and so we want to get information to them as quickly as possible that's reliable [and] scientifically based so that information can populate the plans that they submit to the CDC — and then we'll keep working," he said. "Because obviously this situation is evolving and it will require us to iterate as we go and as science develops, and we see this as not just a short-term commitment but a long-term need."

A Washington Post analysis in April found the virus infected travelers on 55 ships worldwide and killed at least 65 people, though the full impact is unknown.

In its no-sail order, the CDC says cruise travel “markedly increases the risk and impact of the covid-19 disease outbreak within the United States,” and an agency official has called cruise ships “uniquely vulnerable” to the virus because of tight quarters, communal eating and entertainment and passenger demographics.

Gottlieb said he believes the confined environment comes with risks but could also provide an opportunity to create a protective bubble around passengers and “substantially” reduce their risk of getting sick.

“We can control for all the risk factors,” he said. “And so if the commitment is there to put in place the level of protection — whether it’s testing, [high-efficiency particulate air] filters, mechanisms for social distancing, deep cleanings on the ships, which I believe there is — we feel there’s an opportunity to create a safer environment and a more controlled environment.”

The panel plans to share its findings and recommendations with other cruise lines and the industry as a whole.

“Health and safety is the highest priority for all CLIA cruise line members, as demonstrated by this initiative on the part of two of our largest members,” Kelly Craighead, president and CEO of Cruise Lines International Association, said in a statement. “We commend the efforts of all of our members, large and small, who are working tirelessly to develop appropriate protocols based on input from health authorities and medical experts in the U.S. and abroad.”

Leavitt said he expects the panel’s work to apply even beyond cruising, considering the various types of venues found on ships.

“Clearly there are circumstances that are unique to the cruise industry in the same way that there would be conditions that are unique to a basketball game or an apartment building or a dorm or a restaurant; they all have unique settings,” he said. “The reason this presents an opportunity is because there are retail stores on a cruise ship, there are restaurants on a cruise ship, there are recreational areas on a cruise ship, there’s a motel on a cruise ship.”

Asked how challenging it had been to watch the panel examine his company’s operations and start to offer feedback, Royal Caribbean’s Fain praised their work and said it had been thrilling to see professionals in action. But he also brought up a recent medical screening he experienced.
“I will say that was more fun,” Fain joked.

Extending Cruise Ban, C.D.C. Slams Industry for Spreading Coronavirus
In a scathing order extending the current "no sail" order on U.S. cruise lines, the agency said it spent 38,000 hours managing the outbreaks on ships.
July 16, 2020
https://www.nytimes.com/2020/07/16/travel/coronavirus-cruise-ban-extended.html

As the coronavirus pandemic raged around the world, cruise ship companies continued to allow their crews to attend social gatherings, work out at gyms and share buffet-style meals, violating basic protocols designed to stop the spread of the highly transmissible virus, the Centers for Disease Control and Prevention said in a scathing 20-page order, released Thursday, that extended the suspension of cruise operations until Sept. 30.

In a rebuke of the cruise ship companies, Robert R. Redfield, the director of the C.D.C., blamed them for widespread transmission of the virus. The C.D.C. said there were 99 outbreaks aboard 123 cruise ships in United States waters alone, the agency said in the statement. From March 1 until July 10, 80 percent of the ships in the C.D.C.'s jurisdiction were affected by the coronavirus. The agency said there had been nearly 3,000 suspected and confirmed cases and 34 deaths on ships in U.S. waters.

As of July 3, nine ships still had ongoing or resolving outbreaks.

The C.D.C. spent at least 38,000 hours managing the crisis, the order said. Public health authorities had to do contact tracing for some 11,000 passengers, more than the number of contacts identified from airplane flights since the beginning of the pandemic, the C.D.C. said.

The cruise industry has struggled to manage the coronavirus pandemic since the start, when the Diamond Princess, part of the cruise giant Carnival Corporation, moored in the Japanese harbor of Yokohama, Japan, amid an outbreak that eventually infected 712 people and killed nine of them. Even as warnings were issued about the dangers of cruise-ship travel, passengers kept boarding and ships kept sailing.

Though more and more cruise passengers fell ill, companies continued their voyages, offering entertainment that included live music and pool parties. The industry ultimately suspended operations in mid-March, but as ships made their way to port, many passengers and crew were stranded around the world, as countries refused the ships entry.

One ship arrived in Fort Lauderdale with four dead passengers on board. Many of those passengers who were allowed to disembark from contaminated ships "traversed international airports, boarded planes and returned to their homes," the C.D.C. said, potentially spreading the virus further.

The cruise industry had already voluntarily suspended operations until Sept. 15, and many companies withdrew their ships from United States waters, removing them from the C.D.C.'s jurisdiction. But the order from Dr. Redfield underscores the gap between the industry and the public health agency. The companies cannot begin to sail again until they come up with cohesive plans for prevention and mitigation of the illness.

Cruise ship companies submitted plans on how to safely evacuate crews, but nearly all the companies failed to meet the basic requirements necessary to stop the spread of the coronavirus, the C.D.C. said.

Crew members still bunked together and shared bathrooms. Even ships that seemed to have gone a month without any coronavirus cases had crew members who tested positive upon reaching shore, Dr. Redfield said.

One company, Norwegian Cruise Lines, said it felt it had exceeded recommended C.D.C. guidance, because crew members were not just asked but "encouraged" to wear face coverings, the order said. Disney acknowledged that some of its asymptomatic-infected crew members had not quarantined until after the results of shipwide testing came in.

The companies created a task force to come up with recommendations on how to safely sail, but according to the C.D.C., the group will not produce its findings for several months.

If unrestricted cruise-ship passenger operations were permitted to resume, it would put "substantial unnecessary risk" on communities, health care workers, port personnel and federal employees, the order said, as well as placing passengers and crew members at increased risk.

The agency's previous no-sail order was set to expire July 24. Disney said only one of its four ships, the Disney Wonder, had an outbreak on board —but only after passengers had disembarked. The company tested every crew member on board and isolated non-essential crew to their cabins for three weeks in April. Half the 174 crew who tested positive had no symptoms, the company said. The ship has not had a positive case since May 8, Disney said.

Royal Caribbean and Norwegian Cruise Line, whose failures were specifically cited in the C.D.C. document, released statements in response to the order that did not specifically address the allegations.

Norwegian said it canceled trips through September, as well as cruises embarking from or calling on ports in Canada in October. "We continue to partner with the C.D.C. and other authorities to mitigate the impact of COVID-19 by prioritizing the health and safety of our passengers and crew," the company said.

Royal Caribbean said it would suspend operations through September to comply with the order. "The health and safety of our guests, crew and the communities we visit is our top priority," the company said.

Carnival Cruises said that it had already extended its suspension through September. But the company plans three voyages in Germany next month through a European line, and Italy trips are also expected soon, a spokesman said.

Bari Golin-Blaugrund, a spokeswoman for the Cruise Line Industry Association, a trade organization that represents most of the major cruise companies, released a statement that did not address the C.D.C. criticisms.

"As we continue to work towards the development of enhanced protocols to support the safe resumption of cruise operations around the world, we look forward to timely and productive dialogue with the C.D.C. to determine measures that will be appropriate for ocean-going cruise operations to resume in the United States when the time is right," she said.

WTTC and Carnival Corporation Present Unique COVID-19 Scientific Summit
July 6, 2020

https://www.prnewswire.com/news-releases/wttc-and-carnival-corporation-present-unique-covid-19-scientific-summit-301088439.html

WTTC to collaborate with world's largest cruise company on convening leading global scientists and health experts on July 28 for a virtual public forum on the latest insights and best practices for living in a world with COVID-19

The World Travel & Tourism Council (WTTC)– together with the world's largest cruise company, Carnival Corporation & plc (NYSE/LSE: CCL;NYSE: CUK) – will host the WTTC/Carnival Corporation Global Science Summit on COVID-19. Set for July 28, this will be a virtual scientific summit focused on COVID-19 and the 'new normal'.

Taking place from 1400 hours to 1730 GMT (10 a.m. to 1:30 p.m. EDT) on Tuesday, July 28, the summit, which is open to the public, will share the latest scientific knowledge and evidence-based best practices related to prevention, detection, treatment and mitigation of COVID-19.

The joint summit will see global tourism leaders, WTTC Members, government agencies, destination partners, trade and private businesses, share the very latest science and medical evidence that can be used to inform practical, adaptable and science-based solutions for mitigating and living with COVID-19.

The WTTC/Carnival Corporation Global Science Summit on COVID-19, is the latest initiative to continue building global understanding concerning COVID's impact on society, including travel and tourism. The Summit will consider practices from the leading scientists and health experts for mitigating the spread of the virus.

This unique virtual Summit is hosted by WTTC, which represents the global Travel & Tourism private sector, and Carnival Corporation, the world's largest cruise company, and is free to attend. Summit convenes global scientists and health experts at forefront of COVID-19 fight

The summit will bring together a robust lineup of world renowned medical, epidemiology and public health experts to explore and share the latest best practice on the science of COVID-19 and how best to address the many practical questions people have about the disease.

Speakers and panelists represent a diverse range of science, research, clinical, academic, policy and business backgrounds, including amongst others, members of Scientists to Stop Covid-19, who have volunteered to participate. For additional information on the program and panelists, see the registration site at CovidScienceSummit.com

Gloria Guevara, WTTC President & CEO, said: "I was excited when Arnold, on behalf of Carnival Corporation, approached me with this idea. This event will be a powerful platform for harnessing the best thinking from across all fields of knowledge in the public and private sectors. The science of this virus is rapidly evolving and these real-time insights will be invaluable in helping us determine evidence-based protection and mitigation measures to combat COVID-19. They will also help drive global alignment and collaboration on the frontiers of science and policy, which is critical to the survival of this important sector."

"COVID-19 has had a crushing global socio-economic impact and is threatening the jobs of millions of people whose very livelihoods depend upon a thriving Travel & Tourism sector for their survival."

Summit will discuss practical approaches to living in a world with COVID-19. The event will feature a series of panels, each focusing on a critical area of science surrounding COVID-19 and will include best practices from different industry sectors and world regions to control and limit the spread of COVID-19. Panels will include a mix of science-based debates and discussions sharing the latest thinking on the following key topic areas:

Epidemiology: Incubation and peak infectivity periods for SARS-CoV-2; disease progression from exposure to illness; and symptom variability among different individuals and groups.

Transmission: How, when and where SARS-CoV-2 spreads; significance of environmental transmission; guidelines for mitigating spread.

Screening and Testing: Availability and accuracy of current testing methods; viable and cost effective ways to detect illness and effectiveness of screening using temperature and health questionnaires.

Therapeutics: Status of vaccine development; available and approved SARS-CoV-2 treatment protocols; the role of cytokine storms; and profiles of COVID-19 recovery.

Practical Risk Mitigation: Measures to mitigate the risks of social gatherings; balancing the benefits and risks of social gatherings; the role of testing, contact tracing, and managing the psychology of fear.

Arnold Donald, President & CEO of Carnival Corporation, is a member of the WTTC Executive Committee and its Vice Chair for North America. Carnival Corporation designed and is producing the Summit in close coordination with WTTC leadership.

"Our highest responsibility and top priorities are compliance, protecting the environment and the safety, health and well-being of our guests, our crew members and the people in the communities we visit," said Donald. "Throughout the pause in our guest operations, we have been consulting and assembling the best minds in medical science, public health and infectious disease control. We are grateful to bring together a select group of science and medical experts who bring such relevant insight into COVID-19 for the public to hear. Hopefully, this Summit will be an efficient way for attendees to become more informed about COVID-19 in the space of just a few hours."

Port of Seattle

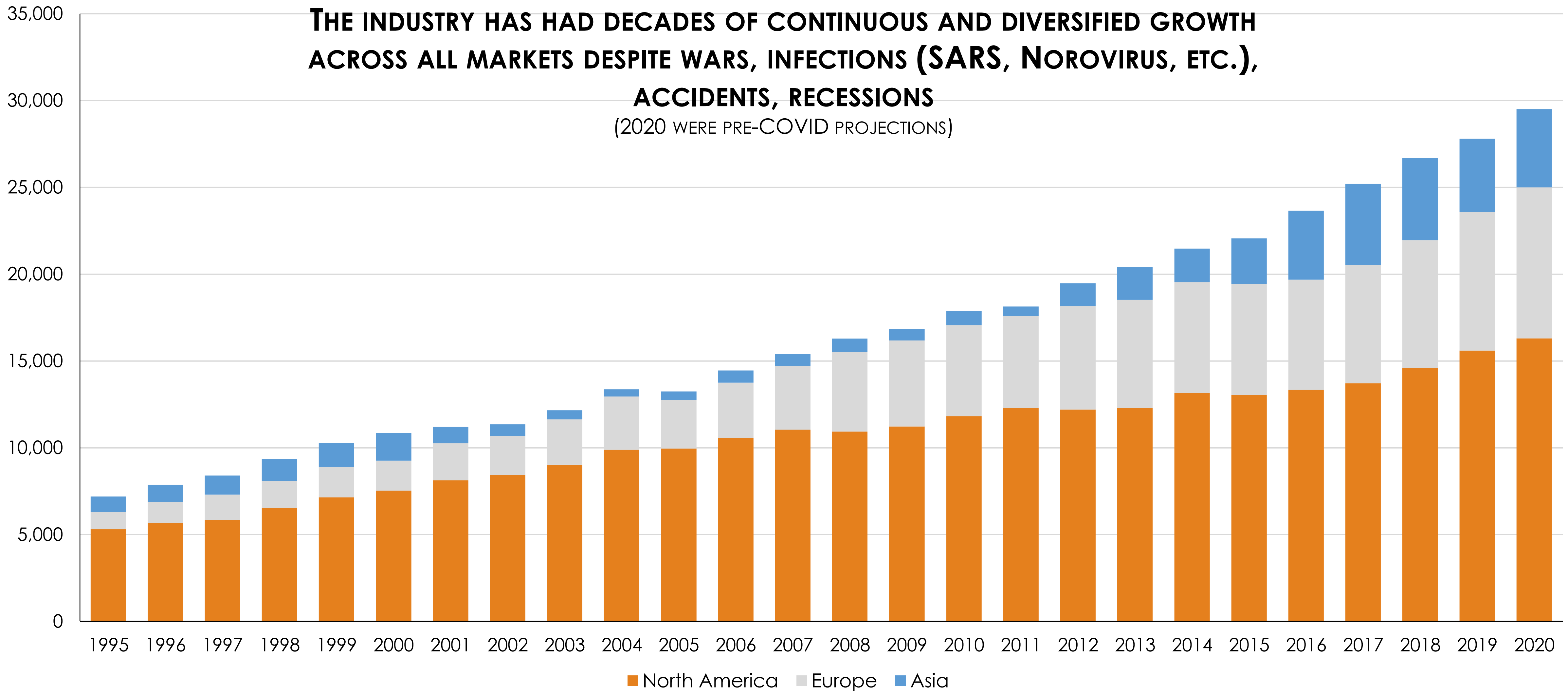
STATE OF THE CRUISE INDUSTRY

Bermello Ajamil & Partners

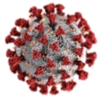
V2.0

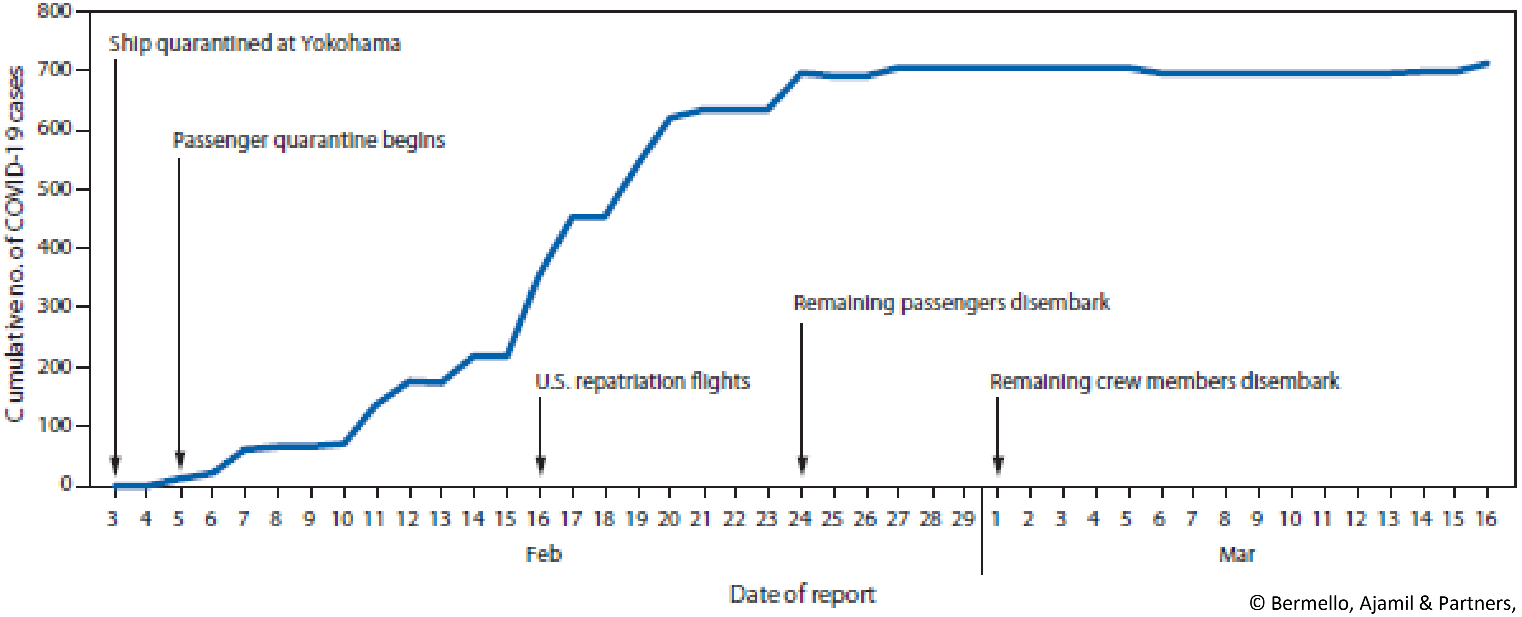
07.22.20

Worldwide Cruise Passengers

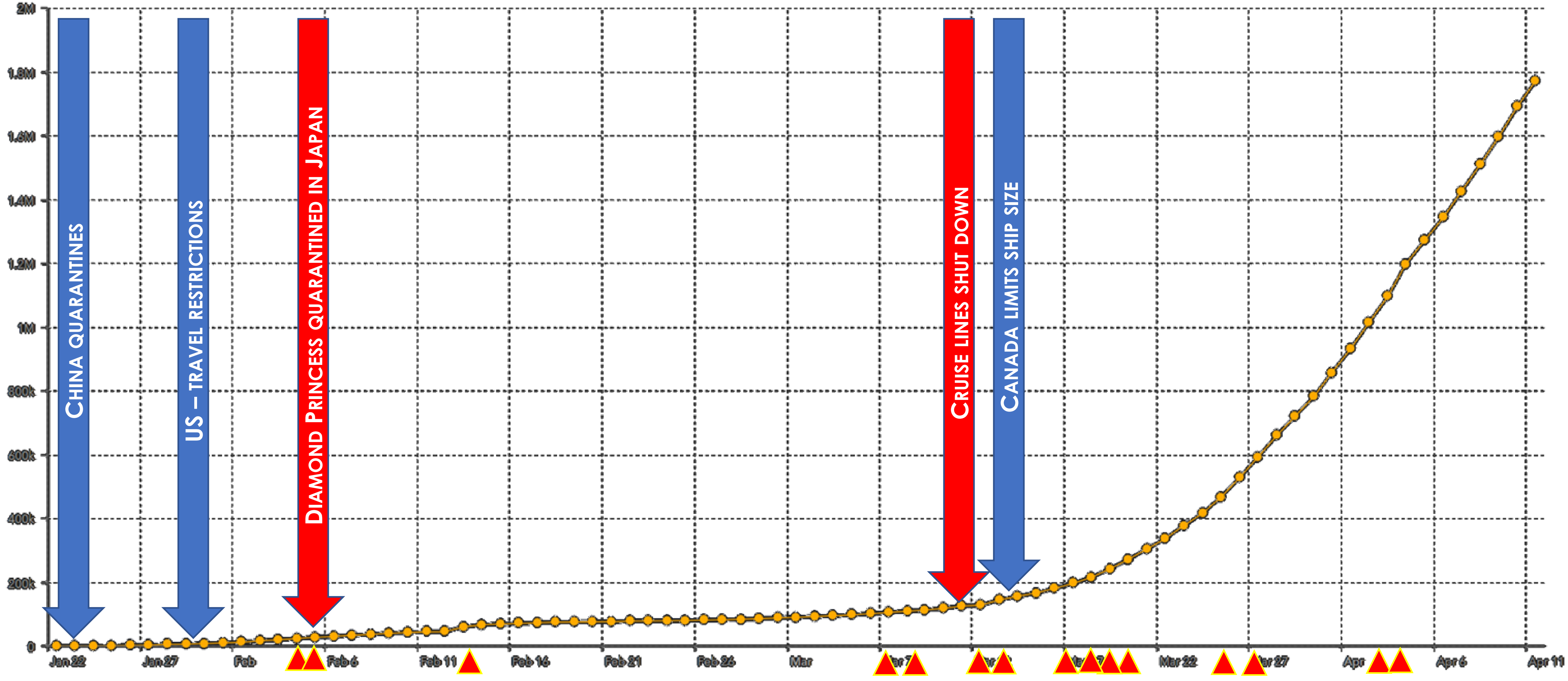


How it began - Diamond Princess – a month of trauma

- January 20 - Sailed from Yokohama
- January 25 - Passenger disembarks in Hong Kong
- **February 1** – same passenger tests positive 
- February 3/4 – ship was due to sail from Yokohama and placed in quarantine
- February 16 – some passengers disembark
- February 20 – WHO declares ship accounts for 50% of the worlds' cases
- February 24 – all passengers disembark
- March 1 – everyone disembarks
- 712 tested positive of 3,711 (19.2%)
- 12 deaths



Timeline



China Quarantines
US – Travel Restrictions
Diamond Princess Quarantined in Japan
Cruise Lines Shut Down
Canada Limits Ship Size
2M
1.8M
1.6M
1.4M
1.2M
1M
800k
600k
400k
200k
0
Jan 22
Jan 27
Feb
Feb 6
Feb 11
Feb 16
Feb 21
Feb 26
Mar
Mar 22
Apr
Apr 6
Apr 11

Government Response

- March 9 – USCDC issues warning about travel on cruise ships
- March 12-14 – Norway, Monaco, Spain, Singapore, others stop cruise ships
- **March 13 – Canada prohibits ships with more than 500 persons from tourism activities**
- March 15 – Australia bans ships from other countries
- March 31 - US Department of State – "Do Not Travel" Issued
- **April 6 – Canada prohibits ships with more than 12**
- **April 10 – USCDC extends the no sail order until Mid July (100 days)**
- May 15 – Seychelles and a few others bans all ships until 2022
- May 29 – Canada extends cruise ship ban through Oct. 31st
- **June 16 – Cruising resumes in Europe (Norway)**
- June 30 – EU/EEA issues sailing restart advice
- July 10 – UK FCO advices against cruising
- July 16 – **USCDC extends the no sail order until October 1**

Pandemic - By the Numbers

- **Ships**
  - 40 ships had cases prior to shutdown
  - 270 ships in CLIA member companies and 423 in total
  - 14.9% of CLIA ships had cases or 9.5% of total
  - Since then 123 ships in total reported cases[1]
  - 45.6% of CLIA ships had cases or 29.1% of total

The pandemic at sea

'Floating Petri dishes'

Four passengers have died, two test positive for covid-19 on cruise ship stranded off the coast of Panama

- **Infections**
  - Total – 2,973 (crew and passengers)[1]
  - Infection rate 5.14% of the total of the initial 40 ships or 0.187% of the total at sea population
  - vs 0.273% (world)[2] or 1.185% (USA)[2]

- **Deaths**
  - Total - **34** deaths[1]
  - Death rate of infected – **1.14%** vs 4.12% (world average)[2] or 3.62% (USA)[2] or 4.74% (King County)[2]

(1) Period: March 1 to July 10, 2020 Source: CDC
(2) As of July 22, 2020, Source: Johns Hopkins University Dashboard

Cruise industry response

❶ **Shut down of operations**

- March 11 – Viking announces closing operations until May 1
- March 12 – Princess, Virgin, Disney, Avalon, AmaWaterways, Windstar and Celestyal
- March 13 – Costa, AIDA, Fred Olsen, CMV, MSC, NCL,
- March 14 – RCCL, P&O, Carnival Australia

❷ **Financial**

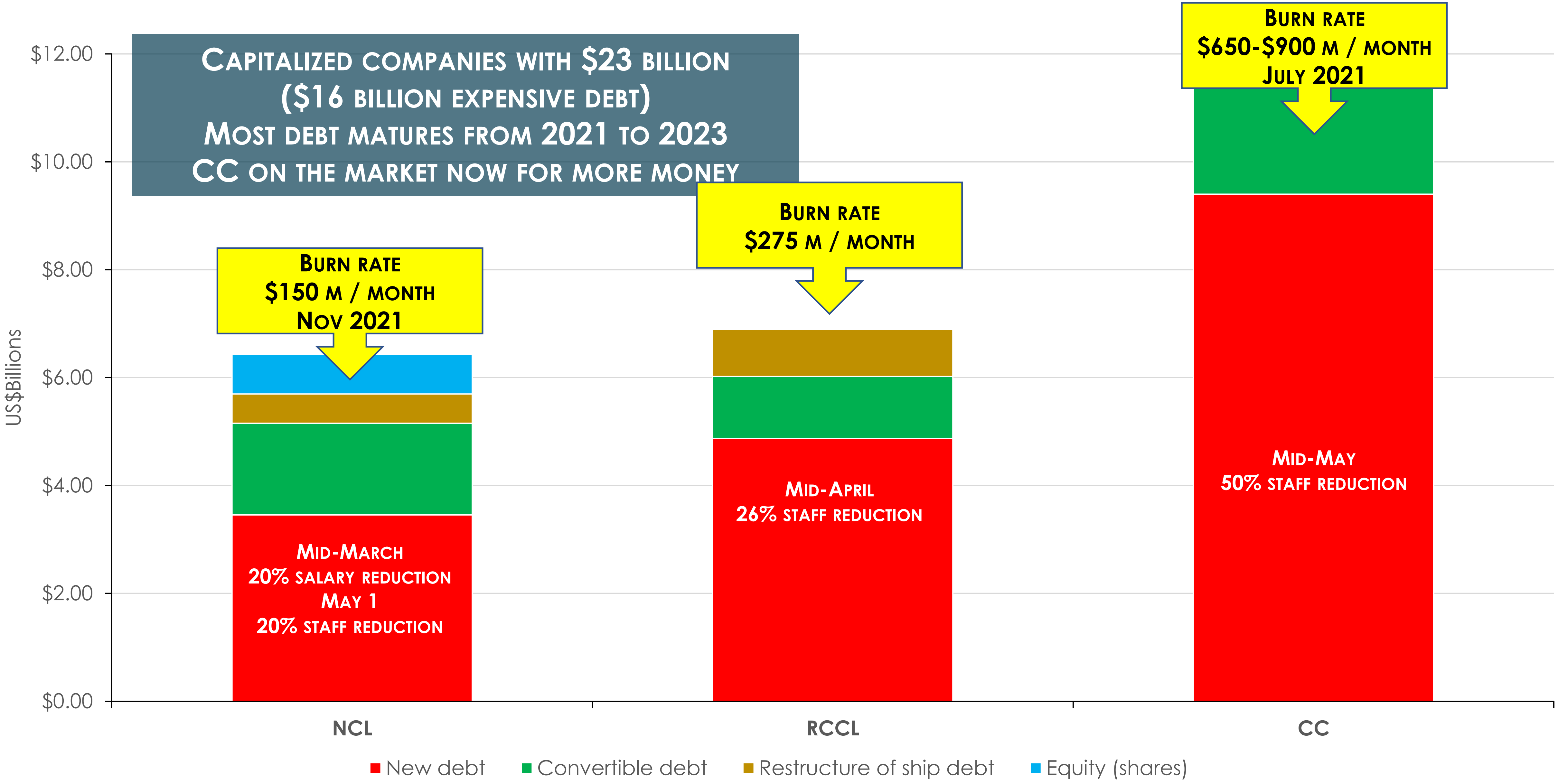
- NCL, RCCL and CC have all loaded up with cash
  - Equity with convertible shares at very low price points
  - Debt - worse than junk bond status
    - Carnival - 11.5%
    - NCL - 12.5%, 10.15%, 10.75%
    - RCCL – blend 10.875% and 11.5% (May); blend 9.125% and 4.25% (June)
  - Restructuring of ship building loans – extending maturity
- All lines report between 12 to 18 months of liquidity without new revenue
- **Most of the debt have terms from 2021 to 2023**

❸ **Repatriating crew**

- Still ongoing

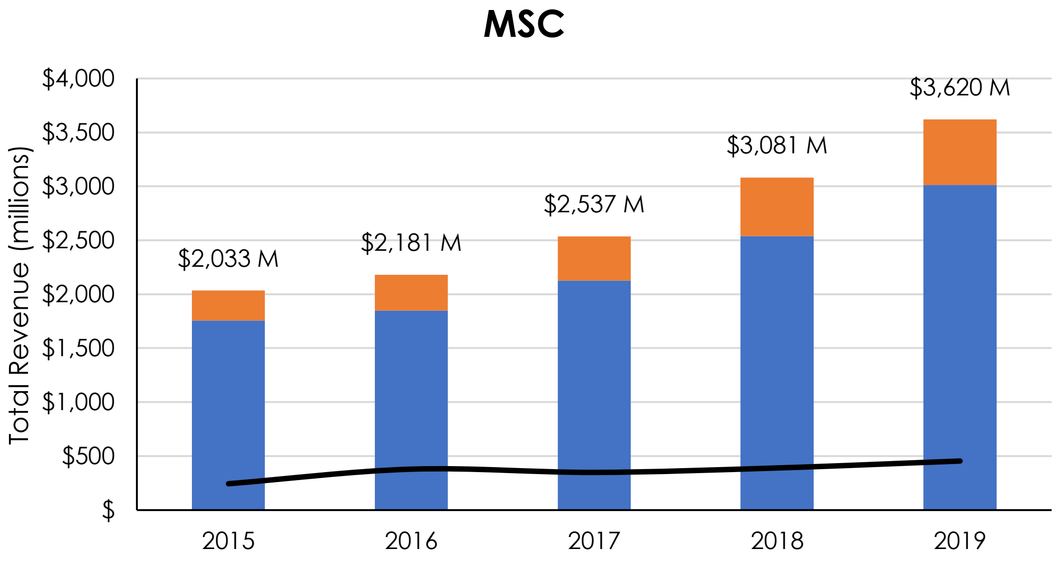
❹ **Now - lines focusing on removing the CDC “No Sail” order**

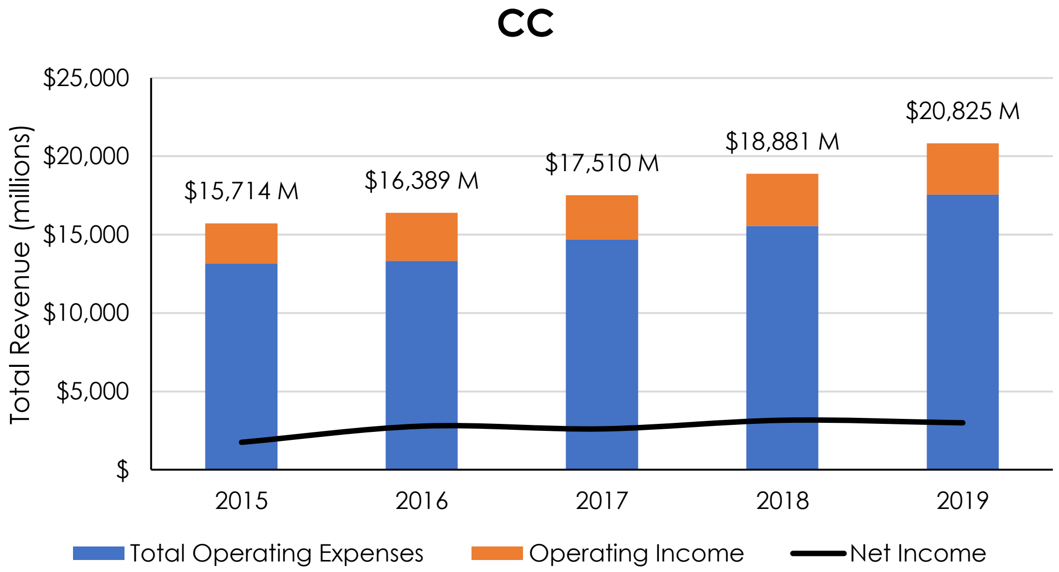
Financial situation – Rapid capitalization



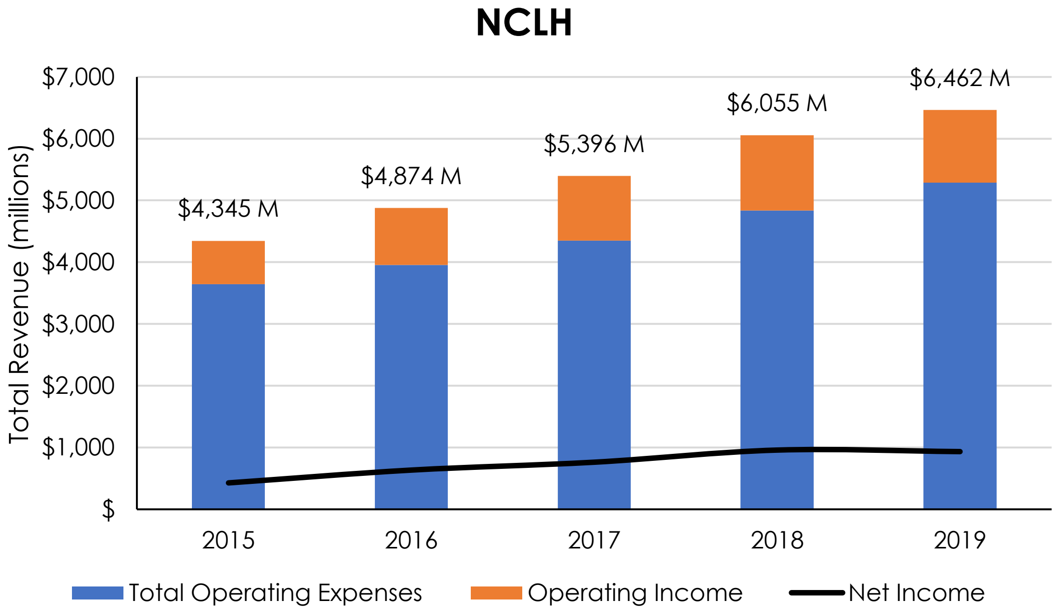
Assumes: NCLH closes on latest shares and debt offering
Sources: Multiple and BoA

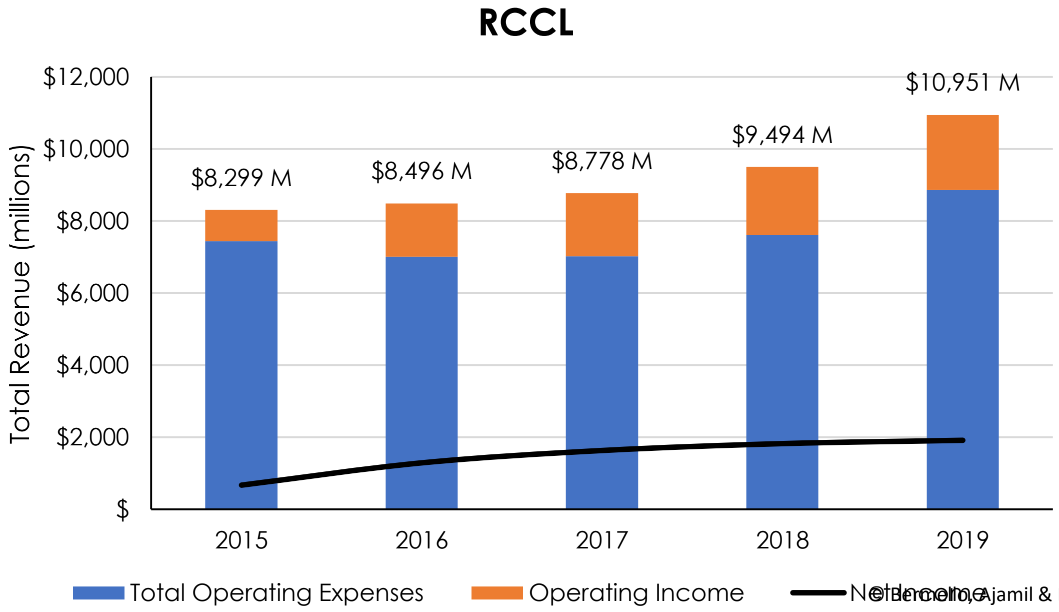
Industry pre COVID financial performance





2019 – US$6.5 Billion combined net income

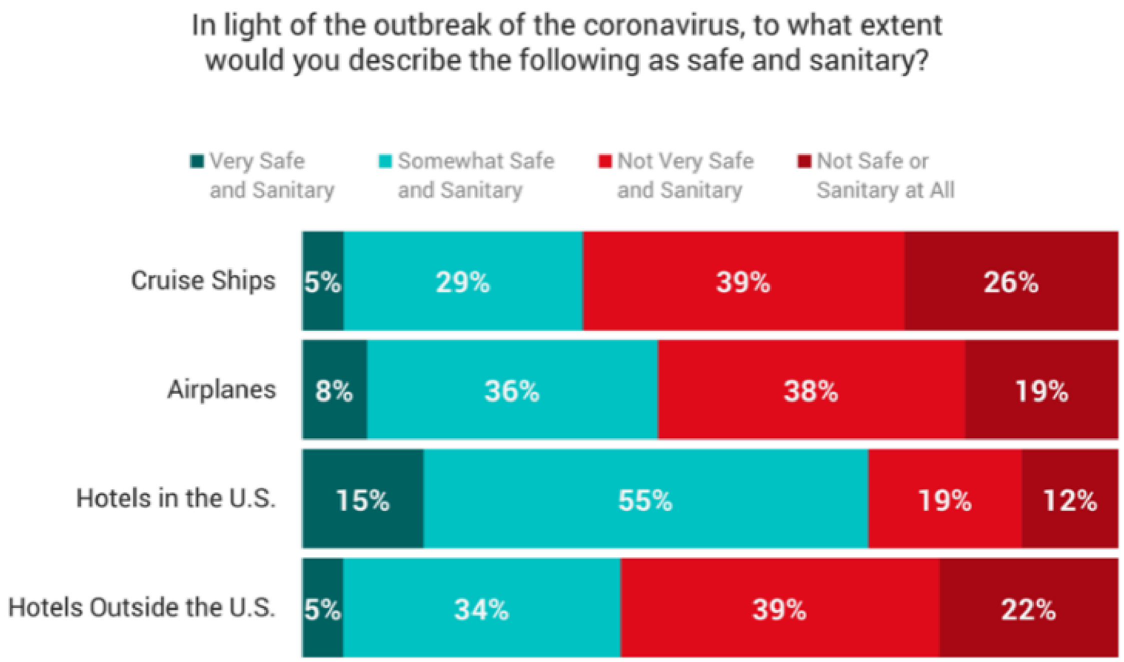




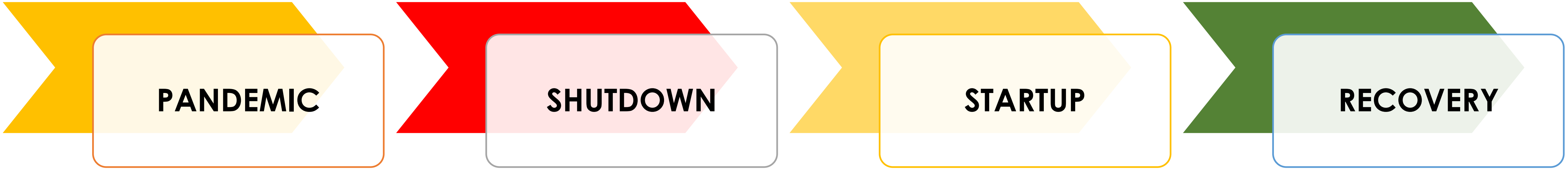
How does the industry return?

Fundamentals

- Tourism is a highly desirable activity
- In the context of safety, what is perceived as less safe:
- Today – the answer is – **CRUISE**
- In practical terms, which can be most controlled – **CRUISE**
    - The cruise industry has outperformed all tourism products during past crises



Stages



Pre vaccine Period
Customer demand
Government acceptance
Social separation
Load factors
Restrictions
Mitigation factors

Post vaccine Period
Customer demand
Government acceptance
Industry capacity
Capitalization
Load factors

Recovery drivers

Immediate
Pricing
Mitigation (steps to prevent outbreaks)
Operational aspect of restarting

Immediate
Priority to pay huge debt loads
Ability to consummate ship building
Foreign Government intervention to support shipyards

Immediate
Ports of entry vigilance
Systems to protect public health
Supporting customers

Mid term
Access to capital for investments
Ability to guarantee revenues
Reliance on third parties or PE

Cruise Industry Return to Service announcements

May 27, 2020

JUNE
- **Hurtigruten** (Norway)

JULY
- **Genting Cruises**
- **RCCL** (China)
- **MSC**
- **TUI Cruises**
- **Astro Ocean** (China)
- **Bahamas Paradise**
- **Marella** (3 of 5 ships)

CDC NSO 07.25

AUG
- **RCCL** (Rest of World)
- **CCL** (8 of 27 ships, NA)
- **NCLH** (6 of 27 ships)
- **Cunard** (2 of 3 ships)
- **Disney** (4 of 4 ships)
- **P&O Cruises**
- **Costa**
- **AIDA**

SEP
- **Cunard** (3 of 3 ships)
- **P&O Australia**

OCT
- **Princess**
- **Virgin**

NOV

DEC

Cruise Industry Return to Service announcements

June 8, 2020

JUNE
- **Hurtigruten** (Norway)
- **SeaDream** (Norway))

JULY
- **RCCL** (China)
- **TUI Cruises**
- **Ponant**
- **Astro Ocean** (China)
- **Bahamas Paradise**
- **Paul Gauguin** (Tahiti / French Polynesia)

CDC NSO 07.25

AUG
- **Genting Cruises**
- **RCCL** (Rest of World)
- **CCL** (8 of 27 ships, NA)
- **NCLH** (6 of 27 ships)
- **Cunard** (2 of 3 ships)
- **Disney** (4 of 4 ships)
- **Costa**
- **MSC**
- **AIDA**
- **Marella** (3 of 5 ships)

SEP
- **Cunard** (3 of 3 ships)
- **Viking**

OCT
- **Princess**
- **Virgin**
- **P&O**

NOV

DEC

Cruise Industry Return to Service announcements

June 17, 2020

JUNE

- **Hurtigruten** (Norway)
- **SeaDream** (Norway)

JULY

- **Astro Ocean** (China)
- **Bahamas Paradise**
- **Paul Gauguin** (Tahiti / French Polynesia)

CDC NSO 07.25

AUG

- **Genting Cruises**
- **Paul Gauguin** (South Pacific

SEP

- **NCLH** (Alaska)
- **RCCL**
- **CCL**
- **Cunard**
- **Disney**
- **Marella**
- **Costa**
- **MSC**
- **AIDA**
- **Viking**
- **Cruise & Maritime**
- **TUI Cruises**
- **Ponant**

CLIA voluntary 09.15

OCT

- **NCLH** (All Others minus CAN & NE)
- **Princess Cruises**
- **Virgin**
- **P&O**

NOV

- **Cunard**
- **Pullmantur**

DEC

Cruise Industry Return to Service announcements

July 23, 2020

JUNE
- **Hurtigruten** (Norway, 1 of 16 ships, 30%)
- **SeaDream** (Norway, 2 of 2 ships)

JULY
- **TUI** (Germany, 1 of 7 ship, 60%)
- **Hapag-Lloyd** (Germany, 2 of 5, 60%)
- **Paul Gauguin** (Tahiti / French Polynesia, 60%)
- **Genting Cruises** (Taiwan, 1 ship, 50%)
- **Ponant** (France, 6 of 11 ships)

CDC NSO 07.25

AUG
- **MSC** (Italy, 10 of 18 ships)
- **Costa** (Italy, 5 ships, 50%)
- **AIDA** (Germany, 3 ships, 50%)
- **Marella** (Greece, 1 ship, 30%)
- **Black Sea Cruises** (Russia, 1 ship, 60%)

SEP
- **Windstar** (Tahiti, 2 ships)

CLIA VOLUNTARY 09.15

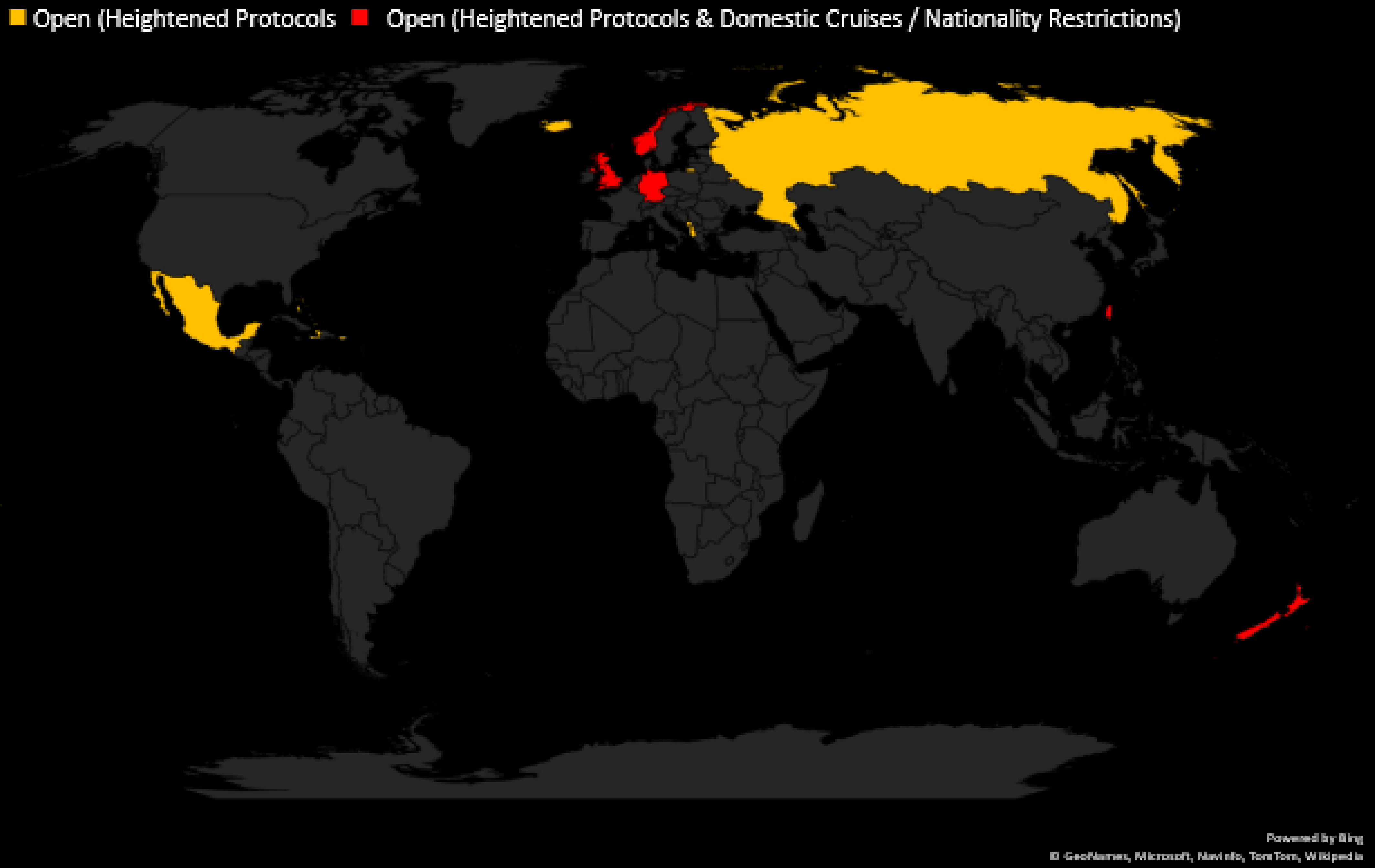
CDC NSO 10.01

OCT
- **NCLH**
- **RCCL**
- **CCL**
- **Disney**
- **Viking**
- **C&MV**
- **Virgin**
- **P&O**
- **Bahamas Paradise**
- **Carnival** (Australia)

NOV
- **Cunard**

DEC
- **Princess**

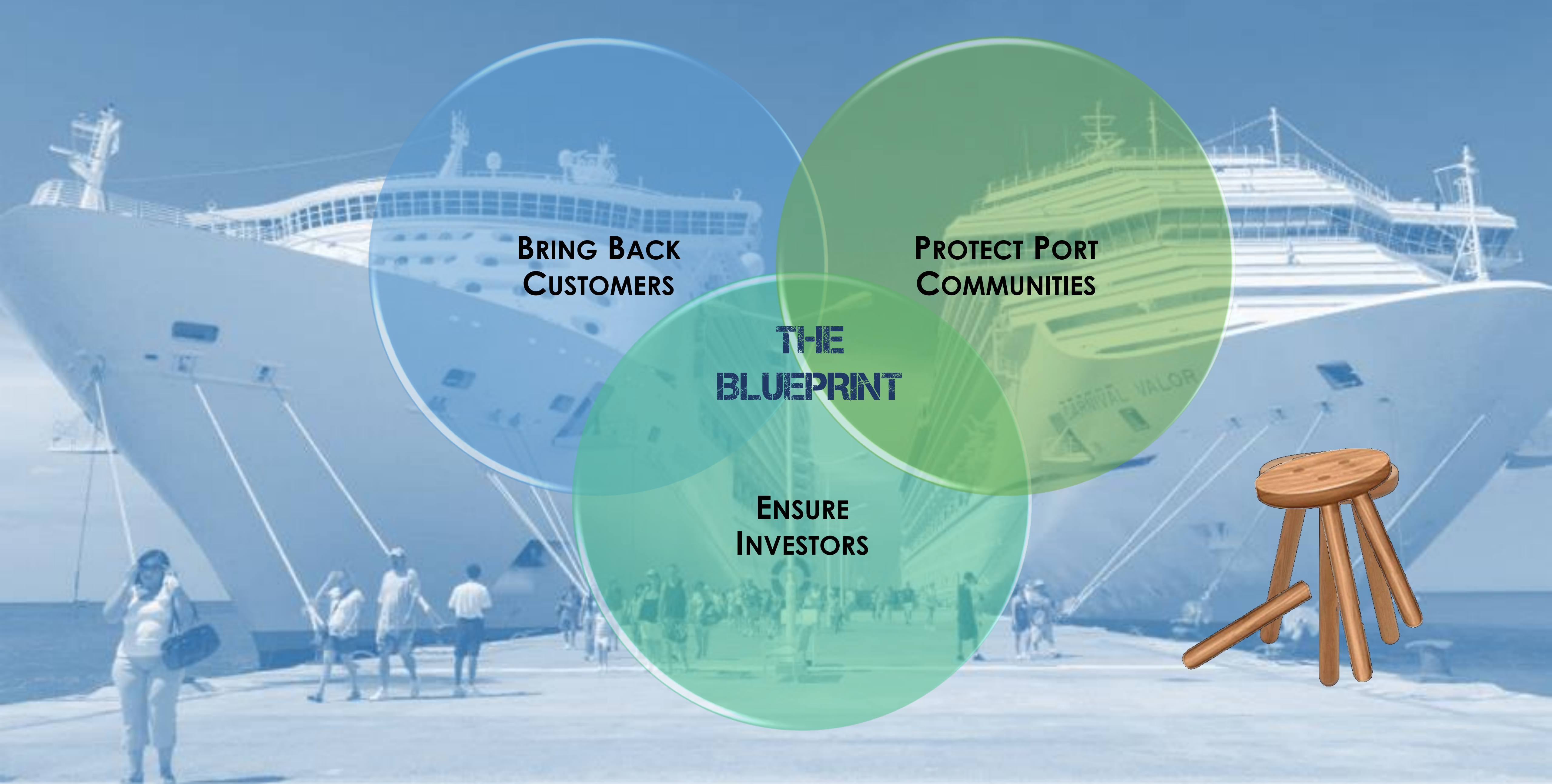
Countries Open for Cruise - July 2020



A Blueprint

for a healthy cruise industry

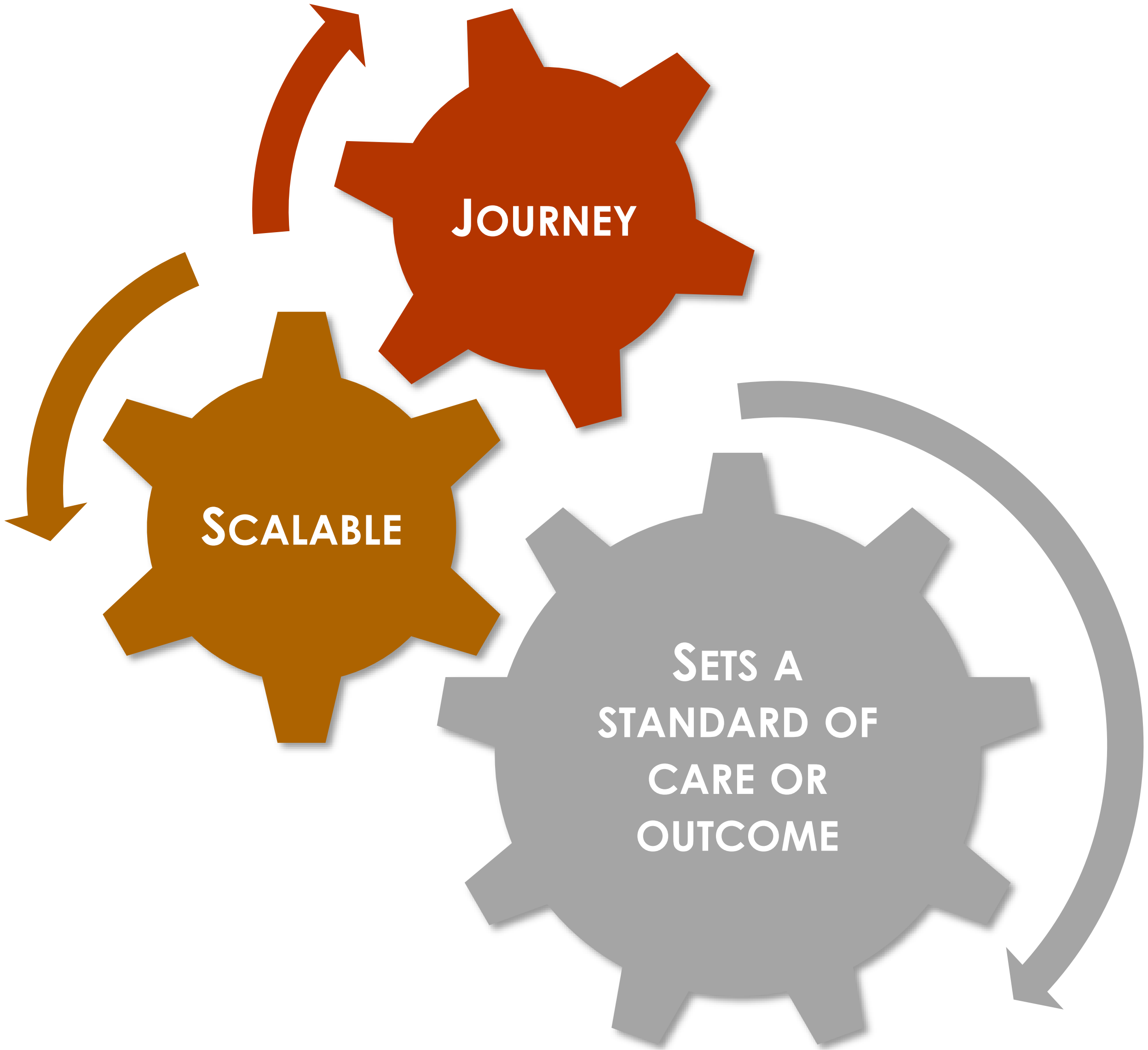
Holistic plan – a three legged stool



The Blueprint

- Has to be a collaborative effort between cruise lines and communities and their ports
- Cruise lines need to set a standard to attract and protect their customers and crew
- Ports need to set a standard to protect their communities
- There is a value proposition in delivering the healthiest experience
- That added value needs to be used to deliver the product

KEYS TO IMPLEMENTATION OF PROTOCOLS



The Cruise Journey

Pre Embarkation (Home)

- Electronic health questionnaire linked to check-in and onboard systems
- Communication of check-in, onboard and port protocol and health items

Embarkation (Terminal)

- Passenger screening
- Health Scan Area on terminal entry
- Thermal scanning
- Terminal Filtration / Sanitization System
- Criteria - Kill 99.9% pathogens-60 min
- Expand terminal time to kill germs
- Secondary Health Inspection Area
- Tertiary UV light Scan on gangway entry / boarding
- Communicate onboard Health Protocol

Cruise (Onboard)

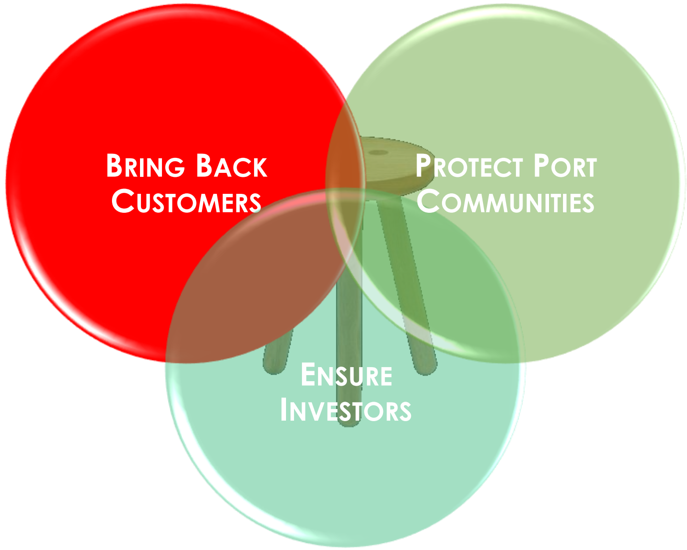
- Integrated onboard Filtration / Sanitization Air System continuous killing of 99.9% of pathogens
- Surface/high touch disinfection
- Laundry sanitation
- Communicate onboard and Port Health Protocol
- Medical / Health Officer standards

Shoreside (Port)

- Health Assurance communication as part of clearance
- Shorex / Venue / Transport Health Flex Standards
- Communicate Port Health Protocol
- Reboard Health Checks / Scans

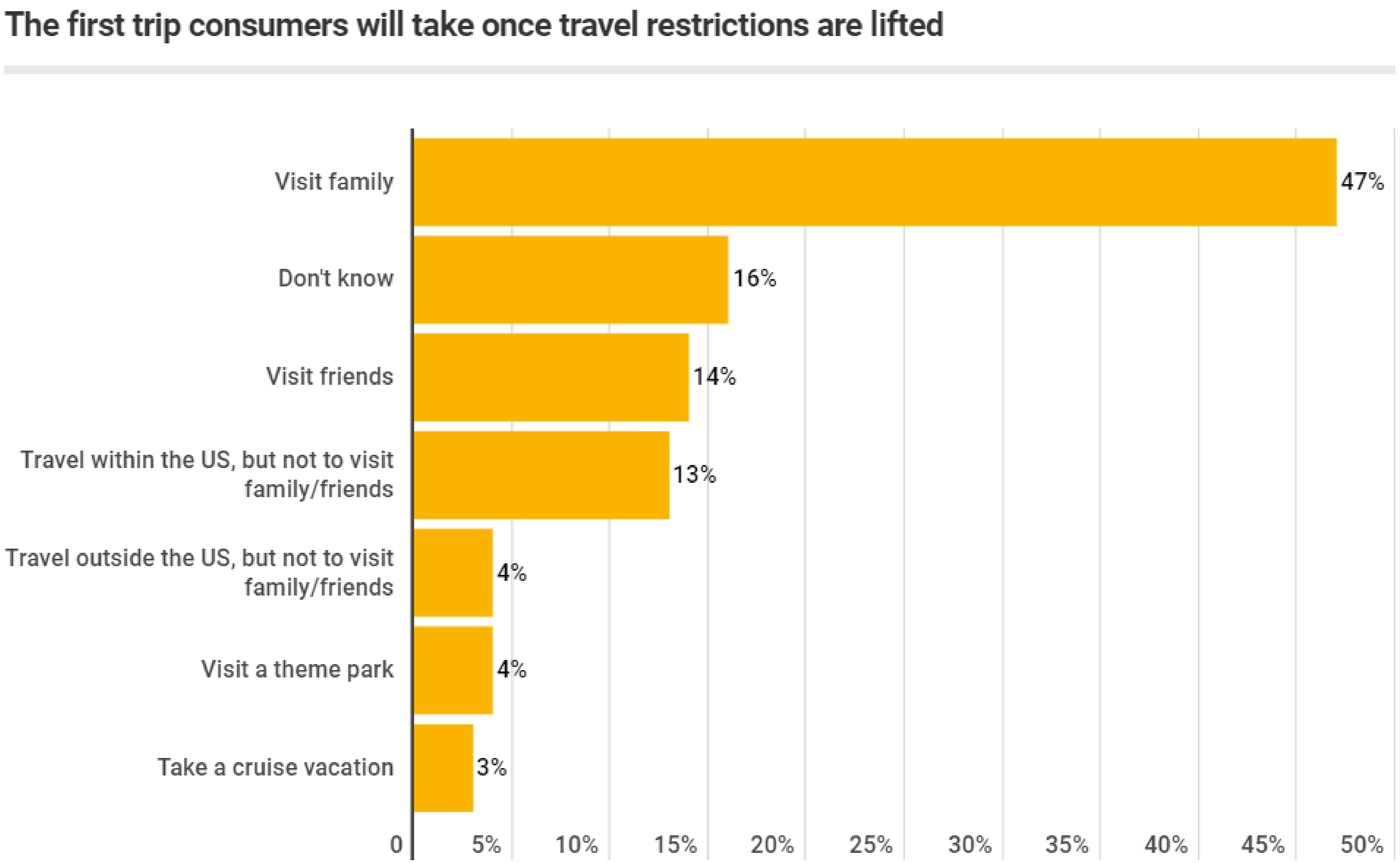
Disembarkation (Terminal)

- Health Assurance communication as part of clearance
- Public Health Checks / Scans
- Consumer health communication



Bringing back the customer

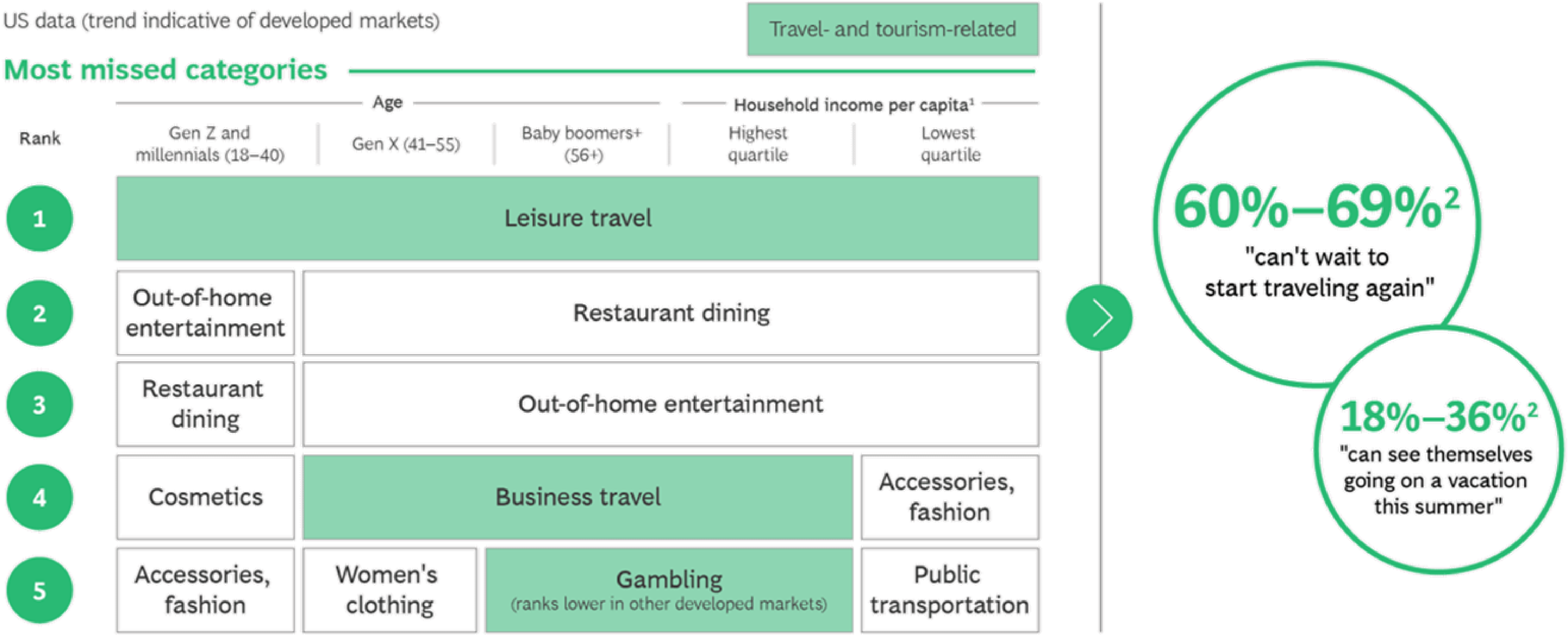
CONSUMERS ARE EAGER TO VISIT FRIENDS AND RESEARCHING VACATIONS



SOURCE: SURVEY – CNBC/PENGUIN, 1,249 RESPONDENTS, 05.27.20

TRAVEL PERCEPTION

- CONSUMERS RANK LEISURE TRAVEL AS THE **NUMBER ONE THING THEY MISS** (ACROSS COUNTRIES, AGE GROUPS, AND INCOME LEVELS)
- 36% OF US CONSUMERS SAY THAT THEY CAN SEE THEMSELVES GOING ON A VACATION THIS SUMMER
- AMERICAN POPULATION IS READY TO TRAVEL NOW OR ARE COMFORTABLE TRAVELING BEFORE A VACCINE IS AVAILABLE
- 7% WILLING TO TRAVEL INTERNATIONALLY, 72% PREFER TO DRIVE AND 9% WOULD TAKE A CRUISE

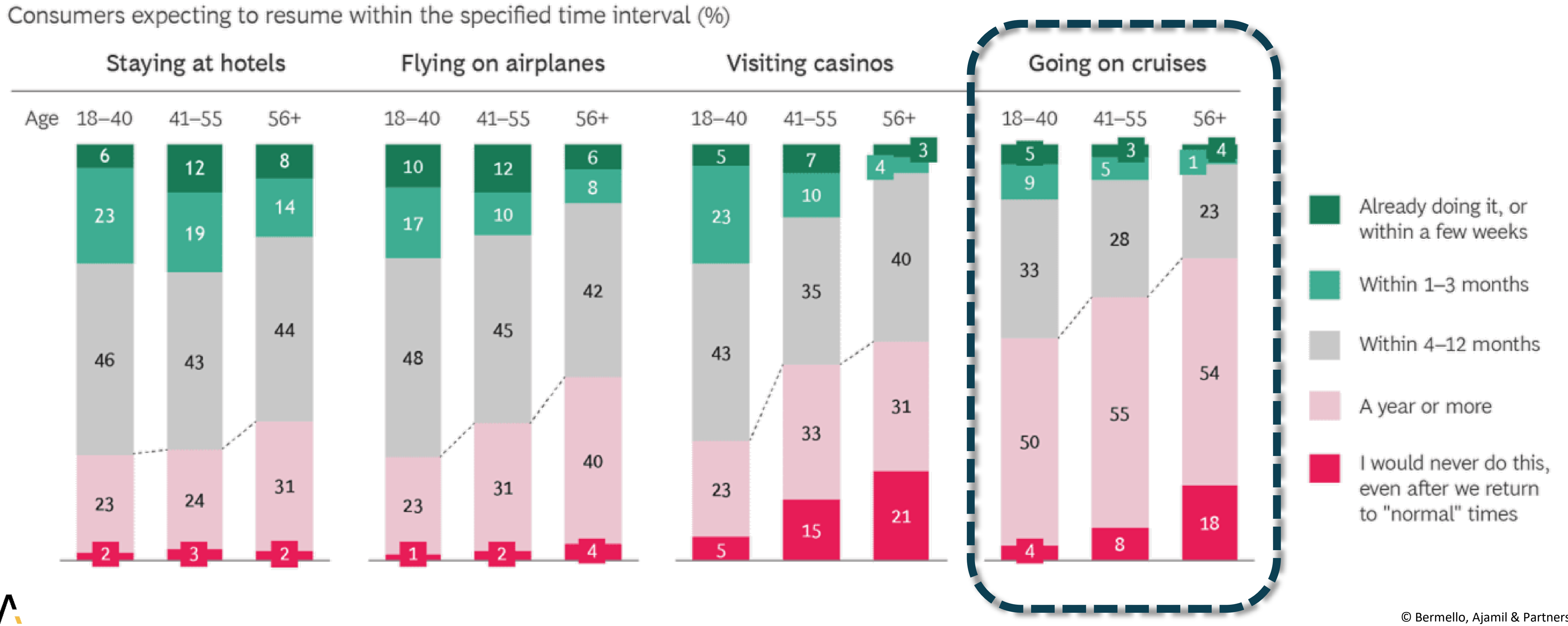


CRUISE PERCEPTION – RISK

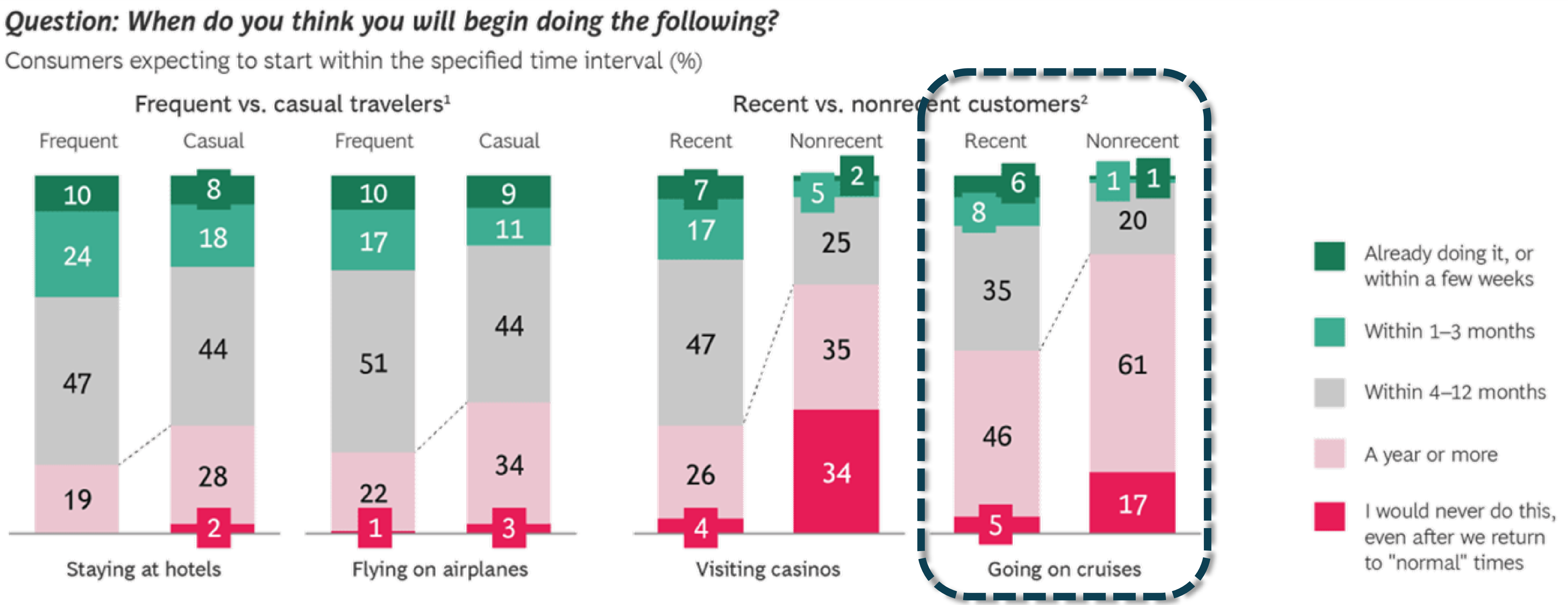
- THREE KEY CONSUMER GROUPS; **EACH GROUP RESPONDS DIFFERENTLY TO RISK**
- **CRUISERS**
  - VIEW A CRUISE AS A "SAFE" HOLIDAY
  - DURING TIMES OF OUTBREAKS, STUDIES SHOW THAT CRUISERS TRUST MEASURES TAKEN ARE APPROPRIATE,
  - ABOVE ALL, CRUISERS ARE RESILIENT AND LOYAL.
- **POTENTIAL CRUISERS**
  - GROUP MOST IMPACTED BY COVID-19 CONCERNS.
  - THIS GROUP IS KEY TO LONG TERM GROWTH AND STABILITY.
  - REGAIN THIS GROUP BY THE INDUSTRY SHARING MEASURES TAKEN TO PROTECT PASSENGERS, CREW AND SHORESIDE STAFF
  - TIME AND REASSURANCE REQUIRED FOR THIS GROUP TO CRUISE.
- **NON-CRUISERS**
  - THIS GROUP REJECTS CRUISING BEYOND HEALTH CONCERNS.

YOUNGER INDIVIDUALS ARE MORE LIKELY TO TRAVEL SOONER THAN OLDER PEOPLE

- 75% OF PEOPLE BETWEEN 18 AND 40 SEE THEMSELVES TRAVELING BY AIR WITHIN 12 MONTHS;
- 47% SEE THEMSELVES ON A CRUISE IN THE SAME PERIOD.

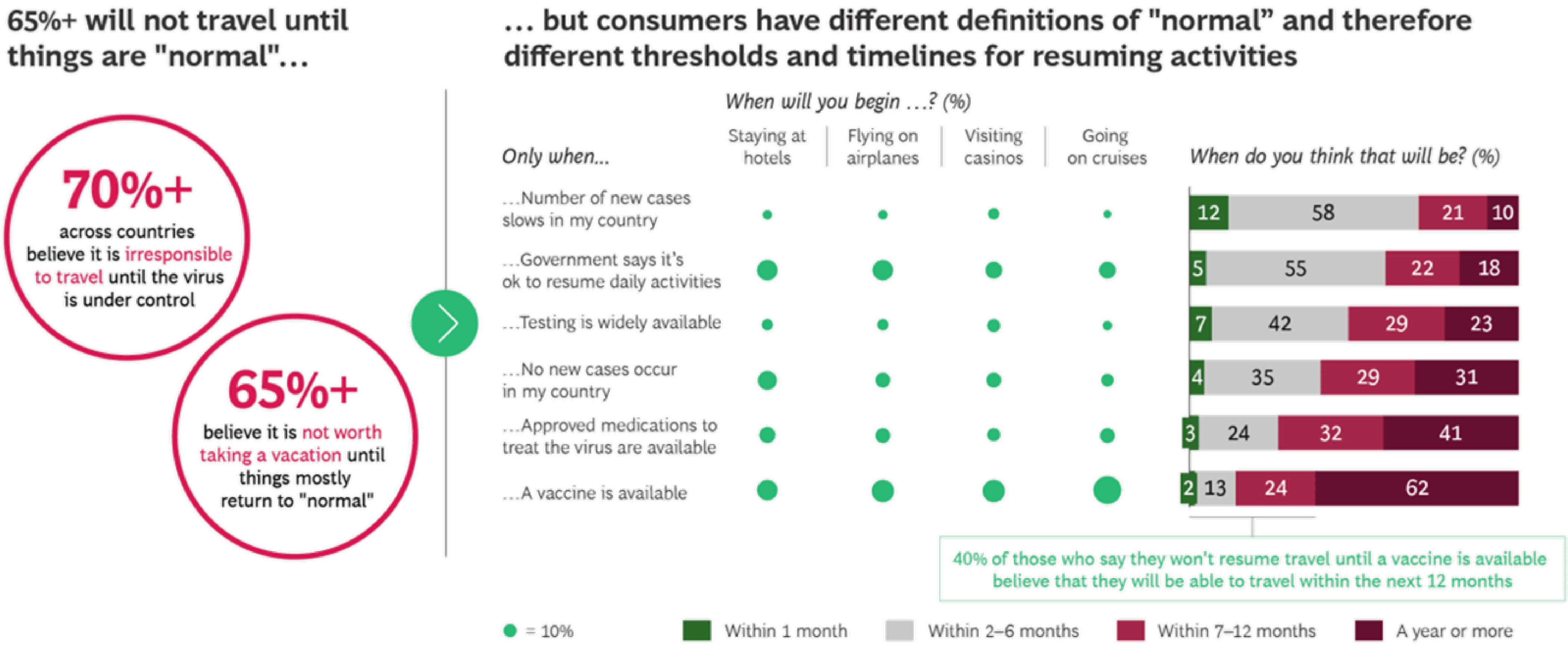


FREQUENT TRAVELERS ARE MORE LIKELY TO RETURN SOONER



PROPENSITY TO CRUISE

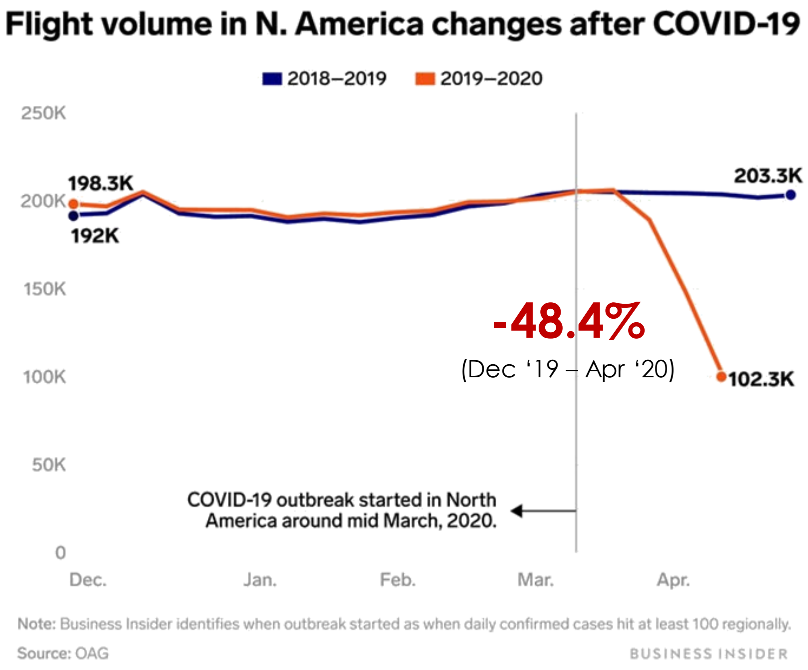
- THE MAJORITY STILL ASSERT THAT THEY WILL NOT TRAVEL UNTIL THINGS ARE "NORMAL"
- 70% OR MORE ACROSS COUNTRIES BELIEVE THAT IT IS IRRESPONSIBLE TO TRAVEL UNTIL THE VIRUS IS UNDER CONTROL
- MANY ARE WAITING FOR THEIR GOVERNMENTS TO ANNOUNCE THAT IT IS ACCEPTABLE
- OTHERS ARE HOLDING OUT UNTIL A VACCINE IS AVAILABLE

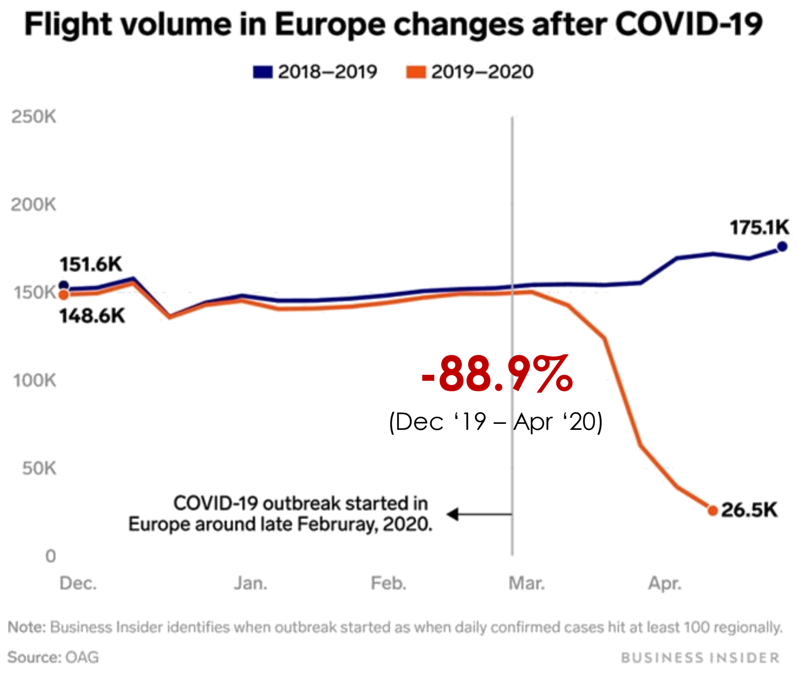


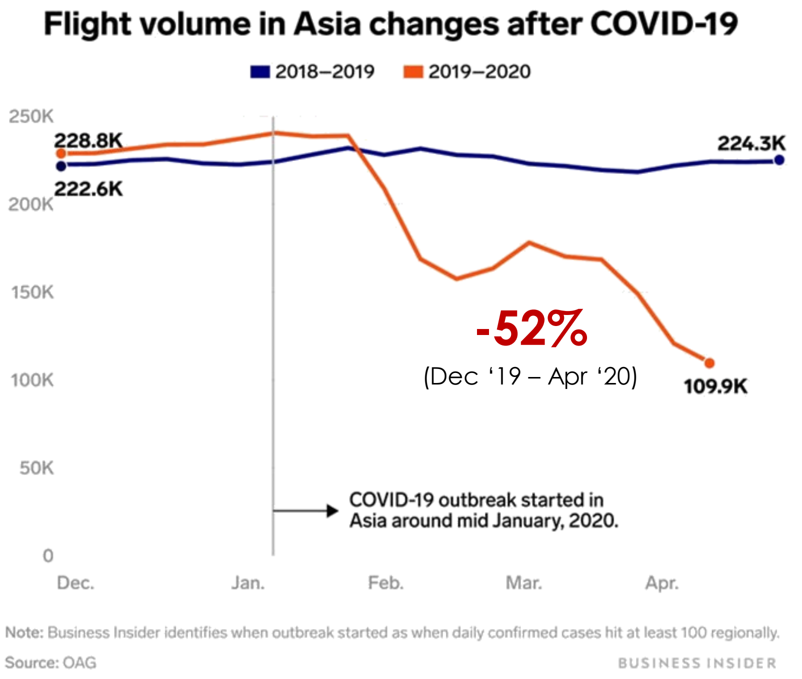
Cruise bookings

- **Future bookings are stabilizing**
  - Booking volume in March 2020 for 2021 was up 9% versus the same time last year.
  - That includes people applying their Future Cruise Credits from sailings that were cancelled this year, but still **shows a surprising resilience in desire to book / take a cruise**.
- **Companies are reporting**
  - In March, Carnival Corp. revealed that advance **bookings for the first half of 2021 were "slightly lower" than the previous year.**
  - Early May, RCCL said the number of bookings made so far for next year is "**within historical ranges when compared to same time last year,"** with prices higher compared to 2020.
  - Mid May, NCLH said **bookings for 2021 were within "historical ranges"** and the majority were "good old cash bookings" as opposed to future cruise credits due to canceled sailings
- **Cancellations are reducing**
  - As of April 2020, cruise lines began to see a steady reduction in cancellations farther out, as **many passengers seem to just be waiting** to see the situation prior to their final payment; cancellation rate for Q4 2020 is back to being roughly normal, and Q3 has come down.
  - 76% of those who have cancelled their cruise are taking the option for a future cruise credit of 125% of the value, rather than getting 100% refund today.

AIRLIFT – HOW WILL PASSENGERS GET TO SEATTLE? (MAY 2021)



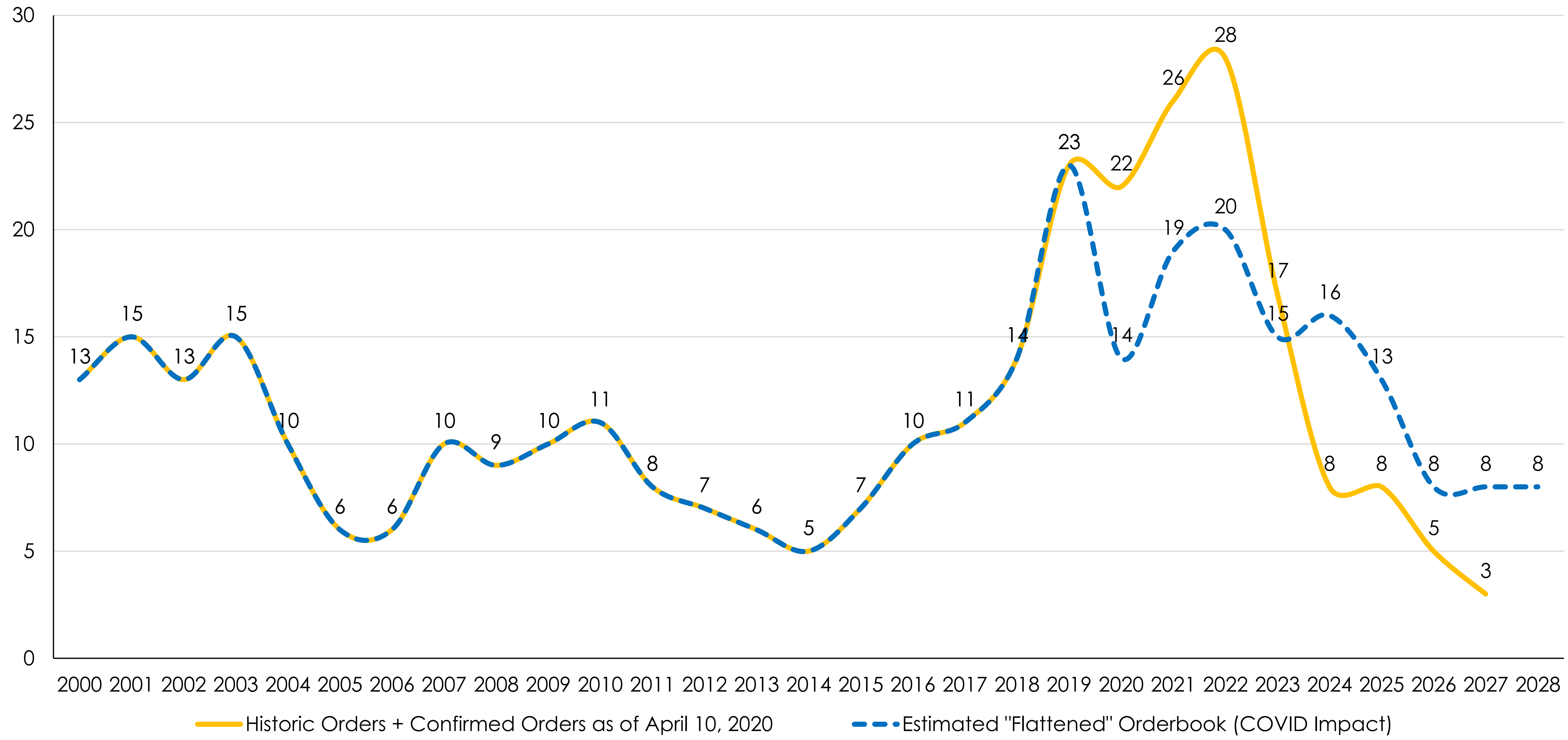




CRUISE COULD ACTUALLY PROVIDE A BOOST TO SEA-TAC TRAFFIC

The long-term impact of COVID

VESSEL ORDER BOOK



Worldwide fleet capacity

- Move from supply to demand industry (next 7 – 10 years)
- Cruise brands shedding older low revenue/high expense vessels
  - These are ship with an average age of 42.6 years
  - 2020 – targeting up to 13 vessels with 19,633 - capacity
  - 2021 – target up to an additional 39 with a capacity of 58,898
  - 2022 -2027 - year average is 5 per year (this is baked into our normal forecasting)
  - 2028 – onwards 2.1% annual growth
- Ship withdrawals will affect brands differently
  - Some lines will not be affected
  - The ones with the older fleets will see reductions
- Regional market capture may shift based on policies
  - Governments could mandate load factors / new space programs
  - Consumer demand could favor certain operations
  - Port openings, cruise vessel prep – crew, etc.

Carnival offloads cruiseship as CEO says more disposals are on the way

Costa Cruises sells Victoria to the San Giorgio del Porto shipyards

What will be the fate of this cruise ship? The hypotheses are two: the dismantling at a shipyard certified for demolitions following European regulations or its conversion into a floating hotel for the workers employed at the industrial sites managed by SGdP

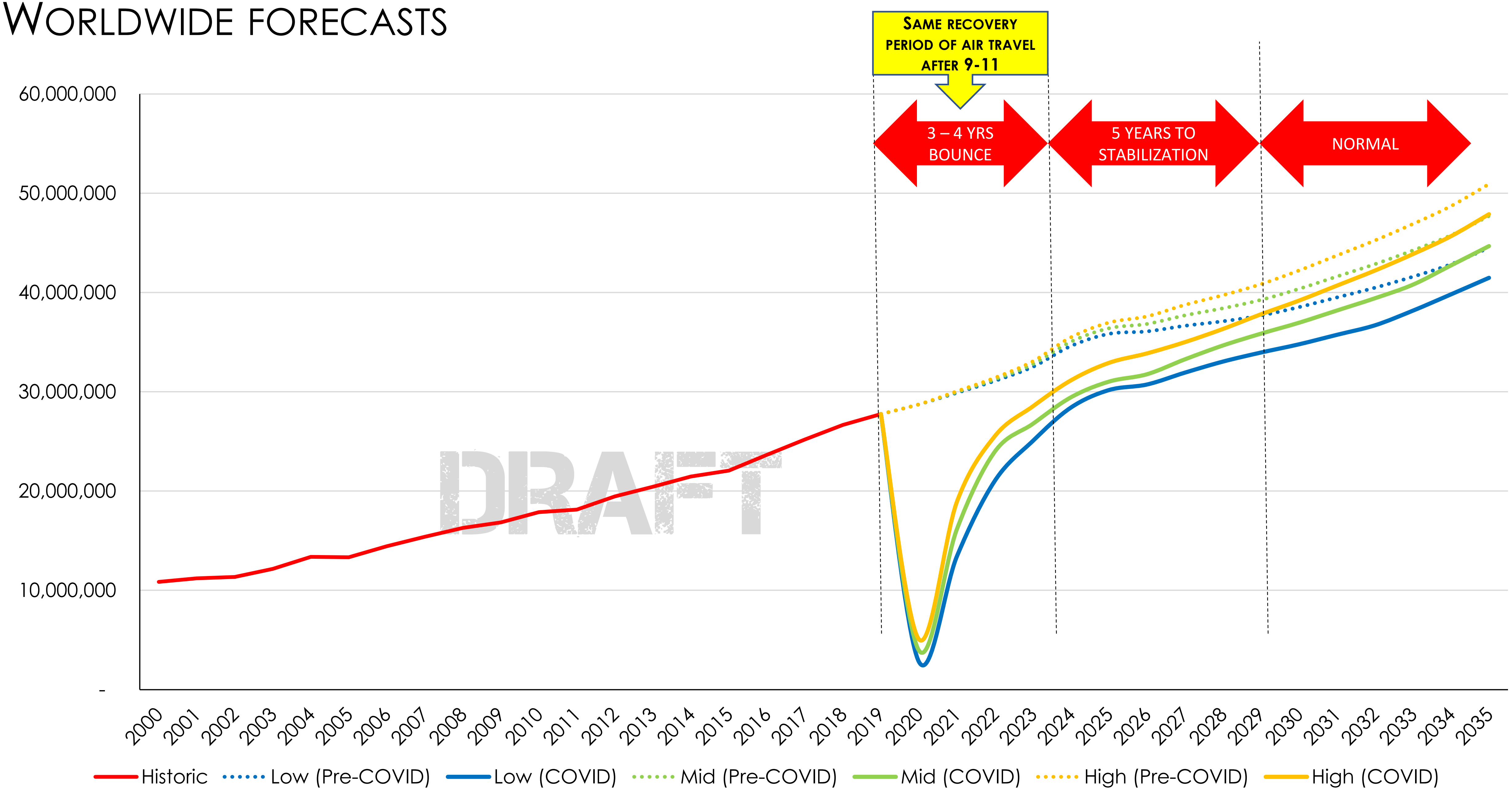
Carnival fleet reduction

Cruise Ship	Brand	New Operator	Tonnage	Capacity	Built	Age	Price/Terms	Delivery
neoRomantica	Costa	Celestyal	53,048	1,578	1993	27	N/A	TBD
Maasdam	Holland America	Unknown	55,575	1,258	1993	27	N/A	August 2020
Veendam	Holland America	Unknown	57.092	1,350	1996	24	N/A	August 2020
Amsterdam	Holland America	Fred. Olsen	62,725	1,380	2000	20	N/A	Fall 2020
Rotterdam	Holland America	Fred. Olsen	61,849	1,404	1997	23	N/A	Fall 2020
Oceana	P&O UK	Unknown	77,499	2,016	2000	20	N/A	July 2020
Victoria	Costa	Unknown	75,166	1,928	1996	24	N/A	June 2020
Pacific Dawn	P&O Australia	CMV	70,285	2,020	1991	29	N/A	March 2021
Pacific Aria	P&O Australia	CMV	55,819	1,258	1994	26	N/A	May 2021
Atlantica	Costa	CSSC	85,619	2,114	2000	20	N/A	Q4 2019
Mediterranea	Costa	CSSC	85,619	2,114	2003	17	N/A	Q4 2020
Pacific Jewel	P&O Australia	Zen Cruises	70,250	1,590	1990	30	N/A	March 2019
Prinsendam	Holland America	Phoenix Reisen	38,484	835	1988	32	N/A	Summer 2019
Oriana	P&O UK	CTS	69,153	1,822	1995	25	N/A	Summer 2019
Fantasy	Carnival	Not disclosed	70,367	2,040	1990	30	N/A	July 2020
Inspiration	Carnival	Not disclosed	70,367	2,040	1996	24	N/A	July 2020
Fascination	Carnival	Laid-up	70,367	2,040	1994	26	N/A	July 2020
Imagination	Carnival	Laid-up	70,367	2,040	1995	25	N/A	July 2020

Worldwide start-up trends

- Limited to specific geographic areas not requiring air (or very limited)
- Relying primarily on drive / rail markets
  - NA – FL / TX homeports to Caribbean region
    - Short duration 1 – 7 days maximum (majority 2 – 4 nights)
    - Itineraries use private islands and key secured port(s)
    - Cruise to Nowhere may be up to 3 days
    - Bahamas shut down is a major impediment
  - Europe
    - BCN / Marseilles to Med Region (French / Spanish)
    - Dover to UK / channel ports (UK)
    - Hamburg / Lubeck to Baltic (German)
    - Norwegian Fjords (Small ship sailing)
    - Short duration 1 – 5 days / Cruise to Nowhere (port availability dependent)
  - Asia
    - HK, Shanghai, Guangzhou (China / HK market)
    - SIN to SE Asia (Asia / SIN market)
    - Short duration 1 – 7 days / Cruise to Nowhere (port availability dependent)
  - **Seattle / Alaska**
    - **Industry could surprise everyone with a huge 2021 season**

WORLDWIDE FORECASTS



Source: Bermello, Ajamil & Partners July 2020

Protecting the Destination

Cruise homeport terminal process

Persons entering the Terminal / Pier must undergo strict health screenings upon each entry / re-entry with no exceptions

Pre-boarding screenings

Scalable dependent upon health alert level

All checked baggage will be externally sanitized in terminal or baggage building

Carry on baggage will be exposed to U/V light for ~10-20 sec. and can be incorporated into the security system at check-in

All goods will be externally sanitized with new Tech systems in warehouse, truck, container prior to being loaded onto the vessel.

Includes food, beverage, hotel, deck and engine, and service supplies

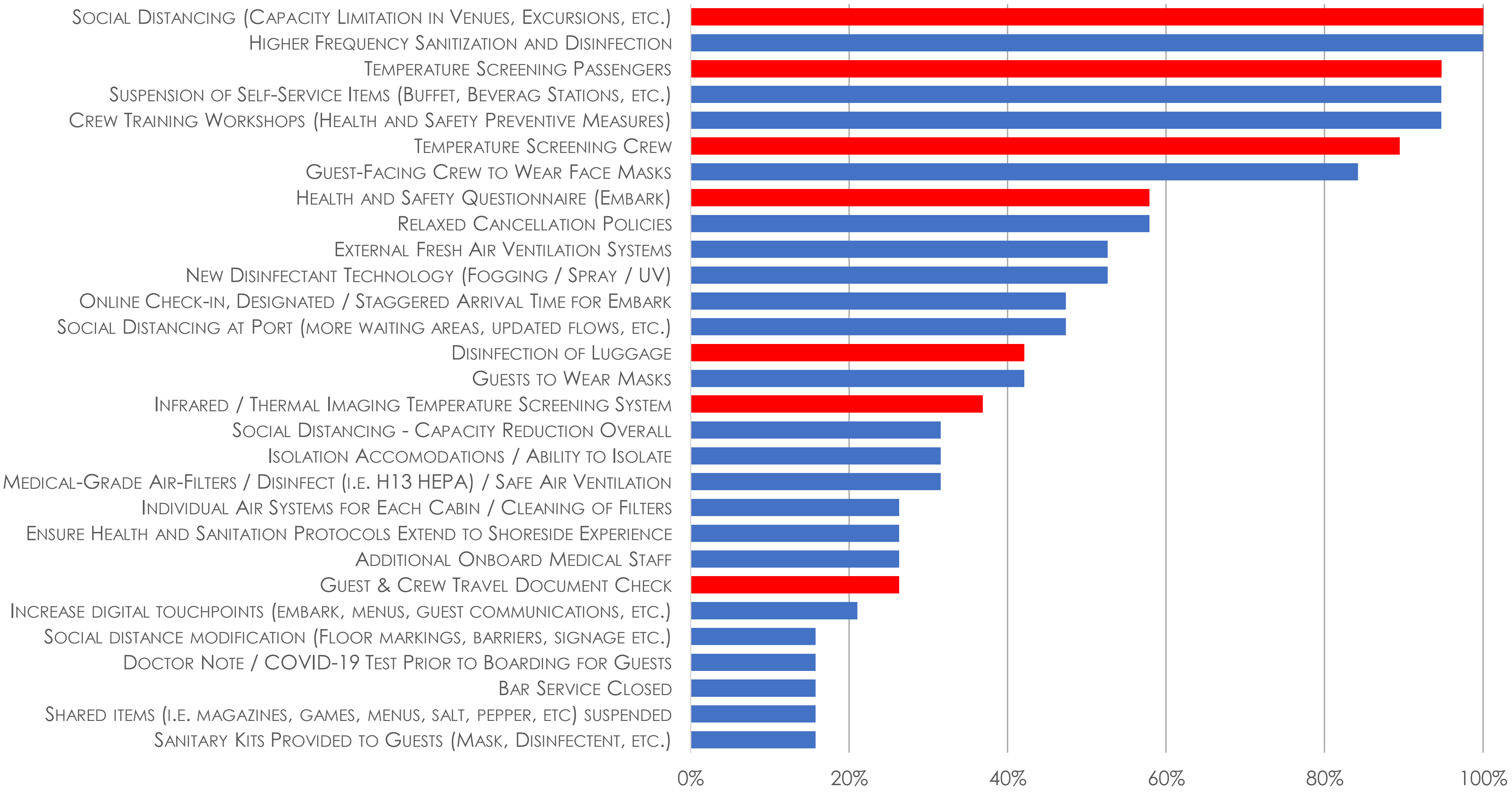
The role of the port

- Adjust facilities to meet the needs of the new protocols
  - Provide measures to control infections from entering the vessel

- Institute controls to protect the communities from disembarking passengers
  - Protocols
  - Quarantine areas

- Contingency plans for emergencies

PROTOCOLS BEING PROPOSED BY CRUISE LINES



DESTINATIONS THAT HAVE ANNOUNCED

	USVI	St. Maarten	Puerto Rico	Barbados	Norway	Bahamas	Bermuda	Iceland	Jamaica
Cruise Specific									
Ready for Cruise Travel	Yes	Yes	Fall	TBA	Yes - Nordic Countries	Yes		Yes	No
Capacity Limitation (Vessels)					Yes - 50% Max Cap.; max 250 pax				
Additional Medical Staff Onboard Required					Yes				
Guest Health Certificates / Questionnaires Required					Yes				Yes
Thermal Temperature Scans						Yes			Yes
Face Mask Required	Yes	Yes	Yes	Yes		Yes			Yes
Social Distancing	Yes	Yes	Yes	Yes	Yes	Yes			Yes
Additional Hand Washing / Sanitizing	Yes	Yes		Yes		Yes			Yes
Capacity Limitation (Transport, etc.)	Yes					Yes			
Higher Frequency Sanitization and Disinfection	Yes					Yes			Yes
Contactless Touchpoints				Yes					Yes
Community Education / Training	Yes		Yes						Yes
Terminal Cleaning Before / During / After Ship						Yes			
Additional Cleaning Available for Additional Charge (i.e. Luggage)						Yes			
Protocol Sharing prior to Arrival (Guests, Cruise Lines, etc.)	Yes								
Crisis Emergency Service Department		Yes							
Medical Unit on Site		Yes							
Temperature Screening for Employees									Yes
Contactless embark / debark process						Yes			
Continue Protocol Refinement	Yes	Yes	Yes	Yes	Yes				Yes
General Travel Arrivals									
Temperature Screening for Arrivals	Yes					Yes			Yes
PRC Test for Arrivals						Yes		Yes (or Quarantine)	
Self-Quarantine						Yes		Yes (or PRC test)	
PRC Test 72-Hours Prior to Arrival							Yes		
Review Travel History						Yes			

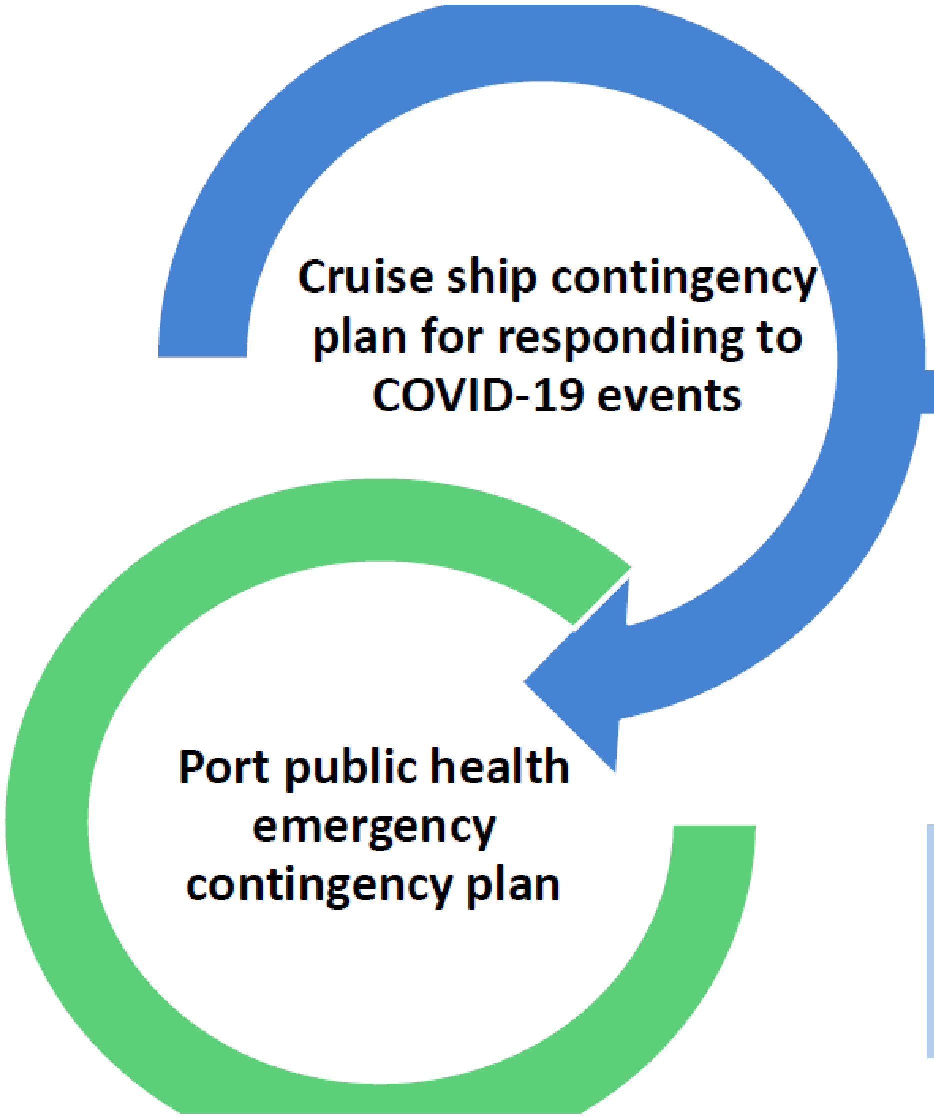
EU/EEA GUIDANCE 06.30.20

As restrictive measures introduced in response to COVID-19 are lifted guidance provides EU Member States and cruise ship operators with options of measures for:

- Preventing COVID-19 infectious passengers from beginning holidays
- Preparing to respond to COVID-19 events on board
- Preventing COVID-19 infectious passengers/ crew from boarding
- Preventing & limiting transmission on board
- Managing COVID-19 cases on board/at terminal
- Responding to COVID-19 events retrospectively

Strategy to reduce COVID-19 risk for travellers should cover entire journey

COORDINATION



Competent authority of at least one port of call in itinerary (home port or other with capacity)

Review to ensure interoperability of plans

10 essential pre-requisites should be addressed in cruise ship contingency plans for prevention and control of COVID-19 before starting operations

Measures at Cruise Terminals

Measures described to reduce COVID-19 risk at cruise terminals	**Maintaining physical distancing**
	Use of face masks
	Respiratory etiquette and hand hygiene
	Cleaning and disinfection
	Ventilation
	Health monitoring terminal staff
	Managing possible cases/contacts at cruise terminal
	Baggage handling

Specific regulations

- Establish and maintain a public health emergency contingency plan, including the nomination of a coordinator and contact points for relevant point of entry, public health and other agencies and services;
- Provide assessment of and care for affected travellers by establishing arrangements with local medical facilities for their isolation, treatment and other support services that may be required;
- to provide appropriate space, separate from other travellers, to interview suspect or affected persons;
- to provide for the assessment and, if required, quarantine of suspect travellers, preferably in facilities away from the point of entry;
- to apply recommended measures to disinfect, baggage, ships, goods….;
- to apply entry or exit controls for arriving and departing travellers; and
- to provide access to specially designated equipment, and to trained personnel with appropriate personal protection, for the transfer of travellers who may carry infection.

OTHER PROTOCOLS ARE BEING PUBLISHED

SCALABLE HEALTH SCREENING (DEPENDING ON THREAT)

0

- **No pandemics**
- Normal health protocol - Health questionnaires, Embark health checks, Sanitation, Onboard healthcare process…
- Ex. – typical illness, common cold

1

- **Regional / localized virus identified**
- **Checking passengers, no testing**
- Upgraded protocols – temperature, visual checks, documentation. Vessel repositioning and upgraded sanitization process...
- Ex. – Flu-type Epidemic (Shoreside or On board)

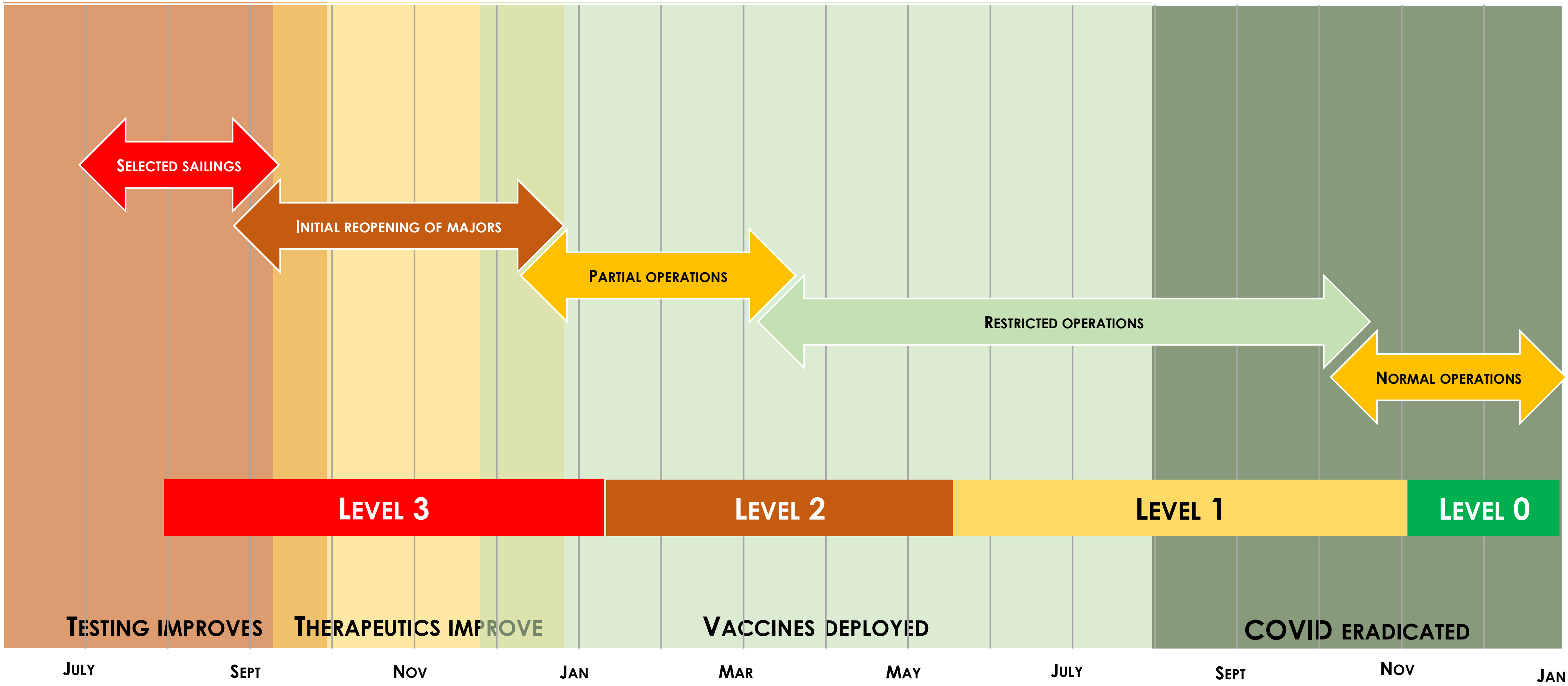
2

- **Pandemic**
- Checking passengers with **non mandatory testing**
- Upgraded protocol – pre-Testing, option & Quarantine, PPE, Expedite passenger and crew repatriation, Quick response action plan
- Ex. – Pandemic

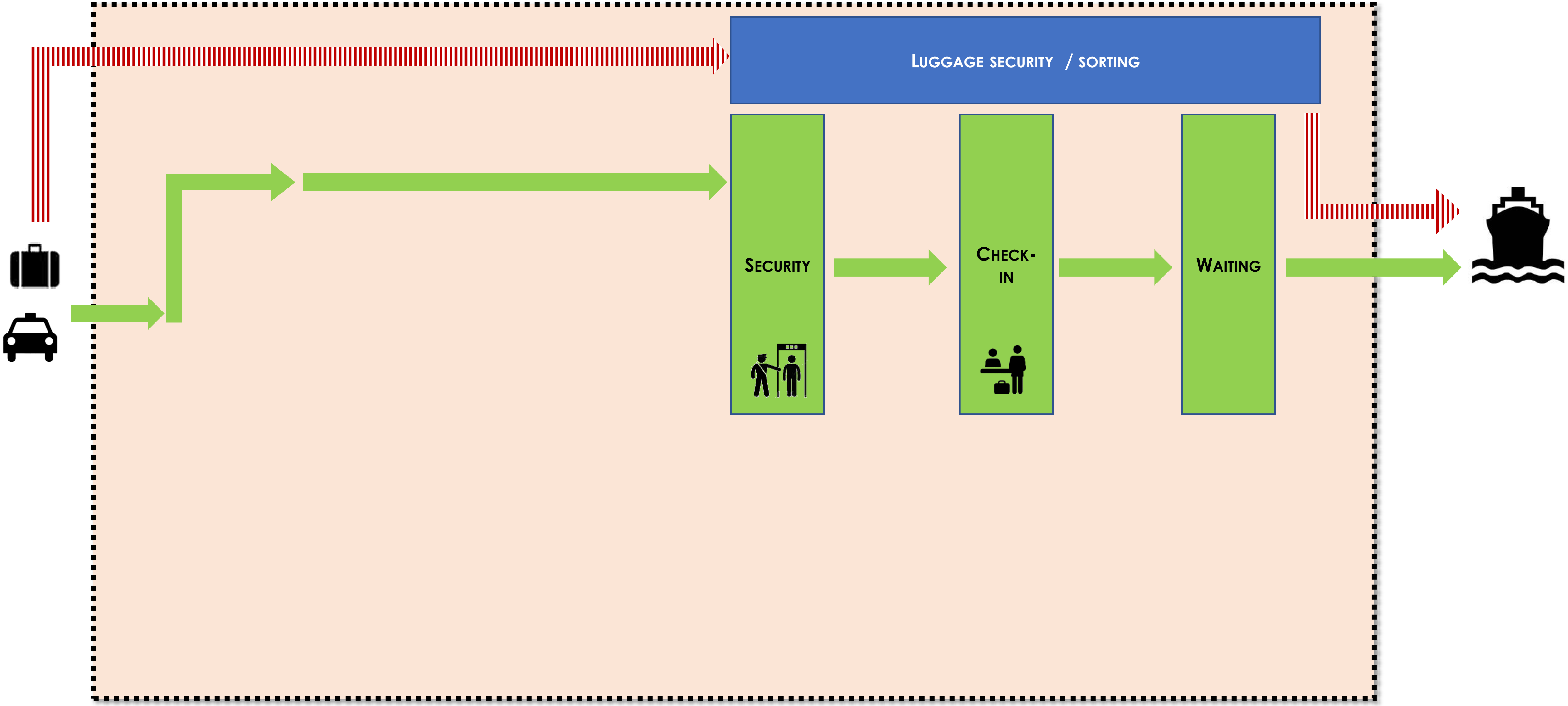
3

- **Pandemic**
- Highest health protocol – **100% Testing** & Quarantine, PPE, Expedite passenger and crew repatriation, Vessel lay-up, Minimize exposure… (Quick response action plan)
- Ex. – Pandemic (worldwide – starting with regional area)

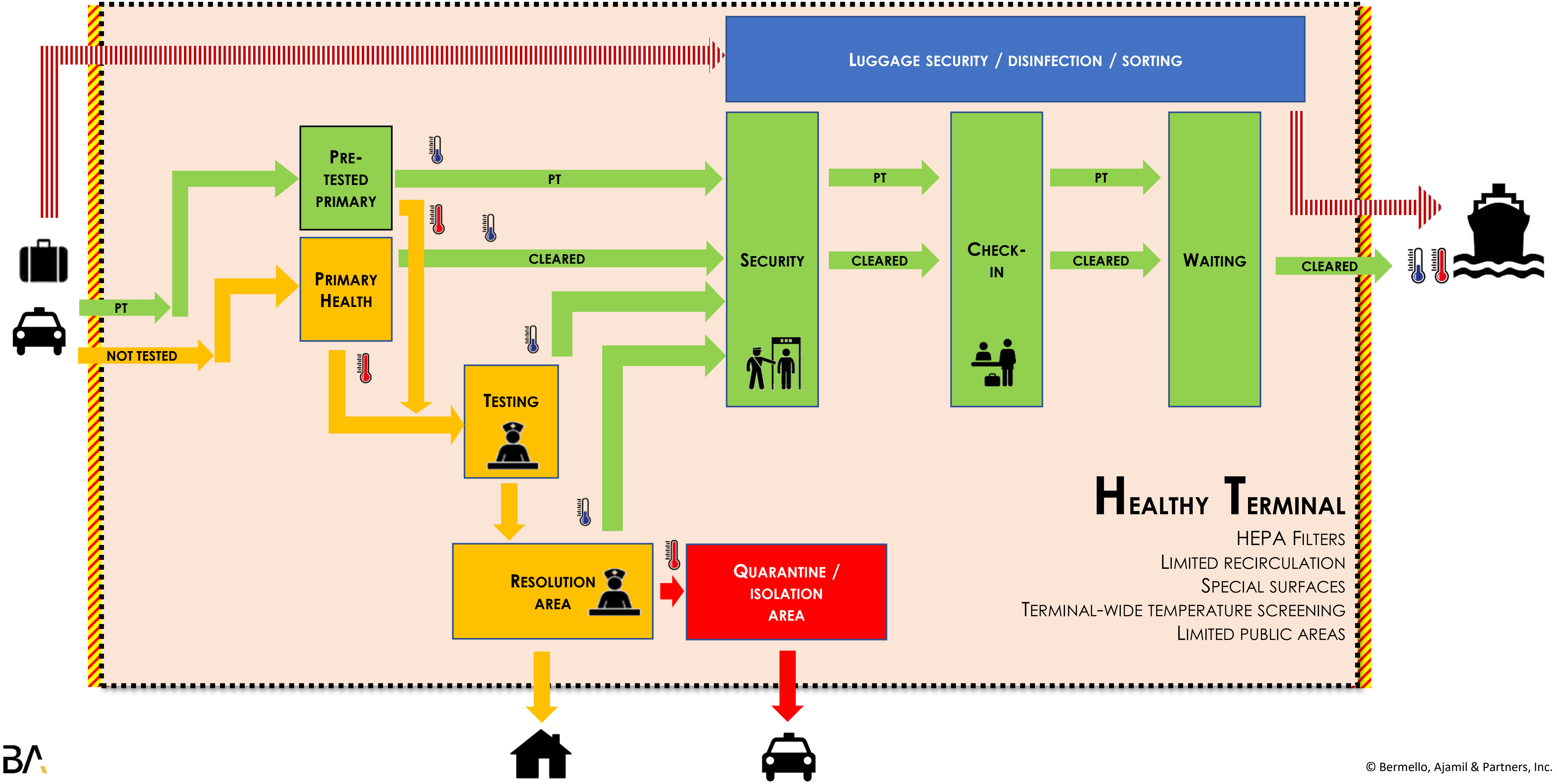
Terminal Operating and Health Check Phases



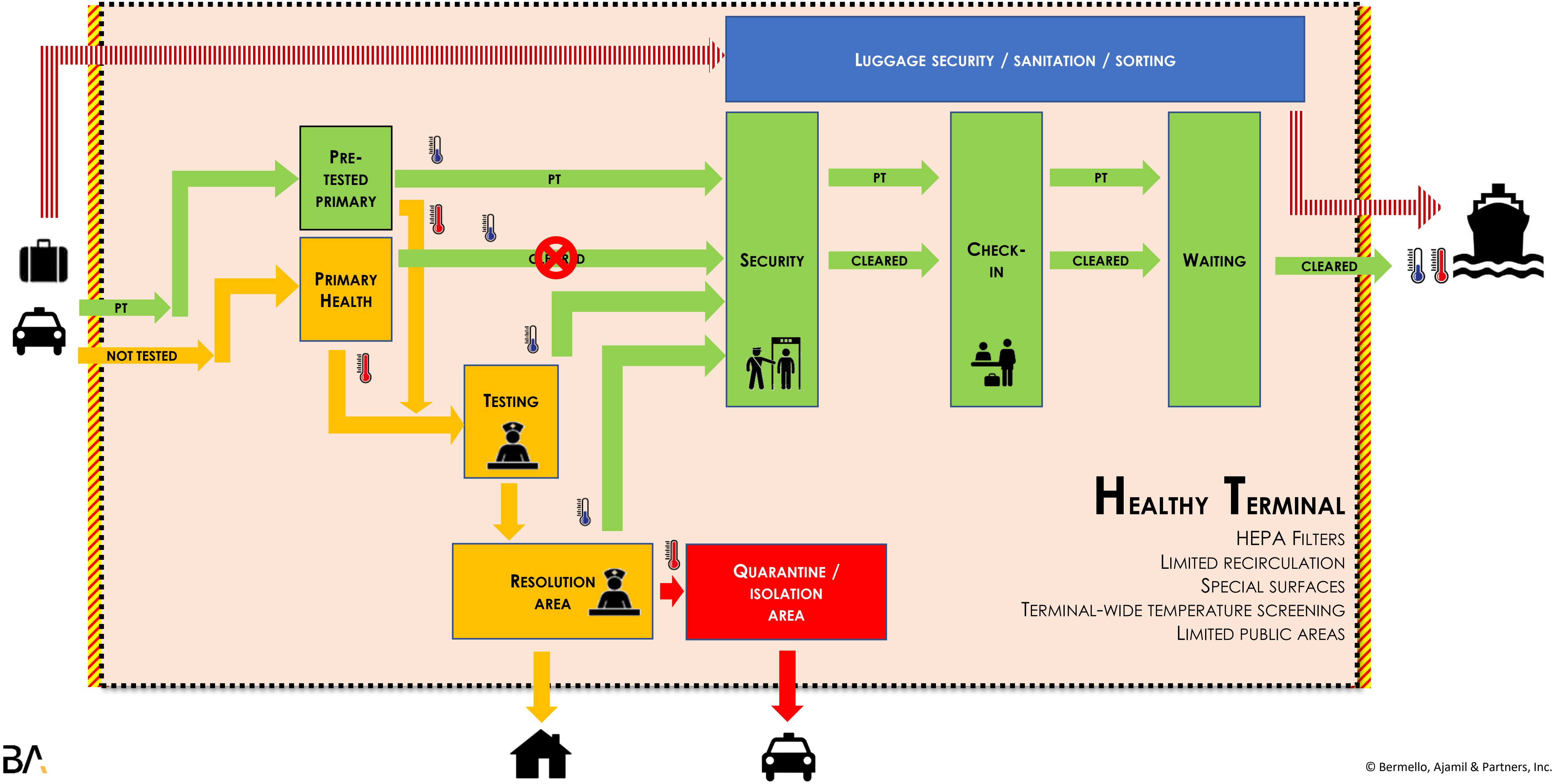
Level 0 - Embarkation – Today



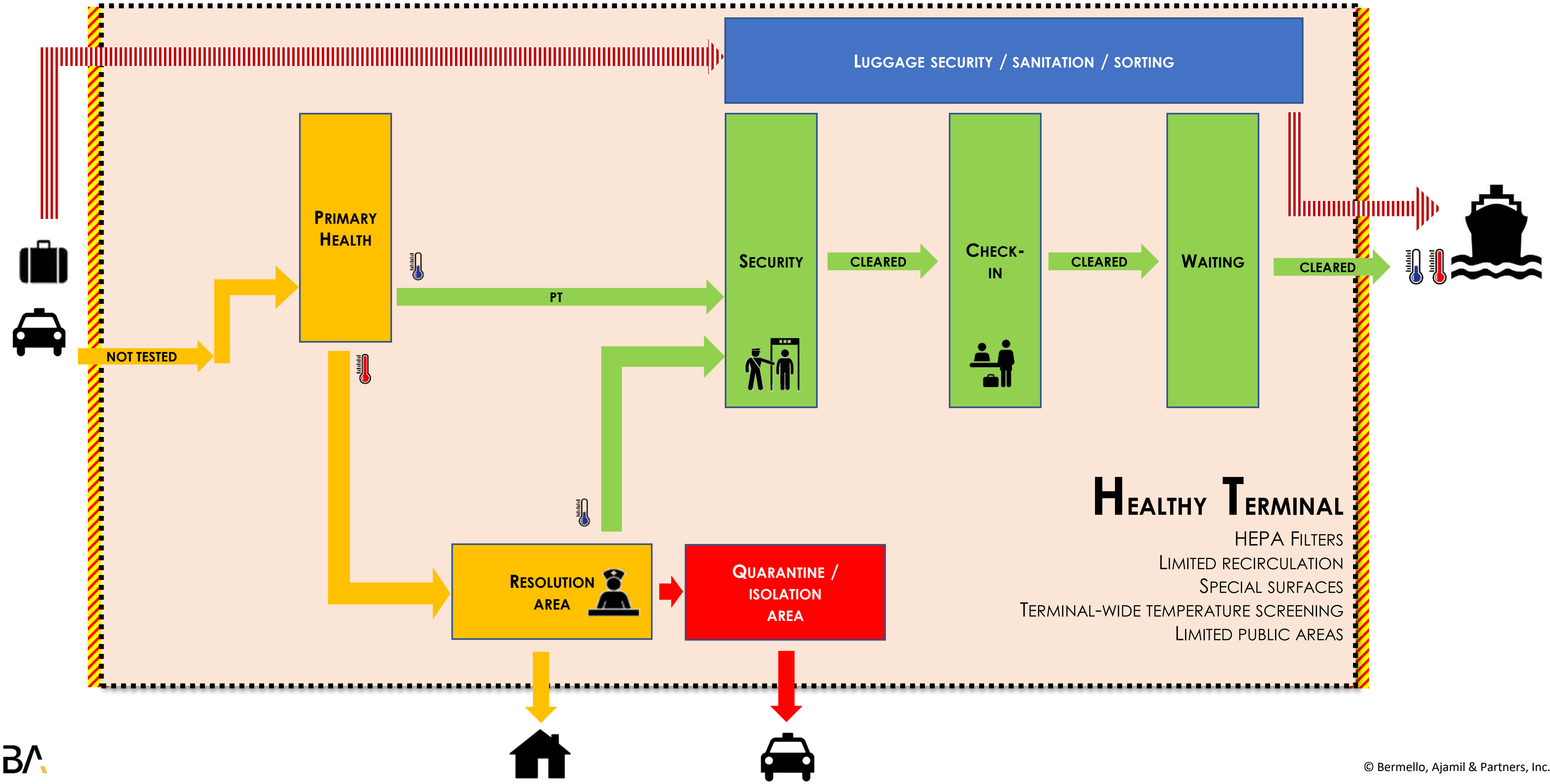
Level 2 - Embarkation – Pre-test option; test not mandated



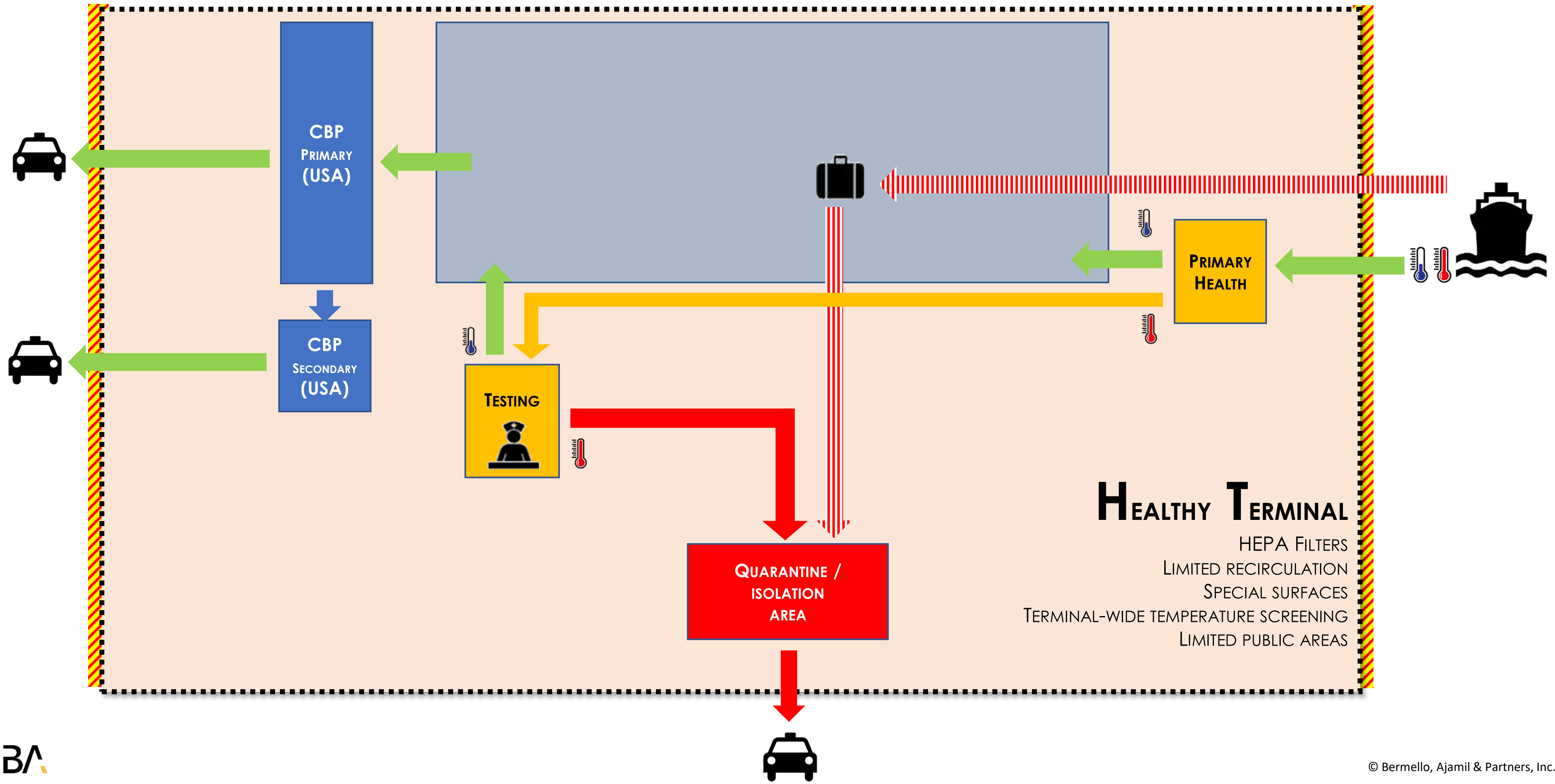
LEVEL 3 - EMBARKATION – PRE-TEST OPTION WITH MANDATORY TESTING



Level 1 - Embarkation – No Testing Protocol

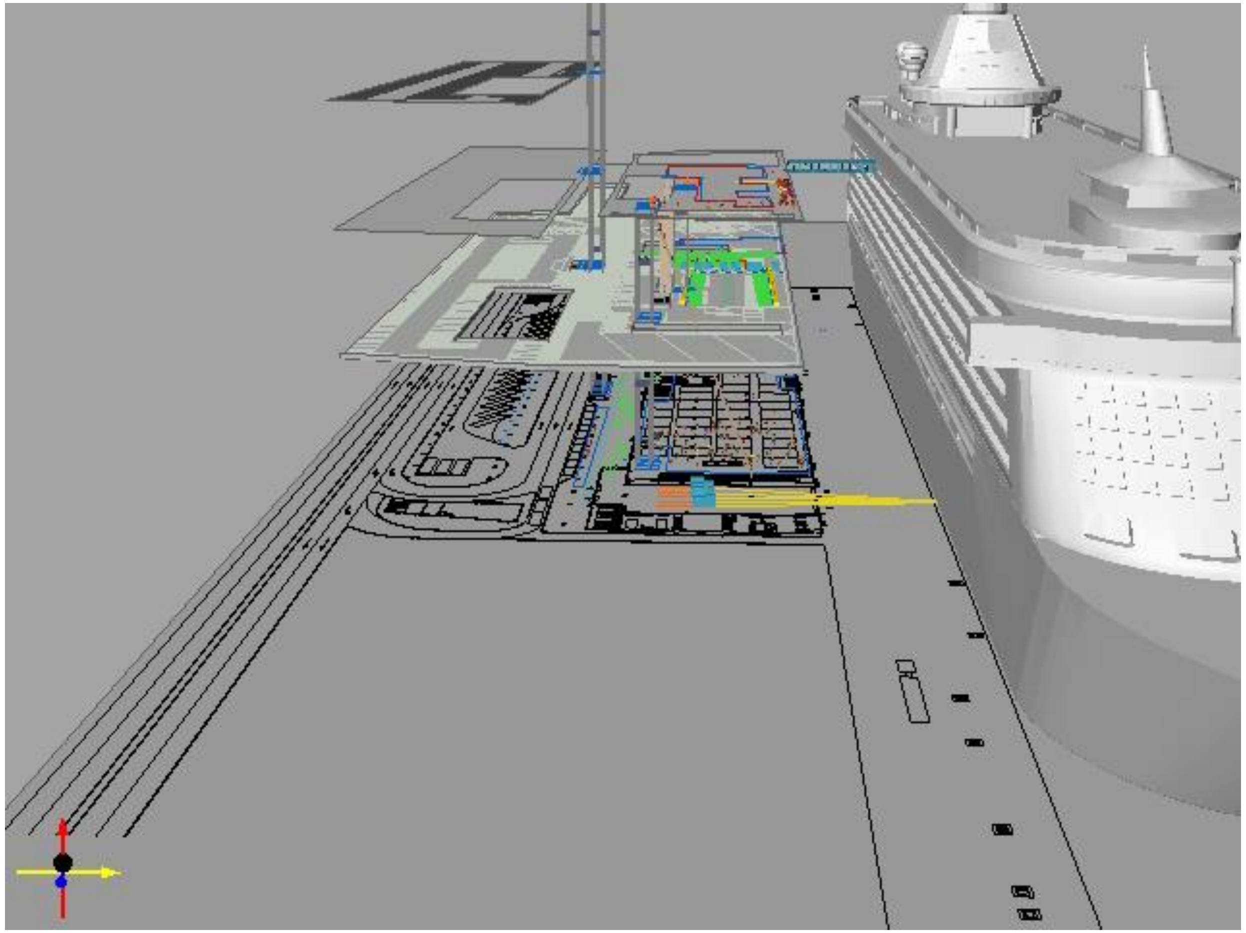


Disembarkation

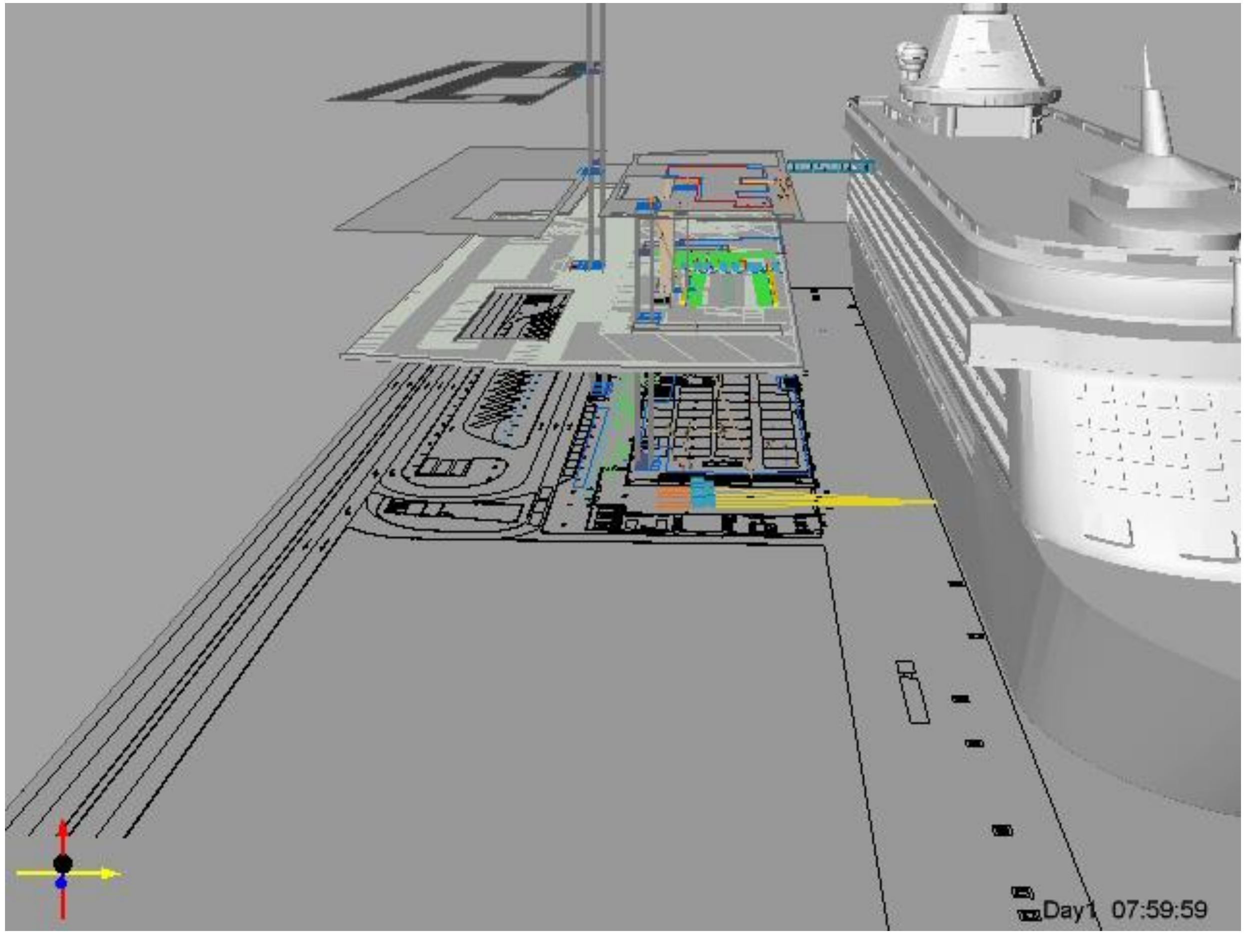


Disembark

PRE COVID 19

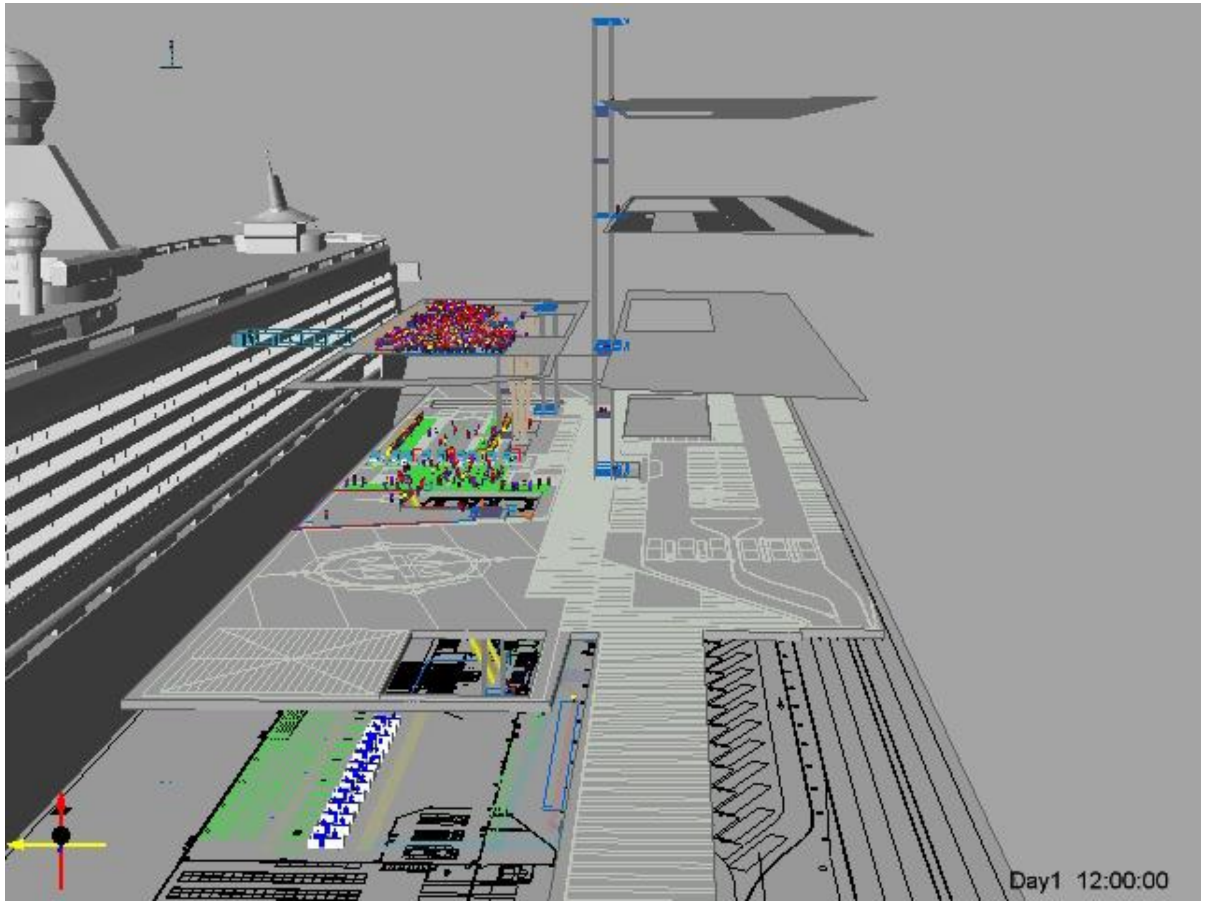


POST COVID 19

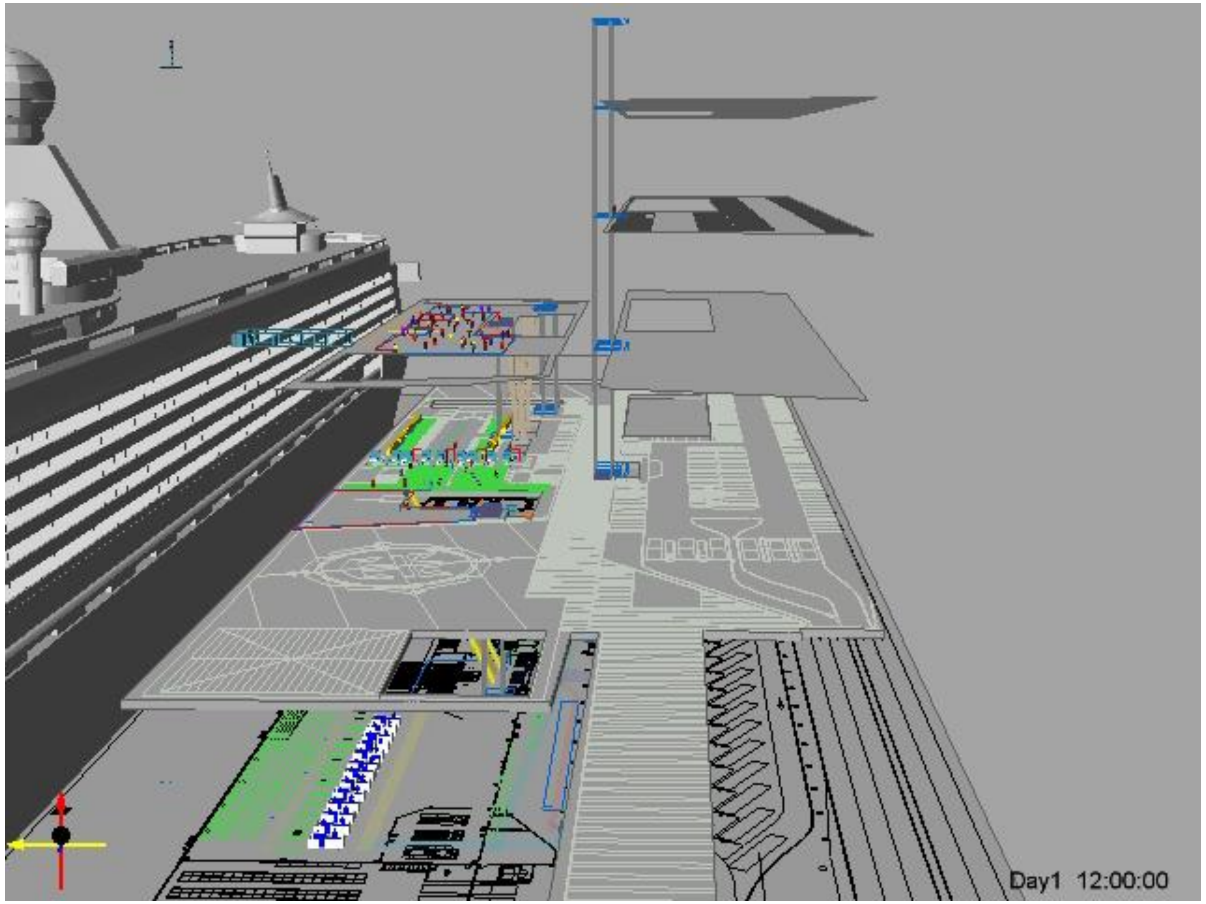


EMBARKATION

PRE COVID 19

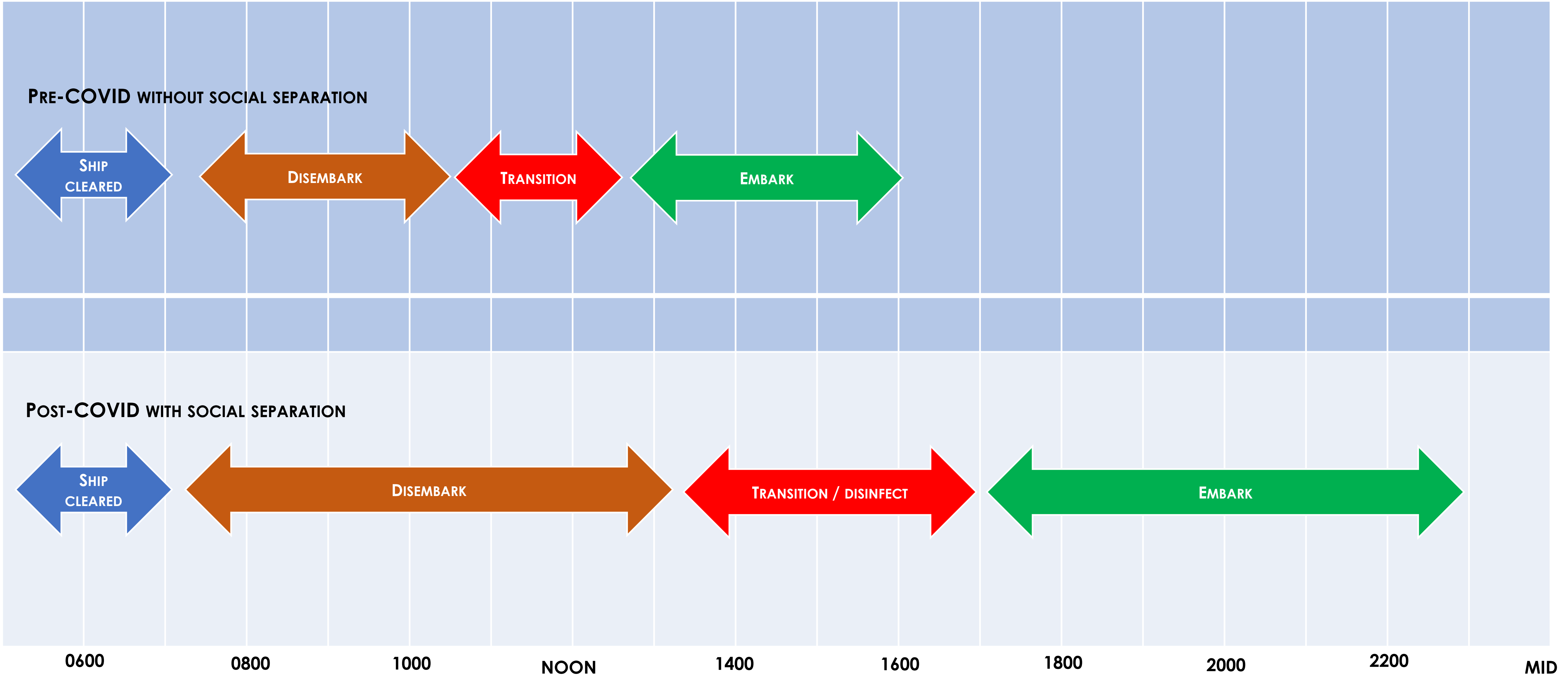


POST COVID 19
SCHEDULE ADJUSTMENTS



Cumulative time impact on turn-around operations

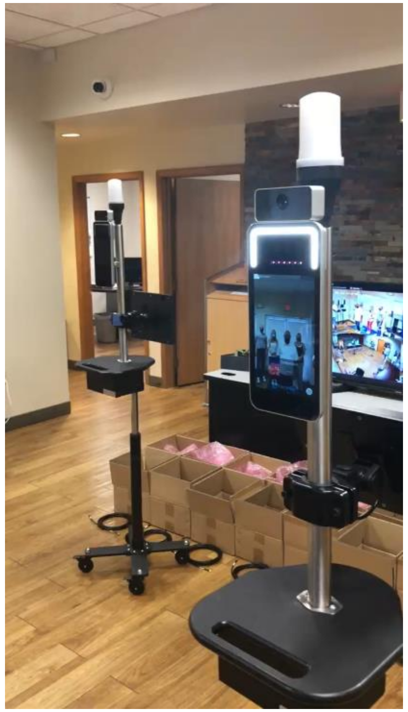
Full turnaround at normal pre-COVID ship capacity practicing social separation in terminal



Terminal Infrastructure

Infrastructure

- Area wide temperature scanning starting outside the terminal
- Linked to cruise lines systems
  - Facial recognition
- Tracks guest throughout the journey
- Transmit data from ship to shore
- Disinfection boarding tunnels

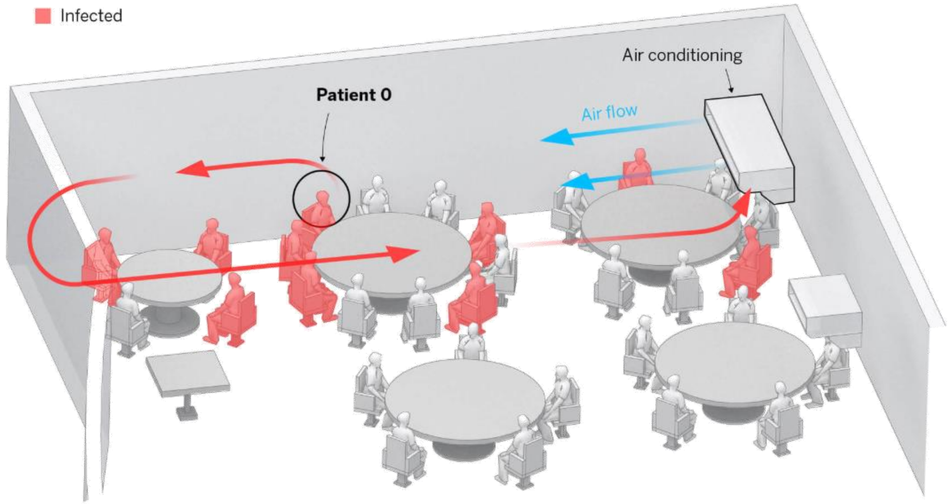


The terminal infrastructure

- Terminals updated to include an HVAC system that provides
  - Sanitized air (99.9% free of pathogens and bacteria, including Covid-19 virus)
  - Kills all virus and bacteria on all surfaces, clothing, and carry-on items

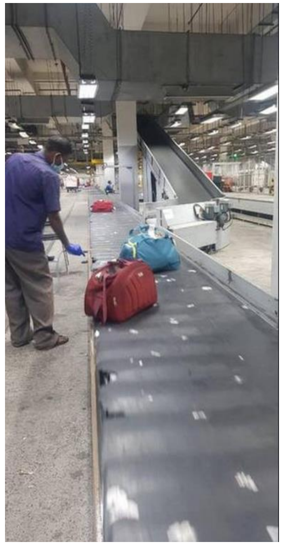
- Terminal interiors including all table and counter tops, seating, handrails and other surfaces, windows, etc. will be treated and cleaned to maintain 99.9 % pathogen and bacteria free condition

- U/V light platform for 8 seconds
  - Sanitizes all surfaces and soles of their shoes



Baggage and provisioning

- Checked baggage needs to be externally sanitized with new systems
- Carry-on bags exposed to U/V light within close proximity for 10-20 seconds
  - This could be incorporated into the security screening process
- Transport of stores from warehouses to the ship
  - Elimination of pathogens / VOC at the warehouse, in the container or both



CONCLUSIONS

- PORTS AND TERMINALS SHOULD BE CAPABLE OF EXECUTING DIFFERENT COMBINATION AND LEVELS OF HEALTH PROTOCOLS
- ADDING NEW PROTOCOLS WILL CHANGE THE RESULTS AND ADD TIME AND COMPLEXITY
- SOCIAL DISTANCING WILL MEAN TIME THE SHIP WILL NEED TO EMBARK AND DISEMBARK CAN INCREASE TO 10 TO 11 HOURS WHEN OPERATING AT FULL CAPACITY, PLUS THE ADDITIONAL TIME TO SANITIZE SHIP
- WHILE SHIPS ARE OPERATING LESS THAN FULL OCCUPANCY THIS NUMBER WILL BE MITIGATED
- PROCESSING CAPACITIES UNDER LONGER TIMES WILL MEAN REDUCED NUMBER OF PROCESSING STATIONS (SECURITY, CHECK-IN, CBP, ETC.)
- THIS MIGHT FREE UP SPACE TO REPURPOSE

WHAT IS NEXT

What is next

- Cruise lines obtain release of "No Sail Order"
- Begin operations in a phased development by 4Q-2020 or 1Q-2021
- They will be ready for a pretty full operation for the 2021 Alaska season, but only if:
  - Protocols are known
  - Capacity limits are known
  - Berth availability is known
  - Communities are ready to receive them
- Facilities are adapted

- **The decisions on cruise sales are being made now**

- Ports need to determine their role and what they will allow

Who is get the ports ready?

- Will itineraries bypass communities that will not receive ships?
- Forcing lines to visit areas like Glacier Bay, or private destinations like Icy Straits?

Haines Borough Assembly asks cruise ships to not visit Haines until further notice

June 12, 2020

The Haines Borough Assembly voted to ask cruise lines to suspend visits to Haines until further notice. The decision comes after the community discovered its first confirmed case of COVID-19 this week. (khns.org)

Wrangell doesn't want cruise ships to dock until it knows port communities will be safe from COVID-19

May 29, 2020 by June Leffler, KSTK - Wrangell

Petersburg assembly extends cruise ship local mandate, discusses incoming ship

Posted by Joe Viechnicki | May 21, 2020

Two Alaskan Ports Reach Different Conclusions on Small-Ship Cruising

Haines, Alaska (file image courtesy LCGS Russ / CC SA 3.0)

What is next?

- Ports need to assure their communities of the cruise business
  - Develop a sound and safe plan
  - Develop new operating procedures
- Long-term the fundamentals of the business are sound and traffic will return
- Cruise lines and ports are financially weak and will have serious CAPEX limits
- Serious interest by private equity and third parties to make investments
- In Seattle
  - The 2021 Alaska Season might actually be very successful
  - May result in higher berth utilization
  - Long-term – We would not be surprised to see a continued strong interest
- Seattle has a great opportunity to take a LEADERSHIP position in helping craft the regional solution
- Impediments
  - Self imposed guidelines
  - Canadian restrictions
  - Alaska restrictions

State of the Cruise Industry

Bermello Ajamil & Partners

V2.0

07.22.20

Logistics MANAGEMENT

JLL research points to further COVID-19-industrial real estate gains

Driven largely by the combination of the ongoing COVID-19 pandemic and sheltering-in-place policies, which have, in turn, spurred on increased e-commerce activity and the subsequent need for additional industrial real estate space, JLL said it is pegging e-commerce sales to hit $1.5 trillion by 2025, well ahead of 2019's $602 billion, as per Digital Commerce 360 data. That estimate would boost U.S. industrial real estate demand, from its current 13,579,524,662 square-feet, to another 1 billion square-feet, according to JLL data.

By Jeff Berman, Group News Editor · July 10, 2020

As the number of people shopping online continues to rise in the United States, so, too, do the growth levels for industrial real estate, specifically warehouses and distribution centers, according to data recently issued by Chicago-based real estate and investment management firm JLL (https://www.us.jll.com/).

Driven largely by the combination of the ongoing COVID-19 (/topic/tag/COVID-19) pandemic and sheltering-in-place policies, which have, in turn, spurred on increased e-commerce activity and the subsequent need for additional industrial real estate space, JLL said it is pegging e-commerce sales to hit $1.5 trillion by 2025, well ahead of 2019's $602 billion, as per Digital Commerce 360 data. That estimate would boost U.S. industrial real estate demand, from its current 13,579,524,662 square-feet, to another 1 billion square-feet, according to JLL data.

The firm noted that the impact of the COVID-19 pandemic on e-commerce and industrial real estate is also highlighted by the fact that before COVID-19 took hold, the firm tied up to 35% of its industrial leasing to e-commerce. But that has taken a sharp upward turn, with JLL saying it expects e-commerce to increase by 20% in 2020.

Craig Meyer, President, Jones Lang LaSalle Americas Industrial, observed in the research that going back to 2011, industrial rent growth has been positive and vacancy rates have been at historic lows providing attractive, stable, long-term returns to investors. "These solid fundamentals and the fact that e-commerce still has a long runway for growth makes industrial real estate the darling of the commercial real estate industry," he added.

While U.S. industrial real estate is pegged to head up by another 1 billion square-feet by 2025, Rich Thompson, JLL's global Supply Chain & Logistics Consulting Leader, noted in an interview that this estimate could actually be viewed as somewhat conservative.

"In recent months, we have seen a lot of different numbers, for things like e-commerce sales and basis points for leasing, from different sources, and, in doing our own due diligence, it continues to confirm that e-commerce will only continue to grow, which confirms our estimates," he said. Thompson added that when looking back at where e-commerce was as a percentage of total retail sales, at the end of 2019, it was relatively low, and has subsequently gained significant traction, as proven out by the pandemic.

“It will only accelerate, and the adoption rates by older people that typically had not turned to e-commerce before, for things like groceries, have gone up,” he said. “There is a lot or runway left with e-commerce, specifically for related facilities like e-commerce fulfillment centers that are dealing with individual packages more so than pallets in and out of facilities. These places are bigger and have more people working there and more SKUs, too.”

With that as a backdrop, Thompson said he views the pipeline for continued e-commerce related real estate demand as robust. Using online grocery, which has accounted for around 3.5% of e-commerce activity as an example prior to the pandemic, he said that is something that will continue to gain traction, when the COVID-19 pandemic is eventually in the past.

Another thing to monitor, according to Thompson, is inventory management and safety stock efforts, for critical parts and medical equipment.

“If inventories were to increase by 5%, some people think that could drive another 300 million square-feet of industrial real estate in and of itself, but I do think there will be some incremental inventory safety stock of critical items and critical parts as a risk management play,” he said. “Our current numbers do not take that into consideration.”

About the Author

Jeff Berman, Group News Editor
Jeff Berman is Group News Editor for *Logistics Management*, *Modern Materials Handling*, and *Supply Chain Management Review*. Jeff works and lives in Cape Elizabeth, Maine, where he covers all aspects of the

12 Industry Channels Expected to Thrive Post-COVID-19

BY KNOWLEDGE LEADER EDITOR | 28 APRIL 2020

Uncertainty drives change. With every global pandemic throughout history, out of safety and necessity, mankind has demonstrated remarkable resilience to evolve and adapt to a new normal. During these times there is documented evidence of markedly accelerated adoption of new behaviors. Now, due to the COVID-19 pandemic, the timeframes for embracing new emerging technologies are being radically accelerated. In some instances companies and sectors will see a decade of market penetration compressed into the next 12 months.

In our view, the confluence of these needs and circumstances within very specific niches that intersect with each other, is creating opportunities for rapid exponential growth in numerous channels. We have summarized twelve that we believe will be the most pervasive:

1. **E-Commerce retailers** – Online is booming. Across the country and the globe, humans have been forced to use it for everything. The adoption rate in the United States has grown tremendously and will probably never retreat to pre-COVID levels. It is not just demographics like older Americans now moving to e-commerce as a necessity, it's vertical, as in most Americans are all of the sudden buying verticals like groceries and consumer products online. This creates exponential growth and while it will pull back after quarantines, it will revert to a mean as consumers continue shopping online out of convenience in a post-COVID-19 world.
2. **Industrial real estate** – Typically when we think about an e-commerce distribution facility, we calculate that they require about three times that of a typical business-to-business facility to accommodate more complex pick-pack systems and provide access to a greater variety of product. With an interest in bringing some industries back to the United States for better control in times of disruption, as well as a new trend of increasing safety stock, demand for industrial space will likely grow. Following on the growth of e-commerce, new retailers will develop strictly online marketplaces and have management either working from the distribution facility and/or from home.

3. **Augmented reality** – The ability to see and touch goods prior to purchasing has not taken a hold yet in America, but with a trend of staying closer to home, augmented reality of the shopping environment is likely to displace some of the desire to drive to a store. With the technologies improving and the costs declining, the transition will be made easier.
4. **Robotics** – The benefits of not relying on humans has never been more evident than during this pandemic. Prior to COVID-19, the rationale behind leveraging artificial intelligence (AI) was primarily based upon rising wage concerns and lack of available workers. Now high unemployment means an abundance of available workers, but working environments incorporating social distancing norms will require a transformation of the warehouse operations. Watch for these automated technologies to be adopted rapidly as employers look for low-cost, flexible automation solutions to replace humans wherever functionally possible.
5. **5G and the growth of bandwidth requirements** – With more people working from home, the speed of our connections will be paramount to many of the growth sectors listed here. It can't happen without faster connections and more homeowners are looking for opportunities to increase or accelerate their bandwidth as both parents and children are working and schooling from home. Here they come.
6. **Virtual meetings** – Up until the COVID-19 pandemic, the only video conferencing or chat tool that had become somewhat ubiquitous was FaceTime. Now Zoom, Microsoft Teams and Skype are all being used widely across a variety of business sectors. Perhaps Zoom is to Virtual Human Connection analogous to how AOL dial up was to your Internet connection.
7. **Online groceries and last-mile distribution centers** – What if grocery shopping meant choosing food online that never goes into a grocery store facility, but instead triggers a pick-up service window at an small, high cube tri-temp building with AI robots fulfilling your complete order to be ready at a pre-determined time slot? What if these could be built right now in the parking lots of existing grocery stores? Will retail stores double as last-mile distribution locations?
8. Freezer and cooler supply chain – In times of crisis, food delivery becomes more critical to as a basic human need. One of the first industries to experience a real boom in work from the onset of this pandemic was food, specifically frozen food. People stocking up on necessities for an uncertain time have added additional stresses on our food supply chain, and this sector is now forced to re-imagine supply chains. Most likely, it will mean a greater need for a safety stock of food supplies in cities across the country. If the facilities are handling bulk shipments, they will probably also employ a greater level of automation, perhaps even running semi-autonomously. Already there are food facilities in this country utilizing this "dark" model. In the coming years, expect to see more.

9. **Dark kitchens** – These are virtual restaurants without tables. With so many restaurants solely reliant upon home delivery of food, and the cost of maintaining a physical retail location and staff to operate a restaurant growing, the "dark" kitchen model — almost the e-commerce of food — will continue to grow. It can becompared with the next iteration of the gourmet food truck, where rather than being fixed in one location, the restaurant is more flexible in its ability to delivery food to customers. Now, centralized kitchens could serve as a hub for many restaurants and deliver a myriad of different choices of food to a customer's home via Uber eats, DoorDash or a myriad of other choices. Delivery speed of food will continue to be positively impacted post-COVID-19.
10. **Reverse globalization** – Vast socioeconomic trends had started to reverse globalization as companies sought supply chain resiliency by moving manufacturing closer to the consumer and creating redundancy in manufacturing and distribution operations. That trend will race as leaders ensure that their organizations will never be caught off guard like this again.
11. **Supply chain resilience** – As discussed earlier, there will be a renewed interest in reshoring product to the United States, or moreover North America. Supply chains which have been outsourced to Asia in the fields of medical, pharmaceuticals and critical componentry may see government policy changes which promote these near-shoring opportunities.
12. **E-Learning** – With most of American children forced to continue their education from home, e-learning has had a tremendous boost. The same is true with colleges and universities. What benefit do large college campuses have for a learning environment which can be replicated, or perhaps even improved upon, by taking the classroom out of the equation. With college tuition outpacing inflation significantly over the last decade, those institutions will be marginalized quickly by e-learning platforms and the younger generation of teachers will excel in this exciting field.

While we don't portend to know the future, and our lens is limited by our own experiences and a reflection of the past, it is in times of great disruption where great opportunity abounds. It is not just across the spectrum of the industries shared above, but among others that we cannot even imagine. Our commitment at Colliers is to continue to look with a sense of curiosity towards change, strive to gain an understanding and share our interpretations with the people and organizations that will strive to embrace and build the new future.

About the Authors:

Brian Netzky, SIOR, is an executive vice president at Colliers based in Chicago and specializing in exclusively representing industrial and office occupiers. He has more than 30 years of tenant representation experience working with manufacturers, distributors and service companies across North America. Brian is an avid reader and writer, curiously focused on the intersection of technology, finance and purpose.

Gregory Healy, senior vice president, leads the Supply Chain Solutions team in the U.S. for Occupier Services. With over 20 years of global manufacturing and supply chain experience as both a senior executive in the corporate world, as well as owning a supply chain consulting practice and a third-party logistics business, Gregory has real world experience that brings a unique perspective to the Colliers team.

A Roadmap for Industrial Real Estate to Survive Post-COVID-19

Disruptions can create opportunities, if you're agile and strategic.

By **ALM Staff** | June 19, 2020 at 07:09 AM

COVID-19 has thrown a monkey wrench at our supply chain operations, creating disruptions that will have lasting impact for the industrial real estate segment. The critical question now is how the industry can navigate this uncertain landscape.

WCL Consulting provides a roadmap, outlining the trends that affect the supply chain, trucking and warehousing. The upshot is that there are opportunities in these volatile times, provided that managers are agile and tactical.

Here are some key points:

Supply Chain Trends:

- Supply chain risk mitigation. This will grow in importance as we continue to witness the serious disruption of goods movement around the world. The ongoing tension with China and the U.S. over tariffs and the disruptions of COVID-19 amplify this point.
- Alternative to China sourcing. Despite China's mature supply chain ecosystem, a growing percentage of companies is considering making a change. Vietnam and Cambodia will likely be the beneficiaries, though importers will face rising business costs, development bottlenecks and less competitive workforces.
- Supply chain sustainability. "Going green" is not going away. The benefit goes beyond the environment: It can lower costs and increase customer loyalty and organizational goodwill.
- Accelerated digitalization. Shippers with digital platforms outperformed those using manual methods in responding to COVID-19 disruptions.

Trucking Trends:

- Autonomous heavy-duty trucks. No longer a fantasy, these vehicles are showing progress in efficiencies and cost reductions. Warehouse facilities will require modified yard layouts and process changes to accommodate autonomous vehicle interface operations.
- Speed and accuracy in delivery. On average, 69% of customers will not shop with a company again if their delivery is late, so meeting customer expectations is critical.
- Warehouse automation growth. Expect more warehouse robotics, automated guided vehicles (AGV), autonomous mobile robots ((AMR), cobotics, and automated picking processes.

Warehousing Trends:

- E-commerce's continued growth. This will drive demand for efficient warehousing operations. Moreover, e-commerce and direct-to-consumer growth will transform the fulfillment operations of retailers, manufacturers, plus their wholesalers and 3PLs.
- Speed and accuracy in delivery. On average, 69% of customers will not shop with a company again if their delivery is late, so meeting customer expectations is critical.
- Warehouse automation growth. Expect more warehouse robotics, automated guided vehicles (AGV), autonomous mobile robots ((AMR), cobotics, and automated picking processes.

The bottom line, sums up WCL Consulting president Jon DeCesare, is that "today's 'normal' requires all organizations to modify the old ways of doing business, moving forward with innovative solutions."

FISHERMEN'S TERMINAL MARKET STUDY

PROVIDED TO

THE PORT OF SEATTLE

MADISON BAY COMMERCIAL
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MARCH 6, 2020

INTRODUCTION

Founded in 1911, the Port of Seattle is a public agency in charge of the region's airport and maritime services operations. The Port of Seattle manages multiple facilities including SeaTac Airport, cruise terminals, the Fishermen's Terminal, recreational boating marinas, and cargo facilities. Its mission is to "promote economic opportunities and quality of life in the region by advancing trade, travel, commerce and job creation in an equitable, accountable and environmentally responsible manner" with a goal of adding 100,000 additional port-related jobs in the region by 2043.

In Seattle, there are two separate manufacturing industrial centers: 1) the Duwamish Manufacturing Industrial Center, and 2) the Ballard Interbay Northend Manfacturing Industrial Center (BINMIC). The Fishermen's Terminal, managed by the Port, sits within the BINMIC and is home to the North Pacific Fishing Fleet. Traditionally and to present day, maritime commerce is a vital component of the local and regional economy. This includes numerous secondary industries that support maritime operations, including vessel maintenance, parts dealers, fueling operators, bookkeeping, insurance providers, and fish brokers.

Over the last 10 years there has been minimal industrial commercial real estate development in the BINMIC region. This lack of development appears to be due to higher land and development costs and limited truck access. In addition, there has been very little vacancy. As such, many prospective tenants have renewed leases in place or looked to other markets to accommodate their needs.

In this study we gauge industrial and flex space demands of Fishermen's Terminal, Interbay area, and Greater Puget Sound region to help inform development of industrial buildings that will be located at Fishermen's Terminal. MBC will provide:

1. Primary research on demand for industrial property within Puget Sound including demand drivers, market rent rates, vacancy rates, size requirements and tenant profiles, unmet need and projected demand for the next several years.
2. Primary research on demand for industrial land/property within the Ballard/Interbay Manufacturing Industrial Center (BINMIC) including demand drivers, market rent rates, vacancy rates, size requirements and tenant profiles, unmet need and projected demand for the next several years.
3. How many leases were signed in 2019 in the BINMIC; who the tenants are and what kind of spaces they leased.
4. Leasing and development trends that include what kind of development is occurring within the BINMIC area.
5. Identify the demand based on net absorption and vacancy rates based on pipeline and closed deals for light industrial product type. Recommend based on market demand for accessory office space or flex office comingled in with industrial space.

6. Identify and research competitive projects in the local market. Consider anticipated additions to the market supply, historical and projected volume of demand, trends in occupancy and revenue, and the likely market position of the upcoming projects.
7. Recommend key leasing parameters for maritime-industrial leasing that includes rental rates, expense recovery, tenant improvements terms, and rent abatement recommendations.
8. Recommend appropriate building size, uses for a new waterfront development in an industrial-zoned areas in Interbay, Ship Canal, and Salmon Bay.

METHODOLOGY

REGIONAL MARKET OVERVIEW STUDY

MBC compiled data from multiple sources to provide an overview of the regional market. The dataset includes King, Pierce, Thurston, Snohomish and Kitsap Counties. MBC utilized commercially available aggregated data (CoStar) as well as proprietary survey data from landlord and prospective tenants. To better understand long-term trends in the region, MBC analyzed rental, growth, and vacancy rates over a ten-year period.

MBC surveyed 48 regional commercial landlords and prospective tenant representatives. MBC asked these individuals to provide the following data: their business's sector (e.g. construction, distribution, etc.), their square footage requirements, and the location they were interested in leasing.

BALLARD/INTERBAY NORTHEND MANUFACTURING INDUSTRIAL CENTER (BINMIC) STUDY

MBC surveyed landlord representatives of 12 buildings with vacancy about leasing inquiries since January 1, 2020. The survey asked the following questions:

- How many leasing inquiries did you receive in the last 8 to 12 weeks?
- What was their industry sector?
- What were the size requirements?
- Did they have dock-high or grade-level door requirements?
- Any specific power requirements?
- Any slab thickness requirements?
- Any other details that were unique in each call?

MBC also interviewed fishing vessel owners currently operating out of Fisherman's Terminal.

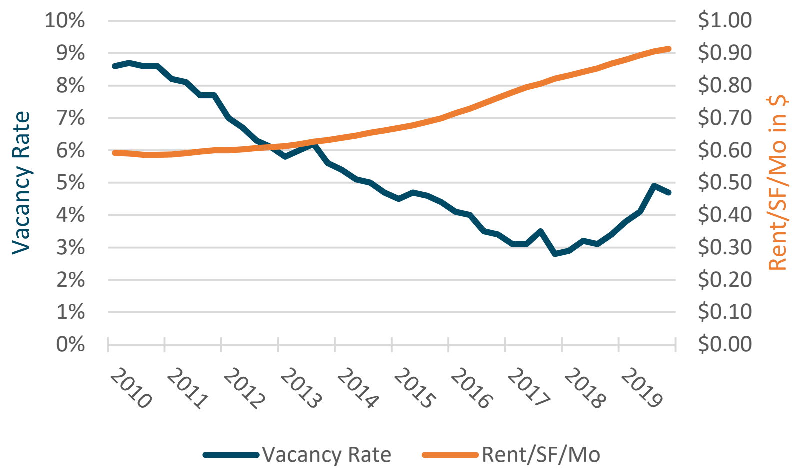
All rental rates are quoted as triple-net (NNN).

REGIONAL MARKET OVERVIEW STUDY

The Puget Sound Region has a strong and growing industrial economy. Distribution and eCommerce are significant industrial drivers in the region, with global enterprises such as Amazon and FedEx occupying significant warehouse space. Regional demands in industrial real estate continue to increase.

As of December 2019, the Puget Sound Industrial Market consists of 329,140,023 sf. In 2019, the regional market had a net absorption of 398,773 sf. At the end of 2019, the vacancy rate for the area was 4.7%. The first quarter of 2020 is indicating vacancy rates of 5.1%. A vacancy rate of 5.0% or below is considered a strong industrial real estate market. The 2019 average rental rate for the region was $0.91/sf/mo NNN.

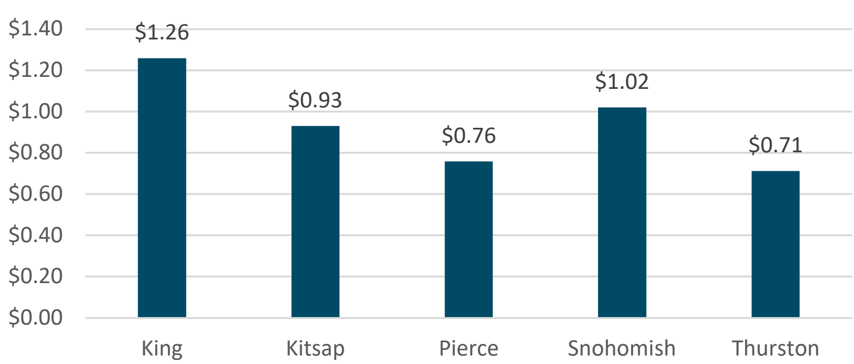
Figure 1: Vacancy Rate and Rent/SF/Mo from 2010 to Present



Rental rates have increased on average 6.71% each year for the past five years (2015 to 2019). The previous five years (2010 to 2014) increased on average 4.93% each year. In 2019, rental rates have increased on average 5.4%, for an average of $0.91/sf/mo across the region (Fig. 1). Rental rates vary widely by county, however, from $0.71/sf/mo in Thurston County to $1.26/sf/mo in King County (Fig. 2).

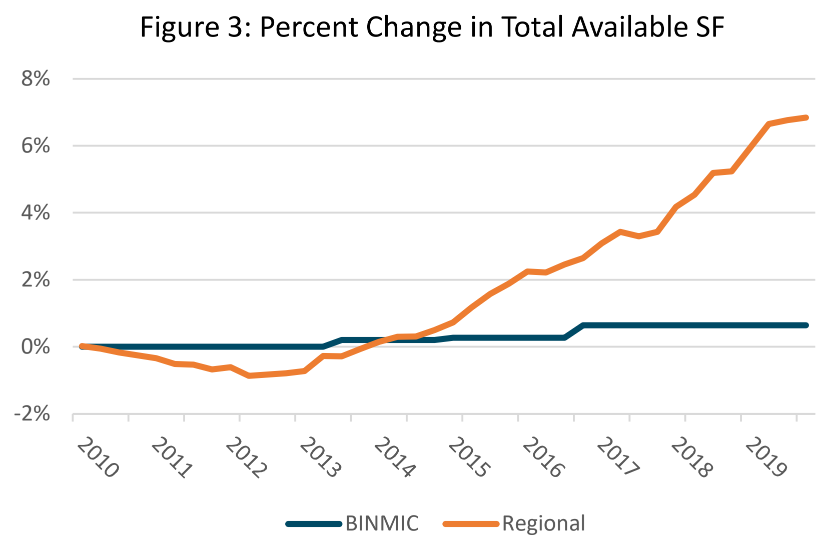
Regionally, rent continues to increase while vacancy rates generally appear to decrease. New construction has driven vacancy rates up slightly since 2018 (Fig. 3). Rent growth and vacancy rates vary by county as well. Pierce County has the highest annual rent growth rate and vacancy rate in Feb 2020 while Kitsap County has the lowest (Fig. 4).

Figure 2: Average Monthly Rental Rates ($/sf/mo as of Feb 2020)



DEMAND DRIVERS

Ecommerce/retail distribution and delivery are still major driving factors in the area's industrial growth, with Amazon leading in square footage leased last year. Of the top 40 industrial leasing deals in 2019, Amazon was responsible for 12.8% of them. Others in this sector include Ashley HomeStore, Port Logistics Group, and Funco. Many larger traditional industrial uses have been moving further south into Kent and Pierce County due to the lower cost of land, truck accessibility, housing costs, and rental rates.



TENANT SIZE AND PROFILE

Currently in the Puget Sound area there is approximately 8,000,000sf of active industrial leasing requirement currently in the market. Out of the 79 industrial leasing requirements that our records show, 25 of them are for sizes greater than 100,000sf, 17 are between 50,000sf and 99,999sf, 23 between 20,000 and 49,999sf, 14 below 20,000sf. Tenants in the distribution sector are looking for the most square footage in the regional market, with eCommerce tenants following close behind. There were a number of undisclosed or confidential tenants in the market that are categorized as "undisclosed" (Fig. 5).

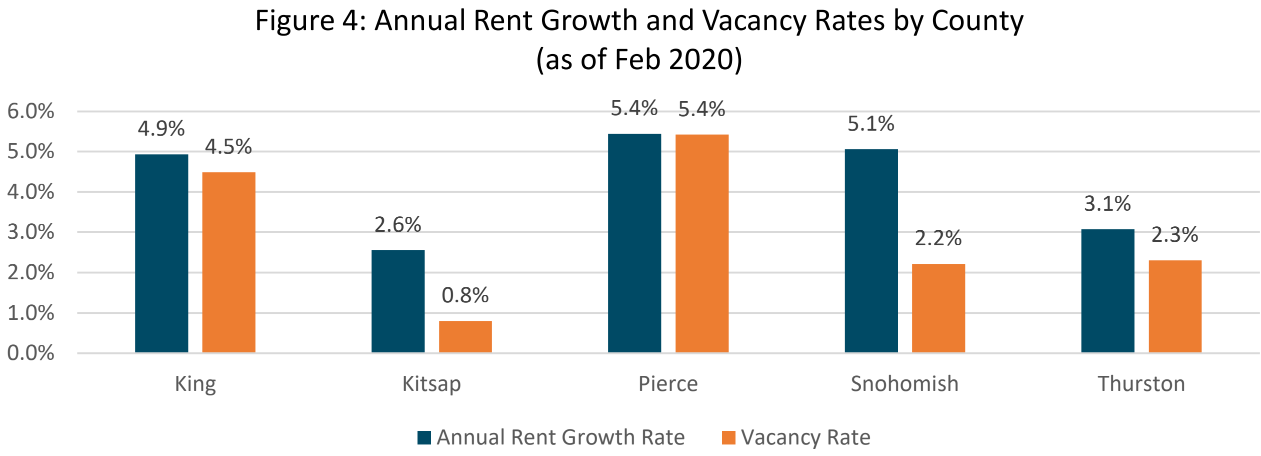
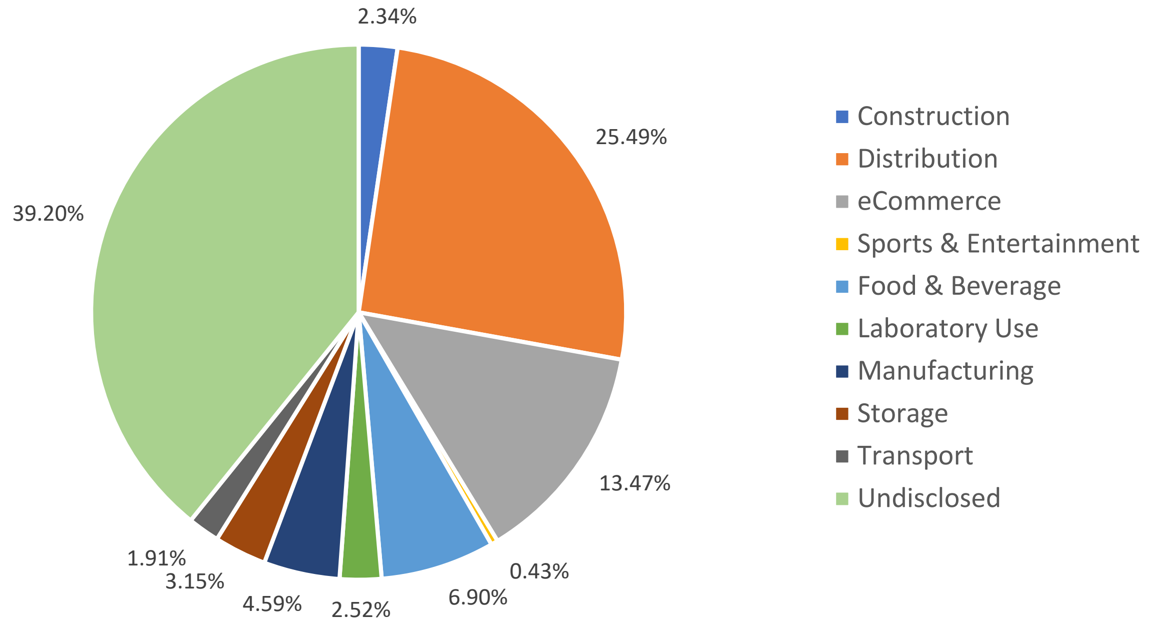


Figure 5: Regional Industrial Demand by Square Footage Requirement



Unmet Need and Projected Demand

There is a dearth of space for both small businesses needing 5,000sf or less and larger businesses seeking 500,000sf or more. Upon interviewing ownership representatives for 7 different flex buildings in the Puget Sound Area, we discovered they fielded leasing inquiry requests 1.83 times per day on average. Requirements were varied coming from companies that do construction, Amazon sales, distribution, hemp manufacturing, chip processing, and food manufacturing.

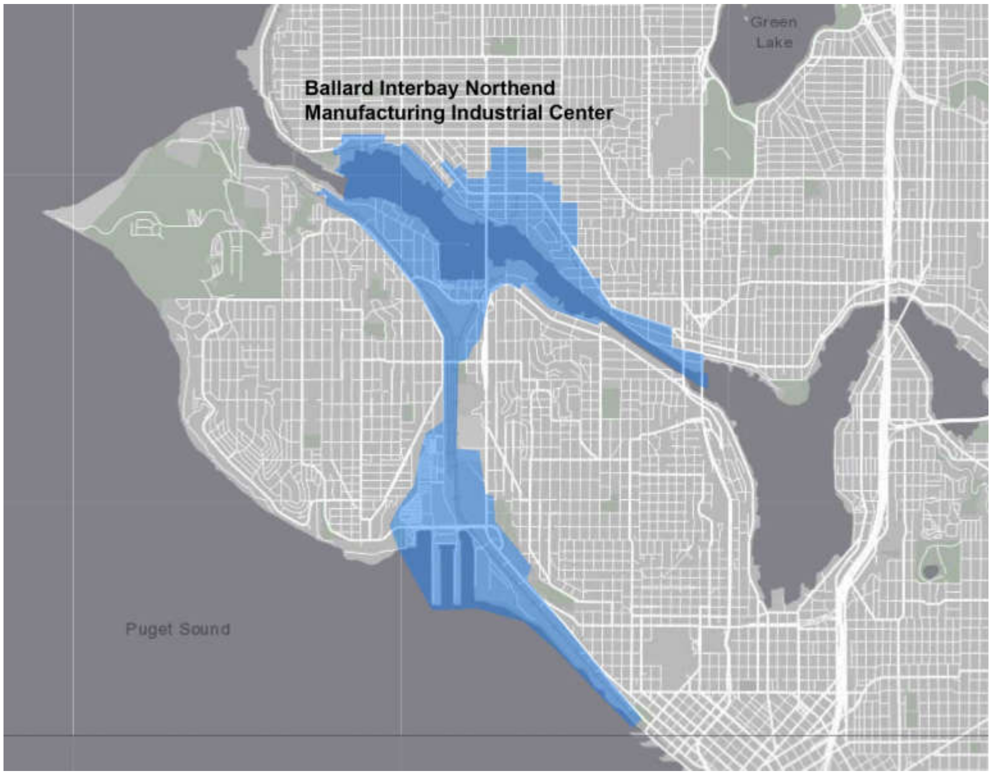
The following flex building ownership representatives were contacted:

- West Valley Business Park - 19226 66th Ave Kent, WA 98032
- Seattle Exchange - 601 Strander Blvd Tukwila, WA 98188
- SeaTac Business Center - 20804 International Blvd SeaTac, WA 98198
- Cumberland Industrial - 22030 68th Ave S Kent, WA 98032
- Overlake Business Center - 2525 152nd Ave NE Redmond, WA 98052
- 212 Business Park - 7818 S 212th St Kent, WA 98032
- Renton Business Park - 901 Rainier Ave N Renton, WA 98057

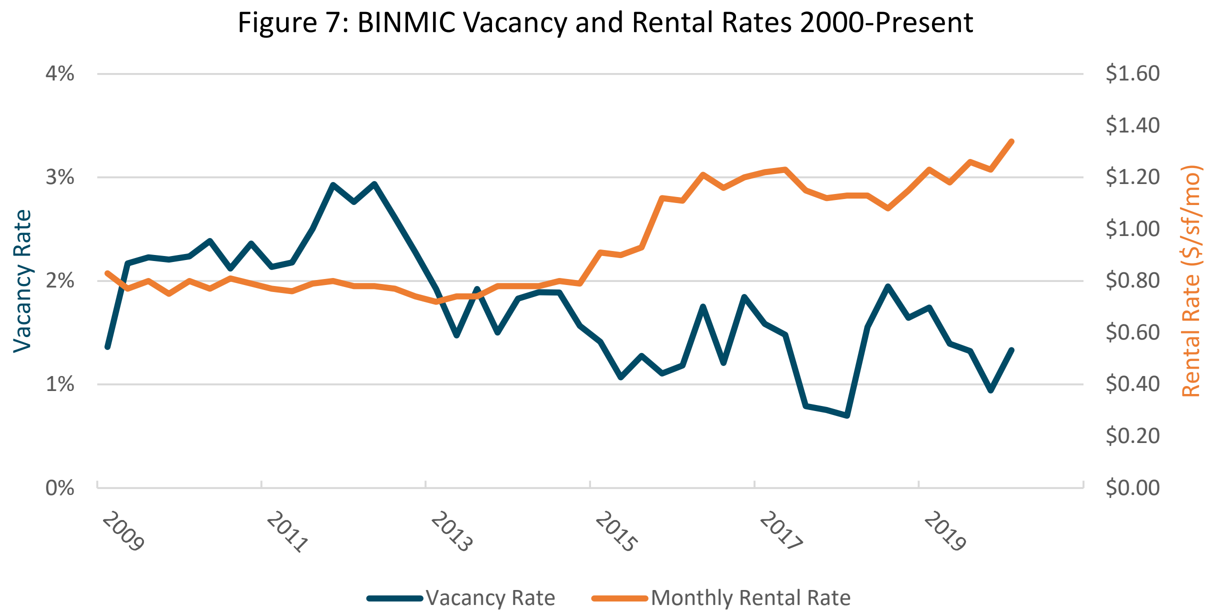
BALLARD/INTERBAY NORTHEND MANUFACTURING INDUSTRIAL CENTER (BINMIC) STUDY

The BINMIC is located within the City of Seattle, with Queen Anne neighborhood to the east and Magnolia to the west (Fig. 6). To the north, it is situated on the south waterfront boundary of Ballard. It is an industrial area that has Terminal 91 (cargo and cruise terminal) and Pier 86 (grain terminal) to the south. In the northern end of the BINMIC lies the Fisherman's Terminal, home to ~300 commercial fishing vessels. The Washington Army National Guard's Armory is located in this region but recently announced its relocation to a more emergency-ready location along I-90.

Figure 6: Map of BINMIC



The BINMIC consists of an approximate inventory of 7,408,154sf with a vacancy rate of 0.94% at the end of 2019. A vacancy rate under 5.00% is considered low. 2019 ended with an average rental rate of $1.23/sf/mo NNN, a 6.96% rent increase from the previous year and a net positive absorption of 51,981sf. Rates have continued to increase as vacancy decreases over the years (Fig. 7).



DEMAND DRIVERS

Major demand in the BINMIC has traditionally been maritime-related, including fishing gear retailers, vessel maintenance and parts distributors, fish distributors, accountants, processors, and moorage. Second to maritime-related businesses, brewery/distillery-related businesses occupy a significant footprint within the BINMIC. There is a variety of other sectors occupying space in the BINMIC as well, including distribution, printing, childcare, manufacturing, cannabis, brewing, distilling, and sports facilities.

SIZE REQUIREMENTS

The majority of the tenants in this area have had a long-term presence. Those looking for space have had to look outside of the BINMIC due to the low vacancy. Based on our interviews with landlord representatives for 12 properties, we concluded there is an approximately 288,315sf to 480,525sf of demand from all different types of industries.

Out of 159 calls that landlord representatives have received year-to-date (2/18/20), 129 were for square footage sizes of less than 10,000sf and 30 were for 10,000sf to 20,000sf. With assuming a median number of 5,000sf for 129 calls and 15,000sf for 30 calls, we conclude that new demand is at least 1,095,000sf, with approximately 645,000sf in small leases (<10,000sf) and 450,000sf in medium-size leases (10,000sf-20,000sf). However, given that only 30 to 50% of all new leasing inquiries end up being serious, we approximate the industrial demand to be 328,500sf-547,500sf.

The only inquires for spaces greater than 20,000sf within the BINMIC were from representatives of an indoor sport facility. This is not an indication that there is no demand for larger square footages, but inquiries were limited based on the limited large spaces available.

BINMIC Needs and Projected Demand

Prospective lessees are generally seeking smaller spaces of 10,000sf or less with good truck accessibility. Large tenants, such as seafood processors, that need 50,000+ sf will continue to move south for truck access, lower rent, and more affordable housing for its workforce. The smaller square footage needs will continue to increase within the City of Seattle, given that the majority of new developments within the Puget Sound Region target larger industrial tenants that are 50,000sf or greater.

2019 BINMIC Leases

In 2019, there were 13 industrial/flex leases that were signed within the BINMIC area (Table 1). Due to limitations in data reporting and collection, this does not include renewals.

The types of spaces that were leased were generally 10,000sf or less, with at least one dock-high and/or grade level door for each tenant. Ceiling height was not a large concern as long as it was 18’ or higher with the exception of breweries, distilleries, and sports facilities. There were no inquiries that mentioned ceiling height was too high, but 1/5th of the respondents mentioned some were too low. 24’ ceilings appear to satisfy most tenants. The total square footage percentage of office space utilization varied from 5% to 28%. There were no requests for slabs more than the standard 6” reinforced slab with rebar. Power was not a substantial issue in the leased spaces. The standard 2500 Amps of 277/480V for an entire building in this market should be sufficient for all but heavy manufacturing.

Table 1: 2019 BINMIC Leases

#	Building	Tenant Type	SF	Sign Date	Office %	Start Rent ($/sf/mo)	Lease Term (Months)	Comments
1	Salmon Bay Marine Center 2360 W Commodore Way	-	1,500	Oct-19	-	$2.17	12	flex space
2	1515 NW Ballard Way	-	11,527	Oct-19	-	$1.20	123	warehouse/office
3	C10 Building 3900 15th Pl W	-	2,991	Aug-19	-	$1.00	24	
4	3455 Thorndyke Ave W	-	5,320	Jul-19	-	$1.90	60	2 months abated, 18' clear height

5	Case Marine Bldg 1100 NW 51st St	Candle Company	3,382	Jun-19	28%	$1.75	60	$15/sf TI's
6	Fomer Leclercq Marine 1080 W Ewing St	-	25,500	Jun-19	-	$1.26	60	warehouse
7	3257 17th Ave W	-	6,942	May-19	0%	$1.50	60	12' clear height, 1 dock high, $3.60/sf TI's, 1 month abated
8	2715 W Fort St	Brewery	3,536	Apr-19	28%	$1.37	60	Two story warehouse/office building
9	Praxair Building 4442 27th Ave W	Industrial Gas Distributor	5,619	Apr-19	17%	$1.51	60	Lease Renewal
10	Salmon Bay Marine Center 2356 W Commodore Way	-	8,450	Apr-19	-	$2.17	60	flex space
11	Building D- Salmon Bay 2284 W Commodore Way	-	1,100	Apr-19	-	$2.17	60	flex space
12	Teatro Zinzani Bldg 4027 21st Ave W	Sport Helmet Company	8,066	Mar-19	14%	$1.24	48	3 months abated, $5.50/sf TI's
13	4020 23rd Ave W	Dog Daycare	10,000	Jan-19	-	$1.00	60	$0.70/sf TI's

Current Leasing Opportunities Within BINMIC

Currently there are 22 buildings that have available industrial/flex space being actively marketed for lease in the BINMIC. Asking rent rates vary from $0.50/sf/mo NNN to $2.88/sf/mo NNN with triple net (NNN) costs running on average $0.26/sf/mo. NNN costs range from 0.08/sf/mo to $0.51/sf/mo (Table 2).

Table 2: Current Leasing Availabilities and Operating Expenses

#	Address	Size (SF)	Rate ($/sf/mo)	NNN ($/sf/mo)	Notes
1	Elliott Mercer 652 Elliott Ave W	6000	$0.50	$0.33	Warehouse
2	920 Elliott Ave W	6,000	$1.67	$0.33	Flex/Office
3	1443 Elliott Ave W	3,050	$1.20	$0.12	Warehouse
4	151 Nickerson St	3,771	$1.50	$0.24	Flex/Office

5	Nickerson Business Center 3837 13th Ave W	2,577	$1.50	$0.51	Flex/Office
6	Kvichak Marine 469 NW Bowdoin Pl	39,400	$0.88	$0.25	Warehouse
7	Ballard Yard, Shed & Office 324 NW Bowdoin Pl	5,412	$1.11	$0.10	Warehouse/Office
8	Salmon Bay Terminals 4025 13th Ave W	2,806	$1.50	$0.33	Warehouse
9	4111 Aurora Ave N	11,016	$1.10	$0.33	Warehouse
10	Elmore Electric 2300 W Elmore St	3,250	$1.25	TBD	Warehouse
11	4200 9th Ave NW	24,200	$0.95	$0.15	Warehouse
12	4237 24th Ave W	13,635	TBD	$0.20	Warehouse
13	4441 26th Ave W	9,888	$1.50	$0.21	Flex/Office
14	Commodore at Interbay 2601 W Commodore Way	36,484	TBD	TBD	Warehouse
15	811 NW 47th St	6,000	$1.15	TBD	Warehouse
16	819-825 NW 47th St	14,261	$1.15	$0.20	Warehouse
17	1520 NW Leary Way	18,416	$1.50	$0.08	Warehouse
18	Ballard Moser Building 1110 NW 50th St	9,597	$2.88	$0.50	Flex/Office
19	Salmon Bay Center 5305-5309 Shilshole Ave NW	3,100	$1.25	$0.25	Flex/Office
20	Waypoint Marine 5350 30th Ave NW	6,200	$1.40	-	Flex/Office

Upcoming New Development Within BINMIC

There are few new developments within the BINMIC region and none are due to be delivered within the next 12 months. During our research, we found 6 permits filed for development (Table 3). Figure 8 shows the locations of each development.

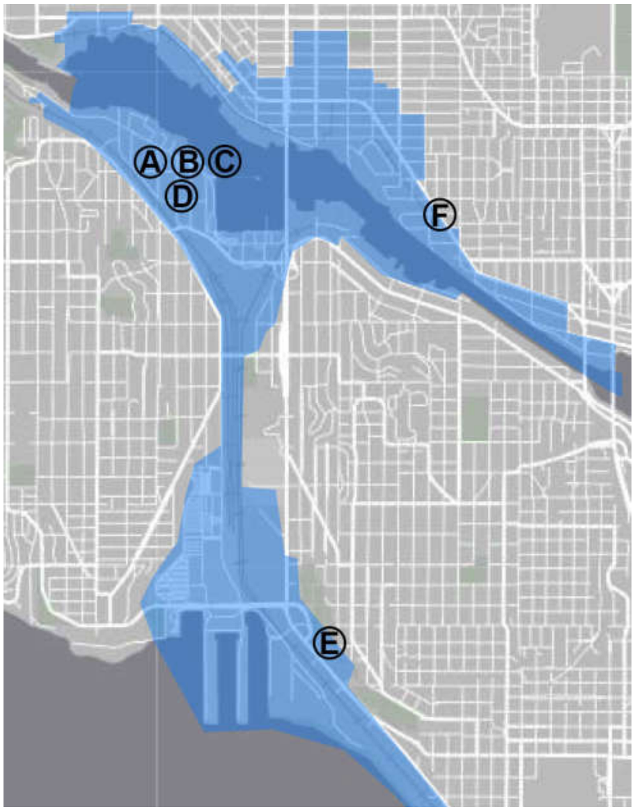
Table 3: New Industrial Development in BINMIC

	Address	Description*
A	4410 24th Ave W	New 2-story industrial building with mezzanine and on-site parking.

B	2327 W Commodore Way	construct 3 story 21,000sf to 23,000sf warehouse/office with parking inside the building for 20 vehicles.
C	2100 W Commodore Way	Two marine sales and service structures totaling 22,560sf and one 70,200sf mini-warehouse structure; surface parking for 126 vehicles; existing warehouse structure to be demolished.
D	4207 22nd Ave W	establish a general sales and services and construct new commercial building
E	1408 Elliott Ave W	Demolish existing buildings, construct 130,000sf of light industrial space including 8,000sf of street-level commercial space and 3 floor levels above grade.
F	4000 6th Ave NW	Retain existing 3-story warehouse building with caretaker's unit, demolish existing accessory 1-story open shed and enclosed storage structures and construct new 5-story industrial building.

* Descriptions taken directly from the Department of Planning and Development's Permit Search

Figure 8: Map of New Industrial Development in BINMIC



MARITIME INDUSTRIAL LEASING FACILITY REQUIREMENTS

Based on the 2015 Madison Bay Commercial "Fishermen's Terminal Real Estate Demand Study and Fishing Cluster Economic Growth Model Study," the following insights still hold true and were taken into consideration in our recommendations:

> The configuration and location of the businesses supporting the North Pacific fleet varies widely; however, some common themes have been identified. The 2015 Fishermen's Terminal survey asked the maritime industrial vendors to provide feedback regarding the facility needs for their Seattle-area locations.
>
> Respondents clearly indicated a preference for industrial space with an office component. The median requirement for combined warehouse / shop space was 5,000 SF, while the median office requirement was 1,350 SF.
>
> "Within the required facilities, the maritime suppliers were split regarding warehouse ceiling height. Forty percent (40%) indicated it was important to have ceilings over 16 feet, while 49% placed little or no importance on ceiling height. Ceilings over 24 feet in height were important to 26% of the respondents. Similarly, survey respondents were divided by loading dock needs, with 32% stating that 48-inch dock-high loading is critical, 44% stating that grade level loading is important, and over half placing little or no importance on either type of loading doors. A truck court accommodating 53-foot container trucks is important to 36% of the respondents, while 47% placed little or no importance on accommodating these large trucks. Heavy power to the facility (in excess of 15 watts per SF) was of no importance to many of the suppliers; however, 25% said it was extremely important to their business.

CURRENT MARITIME COMPANY REQUIREMENTS

From our survey and conversations with multiple landlord representatives and users we've concluded a few maritime requirements in the region are:

- Pacific Northwest Fisheries requirement of 50,000sf+ currently searching in the Everett area for a processor and cold storage facility.
- Additional storage for vessels equipment and supplies. All the current locations are at capacity.
- Cold storage facilities in the area are currently at capacity and there is a need for more. Recently Lineage Logistics purchased City Ice and Seafreeze Ltd local cold storage operators and consolidated ownership of this product type in the area.

Due to a lack of new development within the BINMIC most maritime requirements have mostly renewed their leases in their current locations.

RECOMMENDATIONS

The product type we feel is the best to approach in this market is to create a shell "flex" warehouse building that has multiple options for office/retail and roll-up door access. Office/retail space percentages within the warehouse/flex structure should be left flexible to be built out by the Port based on each tenant's requirements. There is demand for accessory office but to maximize flexibility, flex office space comingled with industrial warehouse is an approach that we recommend. Build the shell warehouse than have the office space built internally for based on each lease requirement. If zoning FAR and height limit allows additional stories above 24' ceiling height of warehouse more office can be built above. This would be beneficial to the development based upon the limited amount of any new development in the market.

LEASE STRUCTURE RECOMMENDATIONS

Rental rates to be structured as $1.00/sf/mo NNN for the entire footprint of the space and an additional office rate addon of $1.50/sf/mo NNN based upon the amount of office square footage the tenant requires to be built out by the Port.

Rent abatement per month should be budgeted ½ month of rent per year of lease term, starting at a minimum 36-month lease.

Tenant Improvement (TI) allowance should be budgeted up to $5.00/sf for lease terms of 60 months or greater. This TI allowance is in addition to the turnkey cost of tenant office buildout done by the Port.

Market lease terms can vary from 12 to 120 months. Some tenants will require security for longer term predictability in cost. Other short-term tenants will prefer a flex transition space. In the case of shorter terms less than 36 months, there should be no lease concessions for the tenant. Rather, these deals should be structured "as-is" in exchange for the shorter lease.

Lease renewal options can vary widely in this market, but we feel up to one 5-year option is sufficient in engaging tenant interest.

BUILDING INFRASTRUCTURE RECOMMENDATIONS

Building size of 10,000sf to 100,000sf.

Based on tenant demand, we feel that 2,500-Amp 277/480-Volt, three-phase is sufficient.

To allow maximum flexibility, every suite of 10,000sf or less should have one dock-high and one grade-level door.

Based on tenant feedback regarding ceiling clearance, **a 24' ceiling height would provide maximum rentability and flexibility.** Uses from breweries/distilleries want higher ceilings for their drum barrels and marine-related industries who store equipment find stacking storage more cost efficient.

Slab thickness of 6" with 4,000psi reinforced at 24" on center is sufficient. Our study suggests that there are very few specialized manufacturing uses that require additional thickness. If this requirement does arise, the cost of cutting slab to pour a specialty slab can be discussed.

Office requirement should not be initially built in, but turnkeyed by the Port for each tenant's need. Generally, we expect that **20 to 25% of the finished building will serve as office space.**

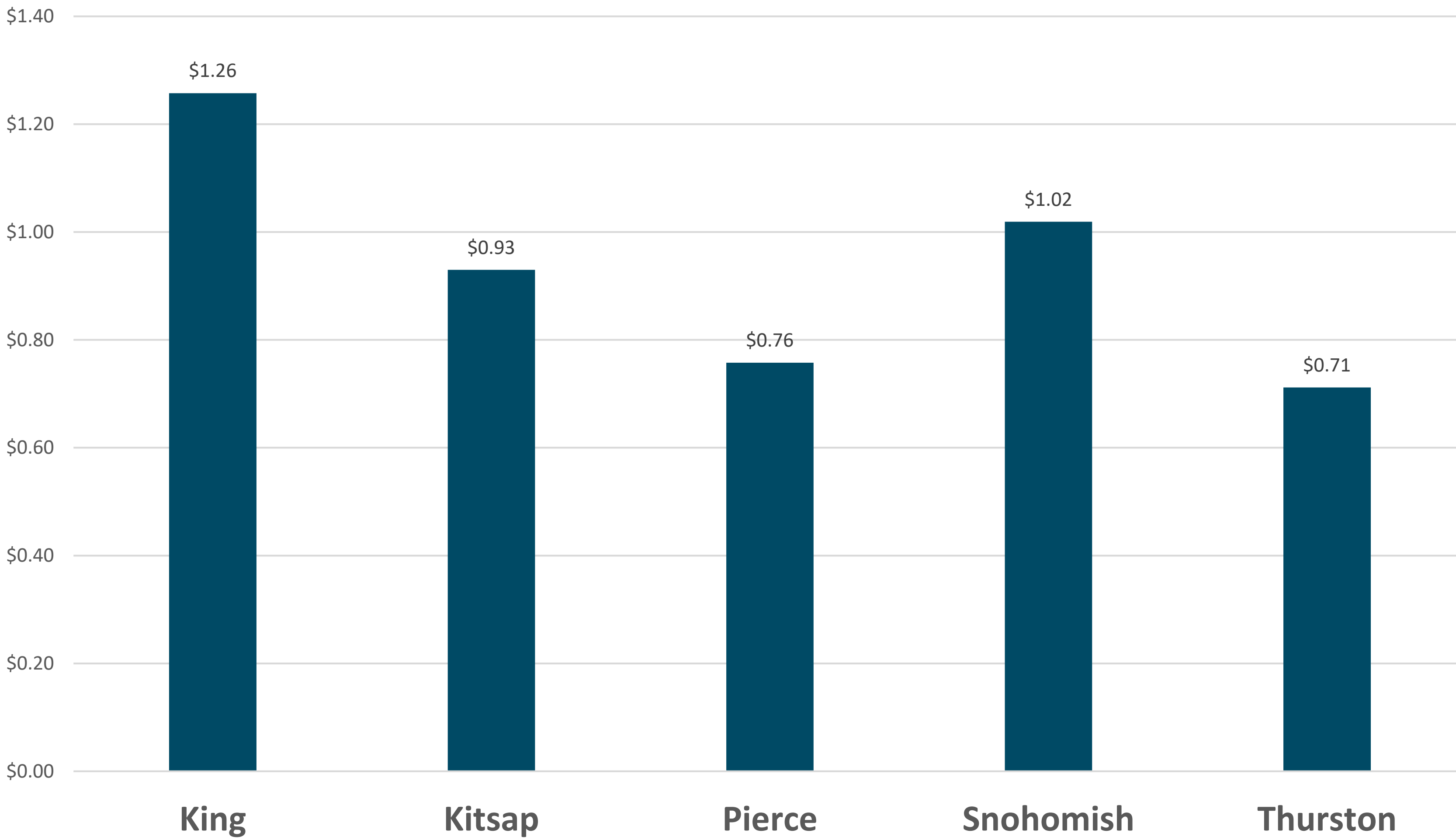
Real Estate Outlook

- Matt Anderson, Heartland LLC
- Erwin Park, Madison Bay Commercial Real Estate

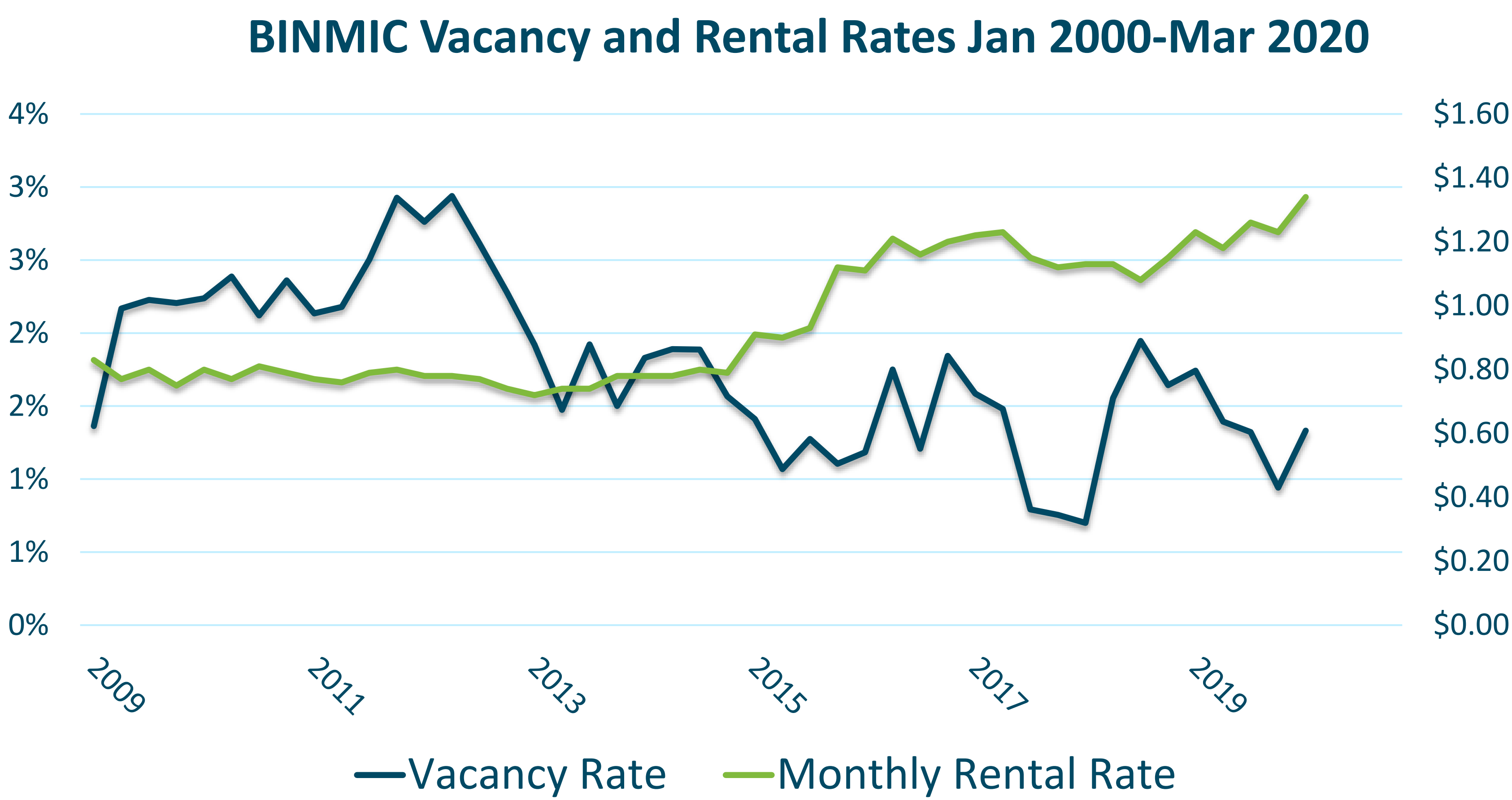
Industrial Market Summary

- 2010 to 2019: 20+mm SF
- Last 12 Months: 2.8mm SF
- Last 12 months absorption - 396,000sf
- 6 years positive 3,000,000+sf/yr
- 5.1% 2Q 2020 vacancy vs 6.1% historical average
- 12 month vacancy change 0.8%
- Total regional market size 328,728,690sf

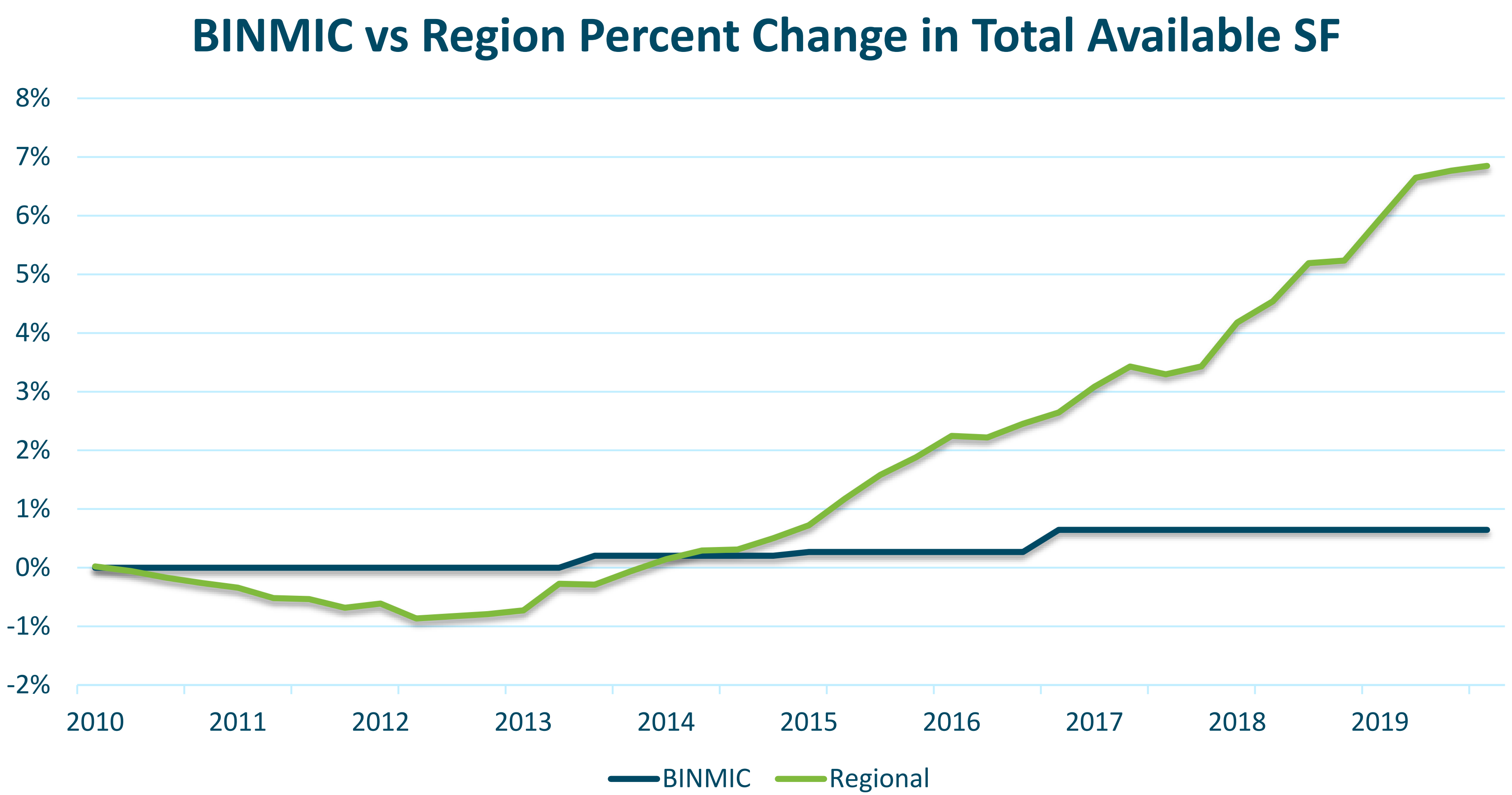
Figure 2: Average Monthly Rental Rates ($/sf/mo as of Feb 2020)



BALLARD INTERBAY MIC Trends



Ballard Interbay MIC Industrial



6

The Covid Era: Now

- Coronavirus and China trade tensions causing uncertainty
- Manufacturing slowdown, Ecommerce increasing
- Regionally Amazon Leases 1,306,071sf (2020 YTD)
- 2020 BINMIC industrial development permits
  - 1408 Elliott Ave 138,000sf (Feb'20)
  - 1110 NW 45th St 86,000sf (Apr'20)
- Flex industrial space is a net loss due to demolition of existing supply

The Covid Era: Near Term

- Capital is amassing specifically for industrial opportunities in gateway cities.
- Reordering of consumer goods supply chain will continue to drive demand.
- Return of “essential” manufacturing?
- Rebounding of Boeing & its suppliers

The Covid Era: Mid Term

Automation:

- C19 accelerates the existing trend
- Efficiency
- Fewer workers; higher skillsets (and pay)

Urban Fulfillment Centers:

- Speed to customer
- Logistics

Port Stewardship

Disruption creates new partnering opportunities.

Disruption requires **everyone** to be more nimble.

Put assets to work with the long term in mind.

Invest for impact.

Non-Airport Financial Performance and CIP Funding Capacity Analysis

Commission Retreat

July 29, 2020

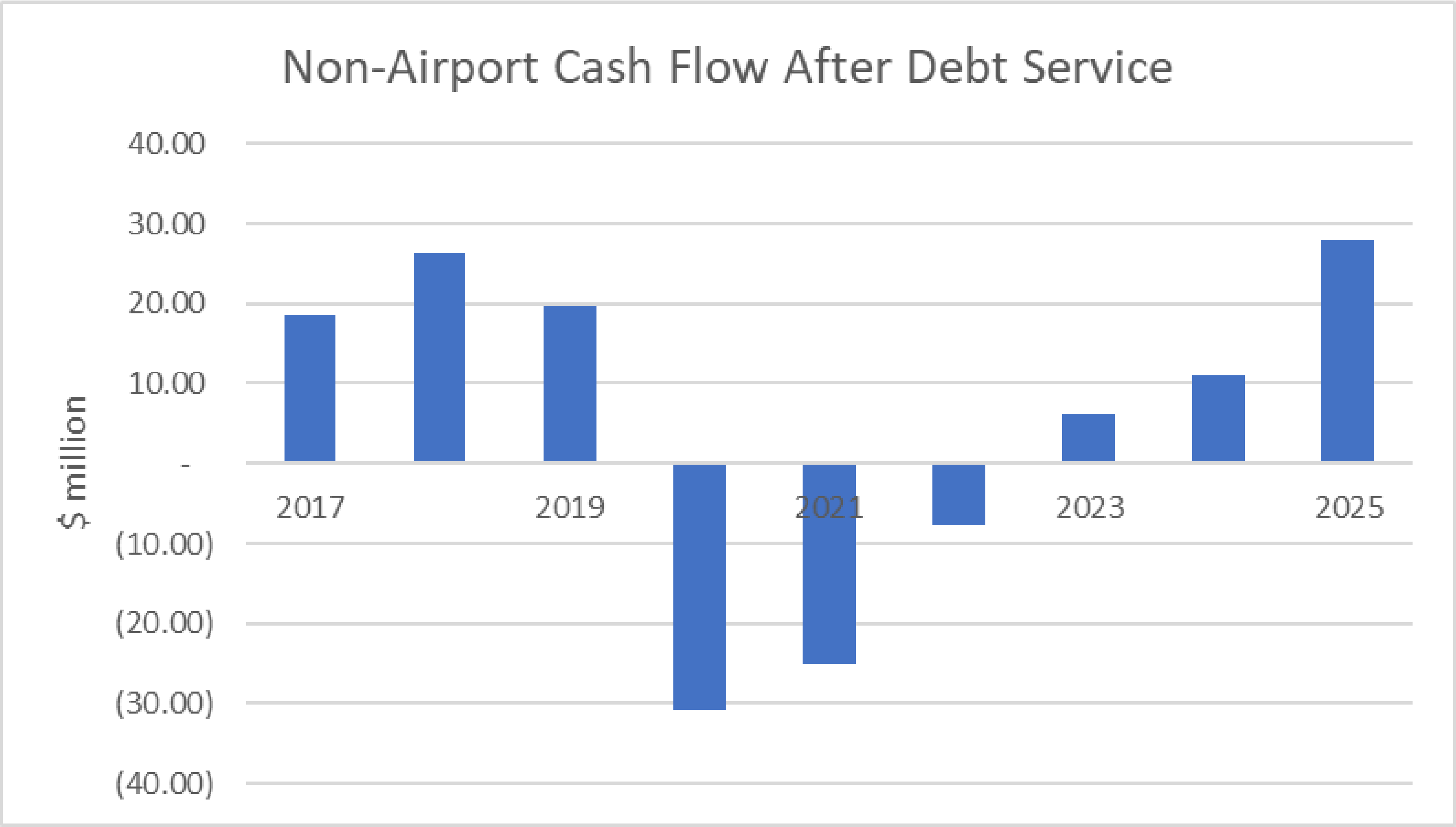
Resiliency = Preparation for Negative Outcomes

- Commission Retreat June 4
  - Focused on 2020-21 time period
  - Evaluated a framework based on two dimensions of uncertainty: Effectiveness of pandemic containment and of economic policy response
  - Provided three scenarios of varying severity – no clarity as to which is more likely
- 2021 Budget – need to agree on one set of numbers
  - Continued uncertainty about 2021 outcome – currently no basis for one scenario being more likely than another
  - Risk of over optimism far greater than risk of pessimism
  - Recommendation:
    - **plan for worse outcomes**
    - **Incorporate flexibility - easier to adapt to a better outcome than to a worse one**

Initial Funding Analysis

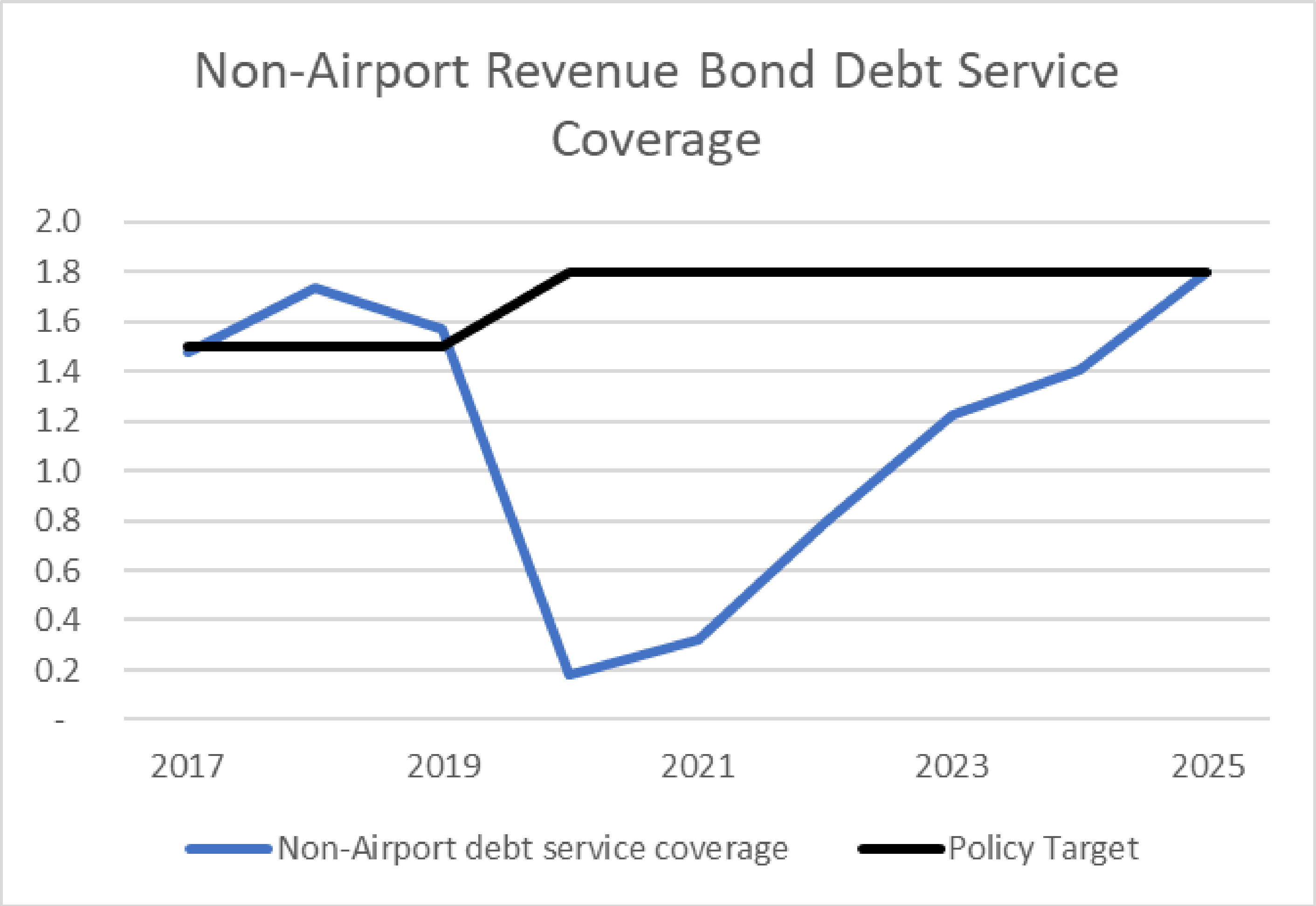
- Extended financial projections to 2021-25
- Conservative approach where downside risk in 2021 can more easily be managed by additional adjustments
- Key assumptions:
  - Cruise activity:
    - 2021 = 25% of 2021 forecast (Scenario #2 from Commission retreat)
    - 2022 = partial recovery to 75% of 2022 forecast
  - 2021 MD & EDD operating expense flat to revised 2020 budget and grows modestly (change from June scenario assumptions)
  - Vacancy & bad debt in 2021 = 7%
  - Conference and parking 2021 = 50% and 60% of 2020 budget
  - No additional support to Airport from tax levy or G.O. bonds
  - Tax levy increases 3% per year 2021-2023, then flat

Operating Cash Flow



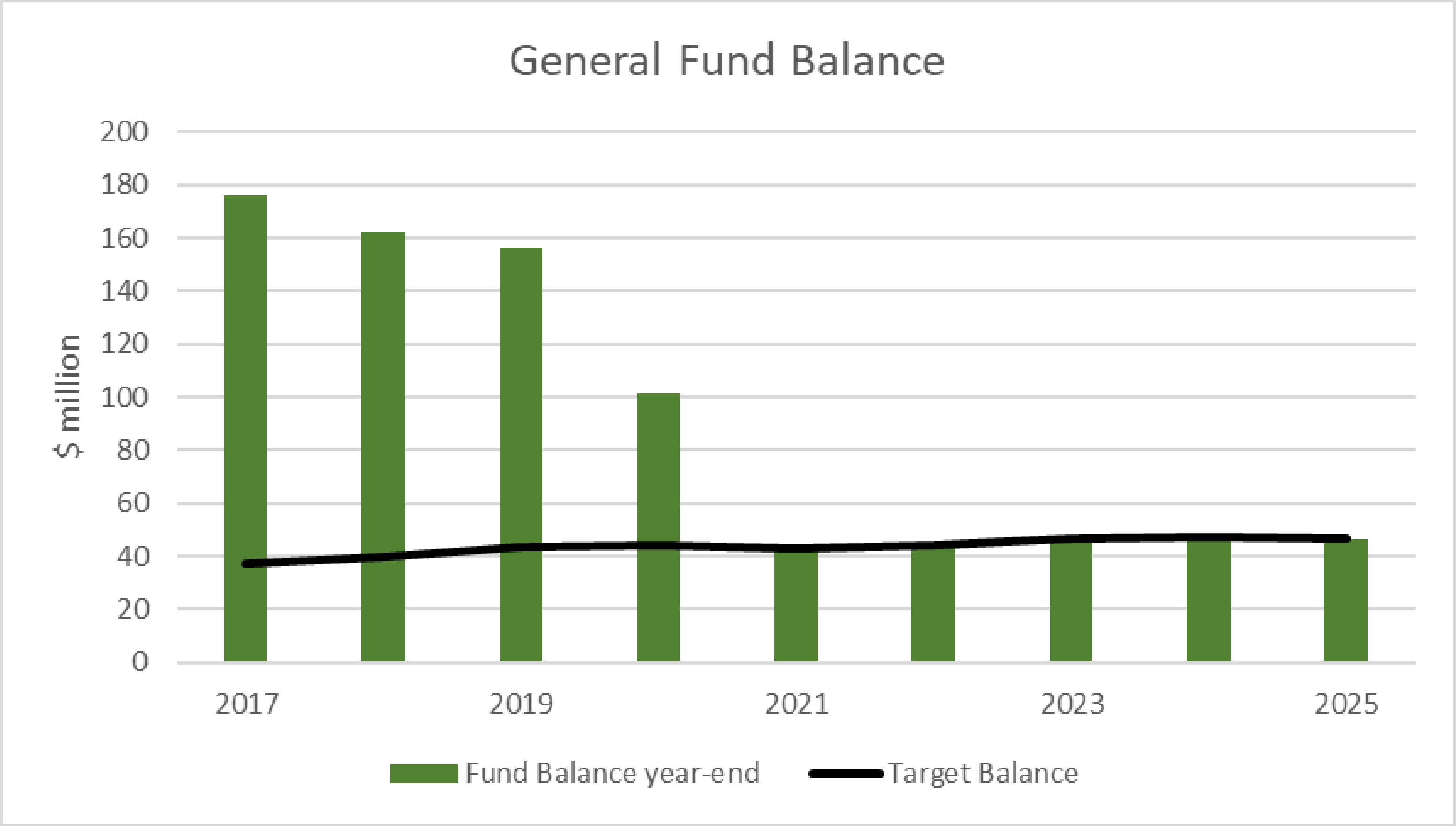
- Cash flow after paying operating expense and debt service is used to fund capital investments
- Current projection is a least two years of negative cash flow and slow recovery
- Negative cash flow drains cash on hand

Debt Service Coverage



- 2019 the Port changed its debt service coverage target
- Negative cash flow means that the Port is not covering its debt obligations from income

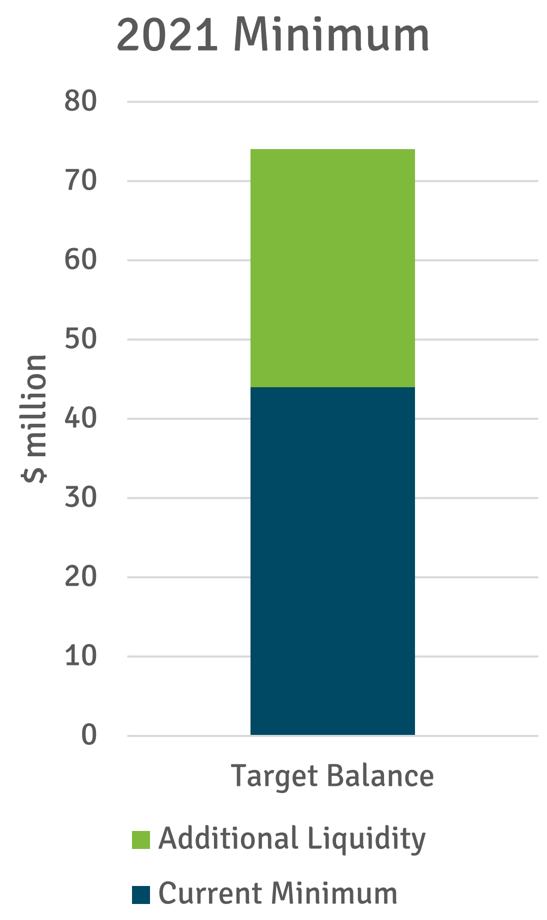
General Fund



- Minimum target = 6 months of O&M, excludes debt service payments
- End of 2019, actual balance was well above minimum
- Excess is funding debt service usually paid from net income

Recommendation For Liquidity Management

- **Increase the General Fund minimum balance to provide liquidity for debt service coverage**
  - Insufficient debt service coverage and current minimum General Fund balance target increases risk of insolvency in a deep and sustained downturn
  - Add $30 million to minimum balance until target coverage is achieved in 2025
  - New target provides 2x debt service liquidity



Additional Financial Tools

- **Borrow from Transportation & Infrastructure Fund (TIF)**
  - TIF includes Tax levy dollars previously set aside to fully fund various surface transportation commitments over the next 9 years (SR 509, FAST, Safe & Swift, Heavy Haul)
  - Borrow $30 million to provide additional resources to help fund the five-year CIP
- **Optional addition to General Fund minimum balance to manage revenue risk**
  - If more optimistic revenue assumptions are chosen, additional funds could added to mitigate the need for more drastic expense reductions in the event that actual revenues fall short of projections

Key Outcomes

- Funding available from MD and EDD CIP = $387 million 2021-2025 (excludes NWSA and Cent. Services)
- Virtually all funding is from tax levy and G.O. bonds until 2025
- General fund will be used for S. Harbor projects
- Debt service coverage target met in 2025
- General Fund is at its minimum balance
- Port issues $285 million G.O. bonds – maximum amount
- 2025 funding includes revenue bond issuance
- An $144 million funding shortfall exists of the five-year period

Capital Funding is Constrained

2021-2025 Non-Airport Funding

		2021-2025
Non-Airport Funding Sources		
Operating Funds above Minimum	$	45,230
Operating Cash Flow		48,893
Grants		1,671
Malarkey Settlement for T117		12,000
Tax Levy		16,933
Harbor Development Fund		59,182
Future LTGO Bonds		285,000
Future Revenue Bonds (1)		100,719
Total Non-Airport Funding Sources	**$**	**569,628**
Non-Airport Capital		
Maritime & EDD CIP	$	531,642
NWSA - 50% Share (North & South Harbor)		131,996
NWSA - Contingency & Port Projects (2)		42,252
Allocated Central Services CIP		7,964
Total Non-Airport Funded Capital	**$**	**713,854**
Estimated Funding Surplus (Shortfall)	**$**	**(144,225)**

(1) available in 2025

(2) Includes "cushion", North Harbor channel deepening, and other 100% Port legacy costs.

Non-Airport Scenario Details

$'000	2021	2022	2023	2024	2025
NWSA (plus depreciation)	41,088	42,549	42,922	44,433	42,644
Maritime	43,880	59,077	65,129	68,537	89,577
EDD	14,354	19,437	21,029	22,614	26,605
Total Revenue	99,323	121,063	129,080	135,584	158,826
Operating Expense	(85,182)	(88,944)	(93,156)	(94,943)	(93,390)
Operating Cash Flow	14,141	32,119	35,924	40,642	65,436
Non-Ops	(2,102)	(2,517)	(2,496)	(2,470)	(2,469)
Available to Pay Debt Service	12,040	29,602	33,428	38,172	62,967
Revenue Bond Debt Service	37,153	37,231	27,241	27,197	35,014
Net Cash Flow	(25,114)	(7,629)	6,187	10,975	27,952
Debt Service Coverage	0.32	0.80	1.23	1.40	1.80

To: Commissioners
FROM: Aaron Pritchard
RE: Commissioner Budget Priority Process
DATE: 7.22.20

Commissioners will be discussing specific budget proposals heading for 2021 at the July 29th retreat. Each Commissioner will have about 6 minutes to discuss their ideas or thoughts about the request.

Some of these may have merit and may take precedence over other considerations for the 2021 budget. In the January retreat Commissioners agreed to follow the budget process established over the last two years:

1) Commission specialist fill out the budget request template with request and seek input from ELT
2) Commissioner seek a second Commissioner, must have two in support for the proposal to be considered.
3) Commissioners discuss requests at July retreat
4) Submit all proposals to the Executive in early August.
5) Executive responds to Commission requests in first two weeks of September.

Commissioner Steinbrueck, E.D Metruck and Dan Thomas support this approach for 2021.

Commissioner	Commission Priority	Estimated Request
Steinbrueck	Port-wide Art Implementation FTE	$150,000
Steinbrueck	Police Reform Consultant	$250,000
Steinbrueck	Resiliency Consultant	$100,000
Felleman	Tribal Relations Investments	$175,000
Felleman	Municipal Solid Waste to Energy Study with King County and Fact Finding Tour with	$125,000
Felleman	CFS Marketing / Education	$10,000
FF/SB?	Rural Eco Tourism Recovery Funding	TBD
Felleman	Kelp Mariculture Economic Development Pilot Project	$25,000
Felleman	ORCA ECHO Program Consultant (Shared)	$100,000
Cho	Post COVID Economic Recovery Study	$75,000
Cho	Human Trafficking Certification Program	$75,000
Cho	Clean Boats Pilot Program	$75,000
Cho	Junteenth Holiday	TBD
Cho	Student Loan Repayment Program	TBD
Calkins	Offshore Renewable Industry Needs Assessment	$75,000
Calkins	Highline Public Schools WFD	$250,000
Bowman	Airport of the Future Consultant	$75,000
Commission	Add Commission Specialist (1 or 2)	$300,000
Commission	Commission Clerk	$100,000
TOTAL		**$1,960,000**

Splash 24/7.com – July 16, 2020

Future sourcing, and the impact on liner shipping

Re-shoring of industries post-coronavirus is a hot topic at the moment. Andy Lane from Singapore's CTI Consultancy crunches the numbers to assess what impact this shift could have on container movements.

Stamford, Connecticut-based Gartner Inc ran a "Weathering the Supply Chain Storm" global survey during February and March 2020, soliciting feedback from 260 participants who are responsible for supply chains and related functions, covering a range of different industries. One of the key findings from this survey was that 33% of respondents said that they had either already relocated manufacturing activities out from China, or planned to do so within the next two to three years.

Those surveyed were not necessarily the extremely high-volume shippers, and those that implied a shift out, might not have meant in totality.

This is maybe not a brand-new trend, there have been several anecdotal reports over the past few years of Chinese manufacturers outsourcing some aspects of their production, mainly to north Vietnam. Manufacturing in coastal China is significantly more expensive than it was a decade or two ago, and with additional logistics challenges and costs associated with manufacturing in the deeper west of the country, that is not always a good option.

A 30% shift results in an overall 12% decline

The already two-year old trade spats, resulting in higher trade tariffs, will have had shippers considering alternatives, or at least partial alternatives. And then came the disruption to Chinese manufacturing as a result of Covid-19, were some critical supplies became harder to come by, causing further sourcing strategy thoughts. Supply chain diversification is now a widely mooted topic.

Remaining as the 'world's factory' is not necessarily a strategy or an ambition of the Chinese government. But any reduction in this activity could only be gradual, as the sheer scale of Chinese manufacturing could simply not be accommodated even by a bunch of other large countries.

If whatever is relocated ends up in other Asian countries, then that would be a zero-sum game for liner shipping. But another trending phrase has been "more regional supply chains", and that would have an impact for sure. The CEO's of CMA CGM and Hapag-Lloyd have recently mentioned and acknowledged that this could become a developing trend.

On one hand, a shift from inter-continental to regional supply chains would be a positive from an environmental perspective, so long as the majority of trade continues to move on water. Reducing lead time from order-to-shelf can also be seen to be attractive for a number of commodities, not least fashion or perishables, and this also assists to reduce inventory. Although clearly the costs of manufacture plus inventory remain below the highly economical cost of inter-continental transportation, otherwise the shift would have happened already.

To attempt to determine the potential impact of a shift from inter-continental to regional sourcing, one needs to have a holistic overview of current trade patterns – and this is where the challenge starts. There are many sources of such information, and some congruity between them, but there are also differences. Container Trade Statistics (CTS) does have some good and deep data, but this is maybe less comprehensive when it comes to intra-regional trade. Seabury/DHL recently published a report showing that Intra-Asia was by far the largest trade-lane at some 33.3 m teu per year. We can also call on Sea-Intelligence's highly comprehensive Trade Capacity Outlook product as another good source.

Pulling all of these together, we can create a picture of the as-is teu*nautical miles of containerised transportation demand. If we take 10% of the current Asia-Europe and transpacific demand and place that into their own regional markets (Eastern Europe and predominantly Mexico respectively), the overall demand for global teu*nautical miles transportation reduces by almost 4%. A 30% shift results in an overall 12% decline.

These are not necessarily huge numbers, but they come at a time when the idle fleet still registers 2m teu (~8%), so it would be another straw on the donkey's back, and a prolongation of getting back to a better (pre-2008) balance between supply and demand.

Another issue here also is the quantity of jumbo-sized ships in the water or on order. These are particularly effective on longer haul routes, but inefficient on shorter (regional) ones. This is evidenced by the fact that the largest ships on the largest tradelane are generally below 5,000 teu capacity.

In the eye of the storm, there can be several remedies touted for the future, but the memory is short and in better times we can forget what we thought we had learned, so there is certainly no guarantee that there will actually be a shift towards regional sourcing. Diversifying the supply chain to make it more resilient looks attractive, but this will increase costs overall, and therefore is an insurance premium. Maybe that insurance policy will never be bought.

JOC Uncharted - July 16, 2020

COVID-19's economic drag deepens

The surging COVID-19 pandemic will remain a drag on the US economy, slowing the country's emergence from a short but severe recession and postponing a full recovery until 2022, Nariman Behravesh, IHS Markit chief economist, said in a JOC Uncharted commentary Wednesday.

The coronavirus disease 2019 (COVID-19) will determine the course of the economic recovery until a vaccine is developed, which may not be until sometime in 2021 or even later, Behravesh said. That means plenty of "ups and downs" rather than a V-shaped US economic recovery. "The path the economy is going to take will depend crucially on what will happen with the virus," rather than on factors that typically would guide a recovery, he said. IHS Markit projects a 20 to 25 percent chance for a W-shaped recovery, one with a second, less serious, downturn. "We've seen a very short, but very deep recession, the worst in 75 years, an event that is causing all kinds of damage and pain," Behravesh said. He acknowledged the US economy "bounced back" toward the end of the second quarter, but said that resurgence will fade. "What we're seeing is that a lot of high frequency indicators show a bounce that occurred in May and early June, but the bounce then faded," he said. The indicators Behravesh cited include IHS Markit's composite purchasing managers indexes and its materials price index.

Those indexes rose steadily from the beginning of May through the middle of June, "and then they topped out," Behravesh said. "That had to do with the number of infections picking up again," as many southern and western states rolled back COVID-19 restrictions, he said. And the bounce back up for those indices and other economic indicators has not been as high as the initial drop in March and April. "Stimulus occurred early on, in a good and big way, but a lot of that is beginning to fade, too," Behravesh said. "We're looking at a very difficult situation."

Caution: Economic bumps ahead

For US shippers, importers, and exporters, that forecast suggests caution in budget planning and negotiating contracts with all types of freight carriers, and avoidance of too much exuberance amid temporary spikes in economic activity that are likely to occur.

Unemployment numbers are an underlying reason for caution. Although the unemployment rate has dropped from 14.7 percent in March to 11.1 percent in June, the jobless rate and the number of unemployed are still up 7.6 percentage points and 12 million people from February. "You've had households and businesses whose finances have been absolutely clobbered," Behravesh said. "The only counterweight to that is the stock market, but tough household and business finances mean spending is going to be slow in coming back."

What's more, many of those households will soon lose the stimulus received in the form of expanded unemployment benefits under the Coronavirus Aid, Relief, and Economic Security (CARES) Act. Those benefits, worth an extra $600 a week, expire July 31.

For the full year, US real gross domestic product (GDP) will drop 6.1 percent, with US unemployment staying above 10 percent through the third quarter, according to IHS Markit, the parent company of JOC.com. Global GDP is predicted to fall 5.5 percent from 2019.

The recession will be worse in Europe, with the eurozone economy contracting about 9 percent and the United Kingdom's GDP falling by 12 percent, IHS Markit predicts. Japan's recession will also be deep, with GDP decreasing 5.2 percent, and emerging markets will fare worse.

China is already beginning to recover, having been the first country hit by COVID-19 and an economic shutdown in the first quarter. But its recovery will be hobbled by a lack of global demand, Behravesh said. "You can't export much to the rest of the world," he said.

Retail sales not all equal

In the US, the continued spread of COVID-19 is already leading some states that loosened restrictions on gatherings and businesses to roll back their reopenings, at least temporarily. The second round of COVID-19 closures, Behravesh said, will not be as pervasive as the first.

Some manufacturing sectors may have a chance at a V-shaped recovery yet, but the odds are stacked against a strong, sustained recovery, he said. "The decimation of supply chains and bankruptcies of small companies are going to make it very difficult to have a v-shaped recovery."

US retail sales have made a strong recovery, fueling truck freight in June and early July, but they also have shifted. In June, total unadjusted retail sales were up 2.3 percent over a year ago, according to preliminary Census Bureau data. But non-store sales fared better than in-store sales.

Non-store sales, including online shopping revenue, increased 30.2 percent year over year in June, without any seasonal adjustment. Home and garden and building materials retailers saw sales increase 22.3 percent year over year, also on an unadjusted basis.

Food and beverage stores increased sales 11.4 percent from a year ago in June, but restaurants and bars saw sales decline 26.8 percent year over year as many restrictions on indoor dining and bars remained in place or were reintroduced.

Many brick and mortar retail categories, including electronics, furniture, and clothing saw sequential monthly improvements from low points in April, but not year-over-year gains. These Census Bureau statistics point to an underlying shift in how and where consumers spend.

That shift may indicate why truck demand is strong in certain sectors, but not others. E-commerce and in-store retail goods alike move to warehouses and distribution points by truck, whether truckload or less-than-truckload, as well as by parcel carrier.

That's why some trucking companies are experiencing a "V" recovery, while much of the broader economy is not.

And then there are areas of the economy where spending just isn't happening. "Airlines, hotels, cruises, conventions, all this stuff is not going to happen in 2020," Behravesh said. "The worst is probably behind us, but we're not out of the woods yet."

Journal of Commerce – July 13, 2020

Fresh tariff threat could put pressure on westbound trans-Atlantic

A rush to get European imports into the United States before a potential wave of tariffs is imposed in August could further tighten westbound trans-Atlantic capacity in the coming weeks, increasing the risk of rolled cargo.

There was front-loading of US imports from the European Union in January due the end of a comment period for retaliatory US tariffs, and now the end of a new public comment period leaves the window open for more tariffs. Alison Leavitt, managing director of the Wine and Spirits Shippers Association, told JOC.com. Leavitt said she is already seeing some of the association's members front-load imports to avoid the tariffs tied to the US-EU dispute over government subsidies to Boeing and Airbus.
Current tariff on EU imports range between 15 percent and 25 percent and are levied on $7.5 billion worth of goods. The latest round of potential tariffs could be as high as 100 percent imports, according to a US Trade Representative notice.

Separately, the Trump Administration on Friday announced that starting next year, it would impose a 25 percent tariff on $1.3 billion worth of imports from France, including cosmetics, soap, and handbags. US importers of French wine dodged the new tariffs, which were a retaliatory move against a French tax on US technologies companies.

Wine and spirit shippers "are seeing bookings taken and then rolled. The alliances' planning (of blank sailings) is not what it should be," said Leavitt, adding that many of her members have already seen a surge of new demand tied to US shelter-in-place orders.

Container lines in the second quarter blanked 12 percent of westbound capacity from North Europe and 14 percent of capacity from the Mediterreanean connecting to the North American east coast, and trimmed 4 percent of capacity from Europe to the North American west coast, according to Sea-Intelligence Maritime Analysis.

The carriers are easing the amount of capacity they blank in the third quarter. Westbound capacity from North Europe and the Mediterreanean to the east coast of North American will be down 10 percent and

7 percent, respectively. Carriers have so far signaled that they will trim only 2 percent of capacity from Europe to the West Coast of North America, according to Sea-Intelligence.

US imports from Europe were down 9 percent in the first half of 2020 compared to the same period a year ago, according to data from PIERS, a sister company of JOC.com within IHS Markit. The decline, however, has deepened in recent months, with volumes falling 20.9 percent in May and 16.9 percent in June.

Bloomberg News – July 10, 2020

China’s Tough Talk on U.S. Sanctions Leaves Room to Cool Tension

By now it’s become a familiar pattern: the Trump administration takes an unprecedented action against China, Beijing vows retaliation and then life pretty much goes on as normal.

That sequence played out again on Friday, with Chinese Foreign Ministry spokesman Zhao Lijian vowing “firm countermeasures” after the U.S. hit sitting Communist Party officials for the first time with sanctions under the 2016 Global Magnitsky Human Rights Accountability Act for abuses in the far western region of Xinjiang. The prime target, Chen Quanguo, sits on the 25-member Politburo and is seen as a rising star in the party.

But analysts in China downplayed the move, saying that it was unlikely to derail the phase-one trade deal or lead to any more serious escalation. China’s economy was already growing at the slowest pace in almost three decades before the pandemic hit, and officials have held off on measures that could spook foreign investors at a time when companies are reexamining supply chains.

“Beijing is in a tough position,” said Trey McArver, partner at consultancy Trivium China. “They don’t want to look weak, but they are also keen not to further dial up tensions between the two countries, which seem to be spiraling out of control. I would expect some tough words from the Foreign Ministry, but nothing much beyond that at this moment.”

The U.S. action is tied to the widespread detention of Muslim Uighurs in Xinjiang, a policy that has been sharply criticized by top American officials as well as human rights groups. It comes amid soaring tensions between the world’s biggest economies over the origin of the coronavirus pandemic, China’s moves to quell dissent in Hong Kong and a debate over the use of Chinese technology by the U.S. and allies.

Zhao, the foreign ministry spokesman, called the sanctions “deeply detrimental to U.S-China relations.” He didn’t give details of the reciprocal measures against “individuals and institutions,” but said they would be known “soon enough.”

China also has one eye on any sanctions that still may come over Hong Kong. The U.S. has already imposed visa bans on unidentified officials responsible for undermining the former colony's autonomy, and President Donald Trump has threatened further actions against Beijing in light of a sweeping national security law that came into effect on June 30. Any sanctions against top national officials that sit next to Xi in Beijing would be considered more serious than lower-level functionaries that implement policy.

'Symbolic Significance'

The timing of the sanctions against Chen and three other officials struck some observers as detrimental, given Chinese Foreign Minister Wang Yi had offered an olive branch just hours earlier. Though he blasted the U.S. for "McCarthy-style paranoia," he also said both sides could still "find ways to steer this relationship out of the difficulties and bring it back to the right track."

"China's recent messaging, including Wang Yi, are striking a conciliatory tone and it doesn't want things to spiral out of control," said Wang Yiwei, director of China's Institute of International Affairs at Renmin University in Beijing. Besides, he said, the sanctions against Chen and others have a very small impact compared to other options.

Chen has become China's point man for subduing ethnic unrest. During his earlier stint in Tibet, Buddhist temples were told to display Chinese flags and images of party leaders. His implementation of a vast police state in Xinjiang and demonstrations of loyalty to Xi won him a promotion in 2017 to the Politburo, and he may be considered for a spot on its supreme Standing Committee, which now has just seven members, in the coming years.

There's little likelihood the officials named have financial connections with the U.S. The sanctions block access to accounts or businesses owned, directly or indirectly, by the people or the bureau. It also prohibits U.S persons from doing business with the sanctioned officials or entities.

The move has "more symbolic significance than real impact," said Zhou Qi, director of the Institute of American Studies at the state-run Chinese Academy of Social Sciences. "If some of them were planning to send their sons and daughters to study in the U.S., there will likely to be some impact on them individually. But in the view of the general public in China, the sanctions may not be a big deal for China as a country."

Any sanctions on Hong Kong could be more worrisome for companies. New legislation passed by Congress and awaiting Trump's signature would put global banks at risk of being caught between Beijing-backed penalties under the new national security law and sanctions being debated in the

U.S. Senior officials have even discussed ways to undermine the Hong Kong dollar's peg to the U.S. dollar, although that remains a remote possibility.

Further complicating matters is the U.S. election, in which Trump and Democratic presidential nominee Joe Biden have sought to taint each other as weak in confronting Beijing's leaders. This week Trump said the U.S. was considering a ban of TikTok, the popular social media app owned by China's ByteDance Inc. The U.S. is seeking to limit U.S. companies' ability to do business with Chinese tech giant Huawei Technologies Co., while Secretary of State Michael Pompeo has pushed for U.S. pension funds to cut ties with Chinese companies.

Uncharted Waters

"We're in uncharted territory right now," said Daniel Russel, former assistant secretary of state for East Asia and the Pacific, who's now vice president at the Asia Society Policy Institute. "There's never been an administration that thought the pursuit of top-level party officials would end well for either side."

China has plenty of options to hit back if things were to get worse. It could hurt U.S. companies by releasing a long-threatened "unreliable entities" list, stop buying American products, unload Treasuries or curb exports to the U.S. of rare earths, which are critical to everything from smart-phones to electronic vehicles. On the diplomatic side, China could take measures such as halting cooperation on enforcing sanctions related to North Korea and Iran.

Potentially worse than any individual action is the cumulative erosion in trust between the countries in recent years. In Wang's speech Thursday, China's foreign minister said it seems the U.S. believes "every Chinese investment has a political purpose, every student studying abroad has a spy background, and every cooperative initiative has an ulterior motive."

"The sanctions will no doubt mar the political atmosphere for doing trade," said He Weiwen, who previously served as a commercial attache at the Chinese consulates in New York and San Francisco and is now a senior research fellow at the Center for China and Globalization in Beijing.

"How do you trade with someone waving a knife at you?"

Cruise Critic Weekly Report

Week of July 6, 2020

Table of Contents

Key Takeaways

The EU recommendation story on guideline suggestions for cruise ships returning to service in Europe was a big hit across all three of our geos. It prompted us to run a survey on which of the suggestions people liked most, and which they were most turned off by. The initial results (below) have been somewhat surprising, in that people expressed apprehension over the concept of shorter cruise itineraries, for example, but were amenable to things like touchless embarkation and designated boarding windows.

Over the past two weeks, we've been able to give readers a glimpse of what is going on onboard cruise ships. Even though the lines covered aren't big in terms of market share, they have proved popular among readers. Sentiment around those stories is positive, and traffic is high.

The U.S. surge in COVID cases, coupled with the holiday, in July has resulted in large fluctuations in bookings.

Cruise Sentiment Survey

Booking intent remains strong, with **75% of respondents sharing that they will book a future cruise**. A third of respondents (33%) **are currently looking to book a cruise,** and an additional 22% are unsure whether they will book a future cruise. Only 3% report they will not book a future cruise.

Breaking down by age group:

Respondents Aged 65+

- 73% report they will book a cruise again

    - 37% will book once travel restrictions and warnings ease, 31% are already looking to book a cruise, 5% will book once they receive their refund/FCC
- 23% are unsure whether they will book a future cruise
- 4% will not book a future cruise

Respondents Ages 45-64

- 78% report they will book a cruise again
    - 38% will book once travel restrictions and warnings ease, 36% are already looking to book a cruise again, 4% will book once they receive their refund/FCC
- 20% are unsure whether they will book a future cruise
- 2% will not book a future cruise

Respondents Ages 18-44

- 82% report they will book a cruise again
    - 43% will book once travel restrictions and warnings ease, 39% are already looking to book a cruise again
- 14% are unsure whether they will book a future cruise
- 4% will not book a future cruise

Following news of the European Union's new cruise guidelines, we surveyed our readers on their opinions of the recommendations. Based on nearly 4,000 responses:

Of the health and safety measures recommended, those that readers found most acceptable included:

- Denial of boarding for those with COVID-19 symptoms (91%)
- Air and ventilation protocols (79%)
- Touchless, digital embarkation with smaller groups and designated boarding windows (77%)
- Routine testing, temperature checks for both passengers and crew, and monitoring of symptoms (69%)
- Fitness center and spa distancing and disinfecting protocols (61%)
- Capacity restrictions to ensure that physical distancing can be maintained at all times (60%)
- No more self-serve food options (56%)
- Masks to be worn when physical distancing isn't possible (55%)

Of the health and safety measures recommended, those that readers found least acceptable included:

- Shorter voyages (three to seven days in length) and fewer port calls (74%)
- Limited interaction, with cohort groups provided with set times for dining, onboard activities, etc. (45%)
- Fewer amenities in cabins, end to twice daily cabin service (43%)
- Elimination of indoor pools hydrotherapy pools and limits on the number of bathers allowed (39%)

Sales and Operations Insights

July has been a whirlwind of a month for trends so far, particularly in the US market. The July 4th holiday coupled with a surge in Covid cases has resulted in large fluctuations, particularly in bookings. The good news is that shoppers are still active on the site and increasing. Clicks are up 10% in the US, 6% in the UK and 30% in Australia.

Bookings in June were surprisingly strong, but have dipped down now at the start of July due to the holiday and uncertainty. Shopping demand is still there, so we expect that bookings will start to pick back where June left off soon. Partner demand in the auction is also starting to increase, which is a sign that buyings signals are appearing elsewhere in the industry.

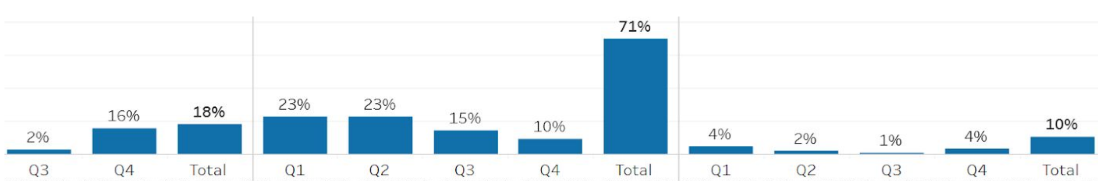
For the bookings we are seeing in July, here are a few of the headlines:

- Average sailing date is now nearly 300 days out
- Caribbean is still the majority of bookings
  - 2021 sailings for Europe, Med and Alaska have started to increase
- 7 Night cruises have been the most popular
  - 3-5 night cruises have seen an increase
- 55+ cruisers are accounting for the majority of bookings
- Average passengers per cabin saw a slight increase, which shows family interest

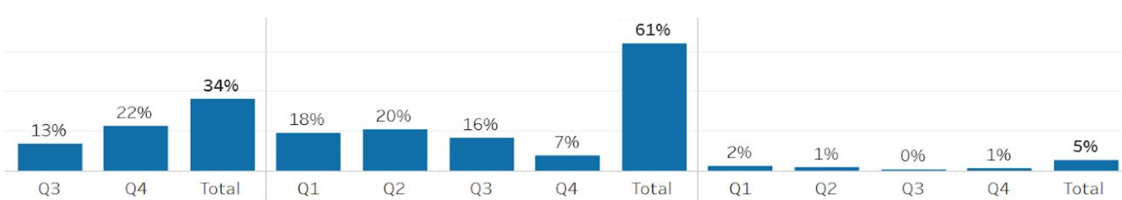
US Site:

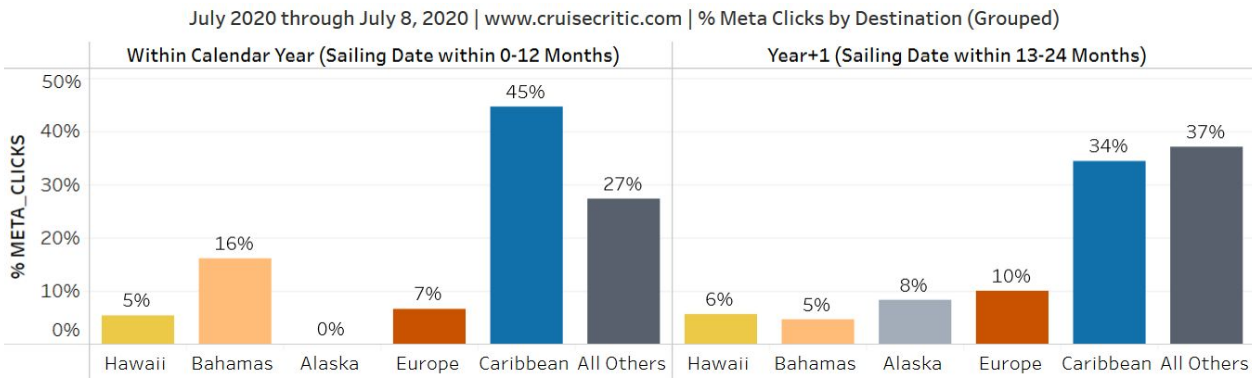
Included this week is July versus June for searches for 2020/2021/2022. Large changes can be seen in the US shoppers with much of the focus on dates that feel more comfortable further down the road. 2021 now accounts for 71% of searches, with 2022 taking a full 10% now. These are very large swings, but does go along with the sentiment survey that cruisers still want to cruise, but are weighing their options.

US Site July



US Site June

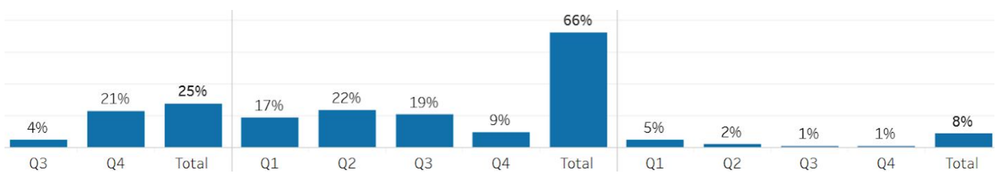




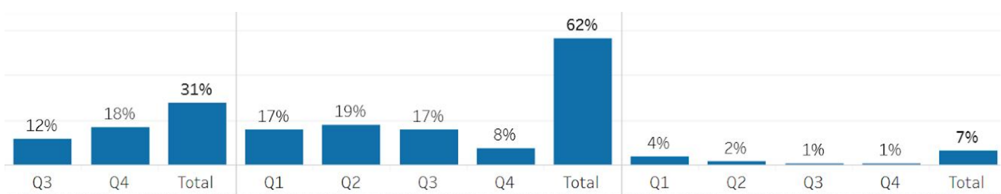
UK Site:

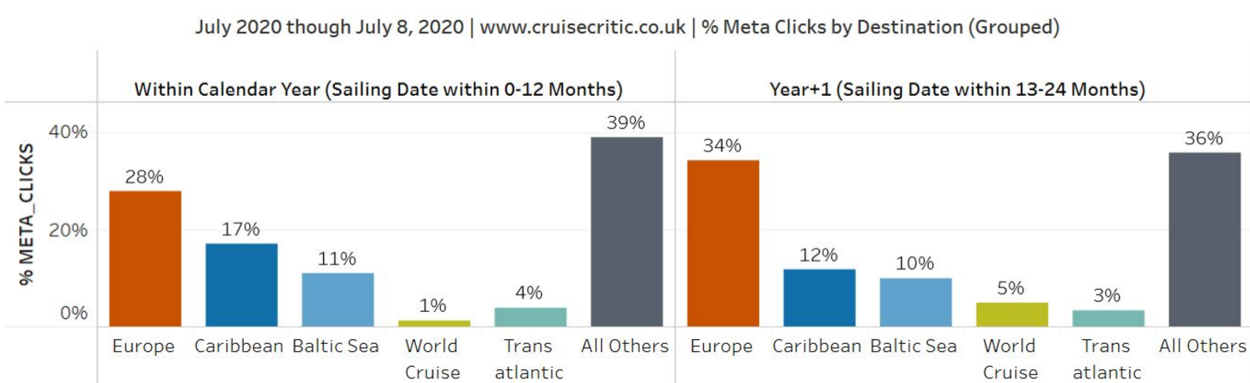
Reactions in the UK have not been as dramatic, but there continues to also be a push for 2021 sailings. UK Cruisers are still more optimistic of 2020 sailing dates though, with 21% of searches for Q4, which is the second highest quarter for searches.

UK July Clicks



UK June Clicks

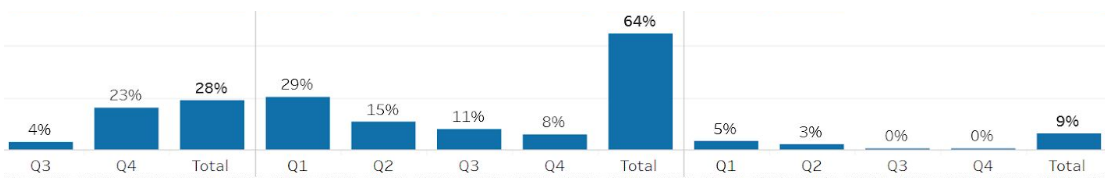




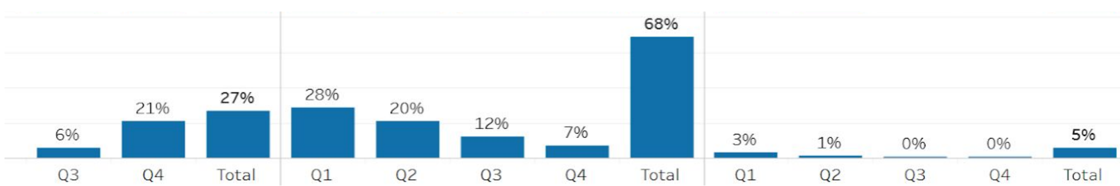
AU Site:

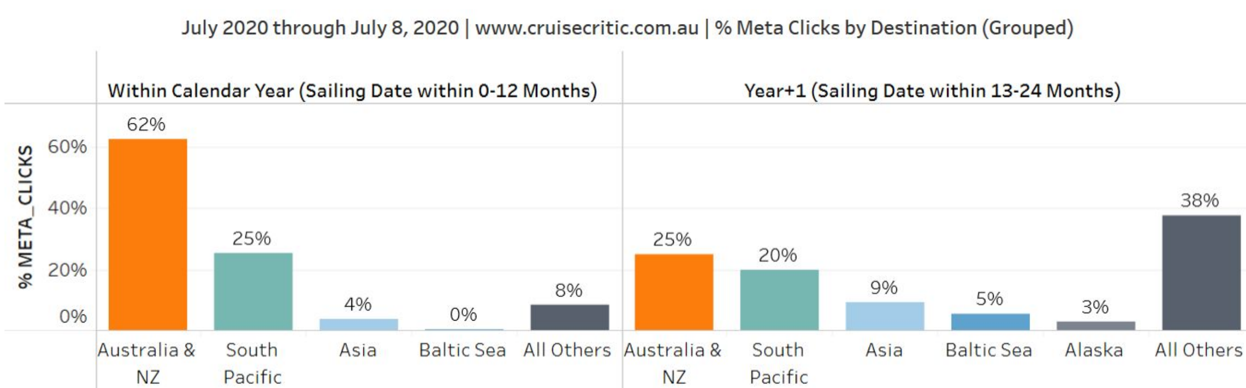
The timeline for Australia has also shifted out a bit, but seems to be the most optimistic of all 3 geos. Over half of searches are between late Q4 and early Q1, with a huge focus on Australia, New Zealand and the South Pacific.

AU July Clicks



AU June Clicks





Editorial Insights

US Top-Performing News:

1. EU Releases Health Guidelines for Cruises: Masks, Social Distancing, No Indoor Pools
2. Which Cruise Ships Will Be Scrapped Or Taken Out of Service Because of the COVID-19 Pandemic?
3. World's First Big Ship Cruise Line to Resume Operations
4. Cruise Lines, Charter Cruises Start to Cancel Into 2021

5. When Are Cruise Lines Around the World Expected To Resume Service?

Performance Summary:

- We're seeing strong interest in which ships might not return after the pandemic. This speaks to the loyalty our readers have for their favorites. We've tackled through pieces designed to allay some fears. Speculation on boards and from other outlets prompted us to provide context around this concept.
- The EU piece was a hit because it outlines clearly some steps cruise lines could take in Europe once they return. We were careful to outline that these were possibilities, but not probabilities. Additionally, we added a survey to this piece to ask people what they thought of the various proposals. Response was strong.

US Top-Performing Features:

1. How Reassuring are New Cruise Cancellation Policies Really?
2. Cruise Critic Readers Speak: Changes Cruise Lines Could Make Post-Covid 19
3. Cruise Critic Survey: 76 Percent of Cruisers Want to Sail
4. Your Favorite Cruise Ship is For Sale? Here's Why You Shouldn't Panic
5. Photos from SeaDream's First Luxury Cruise Following the COVID-19 Lockdown

Performance Summary:

- Like the news piece on ships being scrapped, we wrote the No. 4 piece to help allay fears from readers. It's done well, traffic-wise, and we saw a piece on decommissioned ships -- written long ago -- sneak up into the top 10 for the first time.
- Our No. 2 piece is based on really strong discussion happening on our message boards. We're doing more pieces aimed at bringing our readers' voices to the forefront.
- The No. 5 piece just shows pretty pictures of sailing, culled from social media. It's a simple approach, but people are really enjoying the photos. Content satisfaction -- readers can select their happiness by clicking a symbol for positive, negative, neutral, then opting to say why -- has been solid for this one in the early stages, though statistical significance hasn't been reached. People report being inspired by this article and also that they found it fun to read and enjoyed the photos.

UK Top-Performing News:

1. Which Cruise Ships Will Be Scrapped?
2. EU Releases Health Guidelines
3. When Are Cruise Lines Around the World Expected to Resume Service?
4. P&O Cruises to Sell Oceana
5. Coronavirus: Updated Cruise Ship Policies And Cancellations

Performance Summary:

- An interesting mix this week -- our two regulars (spots 3 & 5) make an appearance, but it looks as if people are also hungry for not directly-related-to-corona news, too
- Our top and 4th spot are closely related, with readers keen to find out about their favourite ships

- The EU Health Guidelines is people looking to what cruising might look like in the future and came with a survey that has already had a very large number of responses (stay tuned for a story on this)

UK Top-Performing Features:

1. How Reassuring Are New Cruise Cancellation Policies?
2. Cruise Critic Survey: 76 Percent of Cruisers Want to Sail
3. Cruise Critic Readers Speak
4. What Cruisers Need to Know About Coronavirus
5. Photos From SeaDream's First Luxury Cruise

Performance Summary:

- A real mix this week. The call out for the survey was top 5 last week and the results story performed well, too; as did our third-placed story -- readers are keen to know what others cruisers think
- And, in keeping with how well our news pieces about people actually sailing, the SeaDream story has performed well even though readers can't get on the ships yet

AU Top-Performing News:

1. EU Releases Health Guidelines for Cruises: Masks, Social Distancing, No Indoor Pools
2. Which Cruise Ships Will Be Scrapped Or Taken Out of Service Because of the COVID-19 Pandemic?
3. What Europe Being Closed to Americans Means for European River Cruising
4. Just Back From Hurtigruten's Finnmarken: The First Cruise Ship to Set Sail, Post-Covid
5. When Are Cruise Lines Around the World Expected To Resume Service?

Performance Summary:

- Aussies are keeping a keen eye on Europe, with three of these stories discussing the future or showing what the current cruise environment in Europe looks like.
- The No. 5 story has been in our top-5 in AU since we started tracking about a month ago.

AU Top-Performing Features:

1. How Reassuring are New Cruise Cancellation Policies Really?
2. Cruise Critic Survey: 76 Percent of Cruisers Want to Sail
3. 10 Changes to the Cruise Industry That Made Things Better Than Before
4. Cruise Critic Readers Speak: Changes Cruise Lines Could Make Post-Covid 19
5. Will I Have to 'Social Distance' on My Next Cruise?

Performance Summary:

- There wasn't a lot of movement this week among the most-popular stories, with three (2, 1, 5) appearing this week and last.
- Features numbers were the lowest of the quarter for AU; the shift to news story interest is strong in Australia, and it's not showing signs of changing.

Email Insights

Email Sends

- Survey Reveals 76% of Cruisers Want to Sail Again (July 1)
- Just In: 4th of July Cruise Sales for 2021 & Beyond (July 2)
- How Reassuring are New Cruise Cancellation Policies Really? (July 5)

Most-Visited Content:

- How Reassuring are New Cruise Cancellation Policies Really?
- Which Cruise Ships Will Be Scrapped Due to the Pandemic?
- Just Back From The First Cruise Ship to Set Sail Post-Covid
- Readers Speak: Changes Cruise Lines Should Make Post-Covid 19
- World's First Big Ship Cruise Line to Resume Operations

Performance Summary:

- Our audience continues to be very interested in the latest cruise news as it relates to the pandemic's impact on the industry, **increasingly on what the future of cruise looks like and what the experience will be**, along with service pieces that can help them to make decisions about currently booked or future travel. *What's happening with cruise ships (will they be scrapped or sold?) is of particular interest this week.*

  ** UK and AU emails are largely the same as the US emails, and are experiencing the same trends. Should any differences unique to these geographies arise, we'll be sure to note.

  - Noticeable declines in engagement with emails sent to the Australian Cruise Critic audience indicating fatigue and frustration over the state of cruising in the region due to the pandemic.

Community Insights

It's Time to Move on From 2020

The original poster (OP) pleads with cruise lines to stop cancelling in segments and just pull all 2020 sailings to focus on getting to a safe place for 2021, and allow cruisers to refocus their attention:

> "Give us a detailed plan on what they can and are doing to make cruising 'safe' in the Covid era. Cruising will return. Why force it and fail. Plan it, work the plan and spend the time and energy to let us all know what they will do and tell us what we will need to do so we can resume planning for a cruise that *should* happen."

Others chimed in with a number of responses -- from reasons the cruise lines are likely unable to do that (contracts, finances, etc.), to others saying they've already come to that personal realization and have begun to focus on 2021 and beyond themselves.

Social Distancing on a Cruise Ship

Cruisers debate the concept of social distancing on a cruise, and whether they would be up for the option. OP says that the reason they cruise is to socialize with others, and many agree that too many restrictions will keep them from cruising in the near future. Others share they would be open to it (some even preferring it).

Social Media Insights

Top Performing Posts:

- Survey Reveals 76% of Cruisers Want to Sail Again
- Norwegian & Royal Caribbean Team Up to Create Cruise Health & Safety Protocols
- The European Union Releases Health Guidelines for Cruises

Performance Summary:

- **People want to cruise, but are concerned about the current land-based spread of the virus.**
  There are a significant number of followers who are eager to return to sea and many who have future cruises booked and are optimistic that they will sail. There are also many followers who welcome any progress made to get them back to sea as soon as they can safely.

  But the rising number of cases in the U.S. are a concern to many -- both in how the public will respond to recommendations and protocols put in place by cruise lines, and in how quickly they'll be able to return to cruising if U.S. numbers continue to rise and destinations are closed to Americans.

- **Cruisers do not favor a ton of restrictions.**
  Far and wide, the comments around the EU cruise guidelines were not favorable -- most people thought the proposed restrictions went too far for them to be willing to cruise under those guidelines. Many others anticipate cruise fares to go up in light of capacity decreases, which makes them even less willing to feel too restricted.

J.P.Morgan

North America Equity Research
08 July 2020

Cruise Lines Monthly Pricing Trends

Ticket Prices Continue to Slide for 1Q21 Sailings; 2Q21 Prices Stable; Cruise Web Traffic Trending Near Lows

Cruise Lines

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J.P. Morgan Securities LLC

July cruise ticket data indicated continued moderate pricing cuts for 4Q and 1Q21 sailings, while 2Q21 prices remained stable.

Based on our data, YTD gross ticket prices for 4Q sailings have declined 14%, 9%, and 11% for CCL, RCL, and Norwegian, respectively. For 1Q21 sailings, YTD % declines are down 3%, 11% and 8%, respectively. 2Q21 prices were essentially unchanged with last month and, by and large, are holding up well. See Figures 1-3 for a summary of YTD pricing changes.

This month, we took a look at web traffic for major cruise lines/brands. Total volume (desktop and mobile visits) for the big three operators, according to data from SimilarWeb, is tracking down 74% y/y, at/near the lows to date, and does not appear to be getting less bad. This comes as no surprise given that companies have mostly turned off marketing. Still, it contrasts with recent operator commentary that bookings are getting less bad, which to us indicates that current/new bookings are primarily coming through the still dominant travel agent channel. We plan to watch web traffic closely from here as a potential leading indicator of new-to-cruise travelers re-engaging with the industry/product. See Figures 4-11.

- **4Q20 Price Trends.** For CCL in July, 4Q ticket prices decelerated to down 11% y/y from down 10% last month, with more sailing cancelations across all regions adding noise to the data. For RCL, ticket prices appeared to stabilize somewhat (down 6% y/y vs. down 9% last month), improving marginally month-over-month in the Caribbean and Bahamas. We note this only reverses some of what was a more meaningful price cut for these sailings last month. NCLH/Norwegian prices decelerated to down 7% y/y, from down 5% last month, driven by a meaningful stepdown in Caribbean prices (down 10% month-over-month).
- **1Q21 Price Trends.** For CCL, 1Q21 ticket prices were stable with last month at up 3% y/y. For RCL, ticket prices in July decelerated significantly to down 9% y/y from down 2% last month. Tickets in the Caribbean and Bahamas saw MSD % cuts m/m, and LSD% in Asia. NCLH ticket prices decelerated to down 7% y/y, from down 5% last month, driven by the Caribbean and Bahamas.
- **2Q21 Price Trends.** CCL ticket prices for 2Q21 sailings were stable in July versus June at up 1% y/y. The Caribbean decelerated slightly to down 3% y/y, which was offset by strength in Europe. For RCL, prices were also stable, with only margin weakness in the Bahamas (down 2% m/m); all other regions were unchanged with June pricing. NCLH prices were unchanged with last month, at +1% y/y.
- **Caribbean prices.** Prices for 4Q20 Caribbean sailings in July were +1% for CCL/RCL and down 11% for Norwegian month-over-month. YTD 4Q Caribbean prices are now down 8%, 11% and 12% for CCL, RCL and NCLH. Prices for 1Q21 Caribbean sailings declined 1%, 5%, and 2% month-over-month for CCL, RCL, and NCLH respectively. YTD 1Q Caribbean prices are down 2%, 12% and 6% for CCL, RCL and NCLH. Prices for 2Q21 Caribbean sailings declined 1%, 0.5%, and 0.5% month-over-month for CCL, RCL, and NCLH respectively. YTD 2Q20 Caribbean prices are down 3%, 2% and flat for CCL, RCL and NCLH.

See page 26 for analyst certification and important disclosures.

- **European prices.** The U.S. and global brands tracked within this report do not have large European sailing seasons outside of the 3Q (which is currently not comparable in 2020's data, given cancelations). However, we note a large differential in pricing performance for the (small) amount of sailings in 4Q20 vs 2Q21. CCL, RCL and NCLH's 4Q20 European ticket prices are down mid-teens % YTD and are flattish YTD for the 2Q20.
- **Bahamas prices.** Near-term ticket prices in the Bahamas appeared to stabilize in July after several months of pricing cuts. In July, 4Q Bahamas tickets improved 1%/2% m/m for CCL/RCL. YTD 4Q Bahamas prices are down 16% and 14% for CCL and RCL. Prices for 2021 continued to slide: 1Q21 Bahamas prices declined 2%, 4%, and 7% month-over-month for CCL, RCL, and Norwegian respectively. YTD 1Q21 Bahamas prices are down 13%, 21% and 18% for RCL, CCL and NCLH. Prices for 2Q21 Bahamas sailings declined by 2% month-over-month for both CCL and RCL.
- **Asia prices.** Ticket prices have been the relative bright spot across operators since prices started to come down in April, with RCL appearing to outperform. YTD gross ticket prices for 4Q sailings in Asia are down 10% for CCL, and only 3% for RCL. YTD 1Q21 prices are down 6% and 3%, respectively, while both are flattish over for 2Q21 sailings (down LSD y/y).
- **Thoughts on pricing trends**. Operators during the 1Q earnings season cited 2021 cumulative pricing down MSD % (NCLH) to up MSD % (RCL); CCL's 2Q preannouncement in June noted cumulative 2020 prices were down low- to mid-single digits. While there is some discrepancy here as compared to our data, it's essentially in the same realm, i.e. much better than what investors expected looking out from the depths of this crisis in March/April. The industry appears to be making an effort to protect pricing in this downturn, aided by the unique position of zero near-term supply and an unknown restart date, no real ongoing marketing efforts, and a large amount of future cruise credits operators would probably like to have absorbed to some extent at current prices (at this point, it still seems like a majority of FCCs remain un-booked). We expect pricing to continue to bleed lower into the 2H20 and wave season/1Q21 as these forces reverse, i.e. moving closer to prime booking period for 3Q21 sailings when operators will (hope to) have most of their (older) capacity come back online and will have to re-engage new cruisers, which was anywhere from 1/3-1/2 of mix pre COVID-19.
- **Thoughts on RCL + NCLH health and safety collaboration.** On July 6th, RCL and NCLH announced the "Healthy Sail Panel," a joint initiative that brings together leading public health experts to develop enhanced cruise health and safety; its findings will be open source and available to others in the industry. The panel appears to have been in the works for 1-2 months now, and the official word is that the CDC reacted to the news "warmly" (it's been invited to observe the panel's progress). The pending submission to the CDC for resuming operations still has to come from the operators themselves, though this panel's work is likely to deeply influence those plans/submissions. That said, we don't see this news changing the timeline of a potential CDC agreement, which still does not feel imminent to us, and the recent resurgence of cases in the southern U.S. states where most drive-to ports are located isn't helping. Lastly, we believe one theme the panel will pursue is the opportunity to ultimately make cruises relatively safer than alternative vacations, underpinned by the fact that cruise ships are by nature controlled environments, and it's plausible that cheap/fast testing (at port) could virtually eliminate or significantly reduce the risk the virus can make it onboard in the first place.
- **Read on.**

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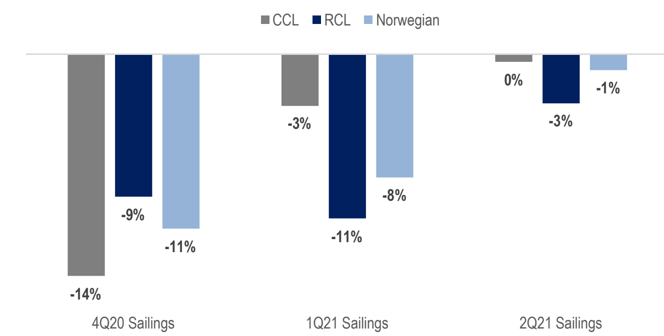
Pricing Trends YTD – Summary

Figure 1: YTD Gross Ticket Price Changes by Operator

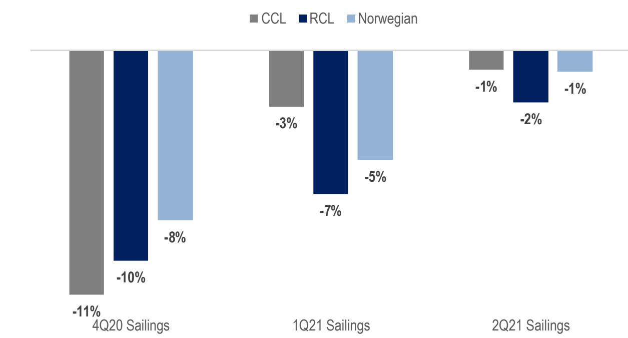
Average gross ticket price per diem total YTD % declines for sailings scheduled in 4Q20, 1Q21 and 1Q21 (as of July 1st)



Source: Cruise Analytics, J.P. Morgan

Figure 2: YTD Gross Ticket Price Changes – ONE MONTH PRIOR

Avg. gross ticket price per diem total YTD % declines for sailings scheduled in 4Q20, 1Q21 and 1Q21 (as of June 1st)



Source: Cruise Analytics, J.P. Morgan

Figure 3: Summary of YTD Gross Ticket Price Changes by Region and Brand

Average gross ticket price per diem total YTD % declines for sailings scheduled in 4Q20, 1Q21 and 2Q21

	Per Diems YTD % Decline		
By Region	4Q20 Sailings	1Q21 Sailings	2Q21 Sailings
CCL	**-14%**	**-3%**	**0%**
Caribbean	-8%	-2%	-3%
Bahamas	-16%	-13%	-5%
Europe	-19%	2%	1%
Asia	-10%	-6%	0%
RCL	**-9%**	**-11%**	**-3%**
Caribbean	-11%	-12%	-2%
Bahamas	-14%	-21%	-11%
Europe	-16%		-2%
Asia	**-3%**	-3%	0%
Norwegian	**-11%**	**-8%**	**-1%**
Caribbean	-12%	-6%	0%
Bahamas	-22%	-18%	0%
Europe	-13%		-4%

	Per Diems YTD % Decline		
By Brand	4Q20 Sailings	1Q21 Sailings	2Q21 Sailings
CCL			
Carnival	-14%	-10%	-4%
Princess	-13%	4%	2%
Holland America	-16%	-2%	-1%
RCL			
Royal Caribbean	-6%	-9%	-3%
Celebrity	-16%	-13%	-3%

Note 2Q21 YTD is measured as July 1st vs. April 1st, and pricing in April was mostly similar to that of January.

Source: Cruise Analytics, J.P. Morgan

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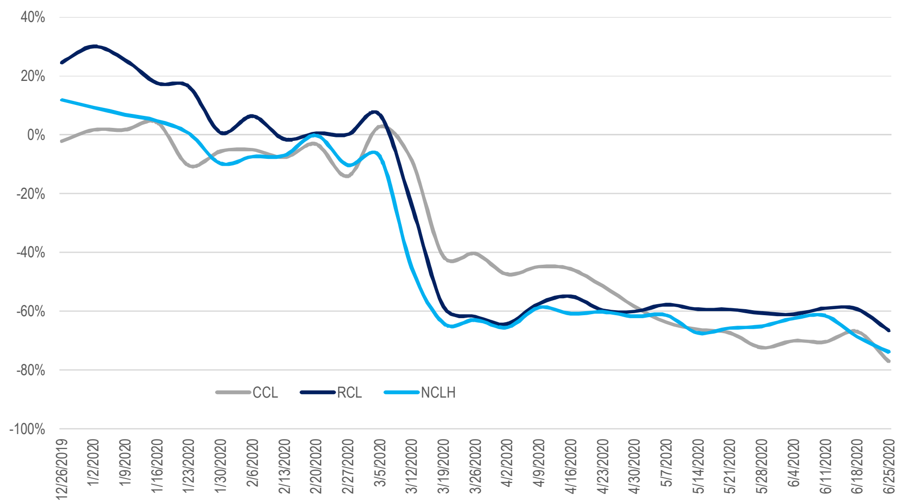
Cruise Web Trends

Figure 4: Cruise web traffic is tracking at/near the lows

Total weekly website visits (desktop + mobile) % y/y



Source: SimilarWeb.

This month, we took a look at web traffic for major cruise lines/brands. Total volume (desktop and mobile visits), according to data from SimilarWeb, is tracking down 74% y/y, at/near the lows to date, and does not appear to be getting less bad. This comes as no surprise given that companies have mostly turned off marketing. Still, it contrasts with recent operator commentary that bookings are getting less bad, which to us indicates that current/new bookings are primarily coming through the still dominant travel agent channel.

Company-level web traffic data is unsurprisingly tracking in a narrow range among major brands, with RCL's brands doing the least bad, then NCLH's, and then CCL's major brands, at down 61%, 67%, and 71% y/y, on average, over the past 4 weeks (total visits). The big 3's brands appear to be doing slightly better than other major U.S. cruise brands (Disney cruises, MSC USA and Viking) at down 73% y/y, collectively.

At the brand level, we note RCL's Celebrity brand is seeing the least bad trends, at down "only" 48% y/y over the last month, which is interesting given an older average age demographic than the contemporary brands. The Carnival brand, which has one of the younger average age demographics in the industry, had the second least bad trends in web traffic and was outperforming up until June. The worst performing brands appear to be Princess, Holland America, Silversea, Regent and Oceania, all brands that cater to older guests, though we note the data sets are less robust for the smaller brands in this list.

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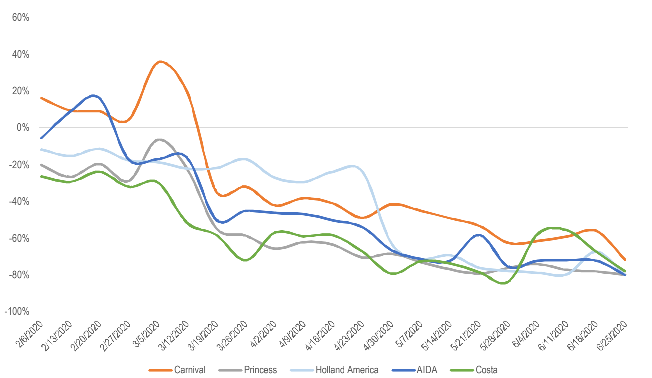
Figure 5: All major CCL brands' web traffic are trending lower

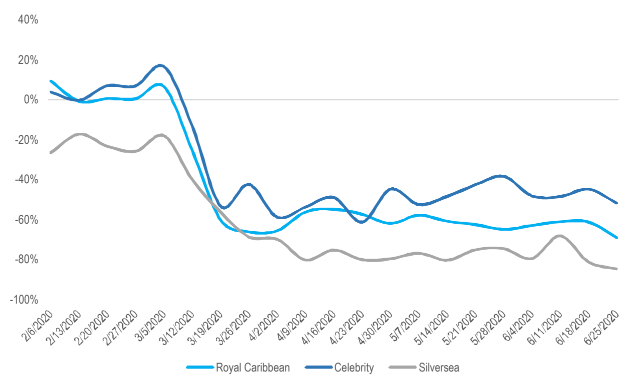
Total weekly website visits % y/y



Source: SimilarWeb.

Figure 6: RCL's Celebrity brand outperforming

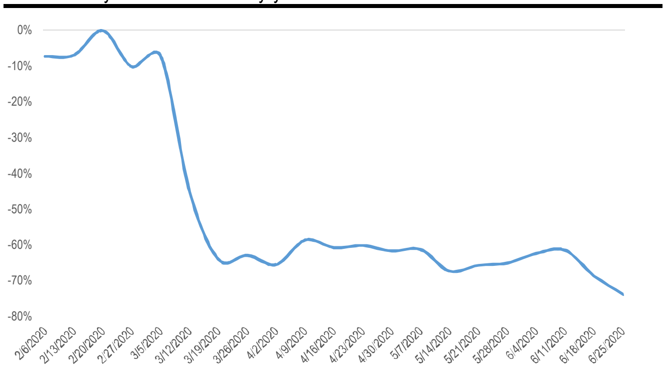
Total weekly website visits % y/y



Source: SimilarWeb.

Figure 7: Norwegian brand web traffic at/near the lows

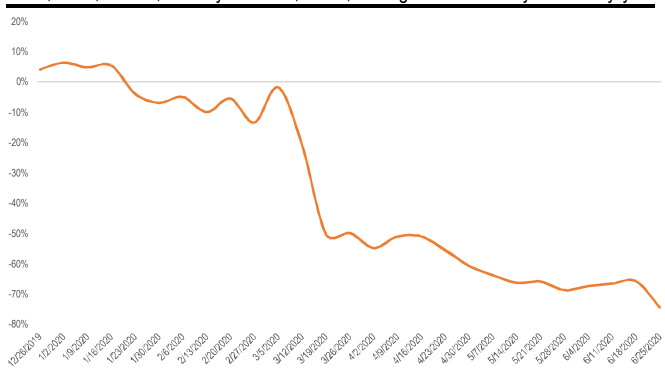
Total weekly website visits % y/y



Source: SimilarWeb.

Figure 8: U.S. Cruise industry overall

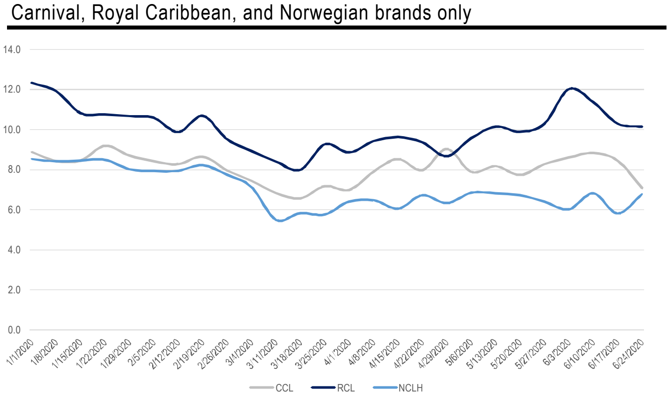
CCL, RCL, NCLH, Disney Cruises, MSC, Viking - Total weekly visits % y/y



Source: SimilarWeb.

Figure 9: Pages per visit has trended steady to better as of late

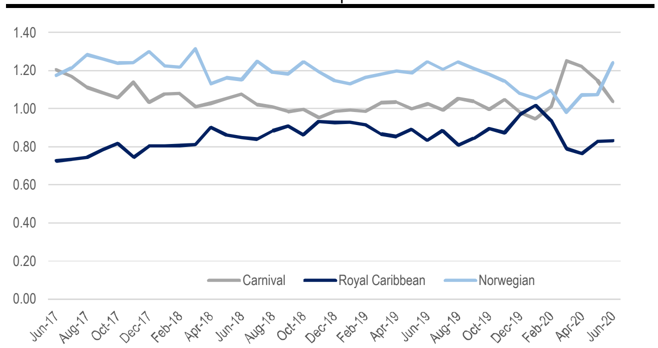
Carnival, Royal Caribbean, and Norwegian brands only



Source: SimilarWeb.

Figure 10: Contemporary Brands' Unique Web Visit Share Ratio

Carnival, Royal, Norwegian relative % share of visits / % share of berths; 1.00 = Brand's share of web traffic is equal to its share of berths



Source: SimilarWeb, JPM.

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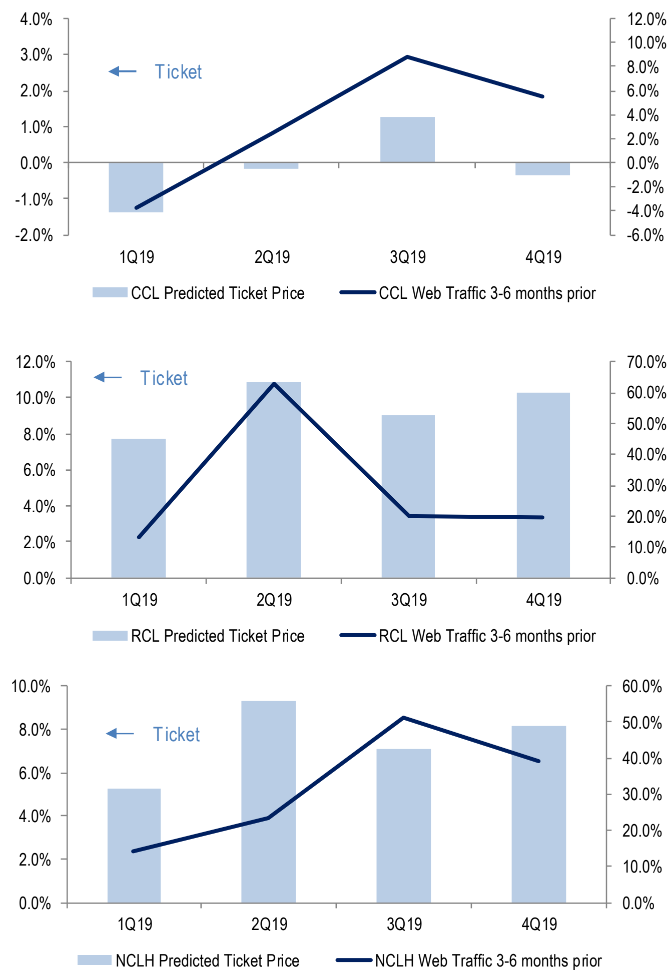
Historical lookback. The lack of reporting detail at the cruise brand level and SimilarWeb's limited history (back to June '17) make back-testing this data difficult. However, with the few data points we have, we do note a directional relationship between our historical predicted cruise ticket price growth y/y and web traffic % y/y 3-6 months prior to the quarter, which coincides with the prime booking period.

Figure 11: Cruise web traffic shows directional relationship with our forward ticket pricing data

Includes all major cruise brands for the Big Three operators; NCLH is just Norwegian



Source: SimilarWeb, Cruise Analytics, JPM.

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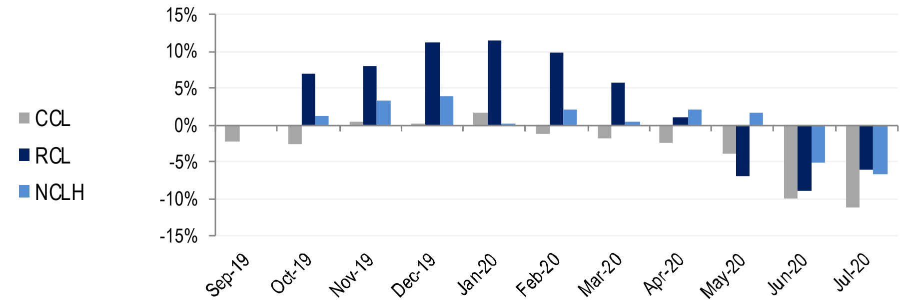
A Closer Look at 4Q20

Figure 12: Global 4Q20 Itineraries – Ticket Price Changes (% y/y)
~39% Caribbean, ~21% Europe, ~15% Asia Pacific

4Q20 | **Global** | **Ticket Price % chg. y/y**



	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	-2%	-3%	0%	0%	2%	-1%	-2%	-2%	-4%	-10%	-11%
RCL		7%	8%	11%	11%	10%	6%	1%	-7%	-9%	-6%
NCLH		1%	3%	4%	0%	2%	0%	2%	2%	-5%	-7%

Source: Cruise Analytics, J.P. Morgan

4Q20 Analysis. For CCL in July, 4Q ticket prices decelerated to down 11% y/y from down 10% last month, with more sailing cancelations across all regions adding noise to the data.

For RCL, ticket prices appeared to stabilize somewhat (down 6% y/y, vs. down 9% last month), improving marginally month-over-month in the Caribbean and Bahamas. We note this only reverses some of what was a more meaningful price cut for these sailings last month.

NCLH/Norwegian prices decelerated to down 7% y/y, from down 5% last month, driven by a meaningful stepdown in Caribbean prices (down 10% month-over-month).

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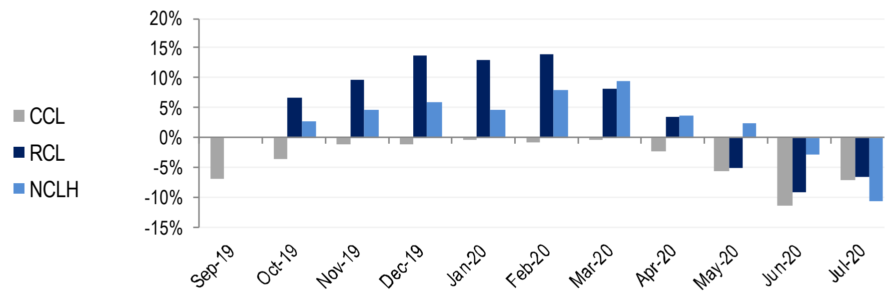
Figure 13: Caribbean 4Q20 Itineraries – Ticket Price Changes (% y/y)

~39% of Global Capacity

4Q20	Caribbean	Ticket Price % chg. y/y



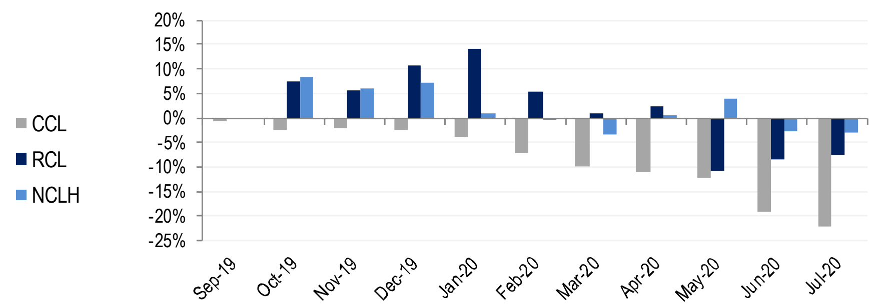
	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	-7%	-4%	-1%	-1%	0%	-1%	0%	-2%	-6%	-11%	-7%
RCL		7%	10%	14%	13%	14%	8%	3%	-5%	-9%	-7%
NCLH		3%	5%	6%	5%	8%	9%	4%	3%	-3%	-11%

Source: Cruise Analytics, J.P. Morgan

Figure 14: European 4Q20 Itineraries – Ticket Price Changes (% y/y)

~21% of Global Capacity

4Q20	Europe	Ticket Price % chg. y/y



	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	-1%	-2%	-2%	-3%	-4%	-7%	-10%	-11%	-12%	-19%	-22%
RCL		8%	6%	11%	14%	5%	1%	2%	-11%	-8%	-7%
NCLH		8%	6%	7%	1%	0%	-3%	0%	4%	-3%	-3%

Source: Cruise Analytics, J.P. Morgan

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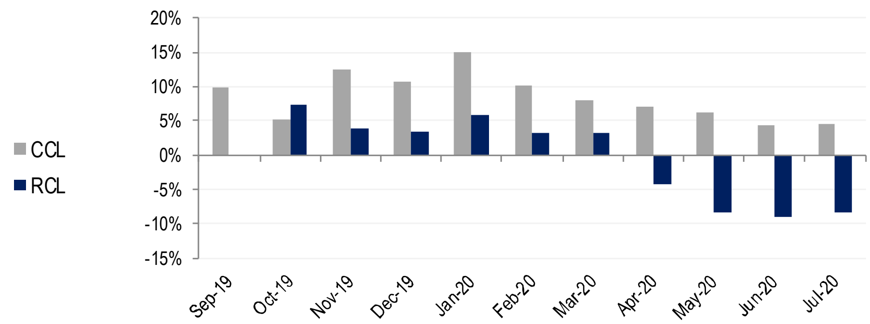
Figure 15: Asia 4Q20 Itineraries – Ticket Price Changes (% y/y)
~15% of Global Capacity

4Q20	Asia	Ticket Price % chg. y/y



CCL	10%	5%	12%	11%	15%	10%	8%	7%	6%	4%	5%
RCL		7%	4%	4%	6%	3%	3%	-4%	-8%	-9%	-8%

Source: Cruise Analytics, J.P. Morgan

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Figure 16: CCL 4Q20 Itineraries – By Brand and Region

$ PPD, % y/y change, and # of itineraries in data sample

	4Q19			4Q20										
	May-19	Jun-19	Jul-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	$178	$176	$173	$184	$182	$182	$181	$179	$177	$176	$174	$171	$159	$154
y/y % chg	*0.2%*	*-0.9%*	*-1.5%*	*-2.1%*	*-2.6%*	*0.4%*	*0.2%*	*1.6%*	*-1.1%*	*-1.7%*	*-2.4%*	*-3.8%*	*-10.0%*	*-11.2%*
# of sailings	1121	1121	1121	866	1103	1103	1099	1103	1102	1123	1123	1102	999	841
Caribbean	$142	$142	$139	$134	$139	$139	$139	$139	$142	$142	$139	$134	$126	$129
y/y % chg	*5.1%*	*4.9%*	*2.0%*	*-6.8%*	*-3.5%*	*-1.0%*	*-1.0%*	*-0.4%*	*-0.7%*	*-0.4%*	*-2.4%*	*-5.7%*	*-11.4%*	*-7.1%*
# of sailings	*287*	*287*	*283*	*228*	*252*	*252*	*252*	*251*	*251*	*251*	*251*	*248*	*248*	*216*
Mexico	$143	$141	$135	$123	$143	$143	$143	$143	$144	$147	$142	$134	$117	$120
y/y % chg	*3.3%*	*1.3%*	*-3.4%*	*-17.8%*	*-2.0%*	*-0.4%*	*0.6%*	*2.8%*	*0.7%*	*1.2%*	*-0.6%*	*-6.0%*	*-16.9%*	*-11.2%*
# of sailings	*75*	*75*	*75*	*62*	*76*	*76*	*76*	*80*	*84*	*88*	*89*	*89*	*87*	*76*
Bahamas	$130	$132	$132	$124	$127	$127	$127	$127	$128	$127	$121	$115	$105	$106
y/y % chg	*4.7%*	*3.5%*	*1.8%*	*0.2%*	*2.4%*	*3.1%*	*3.1%*	*1.6%*	*1.4%*	*0.4%*	*-5.7%*	*-11.5%*	*-20.1%*	*-19.6%*
# of sailings	*96*	*96*	*100*	*109*	*120*	*120*	*120*	*120*	*119*	*119*	*119*	*118*	*118*	*101*
Atlantic	$200	$199	$197	$177	$177	$175	$174	$174	$172	$175	$169	$171	$173	$152
y/y % chg	*1.4%*	*0.8%*	*4.2%*	*-17.8%*	*-17.4%*	*-15.5%*	*-14.9%*	*-13.1%*	*-14.4%*	*-13.0%*	*-15.4%*	*-14.5%*	*-12.8%*	*-23.0%*
# of sailings	*76*	*76*	*76*	*34*	*36*	*36*	*36*	*36*	*36*	*34*	*34*	*31*	*27*	*22*
Europe	$199	$198	$197	$200	$196	$196	$196	$190	$185	$180	$177	$175	$160	$154
y/y % chg	*6.3%*	*5.6%*	*4.1%*	*-0.6%*	*-2.4%*	*-2.1%*	*-2.5%*	*-3.9%*	*-7.1%*	*-9.9%*	*-11.1%*	*-12.2%*	*-19.2%*	*-22.1%*
# of sailings	*306*	*306*	*306*	*219*	*291*	*291*	*290*	*290*	*287*	*294*	*294*	*294*	*257*	*206*
Asia	$177	$174	$172	$211	$202	$202	$201	$201	$194	$191	$191	$188	$182	$180
y/y % chg	*-9.2%*	*-10.1%*	*-7.1%*	*9.9%*	*5.3%*	*12.5%*	*10.8%*	*15.1%*	*10.1%*	*8.0%*	*7.1%*	*6.2%*	*4.4%*	*4.6%*
# of sailings	*119*	*119*	*119*	*105*	*160*	*160*	*160*	*160*	*161*	*166*	*165*	*165*	*152*	*145*
Carnival Brand	$130	$130	$130	$127	$130	$130	$130	$130	$132	$130	$126	$120	$112	$112
y/y % chg	*2.7%*	*1.5%*	*0.1%*	*-1.0%*	*1.6%*	*1.8%*	*2.3%*	*2.2%*	*2.8%*	*2.4%*	*-2.0%*	*-7.2%*	*-14.1%*	*-13.3%*
# of sailings	415	415	415	399	432	432	432	436	439	438	439	431	431	361
Caribbean	$129	$129	$129	$126	$129	$129	$129	$129	$131	$129	$126	$120	$113	$114
y/y % chg	*3.3%*	*2.2%*	*1.3%*	*-0.9%*	*1.9%*	*1.8%*	*2.3%*	*2.2%*	*2.7%*	*2.2%*	*-1.3%*	*-6.5%*	*-13.0%*	*-11.4%*
# of sailings	*237*	*237*	*233*	*203*	*219*	*219*	*219*	*219*	*219*	*216*	*216*	*213*	*213*	*182*
Mexico	$125	$126	$124	$123	$123	$123	$123	$128	$132	$133	$128	$118	$103	$103
y/y % chg	*1.9%*	*1.1%*	*-4.1%*	*-1.6%*	*-1.4%*	*-1.1%*	*-0.9%*	*2.0%*	*4.4%*	*6.4%*	*1.7%*	*-6.1%*	*-18.1%*	*-16.7%*
# of sailings	*57*	*57*	*57*	*62*	*62*	*62*	*62*	*66*	*70*	*74*	*75*	*75*	*75*	*64*
Bahamas	$130	$132	$132	$124	$126	$127	$127	$126	$127	$126	$120	$115	$105	$106
y/y % chg	*4.7%*	*3.5%*	*1.8%*	*0.2%*	*2.1%*	*2.7%*	*2.8%*	*1.3%*	*1.1%*	*-0.1%*	*-6.2%*	*-12.1%*	*-20.4%*	*-20.0%*
# of sailings	*96*	*96*	*100*	*109*	*119*	*119*	*119*	*119*	*118*	*118*	*118*	*117*	*117*	*100*
Princess Brand	$186	$185	$179	$238	$206	$205	$204	$205	$208	$209	$208	$203	$184	$179
y/y % chg	*-1.4%*	*-2.0%*	*-4.9%*	*17.5%*	*2.6%*	*13.5%*	*12.9%*	*13.7%*	*11.8%*	*11.3%*	*11.5%*	*9.2%*	*-0.4%*	*0.0%*
# of sailings	205	205	205	85	199	199	199	200	200	206	206	206	131	113
Caribbean	$158	$160	$152		$171	$171	$171	$180	$199	$212	$213	$206	$193	$194
y/y % chg	*3.2%*	*6.7%*	*1.8%*		*5.4%*	*25.3%*	*22.6%*	*20.2%*	*26.3%*	*32.9%*	*34.5%*	*30.9%*	*20.8%*	*27.7%*
# of sailings	*22*	*22*	*22*		*13*	*13*	*13*	*13*	*13*	*13*	*13*	*13*	*13*	*13*
Europe	$276	$274	$274	$288	$288	$288	$284	$273	$278	$277	$268	$254		
y/y % chg	*24.1%*	*23.2%*	*23.2%*	*-0.6%*	*-0.2%*	*5.1%*	*3.6%*	*-0.4%*	*-0.1%*	*0.6%*	*-3.1%*	*-7.9%*		
# of sailings	*24*	*24*	*24*	*20*	*27*	*27*	*27*	*27*	*27*	*27*	*27*	*27*	*0*	*0*
Asia	$183	$183	$180	$265	$213	$213	$213	$214	$208	$199	$199	$197	$189	$185
y/y % chg	*-6.8%*	*-6.5%*	*-8.6%*	*33.8%*	*7.9%*	*19.7%*	*19.3%*	*21.6%*	*16.5%*	*10.7%*	*9.0%*	*7.4%*	*3.5%*	*2.7%*
# of sailings	*63*	*63*	*63*	*23*	*67*	*67*	*67*	*67*	*67*	*71*	*71*	*71*	*58*	*51*
Holland America Brand	$205	$198	$189	$213	$214	$214	$212	$209	$205	$204	$201	$198	$181	$176
y/y % chg	*-2.9%*	*-5.4%*	*-3.7%*	*-10.6%*	*-9.9%*	*-10.3%*	*-8.7%*	*1.2%*	*-4.7%*	*-4.9%*	*-3.7%*	*-3.3%*	*-8.7%*	*-6.6%*
# of sailings	148	148	148	113	131	131	128	127	125	135	135	124	96	86
Caribbean	$180	$175	$156	$188	$189	$190	$190	$186	$185	$175	$173	$172	$166	$165
y/y % chg	*13.1%*	*14.6%*	*16.1%*	*-11.3%*	*-10.9%*	*-9.6%*	*-9.6%*	*1.2%*	*-6.2%*	*-11.0%*	*-9.4%*	*-4.3%*	*-5.1%*	*5.8%*
# of sailings	*26*	*26*	*26*	*24*	*19*	*19*	*19*	*18*	*18*	*22*	*22*	*22*	*22*	*21*
Europe	$241	$237	$231	$248	$248	$249	$251	$258	$252	$250	$245	$242	$227	$227
y/y % chg	*-5.1%*	*-7.0%*	*-7.9%*	*-8.3%*	*-7.9%*	*18.4%*	*-4.5%*	*11.1%*	*5.4%*	*3.9%*	*2.2%*	*0.3%*	*-4.3%*	*-2.0%*
# of sailings	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*19*	*9*	*9*
Asia	$197	$185	$182	$196	$198	$198	$197	$194	$188	$189	$187	$179	$161	$161
y/y % chg	*-6.4%*	*-11.8%*	*-2.7%*	*-16.2%*	*-15.3%*	*-15.2%*	*-15.1%*	*-3.5%*	*-8.8%*	*-7.6%*	*-8.7%*	*-9.4%*	*-13.2%*	*-11.5%*
# of sailings	*21*	*21*	*21*	*12*	*16*	*16*	*16*	*16*	*16*	*18*	*18*	*20*	*20*	*20*
Costa Brand	$161	$161	$161	$154	$160	$160	$160	$155	$150	$146	$145	$145	$145	$139
y/y % chg	*10.6%*	*10.6%*	*9.4%*	*-4.7%*	*-1.1%*	*-1.0%*	*-1.5%*	*-4.0%*	*-7.4%*	*-9.8%*	*-10.1%*	*-10.0%*	*-10.1%*	*-13.6%*
# of sailings	296	296	296	215	286	286	285	285	283	289	288	288	288	241

Source: Cruise Analytics, J.P. Morgan

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Figure 17: RCL & NCLH 4Q20 Itineraries – By Brand and Region

$ PPD, % y/y change, and # of itineraries in data sample

	4Q19			4Q20									
	May-19	Jun-19	Jul-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
RCL	$211	$212	$208	$208	$210	$212	$214	$215	$213	$209	$196	$193	$195
y/y % chg	*9.5%*	*10.5%*	*8.4%*	*7.0%*	*8.0%*	*11.2%*	*11.4%*	*9.8%*	*5.7%*	*1.2%*	*-6.9%*	*-9.0%*	*-6.1%*
# of sailings	*438*	*438*	*438*	*433*	*433*	*430*	*428*	*427*	*436*	*436*	*436*	*436*	*423*
Caribbean	$209	$211	$208	$208	$212	$215	$218	$223	$220	$213	$198	$192	$194
y/y % chg	*8.8%*	*10.0%*	*10.0%*	*6.6%*	*9.6%*	*13.8%*	*13.0%*	*14.0%*	*8.1%*	*3.5%*	*-5.2%*	*-9.1%*	*-6.7%*
# of sailings	*227*	*227*	*214*	*193*	*192*	*191*	*191*	*190*	*195*	*195*	*195*	*195*	*194*
Bahamas	$197	$196	$182	$181	$179	$177	$176	$176	$170	$164	$157	$149	$152
y/y % chg	*8.5%*	*8.5%*	*2.6%*	*7.1%*	*11.4%*	*13.2%*	*9.8%*	*6.9%*	*-0.7%*	*-12.3%*	*-20.3%*	*-23.9%*	*-16.4%*
# of sailings	*67*	*67*	*80*	*79*	*80*	*80*	*80*	*80*	*81*	*81*	*81*	*81*	*81*
Europe	$256	$258	$255	$274	$273	$273	$282	$267	$262	$263	$229	$236	$236
y/y % chg	*6.7%*	*7.1%*	*6.2%*	*7.6%*	*5.6%*	*10.7%*	*14.1%*	*5.5%*	*1.0%*	*2.5%*	*-10.7%*	*-8.3%*	*-7.4%*
# of sailings	*29*	*29*	*29*	*35*	*35*	*34*	*32*	*32*	*34*	*34*	*34*	*34*	*34*
Asia	$221	$225	$219	$203	$204	$207	$208	$204	$205	$207	$202	$205	$200
y/y % chg	*14.8%*	*17.4%*	*11.2%*	*7.3%*	*3.8%*	*3.6%*	*5.8%*	*3.3%*	*3.2%*	*-4.2%*	*-8.3%*	*-8.8%*	*-8.3%*
# of sailings	*81*	*81*	*81*	*95*	*95*	*95*	*95*	*95*	*95*	*95*	*95*	*95*	*95*
Royal Caribbean Brand	$196	$198	$195	$192	$192	$193	$194	$193	$190	$188	$179	$180	$182
y/y % chg	*5.8%*	*6.8%*	*6.1%*	*6.4%*	*8.8%*	*7.9%*	*7.6%*	*6.6%*	*2.2%*	*-3.5%*	*-8.5%*	*-9.2%*	*-6.8%*
# of sailings	*345*	*345*	*345*	*345*	*345*	*342*	*340*	*339*	*343*	*343*	*343*	*343*	*331*
Caribbean	$193	$196	$196	$193	$194	$196	$197	$199	$196	$192	$182	$180	$180
y/y % chg	*4.1%*	*5.7%*	*8.4%*	*4.1%*	*8.0%*	*8.4%*	*6.4%*	*7.9%*	*2.6%*	*-0.9%*	*-5.7%*	*-8.3%*	*-8.0%*
# of sailings	*180*	*180*	*167*	*153*	*152*	*151*	*151*	*150*	*152*	*152*	*152*	*152*	*151*
Bahamas	$194	$194	$180	$181	$179	$177	$176	$175	$168	$162	$154	$147	$151
y/y % chg	*7.9%*	*7.5%*	*1.7%*	*7.5%*	*12.4%*	*13.4%*	*10.1%*	*6.7%*	*-1.5%*	*-13.1%*	*-20.5%*	*-24.4%*	*-16.0%*
# of sailings	*64*	*64*	*77*	*77*	*78*	*78*	*78*	*78*	*78*	*78*	*78*	*78*	*78*
Asia	$218	$222	$218	$195	$195	$195	$195	$191	$193	$198	$197	$206	$203
y/y % chg	*18.3%*	*20.8%*	*12.9%*	*11.2%*	*5.9%*	*-1.2%*	*2.9%*	*2.7%*	*2.8%*	*-7.8%*	*-9.5%*	*-7.3%*	*-6.6%*
# of sailings	*63*	*63*	*63*	*72*	*72*	*72*	*72*	*72*	*72*	*72*	*72*	*72*	*72*
Celebrity Brand	$258	$259	$248	$259	$266	$273	$278	$282	$282	$273	$248	$235	$234
y/y % chg	*17.8%*	*40.5%*	*12.9%*	*10.6%*	*7.7%*	*20.4%*	*21.8%*	*18.5%*	*14.3%*	*11.8%*	*-3.8%*	*-9.1%*	*-5.6%*
# of sailings	*93*	*93*	*93*	*88*	*88*	*88*	*88*	*88*	*93*	*93*	*93*	*93*	*92*
Caribbean	$278	$278	$261	$266	$282	$290	$300	$315	$308	$292	$257	$237	$245
y/y % chg	*25.3%*	*24.6%*	*13.4%*	*12.7%*	*11.4%*	*28.8%*	*32.3%*	*29.8%*	*19.6%*	*12.3%*	*-7.7%*	*-14.5%*	*-5.9%*
# of sailings	*47*	*47*	*47*	*40*	*40*	*40*	*40*	*40*	*43*	*43*	*43*	*43*	*43*
Asia	$228	$232	$221	$224	$225	$236	$239	$236	$236	$230	$215	$203	$193
y/y % chg	*6.0%*	*8.9%*	*6.8%*	*6.5%*	*2.6%*	*15.6%*	*14.2%*	*7.4%*	*6.9%*	*4.6%*	*-5.7%*	*-12.6%*	*-12.7%*
# of sailings	*18*	*18*	*18*	*23*	*23*	*23*	*23*	*23*	*23*	*23*	*23*	*23*	*23*
	May-19	**Jun-19**	**Jul-19**	**Oct-19**	**Nov-19**	**Dec-19**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**
NCLH (Norwegian)	$196	$193	$190	$198	$198	$199	$199	$203	$201	$203	$199	$183	$177
y/y % chg	*9.4%*	*7.4%*	*6.3%*	*1.2%*	*3.3%*	*3.9%*	*0.3%*	*2.0%*	*0.4%*	*2.1%*	*1.6%*	*-5.1%*	*-6.7%*
# of sailings	*162*	*162*	*162*	*159*	*159*	*158*	*157*	*157*	*177*	*173*	*171*	*171*	*165*
Caribbean	$195	$193	$187	$184	$184	$187	$189	$196	$201	$202	$200	$187	$167
y/y % chg	*16.9%*	*16.2%*	*15.5%*	*2.7%*	*4.7%*	*5.9%*	*4.7%*	*7.9%*	*9.4%*	*3.6%*	*2.5%*	*-3.0%*	*-10.6%*
# of sailings	*65*	*65*	*53*	*40*	*40*	*40*	*40*	*40*	*47*	*47*	*47*	*47*	*47*
Europe	$189	$185	$186	$209	$208	$209	$207	$205	$196	$199	$196	$180	$180
y/y % chg	*6.7%*	*3.4%*	*-0.2%*	*8.3%*	*5.9%*	*7.2%*	*1.0%*	*0.0%*	*-3.3%*	*0.5%*	*4.0%*	*-2.6%*	*-3.1%*
# of sailings	*29*	*29*	*29*	*30*	*30*	*29*	*28*	*28*	*38*	*36*	*36*	*36*	*36*
Asia	$185	$185	$179	$189	$189	$185	$183	$185	$180	$174	$174	$173	$173
y/y % chg	*20.9%*	*20.6%*	*15.3%*		*0.4%*	*1.7%*	*-1.5%*	*-1.5%*	*-5.4%*	*-8.6%*	*-6.0%*	*-6.2%*	*-3.7%*
# of sailings	*9*	*9*	*9*	*13*	*13*	*13*	*13*	*13*	*13*	*11*	*11*	*11*	*10*

Source: Cruise Analytics, J.P. Morgan

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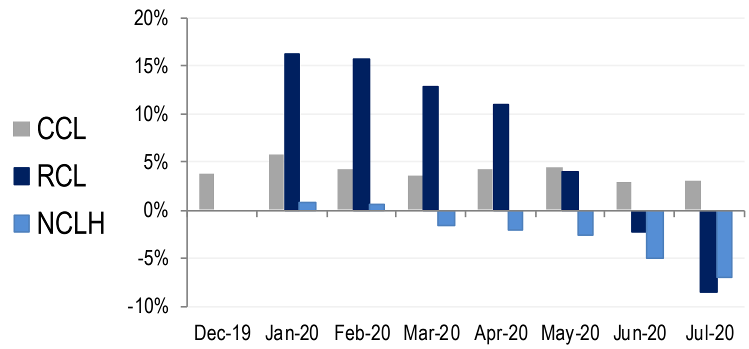
A Closer Look at 1Q21

Figure 18: Global 1Q21 Itineraries – Ticket Price Changes (% y/y)
53% Caribbean, 20% Asia Pacific

1Q21	Global	Ticket Price % y/y



	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	4%	6%	4%	4%	4%	5%	3%	3%
RCL		16%	16%	13%	11%	4%	-2%	-9%
NCLH		1%	1%	-2%	-2%	-3%	-5%	-7%

Source: Cruise Analytics, J.P. Morgan

1Q21 Analysis. For CCL, 1Q21 ticket prices were stable, with last month at up 3% y/y.

For RCL, ticket prices in July decelerated significantly to down 9% y/y from down 2% last month. Tickets in the Caribbean and Bahamas saw MSD% cuts m/m, and LSD% in Asia.

NCLH ticket prices decelerated to down 7% y/y, from down 5% last month, driven by the Caribbean and Bahamas.

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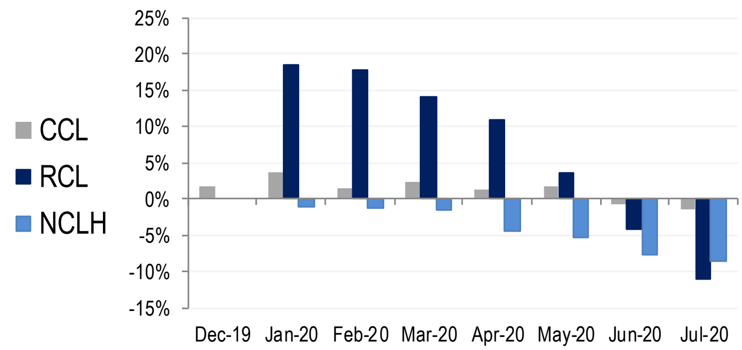
Figure 19: Caribbean 1Q21 Itineraries – Ticket Price Changes (% y/y)

53% of Global Capacity

1Q21	Caribbean	Ticket Price % y/y



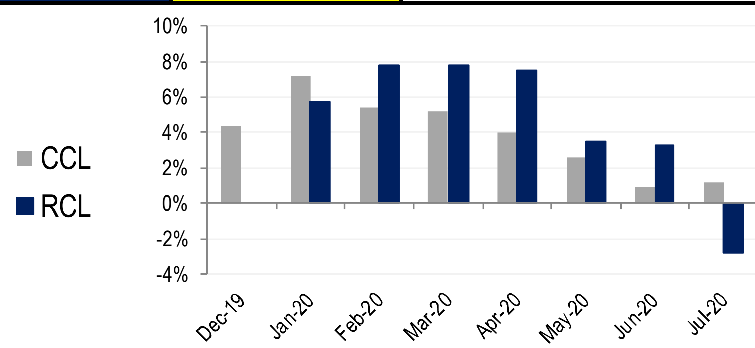
CCL	2%	4%	1%	2%	1%	2%	-1%	-1%
RCL		19%	18%	14%	11%	4%	-4%	-11%
NCLH		-1%	-1%	-2%	-4%	-5%	-8%	-9%

Source: Cruise Analytics, J.P. Morgan

Figure 20: Asia 1Q21 Itineraries – Ticket Price Changes (% y/y)

20% of Global Capacity

1Q21	Asia	Ticket Price % y/y



CCL	4%	7%	5%	5%	4%	3%	1%	1%
RCL		6%	8%	8%	8%	4%	3%	-3%

Source: Cruise Analytics, J.P. Morgan

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Figure 21: CCL 1Q21 Itineraries – By Brand and Region

$ PPD, % y/y change, and # of itineraries in data sample

	1Q20			1Q21							
	May-19	Jun-19	Jul-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	$188	$188	$187	$199	$199	$199	$198	$197	$197	$194	$192
y/y % chg	-2.3%	-1.3%	-0.6%	3.7%	5.8%	4.4%	3.7%	4.4%	4.5%	2.9%	3.1%
# of sailings	1068	1068	1067	1100	1100	1098	1142	1148	1152	1156	1147
Caribbean	$172	$173	$171	$174	$173	$174	$175	$174	$175	$171	$169
y/y % chg	2.8%	6.1%	9.3%	1.8%	3.8%	1.4%	2.4%	1.2%	1.7%	-0.8%	-1.3%
# of sailings	472	472	465	452	452	452	437	437	436	436	436
Mexico	$154	$155	$152	$157	$157	$158	$158	$155	$153	$147	$144
y/y % chg	5.9%	6.5%	7.1%	3.9%	8.2%	4.6%	2.9%	0.8%	-1.0%	-5.3%	-5.4%
# of sailings	91	91	91	90	90	90	89	93	97	101	102
Bahamas	$131	$132	$132	$134	$134	$135	$135	$131	$129	$119	$116
y/y % chg	2.0%	0.7%	-1.1%	5.9%	5.7%	5.7%	5.3%	1.8%	-1.4%	-9.6%	-12.0%
# of sailings	112	112	118	118	118	118	117	117	117	117	117
Europe	$282	$282	$282	$175	$175	$175	$175	$178	$177	$178	$179
y/y % chg	71.6%	71.3%	62.1%	-39.9%	-41.2%	-41.0%	-41.2%	-37.3%	-37.3%	-36.7%	-36.5%
# of sailings	11	11	11	79	79	77	79	79	79	79	69
Asia	$201	$201	$199	$215	$215	$214	$214	$211	$206	$203	$201
y/y % chg	-2.9%	-1.9%	0.5%	4.3%	7.2%	5.4%	5.2%	4.0%	2.6%	0.9%	1.2%
# of sailings	233	233	233	250	250	250	250	252	252	253	253
Carnival Brand	$136	$137	$137	$138	$138	$138	$139	$136	$133	$125	$124
y/y % chg	2.1%	1.5%	0.5%	3.3%	3.2%	3.2%	3.6%	0.5%	-2.5%	-8.5%	-9.3%
# of sailings	429	429	429	437	437	437	426	430	433	437	438
Caribbean	$138	$139	$138	$140	$140	$140	$142	$139	$136	$129	$128
y/y % chg	1.8%	1.5%	1.0%	3.2%	3.0%	3.0%	3.9%	1.3%	-1.5%	-7.0%	-7.4%
# of sailings	244	244	238	250	250	250	240	240	239	239	239
Mexico	$134	$134	$133	$127	$127	$127	$127	$127	$123	$115	$114
y/y % chg	11.8%	9.6%	6.8%	3.9%	3.4%	3.2%	3.5%	-5.2%	-8.7%	-14.5%	-14.6%
# of sailings	66	66	66	63	63	63	62	66	70	74	75
Bahamas	$131	$132	$132	$133	$134	$134	$134	$131	$128	$118	$115
y/y % chg	3.5%	2.1%	0.2%	5.4%	5.2%	5.2%	4.8%	1.2%	-2.1%	-10.4%	-12.8%
# of sailings	112	112	118	117	117	117	116	116	116	116	116
Princess Brand	$186	$188	$187	$210	$210	$213	$215	$216	$220	$222	$219
y/y % chg	-3.0%	-0.2%	2.0%	17.4%	15.6%	13.1%	14.1%	16.0%	18.3%	18.5%	16.7%
# of sailings	211	211	211	206	206	206	206	206	207	206	206
Caribbean	$190	$195	$197	$202	$205	$211	$216	$217	$223	$225	$218
y/y % chg	-2.8%	4.3%	13.7%	22.7%	12.7%	11.4%	13.9%	14.2%	17.1%	15.6%	10.7%
# of sailings	70	70	70	57	57	57	57	57	57	57	57
Mexico	$173	$175	$170	$168	$168	$169	$169	$173	$181	$184	$182
y/y % chg	11.4%	13.2%	11.8%	5.8%	8.0%	2.6%	-1.3%	2.0%	4.7%	4.9%	6.9%
# of sailings	17	17	17	19	19	19	19	19	19	19	19
Asia	$171	$170	$169	$195	$195	$195	$195	$192	$188	$190	$186
y/y % chg	-10.0%	-7.7%	-6.7%	15.0%	16.5%	12.9%	12.8%	12.5%	10.1%	11.6%	10.0%
# of sailings	81	81	81	86	86	86	86	86	86	86	86
Holland America Brand	$224	$221	$212	$214	$213	$211	$211	$209	$211	$211	$208
y/y % chg	4.3%	7.2%	12.9%	-14.0%	-5.1%	-9.0%	-9.1%	-9.5%	-5.6%	-4.4%	-1.5%
# of sailings	146	146	145	153	153	153	151	151	151	151	151
Caribbean	$217	$213	$202	$206	$204	$201	$200	$199	$201	$201	$199
y/y % chg	6.5%	11.7%	19.1%	-14.4%	-4.5%	-10.3%	-10.8%	-10.3%	-7.1%	-5.6%	-1.4%
# of sailings	92	92	91	95	95	95	93	93	93	93	93
Asia	$206	$206	$196	$204	$204	$204	$204	$198	$199	$196	$192
y/y % chg	-2.5%	0.5%	12.0%	-14.3%	-0.4%	-5.6%	-5.7%	-8.3%	-3.3%	-4.5%	-1.8%
# of sailings	25	25	25	27	27	27	27	27	27	27	27
Costa Brand	$164	$164	$164	$167	$167	$167	$164	$165	$164	$163	$162
y/y % chg	3.1%	3.0%	4.2%	2.7%	3.6%	2.9%	1.4%	0.9%	0.1%	-1.0%	-1.4%
# of sailings	216	216	216	231	231	229	285	285	285	285	275

Source: Cruise Analytics, J.P. Morgan

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Figure 22: RCL & NCLH 1Q21 Itineraries – By Brand and Region

$ PPD, % y/y change, and # of itineraries in data sample

	1Q20			1Q21						
	May-19	Jun-19	Jul-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20
RCL	$191	$194	$199	$203	$205	$206	$206	$199	$190	$182
y/y % chg	*9.2%*	*7.4%*	*8.5%*	*16.2%*	*15.8%*	*12.9%*	*11.0%*	*4.0%*	*-2.2%*	*-8.6%*
# of sailings	*426*	*426*	*422*	*448*	*447*	*470*	*470*	*469*	*469*	*468*
Caribbean	$193	$197	$201	$203	$205	$208	$208	$200	$189	$179
y/y % chg	*10.2%*	*9.7%*	*11.7%*	*18.6%*	*17.9%*	*14.0%*	*11.0%*	*3.6%*	*-4.2%*	*-11.0%*
# of sailings	*261*	*261*	*255*	*260*	*259*	*266*	*266*	*266*	*266*	*265*
Bahamas	$158	$161	$169	$176	$176	$178	$178	$168	$146	$140
y/y % chg	*7.2%*	*5.6%*	*3.3%*	*25.4%*	*20.0%*	*18.5%*	*17.0%*	*6.1%*	*-9.4%*	*-17.3%*
# of sailings	*74*	*74*	*78*	*79*	*79*	*80*	*80*	*80*	*80*	*80*
Asia	$193	$193	$202	$202	$202	$202	$204	$200	$200	$196
y/y % chg	*9.8%*	*3.7%*	*4.0%*	*5.7%*	*7.8%*	*7.8%*	*7.5%*	*3.5%*	*3.3%*	*-2.8%*
# of sailings	*82*	*82*	*80*	*101*	*101*	*115*	*115*	*114*	*114*	*114*
Royal Caribbean Brand	$171	$173	$178	$181	$181	$183	$183	$179	$172	$165
y/y % chg	*9.4%*	*7.4%*	*10.2%*	*13.3%*	*13.7%*	*11.6%*	*10.1%*	*5.0%*	*-0.5%*	*-7.5%*
# of sailings	*325*	*325*	*321*	*341*	*340*	*357*	*357*	*356*	*356*	*355*
Caribbean	$171	$174	$179	$182	$182	$183	$183	$179	$171	$160
y/y % chg	*7.4%*	*6.6%*	*11.5%*	*15.4%*	*15.4%*	*11.7%*	*9.5%*	*4.3%*	*-2.0%*	*-10.3%*
# of sailings	*194*	*194*	*188*	*195*	*194*	*196*	*196*	*196*	*196*	*195*
Bahamas	$157	$159	$168	$175	$175	$177	$177	$167	$144	$138
y/y % chg	*8.0%*	*6.2%*	*4.1%*	*27.0%*	*21.3%*	*19.7%*	*18.0%*	*6.6%*	*-9.8%*	*-18.1%*
# of sailings	*68*	*68*	*72*	*74*	*74*	*75*	*75*	*75*	*75*	*75*
Asia	$181	$181	$186	$184	$183	$186	$188	$187	$191	$191
y/y % chg	*19.8%*	*13.9%*	*11.9%*	*0.4%*	*4.8%*	*6.4%*	*5.7%*	*3.6%*	*5.5%*	*2.2%*
# of sailings	*61*	*61*	*59*	*71*	*71*	*85*	*85*	*84*	*84*	*84*
Celebrity Brand	$254	$257	$261	$264	$271	$270	$270	$254	$238	$229
y/y % chg	*8.0%*	*7.0%*	*4.5%*	*20.4%*	*17.6%*	*13.1%*	*10.4%*	*0.1%*	*-7.6%*	*-12.3%*
# of sailings	*101*	*101*	*101*	*107*	*107*	*113*	*113*	*113*	*113*	*113*
Caribbean	$265	$271	$271	$273	$283	$283	$285	$266	$243	$233
y/y % chg	*12.5%*	*13.4%*	*9.0%*	*25.3%*	*22.5%*	*16.0%*	*12.0%*	*0.2%*	*-10.4%*	*-13.8%*
# of sailings	*67*	*67*	*67*	*65*	*65*	*70*	*70*	*70*	*70*	*70*
Asia	$221	$221	$235	$234	$237	$237	$237	$227	$218	$207
y/y % chg	*1.2%*	*-4.7%*	*-4.2%*	*12.9%*	*9.8%*	*9.8%*	*9.8%*	*2.4%*	*-1.5%*	*-11.7%*
# of sailings	*21*	*21*	*21*	*30*	*30*	*30*	*30*	*30*	*30*	*30*
	May-19	**Jun-19**	**Jul-19**	**Jan-20**	**Feb-20**	**Mar-20**	**Apr-20**	**May-20**	**Jun-20**	**Jul-20**
NCLH (Norwegian)	$194	$194	$192	$194	$194	$191	$191	$189	$184	$179
y/y % chg	*14.3%*	*12.4%*	*10.8%*	*0.9%*	*0.7%*	*-1.6%*	*-2.0%*	*-2.7%*	*-5.0%*	*-7.1%*
# of sailings	*121*	*121*	*119*	*144*	*144*	*173*	*173*	*173*	*173*	*172*
Caribbean	$180	$179	$178	$172	$172	$172	$173	$171	$166	$163
y/y % chg	*13.1%*	*12.3%*	*10.0%*	*-1.0%*	*-1.3%*	*-1.5%*	*-4.5%*	*-5.2%*	*-7.7%*	*-8.6%*
# of sailings	*78*	*78*	*76*	*77*	*77*	*78*	*78*	*78*	*78*	*77*
Bahamas	$228	$228	$215	$179	$179	$163	$164	$163	$159	$147
y/y % chg	*25.3%*	*21.8%*	*21.2%*	*-23.7%*	*-23.8%*	*-30.6%*	*-28.3%*	*-28.8%*	*-30.4%*	*-31.5%*
# of sailings	*7*	*7*	*7*	*19*	*19*	*46*	*46*	*46*	*46*	*46*

Source: Cruise Analytics, J.P. Morgan

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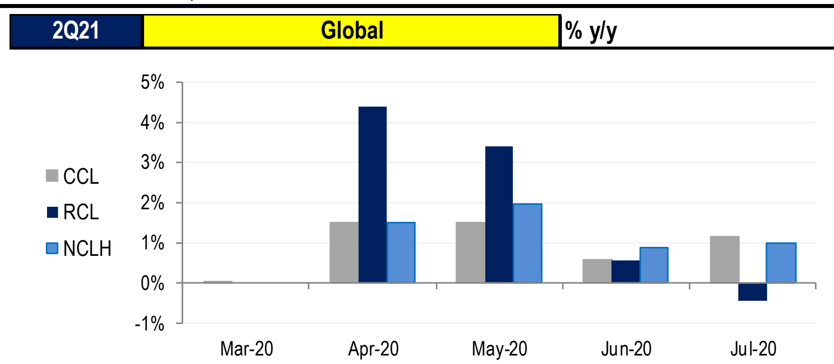
A Closer Look at 2Q21

Figure 23: Global 2Q21 Itineraries – Ticket Price Changes (% y/y)

35% Caribbean, 26% Europe, 14% Asia Pacific



	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	0%	2%	2%	1%	1%
RCL		4%	3%	1%	0%
NCLH		1%	2%	1%	1%

Source: Cruise Analytics, J.P. Morgan

2Q21 Analysis. CCL ticket prices for 2Q21 sailings were stable in July versus June at up 1% y/y. The Caribbean decelerated slightly to down 3% y/y, which was offset by strength in Europe.

For RCL, prices were also stable, with only margin weakness in the Bahamas (down 2% m/m); all other regions were unchanged with June pricing.

NCLH prices were unchanged with last month, at +1% y/y.

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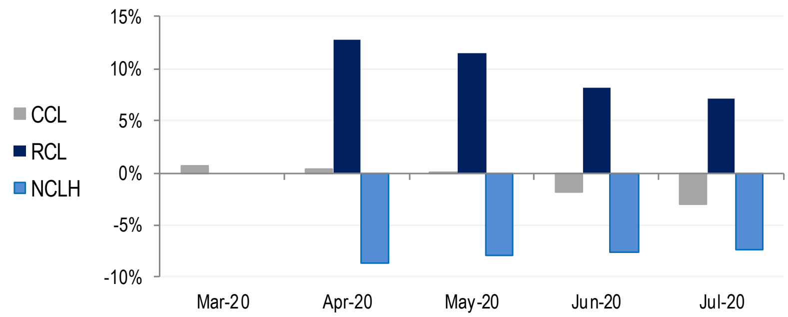
Figure 24: Caribbean 2Q21 Itineraries – Ticket Price Changes (% y/y)
35% of Global Capacity

2Q21	Caribbean	% y/y

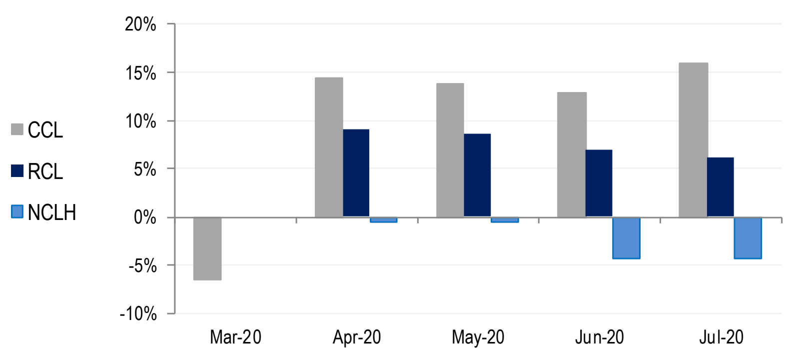


	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	1%	0%	0%	-2%	-3%
RCL		13%	11%	8%	7%
NCLH		-9%	-8%	-8%	-7%

Source: Cruise Analytics, J.P. Morgan

Figure 25: Europe 2Q21 Itineraries – Ticket Price Changes (% y/y)
26% of Global Capacity

2Q21	Europe	% y/y



	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	-7%	14%	14%	13%	16%
RCL		9%	9%	7%	6%
NCLH		0%	0%	-4%	-4%

Source: Cruise Analytics, J.P. Morgan

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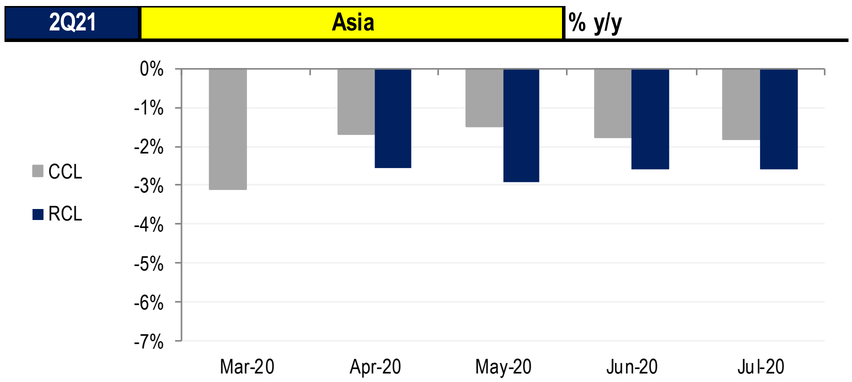
Figure 26: Asia 2Q21 Itineraries – Ticket Price Changes (% y/y)

14% of Global Capacity



	Mar-20	Apr-20	May-20	Jun-20	Jul-20
CCL	-3%	-2%	-2%	-2%	-2%
RCL		-3%	-3%	-3%	-3%

Source: Cruise Analytics, J.P. Morgan

Figure 27: CCL 2Q21 Itineraries – By Brand and Region

$ PPD, % y/y change, and # of itineraries in data sample

	2Q20			2Q21				
	May-19	Jun-19	Jul-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19
CCL	$189	$189	$189	$192	$192	$192	$190	$191
y/y % chg	*-1.9%*	*-1.7%*	*2.2%*	*0.1%*	*1.5%*	*1.5%*	*0.6%*	*1.1%*
# of sailings	*1038*	*1037*	*1037*	*960*	*960*	*960*	*960*	*961*
Caribbean	$159	$159	$159	$159	$160	$159	$156	$154
y/y % chg	*-2.7%*	*-2.0%*	*3.0%*	*0.6%*	*0.3%*	*0.1%*	*-1.9%*	*-2.9%*
# of sailings	*305*	*304*	*293*	*284*	*284*	*284*	*284*	*284*
Mexico	$142	$142	$146	$148	$148	$148	$144	$143
y/y % chg	*-2.6%*	*-2.8%*	*6.5%*	*5.0%*	*4.6%*	*4.6%*	*2.0%*	*-1.5%*
# of sailings	*76*	*76*	*76*	*83*	*83*	*83*	*83*	*87*
Bahamas	$147	$148	$149	$145	$145	$145	$140	$138
y/y % chg	*5.1%*	*5.0%*	*2.4%*	*0.0%*	*-0.6%*	*-1.3%*	*-5.0%*	*-7.0%*
# of sailings	*115*	*115*	*126*	*128*	*128*	*128*	*127*	*127*
Europe	$212	$212	$212	$243	$243	$241	$240	$246
y/y % chg	*-6.3%*	*-6.7%*	*8.6%*	*-6.5%*	*14.4%*	*13.8%*	*12.9%*	*15.9%*
# of sailings	*226*	*226*	*226*	*112*	*112*	*112*	*112*	*107*
Asia	$210	$210	$211	$207	$207	$207	$206	$207
y/y % chg	*-6.2%*	*-6.0%*	*-5.0%*	*-3.1%*	*-1.7%*	*-1.5%*	*-1.8%*	*-1.8%*
# of sailings	*112*	*112*	*112*	*138*	*138*	*138*	*138*	*138*
Carnival Brand	$146	$146	$146	$145	$145	$145	$140	$139
y/y % chg	*2.7%*	*2.7%*	*1.1%*	*-0.1%*	*-0.4%*	*-0.8%*	*-4.0%*	*-5.0%*
# of sailings	*429*	*429*	*429*	*443*	*443*	*443*	*443*	*447*
Caribbean	$145	$146	$146	$147	$147	$147	$142	$141
y/y % chg	*2.1%*	*1.9%*	*0.7%*	*1.2%*	*1.2%*	*0.8%*	*-2.2%*	*-3.2%*
# of sailings	*238*	*238*	*227*	*227*	*227*	*227*	*227*	*227*
Mexico	$131	$131	$131	$133	$133	$133	$124	$127
y/y % chg	*3.5%*	*3.5%*	*1.8%*	*6.2%*	*1.4%*	*1.4%*	*-5.4%*	*-3.4%*
# of sailings	*63*	*63*	*63*	*68*	*68*	*68*	*68*	*72*
Bahamas	$147	$148	$149	$145	$145	$145	$140	$138
y/y % chg	*5.1%*	*5.0%*	*2.4%*	*0.0%*	*-0.6%*	*-1.3%*	*-5.0%*	*-7.0%*
# of sailings	*115*	*115*	*126*	*128*	*128*	*128*	*127*	*127*
Princess Brand	$207	$207	$209	$208	$209	$210	$210	$213
y/y % chg	*-0.9%*	*-0.2%*	*2.6%*	*2.5%*	*1.0%*	*1.5%*	*1.5%*	*2.1%*
# of sailings	*206*	*206*	*206*	*202*	*202*	*202*	*202*	*204*
Caribbean	$188	$189	$192	$199	$203	$203	$204	$202
y/y % chg	*-4.3%*	*-1.7%*	*11.8%*	*5.3%*	*7.5%*	*8.0%*	*7.8%*	*5.4%*
# of sailings	*31*	*31*	*31*	*23*	*23*	*23*	*23*	*23*
Europe	$271	$271	$271	$272	$272	$272	$272	$272
y/y % chg	*5.4%*	*5.2%*	*4.5%*	*4.1%*	*0.4%*	*0.4%*	*0.4%*	*0.4%*
# of sailings	*32*	*32*	*32*	*23*	*23*	*23*	*23*	*23*
Asia	$194	$194	$197	$187	$187	$187	$187	$189
y/y % chg	*-9.6%*	*-9.4%*	*-7.4%*	*-2.6%*	*-3.3%*	*-3.3%*	*-3.3%*	*-4.2%*
# of sailings	*58*	*58*	*58*	*69*	*69*	*69*	*69*	*69*
Holland America Brand	$216	$216	$211	$245	$246	$245	$244	$244
y/y % chg	*-2.1%*	*-1.9%*	*3.8%*	*13.0%*	*13.3%*	*13.1%*	*13.0%*	*15.4%*
# of sailings	*145*	*144*	*144*	*135*	*135*	*135*	*135*	*135*
Caribbean	$217	$217	$202	$215	$216	$215	$215	$214
y/y % chg	*0.5%*	*1.8%*	*15.7%*	*-1.7%*	*-0.6%*	*-0.9%*	*-0.6%*	*6.1%*
# of sailings	*25*	*24*	*24*	*22*	*22*	*22*	*22*	*22*
Europe	$240	$240	$240	$347	$347	$341	$338	$338
y/y % chg	*-12.7%*	*-12.7%*	*-0.3%*	*44.7%*	*44.7%*	*42.4%*	*41.0%*	*41.0%*
# of sailings	*34*	*34*	*34*	*28*	*28*	*28*	*28*	*28*
Asia	$211	$209	$206	$199	$199	$203	$203	$203
y/y % chg	*6.6%*	*6.9%*	*13.5%*	*-5.5%*	*-5.5%*	*-3.6%*	*-2.6%*	*-1.7%*
# of sailings	*16*	*16*	*16*	*10*	*10*	*10*	*10*	*10*
Costa Brand	$151	$151	$151	$143	$143	$143	$143	$142
y/y % chg	*9.2%*	*8.8%*	*0.2%*	*15.5%*	*-4.8%*	*-5.0%*	*-5.7%*	*-6.3%*
# of sailings	*199*	*199*	*199*	*126*	*126*	*126*	*126*	*121*
Europe	$167	$167	$167	$167	$167	$167	$164	$168
y/y % chg	*10.5%*	*10.2%*	*2.9%*		*-0.4%*	*-0.4%*	*-1.8%*	*0.6%*
# of sailings	*147*	*147*	*147*	*51*	*51*	*51*	*51*	*46*
Asia	$128	$128	$128	$140	$140	$140	$139	$137
y/y % chg	*-4.7%*	*-5.0%*	*-11.0%*	*7.5%*	*9.0%*	*9.0%*	*8.7%*	*6.8%*
# of sailings	*12*	*12*	*12*	*28*	*28*	*28*	*28*	*28*

Source: Cruise Analytics, J.P. Morgan

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Figure 28: RCL & NCLH 2Q21 Itineraries – By Brand and Region

$ PPD, % y/y change, and # of itineraries in data sample

	2Q20 May-19	Jun-19	Jul-19	2Q21 Apr-19	May-19	Jun-19	Jul-19
RCL	$239	$241	$241	$248	$247	$242	$240
y/y % chg	13.9%	12.4%	10.1%	4.4%	3.4%	0.6%	-0.4%
# of sailings	371	371	370	339	339	339	339
Caribbean	$217	$221	$222	$242	$241	$239	$238
y/y % chg	17.5%	17.4%	15.0%	12.9%	11.5%	8.1%	7.1%
# of sailings	131	131	129	104	104	104	104
Bahamas	$235	$224	$221	$204	$203	$185	$181
y/y % chg	48.0%	37.4%	25.8%	-12.5%	-13.8%	-17.2%	-17.9%
# of sailings	68	68	70	40	40	40	40
Europe	$282	$284	$284	$307	$307	$303	$302
y/y % chg	7.6%	6.4%	1.5%	9.1%	8.7%	6.9%	6.2%
# of sailings	81	81	81	75	75	75	75
Asia	$195	$195	$195	$189	$190	$190	$190
y/y % chg	2.4%	1.1%	-0.2%	-2.6%	-2.9%	-2.6%	-2.6%
# of sailings	19	19	19	26	26	26	26
Royal Caribbean Brand	$227	$227	$228	$229	$229	$223	$221
y/y % chg	22.4%	19.5%	13.5%	1.4%	0.9%	-1.6%	-2.8%
# of sailings	278	278	277	235	235	235	235
Caribbean	$214	$219	$220	$236	$236	$234	$234
y/y % chg	21.4%	21.4%	17.7%	10.7%	10.0%	6.8%	6.5%
# of sailings	108	108	106	79	79	79	79
Bahamas	$236	$224	$221	$205	$203	$185	$182
y/y % chg	48.4%	38.5%	26.9%	-12.5%	-13.8%	-17.4%	-18.0%
# of sailings	66	66	68	38	38	38	38
Europe	$252	$253	$253	$273	$273	$272	$266
y/y % chg	20.1%	16.0%	1.2%	8.3%	8.1%	7.2%	4.9%
# of sailings	52	52	52	39	39	39	39
Asia	$184	$184	$184	$179	$179	$182	$182
y/y % chg	4.2%	4.2%	-0.7%	-3.5%	-2.9%	-1.4%	-1.4%
# of sailings	14	14	14	22	22	22	22
Celebrity Brand	$275	$279	$280	$289	$287	$282	$281
y/y % chg	-1.6%	-0.7%	1.0%	6.8%	4.6%	1.0%	0.6%
# of sailings	93	93	93	104	104	104	104
Caribbean	$228	$234	$238	$266	$263	$261	$256
y/y % chg	-5.4%	-5.9%	-4.6%	20.1%	15.4%	11.5%	7.6%
# of sailings	23	23	23	26	25	25	25
Europe	$335	$338	$338	$340	$340	$335	$337
y/y % chg	0.9%	1.8%	1.8%	2.2%	1.5%	-0.9%	-0.3%
# of sailings	29	29	29	36	36	36	36

	May-19	Jun-19	Jul-19	Apr-19	May-19	Jun-19	Jul-19
NCLH (Norwegian)	$232	$232	$232	$236	$237	$234	$234
y/y % chg	4.8%	4.3%	2.9%	1.5%	1.9%	0.9%	1.0%
# of sailings	124	123	123	163	163	163	163
Caribbean	$205	$205	$203	$188	$189	$189	$189
y/y % chg	14.0%	13.1%	10.3%	-8.6%	-7.9%	-7.6%	-7.3%
# of sailings	20	20	20	23	23	23	23
Alaska	$339	$338	$338	$284	$284	$284	$283
y/y % chg	8.5%	8.0%	18.1%	-16.5%	-16.4%	-16.0%	-16.2%
# of sailings	8	8	8	36	36	36	36
Europe	$241	$241	$241	$240	$240	$230	$230
y/y % chg	11.4%	11.2%	10.2%	-0.4%	-0.5%	-4.3%	-4.3%
# of sailings	44	43	43	48	48	48	48

Source: Cruise Analytics, J.P. Morgan

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Booking Trends – Company Commentary

CCL – As of 2Q20 Preannouncement (6/18)

As of 2Q-end, cumulative advanced bookings for 2021 were within historical ranges (similar to peers, we would estimate that range to be 15-25%) at prices that are down in the low- to mid-single digits (generally in line with our pricing data), and this includes the negative yield impact of FCCs/on a comparable basis. For 2021, bookings over the past six weeks have been running meaningfully lower y/y but have improved over the previous six weeks – similar to commentary from the other two operators. As of late March, CCL's 1H21 cumulative book was slightly lower y/y, and we would expect the revised data points (and logic) to imply the book has eroded further within the "historical range." Over the last six weeks, 2/3 of new bookings were cash bookings, and 1/3 were from credits/rebookings.

RCL – As of 5/20 (1Q Earnings)

RCL sees booking volumes for the remainder of 2020 as meaningfully lower than the same time last year at prices that are down low-single digits. 2021 bookings are within historical ranges for this (early) point in the booking cycle, at prices up mid-single digits y/y. Roughly 20% of FCC have rebooked future cruises, but this only accounts for a small % of forward net bookings, according to the company.

NCLH – As of 5/14 (1Q Earnings)

In line with recent commentary, forward bookings still sit within historical ranges, with NCLH highlighting demand beginning in the 4Q20 and accelerating through 2021. A "vast majority" of bookings for 2021 are not from future cruise credits.

NCLH – As of 1Q20 Preannouncement (4/27)

For NCLH as of April 17, advanced bookings for the remainder of the year were meaningfully lower than in the prior year, with pricing that was down low-single digits, and its booked position for next year flat y/y at pricing down mid-single digits. These data points are not out of line with our recent pricing publications and the overall market assessment that cruise pricing is holding up better than expected.

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Summary of Company Drivers, Estimates, and Valuation

Figure 29: Summary of Estimates and Company Valuations

$ = Actual (USD), FXN = constant currency

Rating	Ticker	Price as of 7/7/2020	Market Cap	YE20 PT	Upside / Downside to PT	EV/EBITDA @ PT ('22)	EV/EBITDA 2021E	EV/EBITDA 2022E	P/E 2021E	P/E 2022E	Net Leverage 2021E	Net Leverage 2022E
N	CCL	$14.57	$10.9	$20	37%	9.5x	15.6x	7.8x	-10.9x	21.9x	9.5x	4.9x
OW	RCL	$47.55	$10.3	$72	52%	11.0x	13.3x	8.8x	-21.8x	16.7x	8.1x	5.4x
OW	NCLH	$15.27	$3.5	$24	59%	10.0x	17.4x	8.3x	-14.2x	11.6x	11.4x	5.0x
	Mean						**15.4x**	**8.3x**				

	JPME EBITDA 2019	JPME EBITDA 2020E	JPME EBITDA 2021E	JPME EBITDA 2022E	as % of 2019 EBITDA 2021E	as % of 2019 EBITDA 2022E	Capacity (% '19) 2021E	Capacity (% '19) 2022E	Net Yield 2021E	Net Yield 2022E	NY as % of 2019 2021E	NY as % of 2019 2022E
CCL	5,437	-1,544	1,930	4,095	35%	75%	77%	91%	$135	$156	76%	87%
RCL	3,329	-1,037	1,803	2,968	54%	89%	88%	102%	$171	$192	82%	92%
NCLH	1,948	-709	761	1,601	39%	82%	87%	111%	$198	$234	77%	91%

	JPME EPS 2019	JPME EPS 2020E	JPME EPS 2021E	JPME EPS 2022E	as % of 2019 EPS 2021E	as % of 2019 EPS 2022E	Occupancy 2021E	Occupancy 2022E	OCF 2021E	OCF 2022E	ROIC 2021E	ROIC 2022E
CCL	4.40	-4.60	-1.33	0.67	N/A	15%	93%	100%	707	2,866	-1.1%	4.1%
RCL	9.54	-15.00	-2.18	2.84	N/A	30%	97%	100%	881	2,164	1.8%	6.4%
NCLH	5.10	-5.85	-1.07	1.31	N/A	26%	93%	100%	338	1,253	-0.5%	5.7%

Source: J.P. Morgan, Bloomberg

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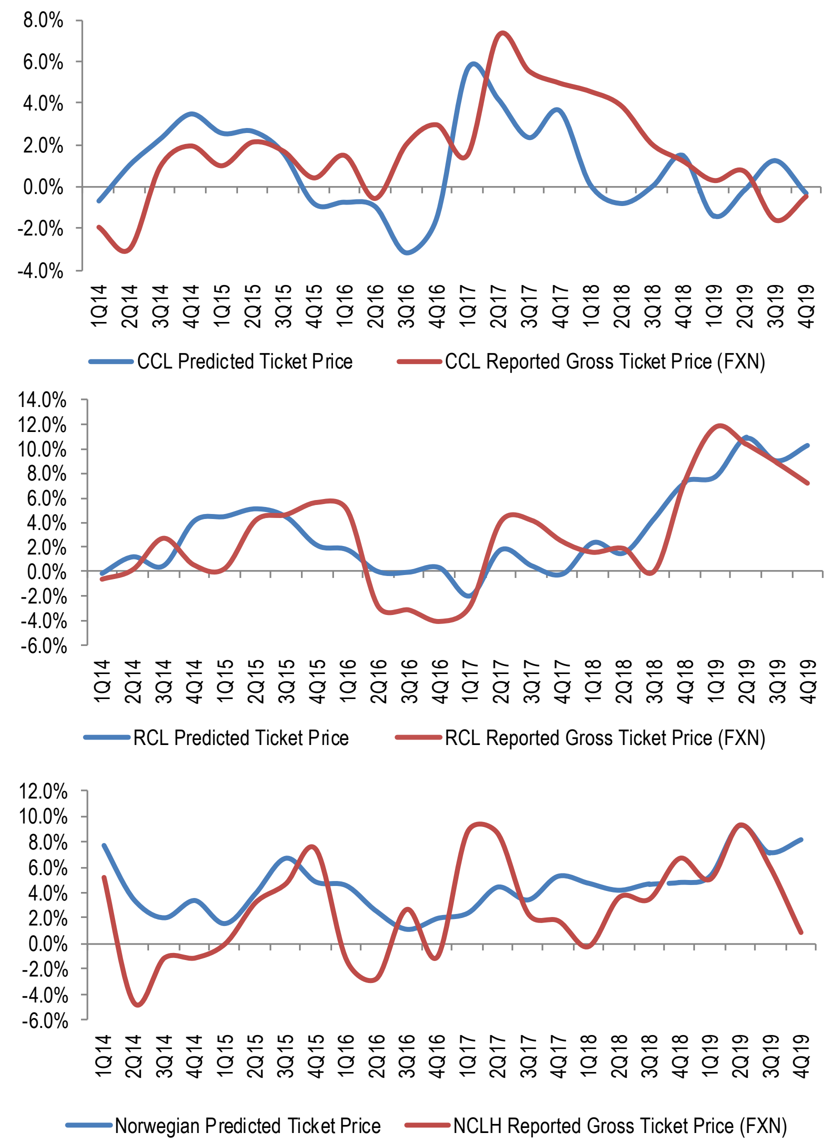
Back-Testing Pricing Data

Historically our data has been reasonably good at directionally tracking the three operators' FX-neutral gross ticket prices (especially in 2019, see below).

Figure 30: Historical data-driven pricing growth predictions versus reported actuals
Price calculation is 50:50 blend of rolling NTM data and cumulative quarterly data



Source: Cruise Analytics, JPM.

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Monthly Cruise Pricing Methodology

About the data. Our survey data, sourced from Cruise Analytics (an OTA and data provider), is conducted in $USD and reflects pricing for internet-marketed tickets that can be purchased globally, but skews more to U.S.-based customers. Pricing corresponds to gross ticket price that cruise passengers are likely to pay before incentives. In our methodology, we find Price Per Person Per Day (PPPD) for all future itineraries, which is then weighted by capacity and days sailed, and finally aggregated for each forward quarter to derive a forecast for year-over-year pricing growth. Average pricing for any given quarterly estimate is equal to the average of 12 monthly data points, which we begin to capture one year prior to each quarter, and therefore variations in actual bookings cadence throughout the year will cause tracking error. Given that ~50% of global cruise passengers are sourced outside of N.A. and thus likely not captured by this survey, differences in internationally marketed ticket prices will cause further differences between our survey's implied pricing and the actual yields reported for each company.

We also note that average pricing does not adjust for mix/deployment differences y/y (though we try and call these out when large), changes in company revenue management strategies (for example withholding higher priced cabins or entire itineraries until later vs. the prior season.), or changes in bundling/promotional activity (the increase of which would boost gross ticket pricing, but not necessarily net yield to the same extent). Given these sources of tracking error, we tend to focus more on sequential changes in forward pricing rather than y/y, and this survey is only one indication of relative pricing strength.

Brand Coverage. CCL surveyed brands include Carnival, Costa, Cunard, Holland America and Princess, which collectively account for ~75% of aggregate capacity. RCL surveyed brands include Royal Caribbean and Celebrity, which account for ~76% of (non-consolidated) aggregate capacity. NCLH's survey includes the Norwegian brand, which accounts for ~85-90% of aggregate capacity. Out of the aggregate capacity, we note our survey covers USD denominated purchases. We note that all cruises with capacity less than 100 berths are removed from the data set for better consistency.

Geographic Coverage. Geographies covered include Alaska, Asia, Atlantic, Bahamas, Canada & NE, Caribbean, Europe, Hawaii, Mexico, Panama, and Others, across CCL, RCL and NCLH.

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"Other Disclosures" last revised July 04, 2020.

Carnival Corporation

Takeaways Post 2Q20 are Net Positive, but CDC Overhang is Fully Intact; PT to $18 (-$2)

Neutral

CCL, CCL US

Price (10 Jul 20): $16.16

▼ **Price Target (Dec-20): $18.00**
Prior (Dec-20): $20.00

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J.P. Morgan Securities LLC

Following CCL's full 2Q20 earnings release and conference call, our takeaways were net positive on the margin. Cumulative 2021 bookings remain within historical ranges, with pricing continuing to hold up. While it's still early in the bookings curve for next year, our sense is that many investors were expecting to see more erosion show up in the cumulative forward book, given so many weeks/months of soft bookings. Cash burn outlook was unchanged, but management included several factors that should push this lower through year-end. CCL announced more tonnage leaving the fleet (now 9% of berths total), several more ships than was implied in an update a few weeks ago. Lastly, CCL's Costa brand in Italy doesn't seem far away from announcing a resumption in operations, following CCL's German brand AIDA earlier this week (for August), which also has potentially positive implications for cash flow, bookings and sentiment, in our view.

On the negative side, CCL's commentary regarding the CDC confirmed investor fears that an agreement for a lift in the no-sail order is far from imminent ("we have not actually gotten to the point of serious resumption of cruise discussions, but of course that's coming.")

Our estimates bleed lower as we continue to push out our capacity and occupancy recovery assumptions, offset partially by slightly less pricing erosion in 2021. These adjustments, along with higher net debt, from the 2Q's greater-than-expected cash burn (initial lay-up and repatriation costs), lowers our 2020 year-end PT to $18 from $20.

- **Bookings trends.** Since CCL's preannouncement 6/18, it is now seeing a higher portion of current bookings coming from FCC's (future cruise credits) - something close to ~50% in the very near term, 40% for the first three weeks of June, and ~1/3 for the six week period ending May 31st. We thought management sounded upbeat regarding the strength its seeing in bookings from repeat cruisers and what it thinks it will see in pent-up demand from its ~40m consumer database looking to potentially sail next year. As of June 21st, ~50% of canceled trips requested refunds (unchanged since late May) and its cumulative advanced bookings for 2021 sailings is within historical ranges at prices down low to mid-single digits, including negative yield impact of FCC's and onboard credits applied (meaning implied net yields would be better if no FCC's were issued). While the update on CCL's cumulative advanced book was technically unchanged, the fact that it hasn't further eroded (from ongoing weak bookings) is undoubtedly positive.

Key Changes (FYE Nov)

	Prev	Cur
Adj. EPS - 20E ($)	(4.60)	(9.81)
Adj. EPS - 21E ($)	(1.33)	(3.46)

Quarterly Forecasts (FYE Nov)

Adj. EPS ($)

	2019A	2020E	2021E
Q1	0.49	0.23A	
Q2	0.66	(6.07)A	
Q3	2.63	(2.00)	
Q4	0.62	(1.98)	
FY	4.40	(9.81)	(3.46)

Style Exposure

Quant	Current	Hist %Rank (1=Top)			
Factors	%Rank	6M	1Y	3Y	5Y
Value	100	32	29	57	32
Growth	80	95	89	21	19
Momentum	92	61	76	21	37
Quality	89	19	13	35	53
Low Vol	85	19	14	12	21
ESGQ	75	25	85	89	91

Sources for: Style Exposure – J.P. Morgan Quantitative and Derivatives Strategy; all other tables are company data and J.P. Morgan estimates.

See page 13 for analyst certification and important disclosures.

Price Performance

	YTD	1m	3m	12m
Abs	-68.2%	-21.5%	30.1%	-64.5%
Rel	-55.6%	-21.0%	20.3%	-58.0%

Company Data

Shares O/S (mn)	684
52-week range ($)	51.94-7.80
Market cap ($ mn)	11,053.44
Exchange rate	1.00
Free float(%)	78.9%
3M - Avg daily vol (mn)	57.27
3M - Avg daily val ($ mn)	907.0
Volatility (90 Day)	181
Index	MSCI Europe
BBG BUY|HOLD|SELL	4|13|2

Key Metrics (FYE Nov)

$ in millions	FY19A	FY20E	FY21E	FY22E
Financial Estimates				
Revenue	15,643	5,962	8,630	13,486
Adj. EBITDA	5,437	(4,386)	762	3,733
Adj. EBIT	3,277	(6,664)	(1,518)	1,360
Adj. net income	3,042	(7,162)	(2,623)	188
Adj. EPS	4.40	(9.81)	(3.46)	0.20
BBG EPS	4.27	(3.26)	(0.29)	1.44
Cashflow from operations	5,475	(4,792)	268	3,040
FCFF	(1,643)	5,598	(2,482)	290
Margins and Growth				
Revenue growth	1.7%	(61.9%)	44.8%	56.3%
Gross margin	-	-	-	-
EBITDA margin	34.8%	(73.6%)	8.8%	27.7%
EBIT margin	20.9%	(111.8%)	(17.6%)	10.1%
Adj. EPS growth	3.2%	(323.1%)	(64.7%)	(105.7%)
Ratios				
Adj. tax rate	2.3%	(0.1%)	(0.1%)	0.1%
Interest cover	29.8	NM	0.7	3.2
Net debt/Equity	0.4	1.1	1.4	1.4
Net debt/EBITDA	2.0	-4.3	27.6	5.6
ROCE	8.9%	(16.7%)	(3.7%)	3.4%
ROE	12.2%	(33.2%)	(15.9%)	1.2%
Valuation				
FCFF yield	(14.7%)	47.5%	(20.3%)	1.9%
Dividend yield	12.1%	3.1%	0.0%	0.0%
EV/Revenue	1.5	5.2	3.8	2.4
EV/EBITDA	4.2	NM	43.5	8.8
Adj. P/E	3.7	NM	NM	82.2

Summary Investment Thesis and Valuation

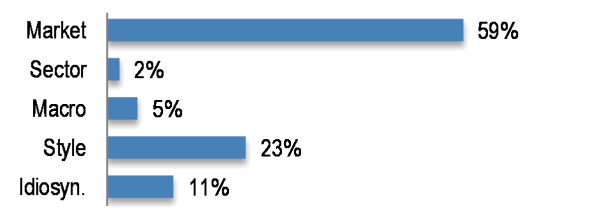
Investment Thesis

CCL's growth metrics were sluggish heading into the crisis, as older capacity and regional footprints were more impacted by elevated capacity growth in Alaska and Europe, respectively. During COVID-19, CCL likely sustained the most direct brand damage (Princess, Holland America). Looking forward, we expect CCL to track the broader industry, albeit continue to underperform peers on account of its sheer size and lack of unique growth drivers becoming a larger competitive disadvantage post-COVID-19 than pre-COVID-19.

Valuation

Our Dec 2020 price target moves to $18, from $20, and is based on 10x 2022E EV/EBITDA, discounted back 1 year at 10% and minus 2022 year-end net debt. This implies CCL can trade at an EV/berth of $110k. CCL's historical forward EV/EBITDA range is 6.3x to 26.3x, with a 23-year average of 11.9x, though it traded just over 6.0x in 1Q09, and traded at 7.0x late 2019; our valuation assumption implies that investors are willing to ascribe an above-trough multiple on well-understood depressed earnings.

Performance Drivers



Factors	6M Corr	1Y Corr
Market: MSCI US	0.79	0.78
Sect: Cons Discretionary	0.23	0.16
Ind: Consumer Serv	0.85	0.75
Macro:		
US 10yr yield	0.24	0.25
Crude Oil	-0.22	-0.20
Economic Surprise	0.22	0.19
Quant Styles:		
LowVol	-0.85	-0.78
Size	-0.80	-0.74
Momentum	-0.76	-0.71

Sources for: Performance Drivers – Bloomberg, J.P. Morgan Quantitative and Derivatives Strategy; all other tables are company data and J.P. Morgan estimates.

- **Liquidity and cash burn.** CCL reiterated its expectations for $650m cash burn per month in 2H20, though we expect this moves lower throughout the 2H and into 2021. It breaks down as follows: $250m op/admin, $85m interest, $115 maintenance and new ship payments, net of financing, and $200m of working capital, ex-deposits (this is mostly 2Q deposit refunds coming out of A/P). We see total liquidity as of May 31st, pro forma for June debt raises and less next-12 month's debt maturities, at ~$7.8b, or ~12 months of liquidity runway. While this is our base case for cash burn in the 2H, it would likely move lower if the sailing pause extended into next year given 1) 4Q burn should be lower than 3Q burn, as more ships will be in a colder lay-up, 2) carrying costs go down as ships leave the fleet, and 3) the $200m monthly outflow from working capital/accounts payable reversed itself in early 3Q and so the monthly burn from this line should be much lower when averaging past the next six months. We model no customer deposit burn in 2H20.

- **Capacity and occupancy ramp.** Recall CCL's German AIDA brand is expected to begin sailing in August with just three ships to start (full write up here), and thinks its Costa brand in Italy isn't too far behind. CCL has a relative advantage over peers in that its portfolio of national brands (~40% of company-wide berths) largely source customers locally, which makes drive-to access easier. Presumably regarding its pending launches in Europe, CCL indicated it will probably start occupancy less than 50%, as it works through new procedures and protocols, and then ramp up above that level "hopefully in a relatively short period of time." It sees ship-level cash flow break-even at 50% occupancy for its older ships, and 30% for its newest ships.

- **Reducing capacity.** Total ships to exit the fleet moves up to 13, representing 9% of current capacity; this is up from the 6 announced a few weeks ago, no color on which ships/brands was given. On the call, management indicated only a few will be scrapped, and the majority of the others are going to buyers with a "variety of purposes." On the new ship front, 4 of the 9 ships originally on order for this year and next, have been delayed into 2022 and beyond. We now model 3 ship deliveries in 2020, 2 in 2021, and 3 in 2022. CCL doesn't see the company reaching prior peak capacity (2Q20) until 2022 at the earliest.

- **Our Dec 2020 price target moves to $18,** from $20, and is based on 10x 2022E EV/EBITDA, discounted back 1 year at 10% and minus 2022 year-end net debt. This implies CCL can trade at an EV/berth of $110k. CCL's historical forward EV/EBITDA range is 6.3x to 26.3x, with a 23-year average of 11.9x, though it traded just over 6.0x in 1Q09, and traded at 7.0x late 2019; our valuation assumption implies that investors are willing to ascribe an above-trough multiple on well-understood depressed earnings.

- **Read on.**

Figure 1: CCL Results Summary, 2Q20

$mm's, except per share data

	CCL Actuals			
			Change	
	2Q20	2Q19	$	% / % Pts.
Revenues				
Passenger Ticket	446	3,257	(2,811)	-86.3%
Onboard & Other	270	1,510	(1,240)	-82.1%
Gross Cruise Revenues	**716**	**4,767**	**(4,051)**	**-85.0%**
Other (Tour)	24	71	(47)	-66.2%
Total Revenues	**740**	**4,838**	**(4,098)**	**-84.7%**
Less: Commissions, Transportation & Other	297	613	(316)	-51.5%
Less: Onboard & Other	114	485	(371)	-76.5%
Net Cruise Revenues	**305**	**3,669**	**(3,364)**	**-91.7%**
Expenses				
Payroll & Related	705	566	139	24.6%
Food	108	269	(161)	-59.9%
Fuel	201	423	(222)	-52.5%
Other Ship Operating	471	742	(271)	-36.5%
Selling & Administrative (Cruise)	492	621	(129)	-20.8%
Net Cruise Costs	**3,930**	**2,621**	**1,309**	**49.9%**
EBITDA	**(3,601)**	**1,058**	**(4,659)**	**-440.4%**
Depreciation & Amortization	577	542	35	6.5%
Operating Income (EBIT)	**(4,178)**	**516**	**(4,694)**	**-909.7%**
Margin	*NA*	*10.7%*		
Interest Expense, Net	(176)	(49)	(127)	
Other Income (Expense), Net	(31)	(7)	(24)	NM
Pre Tax Income	**(4,385)**	**459**	**(4,844)**	
Income Tax Benefit (Expense), Net	11	(8)	19	NM
Tax Rate	*0.3%*	*1.7%*		*-1.5%*
Net Income	(4,374)	451	(4,825)	
Reported Diluted Earnings per Share	**(6.07)**	**0.65**	**(6.7)**	
yoy % change		*-16.6%*		
Nonrecurring Items (per Share)	0.00	0.01	(0.0)	NM
Adjusted EPS	**(6.07)**	**0.66**	**(6.73)**	**-1017.7%**
Average Diluted Shares Count	721	693	28	4.0%
Drivers:				
Net Yield=Net Rev. per APCD ($)	NA	169.51		
Adj. Net Yield YoY % ($)	***NA***	***-2.6%***		
Adj. Net Yield YoY % (Constant CCY)	***NA***	***0.5%***		
NCC (Excl. Fuel) per APCD ($)	NA	101.22		
Adj. NCC (Ex. Fuel) YoY % ($)	***NA***	***-3.5%***		
Adj. NCC (Ex. Fuel) YoY % (Constant CCY)	***NA***	***-0.9%***		
FX Impact to Net Revenues	(3.1)	(117.0)	114.0	
FX Impact to Net Cruise Costs	(7.9)	(59.0)	51.1	
Fuel price ($ per metric ton), net of hedges	418.0	507.0	(89.0)	-17.6%

Source: Bloomberg, company reports, J.P. Morgan

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Liquidity and Cash Burn

CCL reiterated its expectations for $650m cash burn per month in 2H20, though we expect this moves lower throughout the 2H and into 2021. It breaks down as follows: $250m op/admin, $85m interest, $115 maintenance and new ship payments, net of financing, and $200m of working capital, ex-deposits (this is mostly 2Q deposit refunds coming out of A/P). We see total liquidity as of May 31st, pro forma for June debt raises and less next-12 months debt maturities, at ~$7.8b, or ~12 months of liquidity runway.

While this is our base case for cash burn in the 2H, it would likely move lower if the sailing pause extended into next year given 1) 4Q burn should be lower than 3Q burn, as more ships will be in a colder lay-up, 2) carrying costs go down as ships leave the fleet, and 3) the $200m monthly outflow from working capital/accounts payable reversed itself in early 3Q and so the monthly burn from this line should be much lower when averaging past the next six months. We model no customer deposit burn in 2H20.

Figure 2: Liquidity and Cash Burn

Based on company commentary

Monthly Burn	Paused
Operating/Admin Cash Burn	250
Interest expense	85
Maintenance Capex	50
Process Payments	65
Working capital	200
Cash Burn, monthly	**650**

Liquidity	
Cash as of 5/31	6,881
UK Gov't CP	700
June debt raise	2,600
Debt Maturities '20-2H21	-2,400
Net Liquidity 5/31 pro forma	***7,781***
Months of liquidity	***12.0***

Source: Company reports, J.P. Morgan

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Figure 3: CCL Capacity and Occupancy Build (JPME)

Based on latest restart announcements and JPM assumptions/expectations

		3Q20			4Q20			2021				2022
		Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	1Q	2Q	3Q	4Q	
Brand	**% of berths**											
NAA												
Carnival	**29%**			0%	*0%*	*25%*	*35%*	*40%*	*70%*	*85%*	*85%*	*90%*
% sailing JPME												
Princess	**19%**				*0%*	*15%*	*20%*	*35%*	*50%*	*80%*	*90%*	*90%*
% sailing JPME												
Hol. America	**10%**				*0%*	*15%*	*20%*	*35%*	*50%*	*80%*	*90%*	*90%*
% sailing JPME												
Seabourn	**1%**				*0%*	*0%*	*0%*	*20%*	*40%*	*100%*	*100%*	*100%*
% sailing JPME												
EA												
Costa	**17%**			*0%*	*15%*	*20%*	*25%*	*40%*	*70%*	*85%*	*85%*	*85%*
% sailing JPME												
AIDA	**12%**			*15%*	*25%*	*30%*	*35%*	*45%*	*75%*	*90%*	*95%*	*95%*
% sailing JPME												
P&O	**6%**					*30%*	*45%*	*60%*	*75%*	*90%*	*90%*	*90%*
% sailing JPME												
Cunard	**3%**							*100%*	*100%*	*100%*	*100%*	*100%*
% sailing JPME												
P&O Aus	**1%**				*50%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
% sailing JPME												
Blended capacity		0%	0%	2%	6%	22%	29%	43%	66%	85%	89%	90%
JPME			**1%**			**19%**			**71%**			**90%**
Load/occupancy				40%	50%	55%	60%	65%	80%	100%	100%	
JPME			**40%**			**55%**			**86%**			**100%**

Source: Company reports, J.P. Morgan

Investment Thesis, Valuation and Risks

Carnival Corporation *(Neutral; Price Target: $18.00)*

Investment Thesis

Stay Sidelined on CCL. CCL's growth metrics were sluggish heading into the crisis, as older capacity and regional footprints were more impacted by elevated capacity growth in Alaska and Europe, respectively. During COVID-19, CCL likely sustained the most direct brand damage (Princess, Holland America). Looking forward, we expect CCL to track the broader industry, albeit continue to underperform peers on account of its sheer size and lack of unique growth drivers becoming a larger competitive disadvantage post COVID-19 than pre COVID-19.

Valuation

Our Dec 2020 price target moves to $18, from $20, and is based on 10x 2022E EV/EBITDA, discounted back 1 year at 10% and minus 2022 year-end net debt. This implies CCL can trade at an EV/berth of $110k. CCL's historical forward EV/EBITDA range is 6.3x to 26.3x, with a 23-year average of 11.9x, though it traded just over 6.0x in 1Q09, and traded at 7.0x late 2019; our valuation assumption implies that investors are willing to ascribe an above-trough multiple on well-understood depressed earnings.

CCL Price Target Methodology and Valuation

$ in millions

	Valuation Multiple Sensitivity Analysis		
		2022E	
EBITDA	3,733	**3,733**	3,733
x Assigned Multiple	9.5x	**10.0x**	10.5x
Equals Enterprise Value	**35,467**	**37,334**	**39,201**
Less: 2022 Net Debt	20,963	**20,963**	20,963
Add: Convertible Debt	2,125	**2,125**	2,125
Equals: Equity Value	16,629	**18,496**	20,362
Share count	958	**958**	958
Discounted back 1 year @ 10%			
Equals: Fair Value	***$16***	***$18***	***$19***
Current Price	$16.16	**$16.16**	$16.16
Total Potential Return	-2%	**9%**	20%
Implied 2022E P/E	80.3x	**89.3x**	98.3x
Implied 2022E EV/Berth ($k)	$119	**$126**	$132

Year	EPS	EPS Growth	P/E Multiples	CAGR (3 yr)	PEG	LT Avg. P/E	Net Asset Value	Market cap	Net Asset Discount
2022E	0.20	NA	82.2x	NA	NA	16.3x			
2021E	(3.46)	NA	-4.7x	NA	NA				
2020E	(9.81)	NA	NA				**16,681**	**15,484**	**7%**
2019	(9.81)	-330%	-1.6x						

EV/EBITDA

Year	Shares (EOP)	Mkt Cap	Net Debt	Adj Net Debt	EV	EBITDA	EV/EBITDA	Berths	EV/Berth ($k)
2022E	958	15,484	20,963	18,838	34,323	3,733	9.2x	297,021	$116
2021E	757	12,232	21,067	18,942	31,174	762	40.9x	283,571	$110
2020E	757	12,232	18,952	16,827	29,059	(4,386)	NA	268,735	$108
2019	687	11,100	18,952	18,952	30,052	(4,386)	-6.9x	252,635	$119

Source: J.P. Morgan estimates

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Risks to Rating and Price Target

Potential upside risks to our rating and price target include 1) stronger than expected improvement in the cruise consumer; 2) greater than expected growth in cruise ticket pricing; 3) a vaccine announcement; and 4) less than expected structural damage to cruise demand in the wake of COVID-19.

Potential downside risks to our rating and price target include: 1) continued bookings slowdown and/or tail-risk associated with COVID-19; 2) investor sentiment toward consumer discretionary stocks could erode and valuation multiples could contract further; 3) fuel and foreign exchange costs could escalate meaningfully; 4) risks associated with one or more large shareholder groups controlling a large portion of outstanding stock; 5) legal risk from actions taken during COVID-19 crisis.

CCL Model

Figure 4: Carnival Corp. & Plc. - EPS Model

$ in millions (except per share values)

	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20E	4Q20E	2020E	2021E	2022E
Quarter Ended	*11/30/18*	*02/28/19*	*05/31/19*	*08/31/19*	*11/30/19*	*11/30/19*	*02/28/20*	*05/31/20*	*08/31/20*	*11/30/20*	*11/29/20*	*11/29/21*	*11/29/22*
Revenues													
Passenger Ticket	13,930	3,199	3,257	4,477	3,171	14,104	3,234	446	8	267	3,954	7,772	12,081
Onboard & Other	4,679	1,446	1,510	1,855	1,520	6,331	1,504	270	4	144	1,921	3,527	5,590
Gross Cruise Revenues	**18,609**	**4,645**	**4,767**	**6,332**	**4,691**	**20,435**	**4,738**	**716**	**11**	**411**	**5,876**	**11,299**	**17,671**
yoy % change	*7.7%*	*10.1%*	*10.5%*	*11.7%*	*6.5%*	*9.8%*	*2.0%*	*-85.0%*	*-99.8%*	*-91.2%*	*-71.2%*	*92.3%*	*56.4%*
Other (Tour)	272	29	71	200	91	391	52	24	0	10	86	171	257
Total Revenues	**18,881**	**4,674**	**4,838**	**6,532**	**4,782**	**20,826**	**4,790**	**740**	**12**	**420**	**5,962**	**11,470**	**17,928**
yoy % change	*1.0%*	*10.4%*	*11.0%*	*11.9%*	*7.3%*	*10.3%*	*2.5%*	*-84.7%*	*-99.8%*	*-91.2%*	*-71.4%*	*92.4%*	*56.3%*
Less: Commissions, Transportation & Other	2,590	709	613	803	595	2,720	766	297	20	63	1,146	1,499	2,330
Less: Onboard & Other	638	467	485	668	481	2,101	471	114	1	46	632	1,171	1,855
Net Cruise Revenues	**15,381**	**3,498**	**3,669**	**4,861**	**3,615**	**15,643**	**3,501**	**305**	**(10)**	**302**	**4,098**	**8,630**	**13,486**
yoy % change	*7.3%*	*2.4%*	*1.9%*	*3.4%*	*-1.3%*	*1.7%*	*0.1%*	*-91.7%*	*-100.2%*	*-91.6%*	*-73.8%*	*110.6%*	*56.3%*
Expenses													
Payroll & Related	2,190	557	566	548	578	2,249	610	705	120	199	1,633	1,729	2,131
Food	1,065	268	269	284	262	1,083	277	108	2	47	433	789	1,027
Fuel	1,619	381	423	401	358	1,563	396	201	2	58	657	1,160	1,473
Other Ship Operating	2,819	731	742	719	733	2,925	1,001	471	289	357	2,117	2,405	2,805
Selling & Administrative (Cruise)	2,439	629	621	563	667	2,480	678	492	260	309	1,738	1,785	2,324
Ship Impairments & Other								589					
Goodwill & trademark impairment								1,364					
Net Cruise Costs	**10,132**	**2,566**	**2,621**	**2,515**	**2,598**	**10,300**	**2,962**	**3,930**	**671**	**969**	**8,533**	**7,868**	**9,758**
yoy % change	*4.0%*	*3.0%*	*2.7%*	*1.7%*	*-0.7%*	*1.7%*	*15.4%*	*49.9%*	*-73.3%*	*-62.7%*	*-17.2%*	*-7.8%*	*24.0%*
EBITDA	**5,342**	**903**	**1,058**	**2,437**	**1,039**	**5,437**	**591**	**(3,601)**	**(696)**	**(680)**	**(4,386)**	**762**	**3,733**
yoy % change	*14.8%*	*-2.2%*	*0.3%*	*5.7%*	*-1.9%*	*1.8%*	*-34.6%*	*NA*	*NA*	*NA*	*-180.7%*	*-117.4%*	*390.0%*
Margin	*28.3%*	*19.3%*	*21.9%*	*37.3%*	*21.7%*	*26.1%*	*12.3%*	*NA*	*NA*	*NA*	*-73.6%*	*6.6%*	*20.8%*
Depreciation & Amortization	2,017	516	542	548	554	2,160	570	577	577	554	2,279	2,280	2,373
Operating Income (EBIT)	**3,325**	**387**	**516**	**1,889**	**485**	**3,277**	**21**	**(4,178)**	**(1,273)**	**(1,234)**	**(6,664)**	**(1,518)**	**1,360**
yoy % change	*18.5%*	*-11.0%*	*-5.0%*	*5.3%*	*-12.3%*	*-1.4%*	*-94.6%*	*NA*	*NA*	*NA*	*-303.4%*	*-77.2%*	*-189.6%*
Margin	*17.6%*	*8.3%*	*10.7%*	*28.9%*	*10.1%*	*15.7%*	*0.4%*	*NA*	*NA*	*NA*	*-111.8%*	*-13.2%*	*7.6%*
yoy bps change	*1.6%*	*-2.0%*	*-1.8%*	*-1.8%*	*-2.3%*	*-1.9%*	*-7.8%*	*NA*	*NA*	*NA*	*-127.5%*	*98.5%*	*20.8%*
Interest Expense, Net	(178)	(47)	(49)	(44)	(42)	(182)	(50)	(176)	(242)	(268)	(736)	(1,107)	(1,172)
Other Income (Expense), Net	14	(2)	(7)	(18)	(6)	(33)	(741)	(31)	0	0	(772)	0	0
Fuel derivatives, net	27	0	0	0	0	0	0	0	0	0	0	0	0
Income Before Income Taxes (EBT)	**3,188**	**338**	**459**	**1,827**	**437**	**3,061**	**(770)**	**(4,385)**	**(1,515)**	**(1,502)**	**(8,172)**	**(2,625)**	**188**
Income Tax Benefit (Expense), Net	(54)	(2)	(8)	(47)	(14)	(71)	(11)	11	4	4	8	2	(0)
Tax Rate	*1.7%*	*0.6%*	*1.7%*	*2.6%*	*3.2%*	*2.3%*	*-1.4%*	*0.3%*	***0.3%***	***0.3%***	*0.1%*	***0.1%***	***0.1%***
Net Income	**3,134**	**336**	**451**	**1,780**	**423**	**2,990**	**(781)**	**(4,374)**	**(1,511)**	**(1,498)**	**(8,164)**	**(2,623)**	**188**
GAAP EPS	4.42	0.48	0.65	2.58	0.61	4.33	-1.14	-6.07	-2.00	-1.98	-11.18	-3.46	0.20
Nonrecurring Items (per Share)		0.00	0.01	0.05	0.01	0.07	1.37						
Adjusted EPS	**4.26**	**0.49**	**0.66**	**2.63**	**0.62**	**4.40**	**0.23**	**(6.07)**	**(2.00)**	**(1.98)**	**(9.81)**	**(3.46)**	**0.20**
yoy % change	*11.6%*	*-6.8%*	*-2.8%*	*11.1%*	*-10.3%*	*3.2%*	*-53.1%*	*NA*	*-176.0%*	*-416.8%*	*-323.1%*	*NA*	*NA*
Common Shares Outstanding - Basic	776	776	776	776	686	690	682	718	754	754	727	754	754
Average Diluted Shares Count	710	695	693	691	688	692	684	721	757	757	730	757	958
Dividend/Share	1.95	0.50	0.50	0.50	0.50	1.95	0.50	0.00	0.00	0.00	0.50	0.00	0.00

Source: Company Reports and J.P. Morgan estimates.

Figure 5: Carnival Corp. & Plc. – Balance Sheet, Free Cash Flow and ROIC

$ in millions

Balance Sheet	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20E	4Q20E	2020E	2021E	2022E
Cash	982	649	1,202	1,153	518	518	1,354	6,881	7,487	6,113	6,113	3,632	3,922
Trade & Other receivables, net	358	406	405	441	444	444	405	604	508	449	449	591	554
Inventories	450	444	501	482	427	427	440	362	306	304	304	280	348
Prepaid expenses and other current assets / derivs	436	603	727	636	671	671	687	374	356	341	341	315	390
Current Assets	2,226	2,102	2,835	2,712	2,060	2,060	2,886	8,221	8,657	7,207	7,207	4,818	5,214
PP&E, net	35,336	37,005	36,814	36,466	38,131	38,131	38,023	37,139	34,936	35,926	35,926	36,031	36,594
Operating Lease right-of-use assets							1,469	1,413	1,413	1,413	1,413	1,413	1,413
Other long-term assets	1,914	1,880	1,956	1,937	1,955	1,955	1,216	1,086	1,086	1,086	1,086	1,086	1,086
Goodwill and tradenames	2,925	2,943	2,907	2,886	2,912	2,912	3,349	1,958	1,958	1,958	1,958	1,958	1,958
Total Assets	**42,401**	**43,930**	**44,512**	**44,001**	**45,058**	**45,058**	**46,943**	**49,817**	**48,049**	**47,590**	**47,590**	**45,305**	**46,264**
Accounts Payable & Accrued Expenses	2,384	2,435	2,467	2,413	2,565	2,565	2,658	3,152	1,952	1,987	1,987	1,983	2,005
Other Liabilities							168	153	153	153	153	153	153
Customer Deposits	4,395	4,755	5,815	4,674	4,735	4,735	4,690	2,618	2,418	2,418	2,418	3,102	3,641
Current Liabilities ex LTD	6,779	7,190	8,282	7,087	7,300	7,300	7,516	5,923	4,523	4,558	4,558	5,238	5,799
Long term debt (incl short term borrowing)	10,323	11,586	11,174	10,738	11,502	11,502	12,938	20,805	24,064	25,065	25,065	24,699	24,885
Other long-term liabilities	856	913	948	881	890	890	2,199	2,248	133	137	137	161	184
Other Liabilities	11,179	12,499	12,122	11,619	12,392	12,392	15,137	23,053	24,197	25,202	25,202	24,860	25,069
Other													
Total Shareholders' Equity (Deficit)	24,443	24,241	24,108	25,295	25,366	25,366	24,290	20,840	19,329	17,831	17,831	15,208	15,396
Total Liabilities and Shareholders' Equity	**42,401**	**43,930**	**44,512**	**44,001**	**45,058**	**45,058**	**46,943**	**49,816**	**48,049**	**47,590**	**47,590**	**45,305**	**46,264**
Balance Sheet Summary													
Cash & Cash Equivalents	982	649	1,202	1,153	518	518	1,354	6,881	7,487	6,113	6,113	3,632	3,922
Total Long-Term Debt	10,323	11,586	11,174	10,738	11,502	11,502	12,938	20,805	24,064	25,065	25,065	24,699	24,885
Net Debt	**9,341**	**10,937**	**9,972**	**9,585**	**10,984**	**10,984**	**11,584**	**13,924**	**16,577**	**18,952**	**18,952**	**21,067**	**20,963**
change in net debt	*541*	*1,596*	*(965)*	*(387)*	*1,399*	*1,643*	*600*	*2,340*	*2,653*	*2,375*	*7,968*	*2,116*	*(104)*
Equity	24,443	24,241	24,108	25,295	25,366	25,366	24,290	20,840	19,329	17,831	17,831	15,208	15,396

Free Cash Flow Model	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20E	4Q20E	2020E	2021E	2022E
Quarter Ended	11/30/18	02/28/19	05/31/19	08/31/19	11/30/19	11/30/19	02/28/20	05/31/20	08/31/20	11/30/20	11/29/20	11/29/21	11/29/22
Net Income	3,134	336	451	1,780	423	2,990	(781)	(4,374)	(1,511)	(1,498)	(8,164)	(2,623)	188
Add: Depreciation & Amortization	2,017	516	542	548	554	2,160	570	577	577	554	2,279	2,280	2,373
Add: SBC	65	20	7	11	8	46	20	18	**6**	**4**	48	**23**	**23**
Working Capital changes, ex. Customer Deposits	(175)	(127)	(104)	(30)	(74)	(335)	154	928	(1,030)	110	163	(96)	(84)
Increase/(Decrease) in Customer Deposits	539	358	1,158	(1,107)	(22)	387	(36)	(1,951)	(200)	0	(2,187)	684	539
Other Operating (non-cash adjustments, Equity Income)	(31)	13	(1)	43	172	227	989	2,082	0	0	3,071	0	0
Equals Operating Cash Flow	**5,549**	**1,116**	**2,053**	**1,245**	**1,061**	**5,475**	**916**	**(2,720)**	**(2,158)**	**(830)**	**(4,792)**	**268**	**3,040**
Less: Maintenance Capex + Process Payments	(1,900)	(500)	(500)	(500)	(500)	(2,000)	(503)	(350)	(345)	(345)	(1,543)	(1,000)	(1,000)
Equals Discretionary FCF	**3,649**	**616**	**1,553**	**745**	**561**	**3,475**	**413**	**(3,070)**	**(2,503)**	**(1,175)**	**(6,335)**	**(732)**	**2,040**
Less: New Ship Capex, net of process payments	(1,849)	(1,629)	(392)	73	(1,481)	(3,429)	(823)	0	0	(1,200)	(2,023)	(1,384)	(1,936)
Less: Dividends	(1,380)	(346)	(346)	(346)	(346)	(1,384)	(341)	(348)	0	0	(689)	0	0
Less: Share Repurchases	(1,468)	(274)	(42)	(156)	(131)	(603)	0	558	0	0	558	0	0
Less: Acquisitions/Ship Sales	389						226	10					
Debt Issuance/Amortization/Pay Down, net							1,436	7,867	3,109	1,001	13,413	(366)	186
Other Investing/Finance cash flows	118	37	192	71	(2)	298	(73)	511					
Net Change to Cash	***(541)***	***(1,596)***	***965***	***387***	***(1,399)***	***(1,643)***	***838***	***5,528***	***606***	***(1,374)***	***5,598***	***(2,482)***	***290***
Credit Ratios:													
EBITDA/Interest	30.0x	29.6x	29.0x	29.8x	29.8x	29.8x	27.6x	1.5x	-5.2x	-6.0x	-6.0x	0.7x	3.2x
Gross Debt/EBITDA (TTM)	1.9x	2.2x	2.1x	2.0x	2.1x	2.1x	2.5x	44.6x	-9.0x	-5.7x	-5.7x	32.4x	6.7x
Net Debt/EBITDA (TTM)	1.7x	2.1x	1.9x	1.8x	2.0x	2.0x	2.3x	29.9x	-6.2x	-4.3x	-4.3x	27.6x	5.6x

ROIC	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20E	4Q20E	2020E	2021E	2022E
EBIT	3,325					3,277					-6,664	-1,518	1,360
Tax Rate	1.7%					2.3%					0.1%	0.1%	0.1%
Equals Net Operating Profit After Tax (NOPAT)	***3,269***					***3,201***					***(6,658)***	***(1,517)***	***1,359***
Net Debt	9,341					10,984					18,952	21,067	20,963
Plus Shareholders' Equity	24,443					25,366					17,831	15,208	15,396
Equals Invested Capital (year end)	**33,784**					**36,350**					**36,782**	**36,275**	**36,359**
- Ships under Construction	1,004					1,044					1,834	2,234	2,634
Equals Adjusted Invested Capital	**32,780**					**35,306**					**34,948**	**34,041**	**33,725**
ROIC	**9.8%**					**9.1%**					**-18.2%**	**-4.2%**	**3.7%**
Adjusted ROIC (ex-CIP)	**10.1%**					**9.4%**					**-19.0%**	**-4.4%**	**4.0%**

Source: Company Reports and J.P. Morgan estimates.

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Figure 6: Carnival Corp. & Plc. - Revenue Drivers

$ in millions

REVENUE DRIVERS	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20E	4Q20E	2020E	2021E	2022E
Quarter Ended	11/30/18	02/28/19	05/31/19	08/31/19	11/30/19	11/30/19	02/28/20	05/31/20	08/31/20	11/30/20	11/29/20	11/29/21	11/29/22
Cruise Operating Statistics													
Available Lower Berth Days (ALBD)	83.9	21.3	21.6	22.7	21.8	87.4	21.98	3.62	0.14	4.33	30.06	66.3	86.3
yoy % change	1.9%	4.1%	4.6%	5.8%	2.4%	4.2%	3.2%	-83.3%	-99.4%	-80.1%	-65.6%	120.6%	30.2%
memo: pre-COVID forecasts							22.58	22.94	24.02	23.69	93.23	98.17	102.84
memo: % of pre-COVID									0.6%	19.2%		70.7%	90.3%
Occupancy	106.9%	104.8%	105.3%	113.0%	104.0%	106.8%	104.3%	96.1%	40.0%	55.0%	73.9%	86.3%	100.0%
yoy change (bps)	1.0%	0.1%	-0.4%	0.4%	-0.5%	-0.1%	-0.5%	-9.2%	-73.0%	-49.0%	-32.9%	12.4%	13.8%
Passenger Cruise Days (PCD)	89.7	22.3	22.8	25.7	22.6	93.4	22.9	3.5	0.1	2.4	28.8	57.2	86.3
yoy % change	2.8%	4.2%	4.2%	6.2%	1.9%	4.2%	2.7%	-84.7%	-99.8%	-89.5%	-69.1%	98.4%	50.9%
Cruise Revenues													
Passenger Ticket	13,930	3,199	3,257	4,477	3,171	14,104	3,234	446	8	267	3,954	7,772	12,081
yoy % change	7.6%	1.6%	2.0%	2.8%	-2.0%	1.2%	1.1%	-86.3%	-99.8%	-91.6%	-72.0%	96.5%	55.4%
Passenger Ticket per PCD (in $)	155.3	143.3	142.9	174.3	140.2	151.0	141.1	128.2	139.5	112.1	137.1	135.9	140.0
yoy % change	4.6%	-2.5%	-2.1%	-3.2%	-3.8%	-2.8%	-1.6%	-10.3%	-20.0%	-20.0%	-9.2%	-0.9%	3.0%
memo: % of 2019												90.0%	92.7%
Onboard & Other (adjusted to exclude accounting change)	4,679	1,446	1,510	1,855	1,520	6,331	1,504	270	4	144	1,921	3,527	5,590
yoy % change	8.1%	35.0%	34.6%	41.0%	29.9%	35.3%	4.0%	-82.1%	-99.8%	-90.5%	-69.7%	83.6%	58.5%
Onboard & Other per PCD (in $)	52.2	64.8	66.3	72.2	67.2	67.8	65.6	77.6	65.0	60.5	66.6	61.7	64.8
yoy % change	5.1%						1.3%	17.1%	-10.0%	-10.0%	-1.7%	-7.4%	5.0%
memo: % of 2019												91.0%	95.6%
Gross Cruise Revenues	18,609	4,645	4,767	6,332	4,691	20,435	4,738	716	11	411	5,876	11,299	17,671
yoy % change	7.7%	10.1%	10.5%	11.7%	6.5%	9.8%	2.0%	-85.0%	-99.8%	-91.2%	-71.2%	92.3%	56.4%
Other (Tour)	272	29	71	200	91	391	52	24	0	10	86	171	257
yoy % change	15.7%	123.1%	69.0%	19.8%	82.0%	43.8%	79.3%	-66.2%	-99.8%	-89.5%	-78.0%	98.4%	50.9%
Total Revenues	18,881	4,674	4,838	6,532	4,782	20,826	4,790	740	12	420	5,962	11,470	17,928
yoy % change	7.8%	10.4%	11.0%	11.9%	7.3%	10.3%	2.5%	-84.7%	-99.8%	-91.2%	-71.4%	92.4%	56.3%
Less: Commissions, Transportation & Other	2,590	709	613	803	595	2,720	766	297	20	63	1,146	1,499	2,330
yoy % change	9.8%	6.9%	6.2%	5.7%	0.8%	5.0%	8.0%	-51.5%	-97.6%	-89.4%	-57.9%	30.8%	55.4%
% of Passenger Ticket Revenues	18.6%	22.2%	18.8%	17.9%	18.8%	19.3%	23.7%	66.6%	17.9%	18.8%	29.0%	19.3%	19.3%
yoy change (bp)	0.4%	1.1%	0.8%	0.5%	0.5%	0.7%	1.5%	47.8%	0.0%	0.0%	9.7%	-9.7%	0.0%
Less: Onboard & Other (adjusted to exclude accounting chg)	638	467	485	668	481	2,101	471	114	1	46	632	1,171	1,855
yoy % change	8.7%	233.6%	251.4%	222.7%	214.4%	229.3%	0.9%	-76.5%	-99.8%	-90.5%	-69.9%	85.3%	58.5%
% of Onboard & Other Revenues	13.6%	32.3%	32.1%	36.0%	31.6%	33.2%	31.3%	42.2%	36.0%	31.6%	32.9%	33.2%	33.2%
Net Cruise Revenues	15,381	3,469	3,669	4,861	3,615	15,614	3,501	305	(10)	302.1	4,098	8,630	13,486
yoy % change	7.3%	1.6%	1.9%	3.4%	-1.3%	1.5%	0.9%	-91.7%	-100.2%	-91.6%	-73.8%	110.6%	56.3%
Net Yield = Net Cruise Rev. per ALBD (in $)	183.38	162.87	169.51	213.89	166.18	178.60	159.30	NA	NA	69.84	136.34	130.13	156.23
yoy % change	5.3%	-2.4%	-2.6%	-2.3%	-3.6%	-2.6%	-2.2%	NA	NA	-58.0%	-23.7%	-4.6%	20.1%
Net Cruise Revenues (Constant CCY)	15,154	3,575	3,786	4,953	3,682	15,996	3,537	NA	NA	305	3,842	8,630	13,486
yoy % change	5.8%	4.7%	5.2%	5.3%	0.5%	4.0%	2.0%	NA	NA	-91.6%	-75.4%	110.6%	56.3%
Net Yield = Net Cruise Rev. per ALBD (Constant CCY)	180.68	167.85	174.91	217.93	169.26	182.97	160.94	NA	NA	70.54	127.82	130.13	156.23
yoy % change	3.8%	0.5%	0.5%	-0.5%	-1.8%	-0.2%	-1.2%	NA	NA	-57.6%	-28.4%	-4.6%	20.1%
2-year % change	8.3%	4.5%	5.6%	2.4%	1.8%	3.6%	-0.6%	NA	NA	-59.4%	-28.7%	-33.0%	15.5%
% of 2019 (Pre-COVID peak)										42.4%	71.6%	72.9%	87.5%

Source: Company Reports and J.P. Morgan estimates.

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Figure 7: Carnival Corp. & Plc. - Expense Drivers

$ in millions

EXPENSE DRIVERS	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20E	4Q20E	2020E	2021E	2022E
Quarter Ended	11/30/18	02/28/19	05/31/19	08/31/19	11/30/19	11/30/19	02/28/20	05/31/20	08/31/20	11/30/20	11/29/20	11/29/21	11/29/22
Cruise Expenses													
Payroll & Related	2,190	557	566	548	578	2,249	610	705	120	199	1,633	1,729	2,131
yoy % change	*3.9%*	*-0.2%*	*4.2%*	*2.0%*	*4.7%*	*2.7%*	*9.5%*	*24.6%*	*-78.1%*	*-65.7%*	*-27.4%*	*5.8%*	*23.3%*
Payroll & Related per ALBD (in $)	26.1	26.2	26.1	24.1	26.6	25.7	27.8	194.7	21.7	23.9	54.3	24.7	24.7
yoy % change	*2.0%*	*-4.1%*	*-0.4%*	*-3.6%*	*2.3%*	*-1.5%*	*6.1%*	*644.6%*	***-10.0%***	***-10.0%***	*111.2%*	***-4.0%***	***0.0%***
Food	1,065	268	269	284	262	1,083	277	108	2	47	433	789	1,027
yoy % change	*3.3%*	*1.5%*	*1.5%*	*3.3%*	*0.4%*	*1.7%*	*3.4%*	*-59.9%*	*-99.5%*	*-82.1%*	*-60.0%*	*82.0%*	*30.2%*
Food per ALBD (in $)	12.7	12.6	12.4	12.5	12.0	12.4	12.6	29.8	11.2	10.8	14.4	11.9	11.9
yoy % change	*1.4%*	*-2.5%*	*-3.0%*	*-2.4%*	*-2.0%*	*-2.4%*	*0.2%*	*140.0%*	***-10.0%***	***-10.0%***	*16.4%*	***-4.0%***	***0.0%***
Fuel	1,619	381	423	401	358	1,563	396	201	2	58	657	1,160	1,473
yoy % change	*30.1%*	*6.1%*	*13.4%*	*-7.6%*	*-21.0%*	*-3.5%*	*3.9%*	*-52.5%*	*-99.6%*	*-83.7%*	*-58.0%*	*76.6%*	*26.9%*
Fuel per ALBD (in $)	19.3	17.9	19.5	17.6	16.5	17.9	18.0	55.5	12.9	13.5	21.9	17.5	17.1
yoy % change	*27.7%*	*2.0%*	*8.4%*	*-12.7%*	*-22.8%*	*-7.4%*	*0.7%*	*184.0%*	*-27.0%*	*-18.0%*	*22.3%*	*-20.0%*	*-2.5%*
Fuel Consumption (Metric Tons)	3.30	0.83	0.84	0.82	0.83	3.31	0.83	0.48	0.00	0.16	1.4777	3.18	4.03
yoy % change	*0.3%*	*1.1%*	*2.0%*	*0.5%*	*-1.4%*	*0.5%*	*0.1%*	*-42.3%*	*-99.4%*	*-80.6%*	*-55.4%*	*115.1%*	*26.9%*
Fuel Consumption (Metric Tons) / ALBD		0.04	0.04	0.04	0.04	0.04	0.04	0.13	0.035	0.037	0.049	0.048	0.047
yoy % change							*-3.0%*	*245.1%*	***-2.5%***	***-2.5%***	*29.8%*	***-2.5%***	***-2.5%***
Fuel Price ($ per Metric Ton)	491	459	507	487	434	472	477	418	**365**	**365**	445	**365**	**365**
yoy % change	*29.7%*	*5.0%*	*11.4%*	*-8.3%*	*-19.8%*	*-4.0%*	*3.9%*	*-17.6%*	*-25.0%*	*-15.9%*	*-5.8%*	*-17.9%*	*0.0%*
Other Ship Operating	2,819	724	735	684	698	2,841	780	464	289	357	1,889	2,405	2,805
yoy % change	*4.0%*	*5.2%*	*-4.4%*	*1.0%*	*1.9%*	*0.8%*	*7.7%*	*-36.9%*	*-57.8%*	*-48.9%*	*-33.5%*	*27.3%*	*16.6%*
Other Ship Operating per ALBD (in $)	33.6	34.0	34.0	30.1	32.1	32.5	35.5	128.1	27.1	28.9	62.9	31.2	31.2
yoy % change	*2.1%*	*1.1%*	*-8.6%*	*-4.5%*	*-0.5%*	*-3.3%*	*4.4%*	*277.4%*	***-10.0%***	***-10.0%***	*93.4%*	***-4.0%***	***0.0%***
Selling & Administrative (Cruise)	2,439	629	621	563	667	2,480	652	492	260	309	1,712	1,785	2,324
yoy % change	*8.4%*	*2.1%*	*4.5%*	*-1.7%*	*1.7%*	*1.7%*	*3.7%*	*-20.8%*	*-53.9%*	*-53.7%*	*-31.0%*	*4.3%*	*30.2%*
% Selling & Administrative (Total)	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*100.0%*	*96.2%*	*100.0%*	***100.0%***	***100.0%***	*96.8%*	***96.8%***	***96.8%***
Selling & Administrative (Total)	2,439	629	621	563	667	2,480	678	492	275	324	1,768	1,844	2,400
yoy % change	*7.8%*	*2.1%*	*4.5%*	*-1.7%*	*1.7%*	*1.7%*	*7.8%*	*-20.8%*	*-51.2%*	*-51.5%*	*-28.7%*	*4.3%*	*30.2%*
Selling & Admin. (Total) per ALBD (in $)	29.1	29.5	28.7	24.8	30.7	28.4	30.9	135.9	18.6	23.0	58.8	27.8	27.8
yoy % change	*5.8%*	*-1.9%*	*-0.1%*	*-7.2%*	*-0.7%*	*-2.4%*	*4.5%*	*373.6%*	***-25.0%***	***-25.0%***	*107.4%*	***-2.0%***	***0.0%***
Net Cruise Costs	**10,132**	**2,559**	**2,614**	**2,480**	**2,563.0**	**10,216**	**2,715**	**1,970**	**671**	**969.1**	**6,326**	**7,868**	**9,758**
yoy % change	*8.5%*	*3.0%*	*2.8%*	*-0.6%*	*-1.7%*	*0.8%*	*6.1%*	*-24.6%*	*-72.9%*	*-62.2%*	*-38.1%*	*24.4%*	*24.0%*
Net Cruise Costs per ALBD (in $)	***120.80***	***120.15***	***120.77***	***109.12***	***117.82***	***116.86***	***123.54***	***NA***	***4,930.19***	***224.05***	***210.43***	***118.64***	***113.04***
yoy % change	*6.4%*	*-1.1%*	*-1.8%*	*-6.1%*	*-4.0%*	*-3.3%*	*2.8%*	*NA*	*4418.1%*	*90.2%*	*80.1%*	*-43.6%*	*-4.7%*
Net Cruise Costs Ex Fuel per ALBD (in $)	***101.50***	***102.26***	***101.22***	***91.48***	***101.37***	***98.98***	***105.52***	***NA***	***4,917.32***	***210.55***	***188.57***	***101.14***	***95.98***
yoy % change	***3.2%***	***-1.6%***	***-3.5%***	***-4.7%***	***0.0%***	***-2.5%***	***3.2%***	***NA***	***5275.5%***	***107.7%***	***90.5%***	***-46.4%***	***-5.1%***
Net Cruise Costs Ex Fuel (Constant CCY)	**8,387**	**2,233**	**2,250**	**2,113**	**2,262**	**8,858**	**2,340**	**NA**	**676**	**920**	**3,937**	**6,707**	**8,285**
yoy % change	*3.6%*	*5.0%*	*3.6%*	*2.5%*	*5.0%*	*4.1%*	*7.4%*	*NA*	*-67.5%*	*-58.3%*	*-54.5%*	*18.3%*	*23.5%*
Net Cruise Costs Ex Fuel per ALBD (Constant CCY)	**100.00**	**104.84**	**103.95**	**92.97**	**103.99**	**101.32**	**106.47**	**NA**	**4,966.62**	**212.79**	**130.97**	**101.14**	**95.98**
yoy % change	***1.6%***	***0.9%***	***-0.9%***	***-3.2%***	***2.6%***	***-0.2%***	***4.1%***	***NA***	***5329.4%***	***109.9%***	***32.3%***	***-46.4%***	***-5.1%***

Source: Company reports and J.P. Morgan estimates.

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Carnival Corporation: Summary of Financials

Income Statement - Annual	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue	**15,381**	**15,643**	**5,962**	**8,630**	**13,486**
Adj. EBITDA	**5,342**	**5,437**	**(4,386)**	**762**	**3,733**
D&A	(2,017)	(2,160)	(2,279)	(2,280)	(2,373)
Adj. EBIT	**3,325**	**3,277**	**(6,664)**	**(1,518)**	**1,360**
Net Interest	(178)	(182)	(736)	(1,107)	(1,172)
Adj. PBT	**3,188**	**3,061**	**(8,172)**	**(2,625)**	**188**
Tax	(54)	(71)	8	2	(0)
Adj. Net Income	**3,027**	**3,042**	**(7,162)**	**(2,623)**	**188**
Reported EPS	4.41	4.32	(11.19)	(3.46)	0.20
Adj. EPS	**4.26**	**4.40**	**(9.81)**	**(3.46)**	**0.20**
DPS	**1.95**	**1.95**	**0.50**	**0.00**	**0.00**
Payout ratio	44.2%	45.1%	NM	0.0%	0.0%
Shares outstanding	710	692	730	757	958

Income Statement - Quarterly	1Q20A	2Q20A	3Q20E	4Q20E
Revenue	**4,790A**	**740A**	**12**	**420**
Adj. EBITDA	**591A**	**(3,601)A**	**(696)**	**(680)**
D&A	(570)A	(577)A	(577)	(554)
Adj. EBIT	**21A**	**(4,178)A**	**(1,273)**	**(1,234)**
Net Interest	(50)A	(176)A	(242)	(268)
Adj. PBT	**(770)A**	**(4,385)A**	**(1,515)**	**(1,502)**
Tax	(11)A	11A	4	4
Adj. Net Income	**156A**	**(4,374)A**	**(1,511)**	**(1,498)**
Reported EPS	(1.14)A	(6.07)A	(2.00)	(1.98)
Adj. EPS	**0.23A**	**(6.07)A**	**(2.00)**	**(1.98)**
DPS	**0.50A**	**0.00A**	**0.00**	**0.00**
Payout ratio	NMA	0.0%A	0.0%	0.0%
Shares outstanding	684A	721A	757	757

Balance Sheet & Cash Flow Statement	FY18A	FY19A	FY20E	FY21E	FY22E
Cash and cash equivalents	982	518	6,113	3,632	3,922
Total debt	10,323	11,502	25,065	24,699	24,885
Net debt	9,341	10,984	18,952	21,067	20,963
Shareholders' equity	24,443	25,366	17,831	15,208	15,396
Net income (including charges)	3,134	2,990	(8,164)	(2,623)	188
D&A	2,017	2,160	2,279	2,280	2,373
Other	-	-	-	-	-
Maintenance Capex	(3,749)	(5,429)	(3,566)	(2,384)	(2,936)
Adj. Free cash flow to firm	(541)	(1,643)	5,598	(2,482)	290
y/y Growth	*(1160.8%)*	*203.7%*	*(440.7%)*	*(144.3%)*	*(111.7%)*
FCFF/share	(0.76)	(2.38)	7.67	(3.28)	0.30

Ratio Analysis	FY18A	FY19A	FY20E	FY21E	FY22E
EBITDA margin	34.7%	34.8%	(73.6%)	8.8%	27.7%
EBIT margin	21.6%	20.9%	(111.8%)	(17.6%)	10.1%
Net profit margin	19.7%	19.4%	(120.1%)	(30.4%)	1.4%
ROE	12.4%	12.2%	(33.2%)	(15.9%)	1.2%
ROA	7.3%	7.0%	(15.5%)	(5.6%)	0.4%
ROCE	9.6%	8.9%	(16.7%)	(3.7%)	3.4%
Net debt/equity	0.4	0.4	1.1	1.4	1.4
Net debt/EBITDA (x)	1.7	2.0	-4.3	27.6	5.6
P/E (x)	3.8	3.7	NM	NM	82.2
P/BV (x)	0.5	0.4	0.7	0.8	1.0
EV/EBITDA (x)	4.0	4.2	NM	43.5	8.8
Dividend Yield	12.1%	12.1%	3.1%	0.0%	0.0%
Revenue y/y Growth	7.3%	1.7%	(61.9%)	44.8%	56.3%
EBITDA y/y Growth	14.8%	1.8%	(180.7%)	(117.4%)	390.0%
Tax rate	1.7%	2.3%	(0.1%)	(0.1%)	0.1%
Adj. Net Income y/y Growth	9.2%	0.5%	(335.4%)	(63.4%)	(107.2%)
EPS y/y Growth	11.6%	3.2%	(323.1%)	(64.7%)	(105.7%)
DPS y/y Growth	25.8%	0.0%	(74.4%)	(100.0%)	-

Source: Company reports and J.P. Morgan estimates.
Note: $ in millions (except per-share data).Fiscal year ends Nov. o/w - out of which

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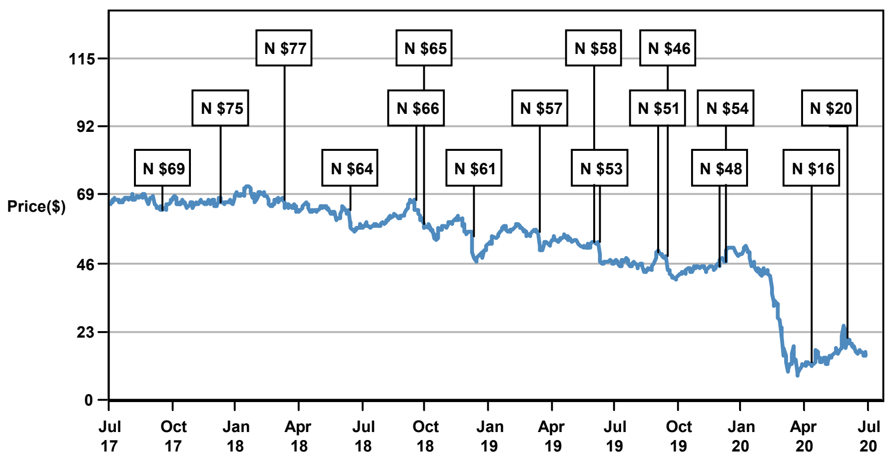
Carnival Corporation (CCL, CCL US) Price Chart



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage May 05, 1999. All share prices are as of market close on the previous business day.

Date	Rating	Price ($)	Price Target ($)
26-Sep-17	N	63.50	69
19-Dec-17	N	66.60	75
22-Mar-18	N	67.06	77
25-Jun-18	N	63.53	64
27-Sep-18	N	66.98	66
11-Oct-18	N	59.06	65
20-Dec-18	N	55.01	61
26-Mar-19	N	56.65	57
11-Jun-19	N	53.18	58
20-Jun-19	N	52.84	53
11-Sep-19	N	49.66	51
26-Sep-19	N	48.06	46
09-Dec-19	N	44.77	48
20-Dec-19	N	46.65	54
20-Apr-20	N	12.56	16
11-Jun-20	N	20.59	20

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2020 Community Programs Summary

Program (in $000)	**2020 Revised Budget**	**Core Programs**	**Departmental Expense**	**Notes**
1) Airport Community Ecology (ACE) Fund	522	522	-	
2) Duwamish Valley Community Equity Program	292	292	-	
3) South King County (SKC) Fund	1,500	1,500	-	
4) EDD Partnership Grants	960	960	-	
5) City of SeaTac Community Relief	1,400	1,400	-	
6) Airport Spotlight Ad Program	1,148	1,148	-	
7) Energy & Sustainability (E&S) Fund	150	150	-	
8) Maritime Innovation Center	150	150	-	
9) Tourism Program	2,842	2,056	786	Added $1.5M for Tourism
10) Workforce Development	4,403	3,832	571	Added $1.5M for Youth Opportunity
11) Diversity in Contracting (formerly Small Business)	1,331	100	1,232	
12) High School Internship Program	749	485	265	
13) Equity, Diversity & Inclusion	925	112	813	
14) Sustainable Aviation Fuels & Air Emissions Program	40	40	-	
15) Low Carbon Fuel Standard Support	105	105	-	
TOTAL	**16,519**	**12,851**	**3,667**	

Port Memberships and Sponsorships

- The Port of Seattle invests **$2-3 Million annually in memberships and sponsorships** that advance professional development, community partnerships, and advocacy
- Memberships and sponsorships are **budgeted by each division**
- Memberships support employee professional development
- Sponsorships must now be sponsored by an ELT member. Proposed sponsorships are reviewed and ultimately approved by Finance, Legal and External Relations
- As the 2021 budget is being developed each division is being asked to reduce expenses. As part of this exercise sponsorships and memberships are being carefully evaluated.
  - Reducing membership and sponsorship investments to some extent will be necessary

Port Memberships

- In 2019 the Port was a member in 307 organizations
  - 142 of these organizations support community, business and/or trade partnerships
  - 165 membership are with professional employee organizations (ex. American Society of Civil Engineers
- The Port paid **$1,309,554** in dues to local, state and national organizations
  - **The ten largest memberships represent $995,000 or 76% of membership investments**

Membership	Amount
Community partners	$1,086,554
Professional staff support	$223,000
Top Memberships	
WA Public Ports Assn	$260,000
Airport Council Intl	$202,000
Greater Seattle Partners	$150,000
Greater Seattle Chamber	$110,000
AAAE	$76,000
Puget Sound Regional Council	$75,000
American Assn of Port Authorities	$24,500
US Travel Association	$20,000
Airport Carbon Accreditation	$16,000
Manufacturing Industrial Council	$15,000

Port Sponsorships

2020 (YTD)	Amount
Total	**$1,365.956**
Airline incentives	$905,000
Other Top Sponsorships	
Economic Summit	$40,000
Port University	$33,000
Disadvantaged Biz Training	$21,000
Fishermen's Fall Festival	$20,000
Soundside Chamber	$20,000
Pacific Marine Expo	$18,500
SODO Improvement Assn	$15,000
Procurement Assistance Center	$15,000
Highline Small Biz Dev Center	$12,000
World Trade Center Seminar Series	$10,000

2019	Amount
Total	**$2,580,133**
Airline incentives	$1,445,000
Other Top Sponsorships	
Cruise Connections	$75,000
Airport Noise Conference	$60,000
Clipper Round the World	$44,000
Port University	$35,000
Champions of Inclusion	$27,000
Maritime Festival	$24,000
Ag History Project	$20,000
KEXP Deck the Dock	$20,000
Soundside Chamber	$20,000
Fishermen's Fall Festival	$20,000