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# Towards recovery

**Christopher Kanal, Editor**



**T**he Haitian earthquake of January 2010, which claimed the lives of over 200,000 people, was and remains a tragedy on a devastating scale.

Royal Caribbean's decision to continue sailings to its private resort, Labadee, 60 miles from Port-au-Prince, just three days after the disaster, provoked considerable media attention across the globe.

While critics attacked the decision to sail there on moral grounds, Haitians welcomed the cruise industry's return. Royal Caribbean was one of the first outside parties to bring aid to Haiti and has brought considerable amounts of help in the immediate aftermath. The cruise line donated \$1 million, delivering food and water on every call and pledging net revenue from Labadee to the relief effort.

The cruise company has a 30-year relationship with Haiti, a country that relies heavily on the cruise industry for the health of its economy.

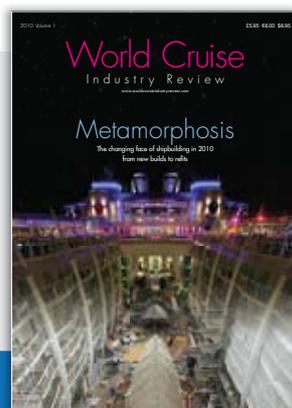
Royal Caribbean's decision to return was simple, courageous and correct. As Adam Goldstein, Royal Caribbean president and CEO tells me, the cruise industry has a central role to play in Haiti's recovery.

Our annual *World Cruise Industry Review* survey shows that while sales are down, passenger numbers are up and the industry continues to grow.

We examine how the cruise sector is emerging from the worst downturn for generations with a roundtable of industry insiders including David Dingle, chairman, ECC, CEO Carnival UK, Pierfrancesco Vago, CEO MSC Crociere, and Cruise Critic's Carolyn Spencer Brown, who share with *World Cruise Industry Review* their analysis of current operations and future trends.

A large proportion of the industry's future health will be determined by the success of new launches such as the *Oasis of the Seas*, which we examine in detail now that the gargantuan ship is in service. Wilson Butler's Scott Wilson discusses the interior design and ground-breaking facilities of the ship that has revitalised the global tourism industry when it most needed it.

In the wake of the *Oasis of the Seas* and in anticipation of the inauguration of the *Allure of the Seas* in December this year, Kevin Douglas, vice-president of technical projects, newbuilds, for Royal Caribbean Cruise Lines, explains how it is easier to fund the building of new ships than renovate existing ones as surplus cash becomes a thing of the past, while Peter Fetten, SVP of refits of Carnival Corporation, discusses the challenge of refitting ships that meet market expectations and demographic trends.



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**Page 29:** Ian Duncan looks at the potential of Asia as a cruise destination and what this means for Europe.

**Page 66:** RCI's Frank Weber discusses the challenges of creating dining options for the *Oasis of the Seas*.

**Page 90:** Phin Foster examines how the cruise sector can respond to the growing threat of piracy.

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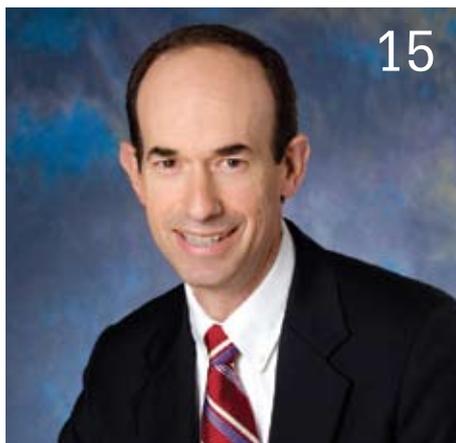
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## Launches

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- **MARCH** Saga Cruise, *SAGA PEARL II*, 18,500t (446 passengers)
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- **APRIL** Celebrity Cruises, *Celebrity Eclipse*, 122,000t (2,850 passengers)
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- **OCTOBER** Cunard Line, *Queen Elizabeth*, 90,400t, (2,092 passengers)
- **DECEMBER** Royal Caribbean International, *Allure of the Seas*, 225,000t, (5,400 passengers)

## Events diary

### Spring and summer 2010

15 -18 March

#### Cruise Shipping Miami

Miami Beach Convention Center  
Florida, US

[www.cruiseshippingmiami.com](http://www.cruiseshippingmiami.com)

25 -27 April

#### Marine Hotel Association

The Peabody Orlando  
Florida, US

[www.mhaweb.org](http://www.mhaweb.org)

31 May - 2 June

#### Maritime Saudi Arabia

Jeddah Hilton  
Saudi Arabia

[www.maritimesaudiarabia.com](http://www.maritimesaudiarabia.com)

7 -11 June

#### Posidonia Exhibition

Hellenikon Exhibition Centre, Greece

[www.posidonia-events.com](http://www.posidonia-events.com)

24 - 25 June

#### All Asia Cruise Convention,

Shanghai Port International Cruise  
Terminal, China

[www.asiacruiseconvention.com](http://www.asiacruiseconvention.com)

# Up in a downturn

*World Cruise Industry Review's* annual survey reveals the top operators and anticipates strong growth despite the global downturn.

**T**he cruise industry continues to grow as more and more people take to the seas but the biggest surprise of *World Cruise Industry Review's* survey was the scale of passenger growth, particularly in light of the global financial slowdown, reaffirming the recent comments of Richard Sasso, the chairman of the marketing committee of the Cruise Lines International Association (CLIA) and the president and CEO of MSC Cruises US, that: "We are not recession-proof, but we are recession-resistant."

Over 13 million people took a cruise in 2009, an increase of 3.3%, year-on-year. It's an impressive performance from a segment of the tourist industry that has weathered not just the downturn but rising unemployment, erratic fuel prices and swine flu. In 2010 the number of sea-goers is expected to hit 14.3 million, particularly as new markets in Europe and Asia open up. Rapidly expanding MSC Cruises is concentrating on building up its European base. In January 2010, it was announced that the cruise line is to base the 60,000t ship *MSC Opera* in Southampton, UK, the first time it has ever operated in the country.

In 2009, CLIA operators alone introduced 14 new ships representing a total investment of \$4.7 billion in 2009. Twelve new vessels are set to follow this year. Significantly, the new ships continue to reflect the diversity of liners and cruise

experiences available to the travelling public, ranging in capacity from 101 passengers to 5,400.

Carnival Corporation, has five new launches in 2010, up from two in 2009, totalling 6,902 new berths across its 11 brands, including Costa Cruises' *Deliziosa* (2,260 passengers), Holland America Line's *Nieuw Amsterdam* (2,100 passengers), Cunard Line's *Queen Elizabeth* (2,092 passengers), and Seabourn Cruise Line's *Seabourn Sojourn* (450 passengers).

In total, 17 additional cruise ships are scheduled to enter service between March 2009 and June 2012, which is expected to result in an increase in passenger capacity of 38,056 lower berths.

In 2009, Carnival Corporation's revenue was down from \$14.646 billion in 2008 to \$13.2 billion but the cruise operator carried a record-breaking 8.5 million passengers in 2009.

The second-largest cruise operator is not doing so badly either. In 2009, with the *Oasis of the Seas*, which can carry 5,400 passengers, Royal Caribbean Cruises increased capacity to 81,000 across its five brands. Revenue for 2009 was down to \$5.9 billion from \$6.532 billion in 2008.

In April, Celebrity Cruises' *Celebrity Eclipse* (2,850 passengers) will enter service followed in December by Royal Caribbean International's 5,400-passenger *Allure of the Seas*, which is scheduled for Caribbean sailings. ■

# 2010 survey results:

The top cruise lines ranked according to their total passenger capacity as of March 2010.

World Cruise Industry Review Survey 2010							
Cruise Line	Head office	Total passenger capacity	Total annual passengers (2008/09)	Number of ships (March 2010)	Number of brands (March 2010)	Ports of operation (March 2010)	Total sales (2009)
Carnival Corporation	Miami, Florida, US	180,000	8.5 million	93	11	500+	\$13.2 billion
Royal Caribbean International	Miami, Florida, US	81,000	3,970,278	38	5	261	\$5.9 billion
MSC Crociere	Geneva, Switzerland	29,760	1,085,000	11	1	642	\$319 million*
Tallink Silja ABP	Tallinn, Estonia	23,750	8.1 million	9	3	9	\$1.1 million
Norwegian Cruise Line	Miami, Florida, US	23,000	1,318,441	10	1	N/A	N/A
Louis Cruises	Nicosia, Cyprus	9,789	190,000	11	1	6	\$258 million
Hurtigruten	Fort Lauderdale, Florida, US	7,874	408,000	14	3	101	\$500 million
Genting Hong Kong (Formerly Star Cruises)	Hong Kong, China	7,000	N/A	5	1	21	N/A
Thomson Cruises	Luton, UK	5,498	200,000	4	2	140	N/A
Disney Cruise Line	Celebration, Florida, US	5,400	160,000*	2	1	18	\$17.3 million*
Prestige Cruise Holdings	Miami, Florida, US	3,942	242,904	6	2	337	\$1.4 billion
Fred Olsen Cruise Lines	Ipswich, Suffolk, UK	3,915	108,000	4	1	260	\$167.4 million
Crystal Cruises	Los Angeles, California, US	1,992	37,883	2	1	174	N/A
Phoenix Reisen	Bonn, Germany	1,900	32,000	5	1	150	\$158.9 million
Birka Cruises	Stockholm, Sweden	1,800	848,000	1	1	4	\$87.9 million

\*Estimate

# Fast forward



Cunard Line's upcoming *Queen Elizabeth* is the operator's third new ship in six years.

Having weathered the worst of the economic storms of the last 18 months, the cruise industry is focusing on growth and new opportunities. Orla O'Sullivan talks to CLIA's **Terry Dale** and **Richard Sasso** about the positive outlook for 2010.

**F**or cruise operators, 2009 was a challenging year, although they fared better than most by keeping ships full, costs low, and finding new market niches. Ship and passenger numbers grew, albeit with operators forced to lower fares to attract cash-strapped consumers.

As Terry Dale, president and chief executive officer of the Cruise Lines Industry Association (CLIA) notes, cruise customers are starting to book earlier than ever, which should allow operators to hold firm on 2010 prices, while reaping the benefits of cost savings put in place last year. "2009 provided us with the shortest booking window ever,"

he says. "A year ago, 39% of passengers were booking less than four months out."

North America accounts for roughly three-quarters of the global shipping industry. Here, the cruise industry more than held its own during the worst of the downturn. Indeed, 11% of travel agents polled by CLIA expect this year to be the best ever for the global cruise business, as cruising continues to rank number one on many counts, including perceived value for money.

A more representative 75% of respondents to CLIA's annual agent survey expect cruise sales to increase this year, typically by 15%.



Unique to the industry: *Oasis of the Sea's* Central Park.

The cruise industry can look forward to growth in the overseas markets, initially in Europe. The UK market in particular will see considerable developments in 2010. In October, Cunard Line will accept the 90,400t *Queen Elizabeth* into its fleet, while MSC Cruises will base the 60,000t *MSC Opera* in Southampton, the first time MSC Cruises has operated in the UK.

The total number of cruise passengers is forecast to grow by 6.4% to 14.3 million people in 2010. However, growth in passengers coming from locations other than the US or Canada should be more than double what CLIA expects in North America, at 14.3% versus 7%. International passengers will form one third of the global cruise business, up from one quarter last year, and less than one tenth in 2000.

Dale believes a key factor in the likelihood of people taking a cruise is how close they live to a port to sail from. More than half of US residents are within driving distance of a cruise port and Europe is fast catching up.

"Asia, South America and the emerging markets are taking a little longer to develop infrastructure such as ports and sales agents, but once everything is in place they will be huge," he explains.

According to CLIA's agent survey, the Mediterranean tops travel agents' list of anticipated cruising 'hot spots' this year. This means that the Mediterranean leads areas of future interest to consumers, although the

Caribbean, followed by Alaska, continues to dominate current bookings.

Another element favouring Europe is the newfound popularity of riverboats. For Dale, one of the most dramatic findings from the survey was that 34% of agents identified consumers as highly interested in river cruising.

"We have three riverboat members within the last year and a half: AMA [Waterways of Chatsworth, California], Uniworld [Boutique River Cruises of Los Angeles] and Avalon Waterways [of Littleton, Colorado]," he says.

He also expects sea cruises to get a boost from river cruisers branching out. "It'll be interesting to watch whether the audiences are separate or cross the line."

Theme/affinity cruises are growing in popularity, while existing tendencies towards spa culture, multi-generational family trips, and younger customers will continue. "Some lines are getting more than 40% of their business from affinity groups," he says. "Historically it was 20%." Music, food, and wine-themed cruises are particularly popular, and there is a broad range on offer. "I was on a knitting cruise recently," Dale says, "I felt really safe!"

**“Asia, South America and the emerging markets are taking a little longer to develop infrastructure such as ports and sales agents, but once everything is in place they will be huge.” Terry Dale**

Couples are the dominant demographic while baby boomers and repeat customers are the biggest growth segment, but Dale believes that the increasingly younger profile of cruise customers is not due simply to more children on board. The latest CLIA age research shows that the typical passenger in 2008 was 46, down from a median age of 49 in 2006.

#### Supply and location

"Maybe we're not recession proof, but we're certainly not in a recession," says Richard Sasso, president and CEO of MSC Cruises,

#### Trends on the horizon

- strong interest in group and affinity travel (for some lines more than 40% of business)
- popularity of theme cruises, notably music, food and wine cruises
- some lines are increasing their line up of on-board speakers for enhanced enrichment programmes
- cruise lines expect baby boomers and repeat cruisers to be the biggest growth markets
- emerging markets to develop further.

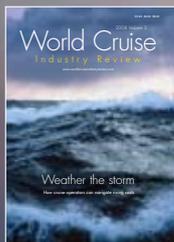
US, and chairman of CLIA's marketing committee, forecasting that cruise operators will thrive this year because of the industry's diversity and ability to reinvent itself. "There will be 26 new ships coming into service between 2010 and 2012, and they're going to be full," Sasso says. Indeed, occupancy has not been an issue although pricing is, with yields down 10% to 15%.

"The good news is that prices are creeping back up and people are booking further out," he explains.

According to Sasso, 14 ships added at a cost of \$4.7 billion in 2009 produced a net 2.8% in supply, accounting for others taken out of service. But the increase in supply created 3.3% more capacity, which is consistent with the trend that has seen the space allotted each passenger double, and features, such as balconies, which were once rarities, become semi-standard.

Sasso believes cruise operators have an advantage over others in the travel industry. "We can move our ships to where the markets are," he says. Carnival Corporation is a case in point, having recently stated that it would continue focusing on Europe in 2010 with "four of six new ships" scheduled for its European brands. Carnival's European revenue fell just 6% last year, versus a 13% drop in North America.

However, Carnival forecasted yield improvements in the second half of 2010, observing late last year that pricing was already running ahead of earlier lows. ■



For expert opinion on how to navigate rising costs in a downturn, read our special report in **World Cruise Industry Review 2008, Volume 2.**

How is the cruise sector emerging from the worst downturn for generations? Industry insiders **David Dingle**, **Michael Bayley**, **Pierfrancesco Vago** and **Carolyn Spencer Brown** share with *World Cruise Industry Review* their analyses of current operations and future trends.

# After the storm

**David Dingle, chairman, ECC, chief executive, Carnival UK**

Last year was an unprecedented time in the cruise industry, one in which pricing inevitably suffered because of the economic downturn. Nevertheless, we began 2010 with a feeling that we have survived the worst and buoyed by the fact that while bookings have come in uncharacteristically late, they have not been as low as we may have feared.

For 2010 there are signs of increased demand although it is too early to say if we are returning to full health. While consumers are beginning to show more confidence, they are still delaying their decision to book.

The key question is whether the cruise industry will be brave enough to extrapolate 2009's experience into 2010 by not overreacting to the uncertainty of a later booking pattern but instead holding out in the expectation of firmer pricing from those late bookings.

The cruise sector is an important part of the European maritime industry and has made a significant contribution to the European economy: 21.7 million passengers

visited European ports during 2008, with the industry contributing 311,512 jobs, a 66% increase compared with 2005. The total value of goods and services generated has increased by a staggering 69% in the last three years to more than €32 billion.

We have also seen an increase in the amount passengers spend. In 2008, the total passenger on-shore spend was €2.7 billion, a 69% increase over 2005. This meant €106 was spent per visit at turnaround ports and an average of €57 was spent at ports of call.

Europe has acted as a magnet, drawing cruise ships from North America, which, together with European fleets, led to a significant increase in the number of passengers – 4.7 million – joining their cruises in 2008 from a European port, a 68% increase on 2005. The European cruise industry has contributed €14.2 billion in direct expenditure, with cruise lines spending €5.1 billion on services, supplies and equipment.

The number of cruise ships operating in Europe in 2008 rose to 192, an increase of 35% from 2005. Europe is the world leader in building cruise vessels and during 2008, the

industry spent €5.2 billion on the construction, repair and maintenance of cruise ships. The cruise model is a stable one. Even in this economic downturn, capacity has grown and a full-ship business model will deliver increasing economic output in Europe.

With the introduction this year of new ships dedicated to the European market, I am confident of continued passenger growth, although not at such a frenetic pace as the past three years.

**Michael Bayley, senior vice-president, international, Royal Caribbean International**

The cruise industry continues to be resilient, but obviously not immune to the downturn. Last year was a painful one, with net revenues down 14%, yet the industry has experienced less revenue decline than other comparable industries.

Cruising has always represented excellent value for money and there has never been a better time to cruise. This year is off to a promising start with occupancy rates and pricing levels trending upward, suggesting

2010 may be stronger than many had predicted in 2009.

We ended last year on a positive note with the introduction of the *Oasis of the Seas*. Its inaugurals went well and customer satisfaction during the first cruises reached new highs. We are equally excited about the arrival of its sister ship, the *Allure of the Seas*, later this year. The unprecedented level of variety and range of options for guests to choose from, coupled with Royal Caribbean's Gold Anchor Service, have made the *Oasis* class of ships truly amazing. Celebrity Cruises will be growing significantly over the next three years and the success of the *Solstice* class is exceptional. We are looking forward to the introduction of the *Celebrity Eclipse*, our first ship dedicated to the UK market, in the spring. We are also excited about advancing the Azamara Club Cruise brand, especially in our international markets.

One of Royal Caribbean's long-term strategies continues to be centred on growing brands globally. Cruise holidays have been increasing in popularity over the past 40 years. At first, the focus was on building the North American market, but the last decade has seen a shift towards the European market, which has been expanding by about 10% annually for the last 12 years. When it comes to choosing holidays, Europeans are recognising the value proposition, quality and variety of choices a cruise can offer.

Looking at the fundamentals, it is clear that Europe's full potential has not been reached: it has a population of approximately 500 million compared with 300 million in the US, and most Europeans have more holiday time than their US counterparts. There are also excellent and easily accessible cruise destinations. Europe remains a key area of expansion and I would expect the European industry to grow at a similar rate to the North American market, which would take the total number of European cruisers to about ten million by 2020.

Developing markets such as Asia and Latin America offer excellent long-term growth potential and it's impressive to witness the emerging economies and individual wealth being generated there. As investments in infrastructure are made these markets will become significant destinations in the future.

**Pierfrancesco Vago,**  
chief executive, MSC Cruises

The industry is well positioned to come through the downturn and while some

companies have looked at the economies of streamlining, MSC Cruises is on a different level. We are a young company and still expanding.

In 2009, we took delivery of the *MSC Fantasia* and *MSC Splendida*, and we look forward to the arrival of the *MSC Magnifica* in March this year.

Over the last five years, MSC has had an average annual growth rate of 36%. Last year we carried over a million passengers and this year we hope to carry more than 1.2 million. With such anticipated growth, it's crucial to invest in marketing in order to communicate to our customers and project our brand to the right market.

Using our 42 offices, we are marketing our fleets and destinations throughout the world in line with their different seasonalities and cruising requirements.

MSC Cruises is targeting all holidaymakers, not just regular or repeat cruisers. It is clear that the investment in marketing is working as more people become familiar with cruising and the number of booked cruises increases. People of all demographics are reviewing their holiday budgets and discovering the value for money that cruises offer: passengers are offered meals five times a day, and there is a huge range of entertainment, as well as spas, gyms and other activities to enjoy on board. What's more, as many of MSC Cruises itineraries visit a different port every day, cruising is the ideal way to see many destinations while staying in luxury and comfort.

MSC has the most modern fleet in the world with many amenities and facilities for people of all ages to enjoy. We cater for families by allowing children and young people up to the age of 18 to sail for free, with costs only for flights, transfers and port taxes. The economic downturn has given the industry an opportunity to encourage first-time cruisers because cruising is good value for money, and it is my belief that if we deliver an excellent product, these first timers will become repeaters.

We have seen a definite change in booking trends over the past 18 months, depending on the region and the season. For example, in the US, there have been a number of cancellations due to passengers' insecurities about money. This has created a trend to book much closer to the departure date, eliminating the mid-booking trend. Generally, people are still taking holidays.

Although the economic crisis appears to have peaked, it doesn't necessarily mean that the market will recover at a fast pace, although it is possible that we will see an upswing by the end of 2010.

**Carolyn Spencer Brown,**  
editor-in-chief, [cruisecritic.com](http://cruisecritic.com)

While everyone felt the negative effects of the downturn, it has produced some benefits for consumers. Lines have been aggressive in their deals, with great discounts for solo travellers, who would normally pay double-occupancy prices, and for people considering luxury cruises.

Unusually, the economy has impacted the top-tier earners, so they've not been travelling so much. While still more expensive than the 'big ship' voyages, luxury deals are so good that people who previously thought they could not afford them are finding that they can. This sector has been stagnant for a long time: you could go on a luxury cruise and pay upwards of \$1,000 and still not get a balcony because the ships were so old there were simply none on offer.

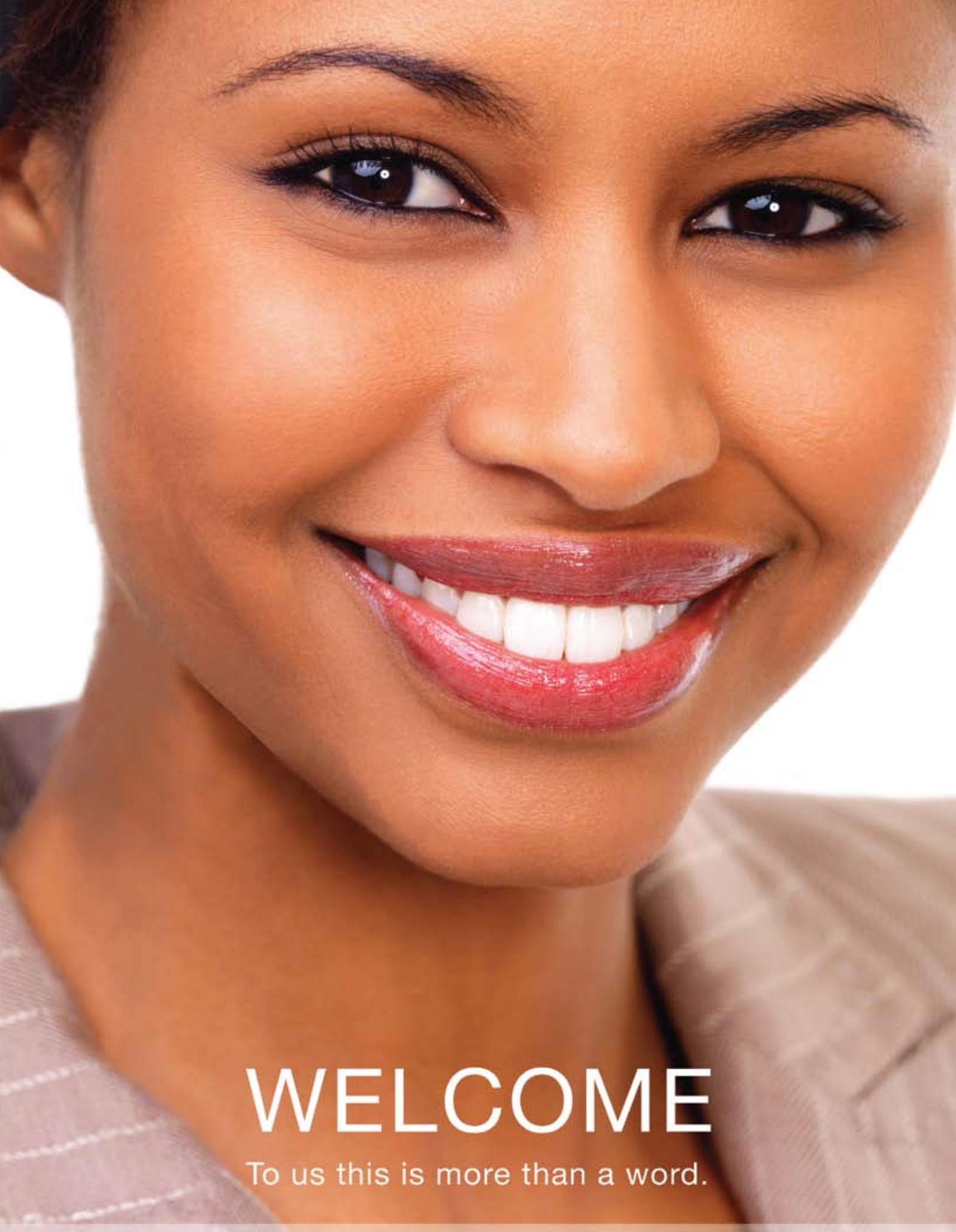
However, anybody who thinks that cruising is still stuffy, expensive and formal need only to experience the *Oasis*, which is a great signature for cruising. The current roster of new ships come with exciting features and amenities, but some lines are charging extra fees for services that were previously included in fares.

Most passengers expect to pay extra for unusual services and features such as top-notch dining, but too much of this 'nickel and diming' is not a good idea.

Passengers are spending less on board and lines should see this as a warning, especially with rumours that fuel surcharges are coming back. Fares are lower and people are getting a great deal, but it is a perception issue and having to pay extra could put people off cruising.

Of course, this downturn will end. There have been so many efforts to stimulate the economy and give people confidence that they can relax and take their holiday.

Cruising is moving away from being a niche form of travel to one that is mainstream and there is potential for growth. In the near term, this shows strong potential, but the long-term prospects will be a different story if lines hold back from ordering new ships. If this is the case, by around 2012 the industry will plateau. ■



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**Adam Goldstein**, president and CEO of Royal Caribbean International, talks to Christopher Kanal about a pivotal few months in the history of the cruise operator as it launched the world's largest cruise ship and responded to a humanitarian disaster following the January 2010 earthquake in Haiti.



Goldstein reports growth in "at least the 30 top countries".

**Christopher Kanal: Can you give an update as to how your relief efforts are proceeding in Haiti?**

Adam Goldstein: We are taking what happened in Haiti very seriously. It is a daunting challenge for everyone and we are very involved. We have a 30-year relationship with Haiti and as one of the main parties involved in the country we need to help. Every RCI ship that is going to Labadee in Haiti is transferring significant amounts of supplies. To date, 16 RCI and Celebrity Cruises ships have called at Labadee delivering more than 160 pallets of food, water and medical relief supplies. In addition, Royal Caribbean has raised more than \$475,000 to donate to relief organisations dedicated to helping Haiti.

**How do you respond to the criticism you have received for continuing cruises to the country?**

I don't think anybody enjoys public criticism but we knew we were doing the right thing. Everybody in Haiti and everyone in positions of authority related to the aid effort, everybody without exception wanted us to keep going there. The implication of not going would be to

hurt the Haitian people and that did not make too much sense to us.

I'm very proud of our efforts and have seconded our staff to Paul Farmer [the UN's deputy special envoy to Haiti], former president Bill Clinton and the UN Special Envoy Group who are doing a number of projects, including constructing a warehouse and a command and control centre for the distribution agencies to offload and pick up supplies. In time, the Haiti disaster may

diminish in public consciousness around the world but it won't fade for us.

**How do you see the cruise industry evolving in the next five years?**

The evolution of the cruise industry is going to become more mainstream. In the past, when we talked about cruising becoming more mainstream we were generally talking about the US, now we

**“Our ships are destinations in themselves that we match up with geographical destinations to create a very compelling cruise experience.”**

mean around the world. In every major tourism market cruising is beginning to play a role. In markets such as the UK, it is already playing quite an important role. In almost every developed market, cruising is becoming one of the holiday choices that people are contemplating. In five years' time the industry will be a lot more global than it is today.

RCI is seeing healthy growth in at least the top 30 countries. I believe that we are

the world's most international cruise line. We win almost every award in the world for the top cruise lines in every market, which demonstrates that we are respected across the globe in the product we deliver to our guests. Our ships are destinations in themselves that we match up with geographical destinations to create a very compelling cruise experience.

There is still enough room in the market for cruise lines to be pursuing their own agendas. The amplification of choices, whether they are land-based or water-based, is astounding today. Cruising is a small piece of that action, and is still collectively only 2% of the holiday market. One of our goals is convincing consumers that cruising will deliver the highest level of satisfaction possible. RCI is able to cater to a global audience and can bring our ships anywhere. As we speak we have the *Legend of the Seas* in Singapore, *Rhapsody of the Seas* in Australia, *Splendour of the Seas* and *Vision of the Seas* in Brazil, *Brilliance of the Seas* in Dubai and *Enchantment of the Seas* off Colombia. We are able to do these things at a high level and still have the *Oasis of the Seas*, *Freedom of the Seas* and *Liberty of the Seas* doing things that we have traditionally done. We have been growing for 42 years and we expect to continue.

**What are you doing to attract a new generation of cruisers?**

In the US, we bring out ships that have captivating features so you can have an active, comfortable cruising vacation in your 20s and 30s. If you know *Oasis of the Seas*, you don't need to wait until you are older to take a vacation on board. You are going to have a fabulous time right now. In other parts of the world, we are happy to have people of all ages with us, but in

general we are attracting an older clientele. It is like what North America was 15 years ago, but today we are saying that cruising is not as you imagined and we are bringing a fresh face to it.

I believe the *Oasis of the Seas* and *Allure of the Seas* will contribute towards attracting a new generation. The *Oasis of the Seas* generated global publicity on a level that was surprising even for us. When the *Allure of the Seas* comes out at the end of the year, we will have another burst of publicity.

**Oasis of the Seas is generating very comfortable revenues despite the economic downturn. Do you see this continuing?**

We didn't have the *Oasis of the Seas* constructed with the purpose of her coming into service during the downturn, but even now she has done remarkably well. There isn't anything currently under construction or under contract in the world in terms of cruise ships that is even attempting to compete with the *Oasis of the Seas* and *Allure of the Seas*. It will be years until these

comes to the Bund in Shanghai, this gleaming white shipper, bigger than anything around her, is an ambassador for the industry.

**What is the company's main financial objective for 2010?**

We want to return to at least the level of revenue yields we were experiencing before the downturn as fast as we can. That will clearly take time. It will take more than this year to recover the deficit that we experienced. That is the huge priority.

Clearly, we have to operate as efficiently as possible under the circumstances and make sure every dollar that we spend is for a purpose and guarantees a return.

We don't take any new ships for granted. The *Allure of the Seas* needs to be introduced in a very positive way.

Like every year, 2010 is full of opportunities and challenges. It is a difficult time economically, but things seem to be getting better so we have a lot of faith in the long-term outlook for cruises.

are very exciting from an environmental standpoint, and we are trying to figure out which ones.

There are always people who are not going to be satisfied, but we believe that most reasonable people understand that we do pursue continual improvements and that we do deliver.

**Do you have a favourite experience on board the Oasis of the Seas?**

Everybody is giving me the credit for the jogging track and the table tennis facilities. I didn't ask for one but my colleagues know what I like to do and they took it very seriously, so now we have the greatest jogging and table tennis facilities that have ever been on water! ■

“Big works for us. We don't pontificate and say this is the only way it can and should be done. We like to build multi-faceted cruise ships with lots of options, varieties and choice that allow people to programme their own vacation as they see fit.”

ships have rivals. They are clearly going to be the flagships for the industry for the foreseeable future. Big works for us. We don't pontificate and say this is the only way it can and should be done.

**So, is big always beautiful?**

We like to build multi-faceted cruise ships with lots of options, varieties and choice that allow people to programme their own vacation as they see fit. Our ships are constructed for lots of people to have an extraordinary time and that is what happens. The best thing about the cruise industry is the level of choice on offer. There is an incredible array of options and you don't have to do the same thing twice.

The *Oasis of the Seas* and *Allure of the Seas* are our flagships and exemplify the best expression of our brand. Both are great ambassadors for the industry but so is the *Legend of the Seas*. Every single time it

**And what steps are you taking to improve the environmental record?**

The industry understands that our environmental record is of the utmost importance. We believe we are world leaders in many respects from our management of waste streams to constantly pushing for greater energy efficiency. But you need to be better tomorrow than you are today.

There are always new challenges, whether you talk about improving the ship propulsion machinery, shipboard systems or the way we run from point A to point B. Everyone can read our Environmental Stewardship Report online because we are incredibly proud of what we do.

We explore many avenues but there is big difference between exploring an avenue and contracting to have something on board your ship. I'm pretty sure that in a five-to-10-year time frame, the cruise industry is going to be involved in opportunities that

**Profile**

**Adam Goldstein** was named president of Royal Caribbean International in February 2005, and in September 2007 expanded his role to include CEO. Goldstein oversees fleet operations, sales and marketing, brand development, supply chain management, government and community relations and Royal Celebrity Tours. Prior to his appointment, Goldstein served as executive vice president, Brand Operations, with similar responsibilities, from 2002–05.

He has been with the company since 1988. Prior to 2002 he held the positions of senior VP, total guest satisfaction; senior VP, marketing; VP, marketing; VP, international sales and marketing; director, market development; and corporate secretary to Royal Caribbean's board of directors.

Goldstein serves on the Board of Trustees of Our Kids, Inc, a non-profit organisation with oversight responsibility for foster care and related services for thousands of children in Florida, US. He is also a member of the Energy Security Leadership Council, which is dedicated to spurring a comprehensive solution to US energy security. Goldstein also serves on the board of directors of the US Travel Association.

In 1998, *Advertising Age* named Goldstein in the 'Marketing 100', the magazine's annual round-up of the best and brightest American and international marketing minds. He graduated with honours from Princeton University, majoring in public policy at the Woodrow Wilson School of Public and International Affairs. He has a Harvard law degree and an MBA with distinction from INSEAD, the European business school in Fontainebleau, France.



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# The cost of luxury

With the cruise industry emerging from the global downturn, the luxury segment has sought to highlight value while maintaining exclusivity. Phin Foster talks to Crystal Cruises CEO **Gregg Michel** about how the cruise line is working to keep its sparkle.



Crystal Cruises CEO Gregg Michel, part of the cruise line's original management team.

As the travel industry deals with the effects of the global downturn, an area of particular interest for analysts and insiders is the luxury segment. With belts being tightened and leisure expenditure more closely monitored than ever, one could be forgiven for thinking that the concepts of luxury and exclusiveness jar somewhat with the prevailing mood of austerity and

prudence currently dominant across much of the globe.

Conversely, some argue that the luxury sector by its very nature should be immune to the prevailing winds of the economy; products and brands that offer genuinely exclusive experiences and appeal to the more affluent consumer maintain a cachet and a client base unwilling to downgrade.

As is often the case in such debates, the truth lies somewhere in the middle. While research undertaken by independent ratings and research organisation the Luxury Institute has found that 76% of Americans with a net worth of between \$1 million and \$10 million are cutting back on luxury items as a direct result of the financial climate, an emphasis on value has seen consumers trade up as well as down.

The test for luxury operators therefore becomes how to promote that concept without undermining the nature of the brand. It is a question that has been posed repeatedly to Crystal Cruises CEO Gregg Michel since the start of the downturn.

"There's no question 2009 was a challenge for us," he says. "The fluid market has been hit hard and we're working a little harder to obtain our business. Like all categories within the luxury sector, the climate has changed markedly."

As a 26-year cruise industry veteran and part of the original 1988 management team that developed the Crystal product, Michel is under no illusion as to the scale of the task.

"All our research tells us that consumers are buying down, and that includes affluent consumers," he says. "It is difficult to get people to buy up, something that in the past few years was far easier for us. We were extremely focused on growing our international business long before the economic downturn and that is standing us in good stead.

"In the past such diversification could be a help: if the US was struggling there would always likely be other parts of the globe where things weren't so bad. Unfortunately, this time around we are facing a global crisis. We also saw the dollar gain a little value over the same period and our product suddenly became slightly more expensive in those markets. It was tough."

The dollar has since backed off a little and Crystal is investing time and money in reassuring its existing client base and convincing potential guests that the brand

and product remain as strong as ever. “Our advertising and direct mail is receiving more of a financial push these days,” admits Michel. “It demands increased effort to persuade a potential customer to book a cruise and we’re also committing far more spend into new markets. We’re also focusing a lot of our energies staying in touch with our existing customer base – the Crystal Society – letting them know what’s going on, what we can offer and that we look forward to welcoming them back on board.”

Potential benefits of the Crystal Society programme include shipboard credits, upgrades and even free cruises. The greatest damage one can do to a brand in a difficult climate, particularly at the higher end of the market, is to undermine the product through deep discounting. As many operators have found to their cost, it takes far longer to claw back one’s status point than it does slashing one’s price point.

“The fluid market has been hit hard and we’re working a little harder to obtain our business. Like all categories within the luxury sector, the climate has changed markedly.”

### Adding value

Michel is more than aware of the perils associated with such an approach and focuses instead on the idea of adding value. “Price is what you pay for something, value is what you get,” he says. “We try not to discount. Price integrity goes hand-in-hand with brand strength. In a difficult marketplace, however, it is important to demonstrate that the guest is getting more for their spend.”

As an example of such an approach, Michel cites Crystal’s all-inclusive As You Wish promotion, a spending credit of up to \$2,000 that can be used by guests in a multitude of ways.

“It allows the customer to choose what their experience will be, whether that is fine wines, spa treatments or shoreside excursions, adding value to the product while maintaining price integrity,” he explains.

“Giving guests more for their dollar is very different to merely discounting.”

If Michel’s house appears to be in order

in this regard, how great a danger does he believe deep discounting poses to the industry at large? “It’s an easy way to go,” he admits.

“The initial instinct can be to cut prices in an effort to appeal to your core audience. However, because we are such a value-added industry, with so many things to offer on board and a great emphasis on choice, there is a message that we can get across which is particularly relevant at times such as these.”

The sentiment is heartening and may account for why the cruise industry has come through the past 18 months less scathed than its shoreside resort competitors. It is also something that Michel and his team will continue to emphasise regardless of the financial climate.

“Do our guests recognise the value in the various offerings available? I hope so,” he says. “Could we do a better job of conveying that message? We’re often

talking about intangibles such as how the experience is delivered, service levels, safety and social responsibility. Communicating these ideas is extremely important.”

As CEO, the importance of communication is something that plays heavily on Michel’s mind and the message being conveyed to stakeholders within the organisation is equally important to that directed towards the consumer base.

“It’s one of the greatest challenges for any organisation and that’s the case in good times as well as bad,” he says.

“We have these ships out there sailing the world and it is vital that our crews are kept fully up to date with any company developments.

“People have far more questions about the financial status of the company and it is only natural for staff to feel more sensitive with the financial climate the way it is. We must address these concerns head on.”

### Time to shine

Fundamental to achieving success in this regard is an accentuation of the positive and an ability to convey a message that looks beyond immediate concerns and further into the future. Crystal was voted best in class for large ships in operation in last year’s Travel & Tourism list for the 14th time in succession and is enjoying its 15th year as Condé Nast Traveller’s best cruise line.

“These awards are a validation of our product and are the kinds of endorsements that are particularly important at a time when potential customers are putting in far more research prior to making a commitment,” Michel explains.

“Guest satisfaction levels also remain extremely high and that is something we must not lose sight of.”

Maintaining these standards demands investment and it is difficult to envisage a greater statement of intent than the \$25 million revamp of the *Crystal Symphony*. New interiors and deck space on the 50,000t ship include redesigned penthouses, pool areas and restaurants.

“It would be easy to delay a capital expenditure of this nature and justify it as a result of the financial climate,” acknowledges Michel. “However, now is the time to prove to our various constituencies that we are maintaining our product and are prepared to spend money to do so. This is when we have to shine and demonstrate a belief in our brand and core values.

“If you’re not in a position to benefit as soon as the market picks up, you’re going to be in trouble.”

Michel is in little doubt that it is a question of when rather than if that happens and believes Crystal’s standing as a luxury brand will enable the company to benefit quickly. “The affluent customer base still has discretionary income, only their purchasing psychology has changed,” he explains. “We are well placed for when such a shift occurs in the opposite direction.”

The announcement of its 2011 itinerary, visiting 163 ports in 67 countries with increased emphasis upon departures from North America, is a further statement of intent by the organisation. Michel and his team’s belief in their value proposition should reassure other prestige brands within the cruise industry and beyond. ■

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The port of Valletta in Malta extended its waterfront quay in 2009 in a €2 million project.



# Modernising the Med

Ports are struggling to keep up with the cracking pace of growth set by the global cruise industry, especially in locations such as the Mediterranean. Jodie McLeod talks to **Luigi Pastena** from MSC Cruises about the challenges created by outdated port infrastructure and the way forward for the cruise sector.

**T**he cruise industry is entangled in a love-hate relationship with many ports in the Mediterranean that are not keeping pace with the industry's rapid and continuous growth.

Cruise companies' ships, fleets, passenger numbers and ports of call are all increasing at a rate disproportionate to their on-shore partners in tourism, creating problems with ship congestion, management of berth availability, discontinuity between the at-sea and on-shore experience for passengers and frustrations for cruise ships and cruisers alike.

#### Keeping up with the cruises

Growth and advancement for the cruise industry is imminent. The Cruise Lines International Association (CLIA) forecasts

that a total of 14.3 million passengers will cruise in 2010 (an increase of 6.4% on 2009), while the industry will also welcome 26 new ships between 2010 and 2012. In the Mediterranean, Italian cruise line MSC Cruises has recorded a four-fold rise in passenger numbers in the past six years.

Port captain of MSC Cruises Luigi Pastena says that lagging port infrastructure is in dire need of attention if the cruise industry is to stay at full speed ahead.

"My concern is that many piers are the same as they were 30 years ago when the maximum length of a cruise ship was about 200m and a berth could accommodate up to two vessels," he says. "Nowadays, the same berth is

used by two 300m-long vessels, with relatively poorer structures."

While many ports are investing in new infrastructures, in an industry where time is of the essence and ship owners are already envisaging the next generation's bigger and better new builds, port projects simply aren't moving fast enough.

A big problem is that projects are often cancelled or delayed due to political issues or mismanagement, or are only approved when cruise companies actually build the bigger vessels that were designed several years prior. Pastena gives an example of a project initiated by MSC in 1972, in which a new pier was to be built in an existing port. After years of delays, the project was only just completed in 2008. "The result is that now it is inadequate for the new generation of vessels," says Pastena.

It seems the moment ports become equipped to cater for the cruise industry of the present, the present is in the past. The availability of berths, and management of

this availability, is another major issue that needs to be addressed.

"[They need] to start limiting the berths' availability if they cannot provide adequate berth facilities," says Pastena. "We would also like the ports to keep us informed during the study of the planning so that congested dates can be managed," he says.

Upgrades to port facilities are also needed to prevent unnecessary expenditures for cruise ships. Pastena says the fenders and bollards used at many ports in the Mediterranean are no longer adequate for the amount and type of traffic passing through, resulting in broken bollards and related costs that could be avoided.

### Bearing the brunt

Disappointing experiences for passengers at the port level, whether it's due to berthing delays or poor on-shore customer services, have a significant impact on customer satisfaction.

Passenger comment cards gathered by MSC Cruises following an unsatisfactory port of call in the Mediterranean revealed that congestion and poor port structures accounted for 60% of passenger negativity.

**“My concern is that many piers are the same as they were 30 years ago when the maximum length of a cruise ship was about 200m and a berth could accommodate up to two vessels.”** **Luigi Pastena**

Unfortunately for cruise lines, if cruise passengers experience frustrations at the hands of the port, it's the cruise operator that bears the brunt.

"A cruise starts when the passenger closes his house door," says Pastena. "Good infrastructures help the holiday to start the right way. If anything negatively affects his transfer [such as a] traffic jam, flight delay, slow embarkation procedure or loss of baggage, the passenger will already be nervous when embarking and will hold the vessel, the crew and the company responsible for the inconvenience even though it is not due to the bad management of the cruise.

"Passengers only want to enjoy the vacation they paid for and, as a result, the cruise industry is the only one to suffer the consequences.



The Med's port infrastructure is in need of attention, says MSC's Luigi Pastena.

"The problem is that the passengers are not aware of all these port issues and the ports are not aware of the passengers' needs."

### The way forward

Clear and cooperative communication, and strategic and financial partnerships between cruise companies, port authorities,

waterfront quay in 2009 in a €2 million project to cater for bigger cruise ships; while the port of Malaga in Spain is underway with developments for the second phase of its passenger terminal to cater for significant passenger increases (40% in 2009) and to improve embarkation and disembarkation for passengers of larger cruise ships.

Pastena says that new ports entering the market are showing greater levels of cooperation, which is a major attraction for cruise lines looking to expand and diversify their ports of call.

"These are all positive developments," says Pastena, "but we still need to work on the ports where growth is blocked due to political conflicts.

"We appreciate that due to the economical downturn governments do not have a lot of money to invest, but they have to understand that the cruise market is the only one that keeps growing, and with the arrival of 26 new vessels by 2012, they must not miss this opportunity." ■

community leaders and industry associations are the most effective means of bringing about change in the quality of port infrastructure.

But forming such idyllic collaborations, where everyone agrees on the way forward, is easier said than done. "There are a lot of conflicts between institutions over a port's organisation," says Pastena.

"Some ports and organisations such as the European Cruise Council are very cooperative, and some improvements in terms of new bollards, new maritime stations, new piers and new fenders have been made thanks to the pressure that MSC and other companies put on the market," says Pastena.

The port of Barcelona responded to cruise industry demand for increased berthing facilities by investing €15 million in a new Terminal A, which opened in June 2009. The port of Valletta in Malta extended its

### Profile

**Luigi Pastena** is the port captain of MSC Cruises. A graduate of Nino Bixio Nautical Institute in Italy, Pastena has worked with MSC on board cargo and passenger vessels since 1994 with the rank of master and staff captain/master. In 2004 he was appointed port captain. On behalf of the vessel owner, the port captain plans and schedules itineraries, takes care of the port coast, looks after the port operations and selects the agencies in the ports called by MSC Cruises vessels.



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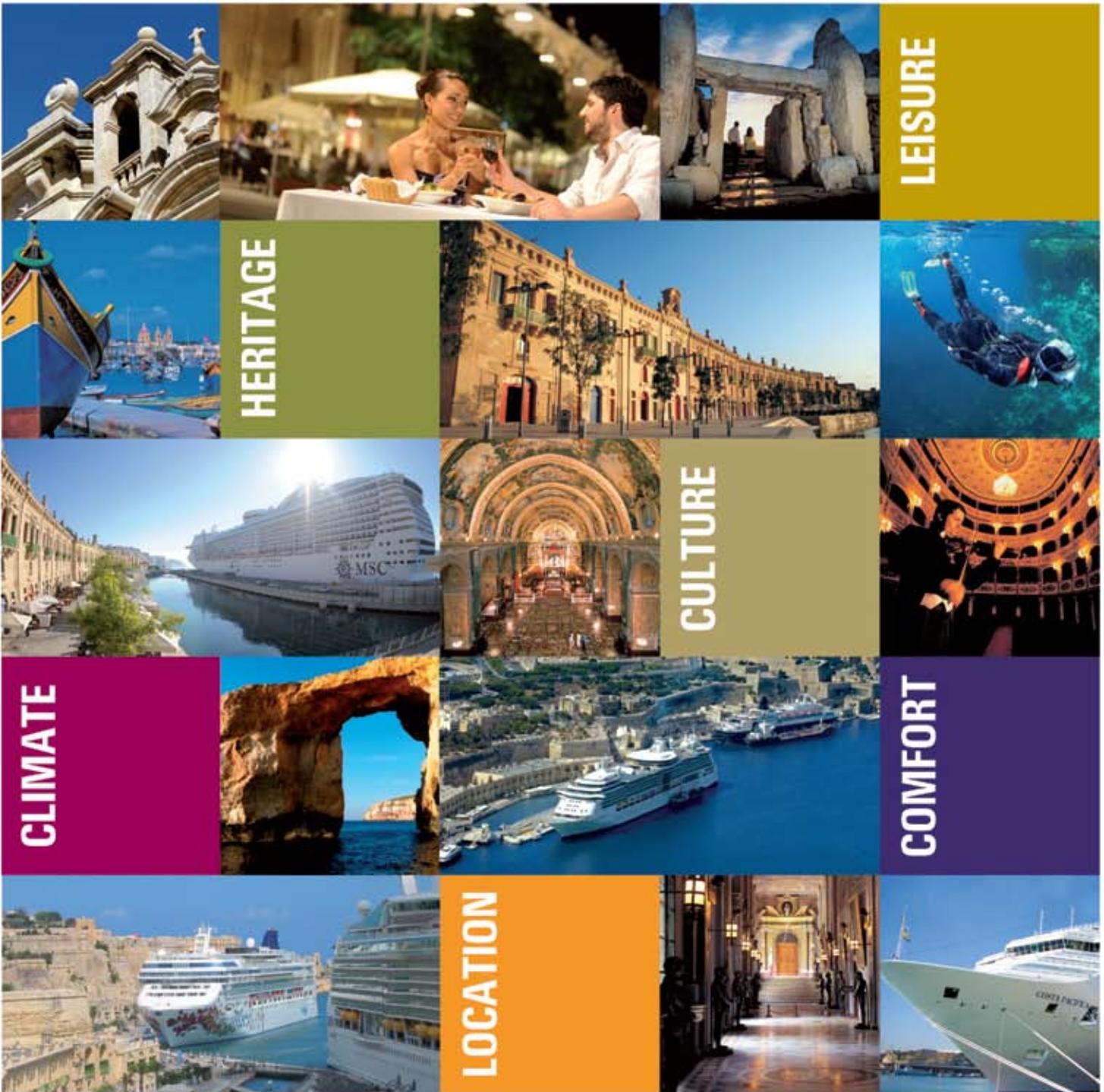
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# Gateway to the Mediterranean

Malta's **Port of Valletta** is a thriving call for cruise itineraries in the Mediterranean, offering access to ancient sites, tourist activities and all-encompassing maritime services.

**T**he Port of Valletta, Malta, is situated in the heart of the Mediterranean. Flanked by Sicily 60 miles to the north, and by the coast of Africa 120 miles to the south, its central location renders it ideal for Mediterranean cruise itineraries.

Valletta is a central gateway in the Mediterranean with living history, which includes some of the oldest temples in the world, UNESCO heritage sites and a vibrant Mediterranean lifestyle.

Given the country's maritime tradition, cruise lines can benefit from 24/7 support services including bunkering, ship chandelling and ship-repair services. In terms of facilities and passenger support services, the country enjoys an excellent reputation for its accommodation, multilingual guides and tourist activities as well as a wide range of transport services. Excursions can be personalised and all these factors make a call to Malta a memorable experience. Since 2002, 3,155,302 passengers have called at the port.

**“Valletta is a central gateway in the Mediterranean with living history.”**

The port's quays are ISPS-compliant and can handle the largest cruise vessels. The total available quay length is 1,762m. A luggage drop-off and reclaim hall is available as well as luggage transport vehicles, luggage storage and screening areas, and porter services.

There is a shuttle bus within the terminal as well as transport for the physically challenged.

It is only a 15 minute walk to the historical centre of Valletta, while various means of transportation are available at economical rates. For passengers arriving and departing by air, Malta's international airport is only 6km away.

In 2008 VISET Malta, operator of the Valletta Waterfront and the Valletta Sea passenger terminals, extended its main quay. In addition, the Malta Maritime Authority inaugurated a 383m terminal at Boiler Wharf across the harbour from VISET's terminals. Shore-side operations at the port are complemented by various shops, cafes, restaurants and other amenities close to the berthing quays.



Since 2002, Malta has been visited by more than three million cruise passengers.

## Maximum ship dimensions for berth

- Length: 333m
- Width: 35m
- Draught: 13.7m
- Anchorage available: yes
- Ship tenders allowed: yes
- Tugs available: yes
- Tidal movement/range: 500mm max

## Quays

- Total number of quays: seven
- Total length of quays: Pinto 4/5: 251m, Pinto 3: 171m, Pinto 1/2: 304m, Gun Wharf: 92m, Wine Wharf: 73m, DWQ: 488m, Boiler Wharf: 383m
- Quay depth: 11m
- Passenger terminals: four

## Distances/transportation

- City centre: 1.5km
- Airport: 6km
- Bus transport to city: €1 per person return

Other transport options available include taxis, open-top buses, horse cabs, local dghajjes (boats) and scenic plane rides. All these can be booked from the Valletta Waterfront promenade. ■

### VISET Malta

VISET Malta manages Malta's cruise terminal operations.  
[www.vallettawaterfront.com](http://www.vallettawaterfront.com)



# Gulf dream

With cruise lines coming out of the downturn and in good health, the drive to expand their itineraries has seen the Persian Gulf become an exciting prospect. Elly Earls talks to Royal Caribbean's **Rama Rebbapragada** and Costa Cruises' **Roberto Ferrarini** about the potential of this developing destination.

**T**he cruise sector fared relatively well during the harsh economic times of 2009. Despite the need for some lines to discount many of their products, the industry has seen increasing numbers of holidaymakers take advantage of the all-inclusive nature of cruising and the value it offers.

This momentum has seen cruise lines continue their strategies of expansion, and for Costa Cruises and Royal Caribbean International this includes opening up operations in the Persian Gulf. Costa was the first operator in the world to place its confidence in the area, making the UAE its regional hub in 2007.

On 23 February the Italian cruise line celebrated another milestone when the *Costa Deliziosa* was christened in Dubai, the first ship to be named in an Arabian city. Royal Caribbean has followed suit, homeporting the *Brilliance of the Seas* in Dubai for the first time this season.

"We started our cruises out of Dubai on 18 January and we will be there until the middle of April offering seven-night cruises in the Arabian Gulf," says Rama Rebbapragada, regional vice-president of Royal Caribbean.

"It's a new product for us and we are very excited because it has been extremely well-received in most of our markets, particularly the UK, Germany and North America."

Rebbapragada explains that there are several factors to consider when planning itineraries and deployment, and still more to bear in mind when choosing a homeport in a new country. "Firstly, you have to take into account the infrastructure and facilities at the port," he says. "You need to be able to move about 2,000 passengers in and out of a ship in a day along with about 8,000 pieces of luggage. Secondly, you need to consider the fact that very little of our business comes from the Gulf itself; most guests fly in from countries such as the UK, Russia and Germany, and even as far away as Japan, China and Australia. Dubai has phenomenal air connectivity.

"Hotel infrastructure is also significant because guests tend to spend a day or two before and after the cruise at the homeport. And finally, you need to think about the port's location in relation to other ports of call in the region."

Combining these factors with the completion of the new Dubai Cruise Terminal, and the powerful appeal Dubai prides itself on, the city was an obvious choice for Royal Caribbean. However, the cruise giant is not stopping there and plans to expand its operations in the Gulf when it has established a firm presence in the market.



"We are always looking to add some variety to our itineraries," says Rebbapragada. "The Gulf region has seen a lot of interest in cruising in the recent past and there are several ports interested in developing their infrastructure and coming up with shore excursions and land programmes for cruise passengers."

As a major tourist hub in the region, Dubai, has welcomed the *Brilliance of the Seas* with open arms, quickly recognising how regions such as the Caribbean and South East Asia have benefited from the cruise industry. "The ports in the region, including Abu Dhabi, have expressed a keen interest in preparing for an expanded usage of their facilities and have been very supportive," Rebbapragada remarks. "They are looking to take advantage of this momentum."

They also understand the demands and expectations of cruise lines. "Even before the opening of the Dubai Cruise Terminal, Dubai did a pretty good job with its temporary facilities," Rebbapragada notes. "They understand that the embarkation process is part of the entire cruise experience and that it reflects on Dubai."

Akin to the calibre of the city's five-star hotels, the authorities' efforts in ensuring high standards at the port facilities means that Royal Caribbean has experienced few setbacks commencing operations in the region. "Getting goods into and out of Dubai is very easy; even supplies such as produce can be shipped in without any problems," Rebbapragada says. "We buy whatever we can locally, but we also work with suppliers

## Dubai Cruise Terminal

Inaugurated in February, Dubai's new cruise terminal has been designed to cater for the increasing number of liners visiting the city and is capable of handling four ships simultaneously. Dubai's tourism department has predicted a 77% growth in cruise passenger numbers by 2015 as well as increasing its projections for 2010: 120 ships are expected to dock at the Port Rashid terminal.

With a tourist support infrastructure including facilities such as a money exchange, a post office, souvenir shops, a business centre with internet access, Wi-Fi, and the Al Majlis VIP facility. It also houses offices for representatives from immigration, customs and the police as well as several information counters.



Maiden call celebrations for the *Brilliance of the Seas*, Dubai.

around the world and have had no issues getting containers onto ships or offloading them on time. In terms of bunkering, we are in the midst of where the oil is supplied."

The increasing number of cruise liners in the region has done little to affect marine operations because, according to Rebbapragada, the volume of ships is not yet high enough to cause congestion. Besides, Dubai's new cruise terminal, which can accommodate more than one ship at a time, is capable of adequately meeting an increase in demand.

"Even when it comes to the weekend and ships are turning, more than one cruise line can have a ship working in Dubai," Rebbapragada says. "The terminal also has the capacity to handle larger ships. It all bodes well for the industry at the moment."

## Room to develop

Roberto Ferrarini, director of marine operations at Costa, agrees, and expects a 40% increase in the number of guests cruising to Dubai in winter 2009-10, which would raise €14 million for the city as well as benefitting the cruise line. This could potentially increase as facilities in the Middle East develop. "We are assisting with the continuous improvement of the quality of port operations in the region," Ferrarini says. "In terms of infrastructure, we are liaising with local port and tourism authorities, as well as customs and immigration, to realise the improvements they want to see. The number of people cruising in the region and the consolidation of the market justifies such investments more than in the past."

Ever a forward-thinking destination, Dubai has taken to cruising faster than many cities Ferrarini has encountered.

"The worldwide promotional impact of the cruise industry has been recognised quickly in Dubai and much quicker than in other places where, even after several years, they are still debating whether cruise passengers are positive for the country or not," he says. "We are confident in the will of the local authorities and community to keep investing in software and hardware for the cruise industry."

Yet the Gulf has a long way to go before it can compete with the leading global cruise locations, as Rebbapragada is well aware. "I've been in the business for a long time and it took 30 years for the US to get to where it is today," he says. "Even now only 12% of North Americans have experienced a cruise."

A further challenge, Rebbapragada notes, is that the Middle East, despite being an appealing destination, is lacking a local market. "We have to start encouraging people in the Middle East to cruise locally," he says. "Once we reach that scale, you will see more ships deployed in the region and products being customised to the local Middle East market. That's what we're working on." ■

## Profiles

**Roberto Ferrarini**, following a career working on board cargo and cruise vessels since 1983, joined the Costa Crociere shore department in 1996. He has since become director of marine operations.

As regional-vice president, international, of Royal Caribbean, **Rama Rebbapragada** is responsible for the growth and development of the business in the emerging markets of Asia, Latin America, Europe, Middle East and Africa.

# A new day for Dubai

The recent opening of the Dubai Cruise Terminal and the naming of the *Costa Deliziosa* mark Dubai's growing status as a leading cruise destination and port of call in the Middle East.

On 23 February the *Costa Deliziosa* was named in Dubai in an event organised by the Dubai Department of Tourism and Commerce Marketing (DTCM) and Costa Crociere. The naming ceremony took place during the ship's grand inaugural cruise, having departed from Savona, Italy, on 5 February.

The *Costa Deliziosa*, the 15th ship in Costa's fleet, was the first ever cruise ship to be named in an Arabian city. The ceremony further strengthened the ties between Costa Cruises and the DTCM. Over 3,000 guests attended the event, including about 2,000 Costa guests cruising on the first leg of the grand inaugural cruise.

"The naming ceremony of our fifteenth ship, the *Costa Deliziosa*, in Dubai confirms again our pioneering spirit in setting a new record and strengthens the partnership between Costa Cruises and the Dubai Emirate," says Fabrizia Greppi, Costa Cruises vice-president for corporate marketing and communications.



successful. We are confident that this will help expand the cruise tourism industry in the region and stimulate other cruise operators to use the emirate as a cruise hub."

**"This year, the new Dubai Cruise Terminal will host 120 ships with over 325,000 passengers."**

"Our Italian company was the first and it's still the major operator to believe in the value of this new cruise destination, confirming the pioneering spirit of Costa Cruises. Thanks to our four-year-partnership with the DTCM, we are boosting our presence in the Arabian Gulf by bringing ships to Dubai, such as the *Costa Deliziosa* and *Costa Luminosa*. In winter 2009-10 we expect a 40% increase of our guest cruising to Dubai, with an estimated economic impact of €14 million for the city."

Hamad bin Mejren, DTCM executive director business tourism, says: "Dubai is steaming ahead and we look forward to a period of tremendous growth in cruise tourism. Cruise tourists are becoming an increasingly important part of Dubai's tourism industry. Costa Cruises made Dubai its regional cruise hub in 2006, giving the growing cruise industry a major boost. Costa's decision reconfirms the potential of Dubai as the regional cruise industry hub.

"We are delighted with their decision and assure of our whole hearted cooperation and support to make the initiative

## Opening up

In 2009, Dubai played host to 100 cruise ships that brought 260,000 cruise tourists. This year, the new Dubai Cruise Terminal will host 120 ships with over 325,000 passengers.

Next year, the terminal is expected to receive 135 ships with 375,000 passengers, followed by 150 ships with 425,000 passengers in 2012, 165 ships with 475,000 passengers in 2013, 180 ships with 525,000 passengers in 2014, and 195 ships with 575,000 passengers in 2015.

The 3,450m<sup>2</sup> terminal has the capacity to handle four ships simultaneously and offers facilities such as a money exchange, cash machine, post office, duty free shop, souvenir shops, a business centre and VIP Majlis.

In winter 2009-10, Costa's ships are expected to bring 140,000 passenger movements to Dubai thanks to the presence of three ships for a total of 32 calls.

Costa Cruises is Italy's largest tourism group and Europe's leading cruise company. For more than 60 years its ships have sailed the seas, offering Italian style, hospitality and cuisine. ■

## The Department of Tourism and Commerce Marketing

The Department of Tourism and Commerce Marketing was established to promote Dubai as a tourist destination.  
[www.dubaitourism.ae](http://www.dubaitourism.ae)



# Old world, new opportunity

With Asia opening up to cruise lines, the push to offer new destinations is seeing China become a potential giant of future itineraries, which could also take pressure off congested European ports. Yachts of Seabourn's *Peter Cox*, Holland America Line's *Simon Douwes* and Royal Caribbean International's *Diana Block* tell Ian Duncan why many in the industry are looking east.

**I**n June, leading industry figures will descend on Shanghai for the second Seatrade All Asia Cruise Convention. At the city's international cruise terminal, they will debate the challenges and opportunities the continent presents. Meanwhile, the governments of Asian nations have been working to set their marketing agendas while making material improvements to infrastructure.

In 2010, Asian cruise passenger numbers are predicted to rise by 40%, topping 1.5 million, and climbing to two million by 2015. Last October, construction began on a \$350 million cruise terminal in Singapore, and in January this year its government launched a joint plan with Vietnam to promote South East Asian itineraries.

In the same month, Chinese authorities announced an overhaul of the regulations governing cruise ships visiting China. The

visa and customs process for cruise passengers will be expedited and foreign liners will be allowed to dock at more than one port in the country during a single voyage. Chinese companies will also be permitted to operate cruises for the first time, building on the 2007 decision to allow the country's citizens to holiday on board international vessels.

China's Culture and Tourism Ministry hopes the new measures will triple the number of cruise passengers visiting the country and all this potential is not going unnoticed by western operators. China's growing economy means its citizens increasingly have the means to travel and, at the same time, foreign tourists are being drawn to this huge undiscovered land. It is this unique combination that makes the country so appealing to itinerary planners.

Holland America Line's director of development and itinerary planning, Simon Douwes, recognises the appeal of China and Asia generally. "It's a fascinating continent and people are attracted to the fact it hasn't been open in the past," he says. "It's untouched and there is an awful lot to see: China, Japan, Vietnam, Thailand."

Royal Caribbean International (RCI) has already seen significant growth and now has offices in Beijing, Shanghai and Guangzhou. Diana Block, the company's vice-president of development and revenue management, admits that China is starting from a very low base. "There was almost nothing in the past," she says. "It's very new to the market and travel there is highly regulated. It has not been an easy start but we think that, as things change within the country, there will be great opportunities."

The existing regulatory framework is a major problem in setting up operations in the country but Block hopes the recent announcement will boost the nation's commercial potential. "We believe in a good competitive environment and that it will serve us well," she says. "It's important to work closely with the Chinese Government so that everyone can move in the same direction." ▶

## Lucky numbers

■ Foreign cruise visitors to China target 2010:	<b>600,000</b>
■ Foreign cruise visitors to China 2009:	<b>200,000</b>
■ Chinese cruise passengers in 2009:	<b>365,000</b>
■ Chinese cruise passengers in 2008:	<b>110,000</b>

Source: *Chinese Transport Ministry*

RCI was surprised to find that shorter cruises aimed at the domestic Chinese market drew great international interest from the US, Europe and Australia. Peter Cox, director of itinerary planning and development at Yachts of Seabourn, understands why this was the case. "As a country and cruise destination, China should interest all of us because of the major role it plays in the world," he explains. "People will become increasingly intrigued by this huge country with such a long history. The interest is in China as a modern state contrasted with its ancient culture."

### Opened up

The major challenge for operators trying to offer European and US guests cruises in China is its relatively limited infrastructure. The government has pledged to develop the country's ports but much work remains to be done. Cox believes that the cities most accustomed to receiving foreign visitors have made good progress.

"It's different for the less visited places such as Xiamen, Qingdao, Dalian," he says. "They need to get on the ball. In general they're modernising very fast but it will be much more challenging to find good guides, for example. They need to not only have a good knowledge of their history but also be able to articulate it to foreign visitors."

Unlocking the huge interior can make planning Chinese itineraries difficult, especially compared to the accessible islands of South East Asia and Indonesia. The easing of cabotage restrictions should make coastal cruises a viable option but, for Cox, the trick will be to create an extensive package of excursions.

"We bundle Beijing, the Forbidden City and the Great Wall with the rest of the coastal cruise to expose our guests to a mix

of cultures," he says. "The aim is to showcase things such as Buddhist temples and traditional cuisine that are very Chinese but are hidden behind a modern façade. It's not an easy destination but ours are generally well-travelled, worldly guests who want to gain a deeper understanding. Our role is to make the experience interesting and varied."

While Asia is attracting a lot of attention, operators are also being careful to not lose sight of their core markets. Nevertheless, the emphasis on experience is driving itinerary development in this regard.

"We cater to all sorts of people who like to explore culturally and historically interesting destinations," says Douwes. "The younger generation wants to explore far-flung places all over the globe."

**“People will become increasingly intrigued by this huge country with such a long history. The interest is in China as a modern state contrasted with its ancient culture.” Peter Cox**

### Ease the pressure

With demographic and market trends pushing the industry to look further afield, there is an opportunity to take the pressure off traditional destinations which are rapidly becoming saturated.

Douwes acknowledges that congestion is a growing problem in some of the more popular Mediterranean ports such as Barcelona and Civitavecchia.

"We tend to adjust our schedule for congestion as these places have so much to offer cruises," he says. "It's not like sailing to a small Caribbean island: you're sailing to a major destination and they are much better equipped to absorb a large number of visitors."

Block recognises that the postcard locations of Europe are just too big to pass up, so careful planning is key to developing a successful itinerary. "Italy's not a country where things move real quick," she says, "but we're really trying to work closely with it for the benefit of the industry. It's not just us building big ships, everybody's building them, and everybody wants to be in the Mediterranean."

"We're looking for alternative locations for ports and ways we can improve the infrastructure in the existing ones so they

can handle larger ships on a regular basis. In the meantime, planning well to get the prime berths is essential."

Europe has long been Seabourn's core territory and the challenge for Cox is keeping the company's itineraries fresh. "There are about 100 ports in the Mediterranean that we have been scheduling over the last couple of years," Cox explains. "With our smaller number of guests it's possible to disembark with limited infrastructure. Our ships can anchor quite easily and don't need a pier to dock alongside in order to be able to deliver a good experience."

As horizons broaden, it's clear that diversity and flexibility will be the most important trend in itinerary development over the coming years. By continually tweaking

schedules it should be possible for the industry to keep repeat guests interested while at the same time seeking fertile sources of new customers. Huge operators such as RCI might have a different emphasis from a niche line such as Seabourn, but neither can afford to let the opportunity pass them by. ■

## Profiles

**Diana Block** joined RCI in 1998 as director of air/sea and has held the positions of associate vice-president in revenue management, hotel finance, and deployment and itinerary planning.

**Peter Cox** began his cruise career in 1974 as a tour manager aboard Norwegian American Line's *Sagafjord* and has worked for Pearl Cruises and Society Expeditions. He joined Seabourn in 1993, and has been planning its cruise itineraries and land programmes since then.

**Simon Douwes** is the director of deployment and itinerary planning for Holland America Line. Appointed to this position in 2002, he has the responsibility of researching, developing and implementing new and existing itineraries and deployment for all ships in the Holland America Line fleet.

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# St Croix, your port of solace

The Caribbean island of **St Croix** is growing in popularity. With a newly refurbished marine facility, St Croix offers cruise visitors more than just tropical sun and clear waters; it's a chance to experience idyllic island life.

**F**ollowing the multi-million dollar refurbishment of the Ann E Abramson Marine Facility and the Frederiksted pier area, St Croix has opened its doors to a new world of sights and sounds for cruise passengers.

The pier is now equipped to welcome more cruise ships than ever before. As a testament to its renewed popularity, many popular cruise lines added St Croix to their itineraries in 2009, including Celebrity Cruises, Royal Caribbean, Amazara Cruises, Disney Cruise Line, Oceania Cruises, Holland America Line, Crystal Cruises, Seabourn Cruises and Regent Seven Seas Cruises.

With its enchanting towns, magnificent coastline, historic sites, and incomparable water adventures, a world of unforgettable moments is waiting to be discovered in St Croix.

## Discover its towns

Cruise passengers are often enchanted by Crucian hospitality as they are greeted by Mocko Jumbie stilt dancers, the sounds of steel pan music and Cruzan Rum punch. After docking, passengers can stroll through flower-filled parks and down cobbled paths that stretch along the town's waterfront, passing by the shopping area located close to the pier.

Along the waterfront, residents and visitors can explore the monthly Sunset Jazz Festival at Fort Frederik Beach and enjoy music from locally and internationally acclaimed jazz artists against the backdrop of a spectacular Caribbean sunset.

From the pier, cruise passengers can embark on a scenic taxi or bus ride across the island to Christiansted, which offers historical churches, traditional pastel buildings and unique art galleries, along with charming shops, boutiques and pavilions which sell crystals, designer perfumes, handmade jewellery, local arts and crafts and, of course, Cruzan Rum. US citizens enjoy a \$1,600 duty-free shopping quota.

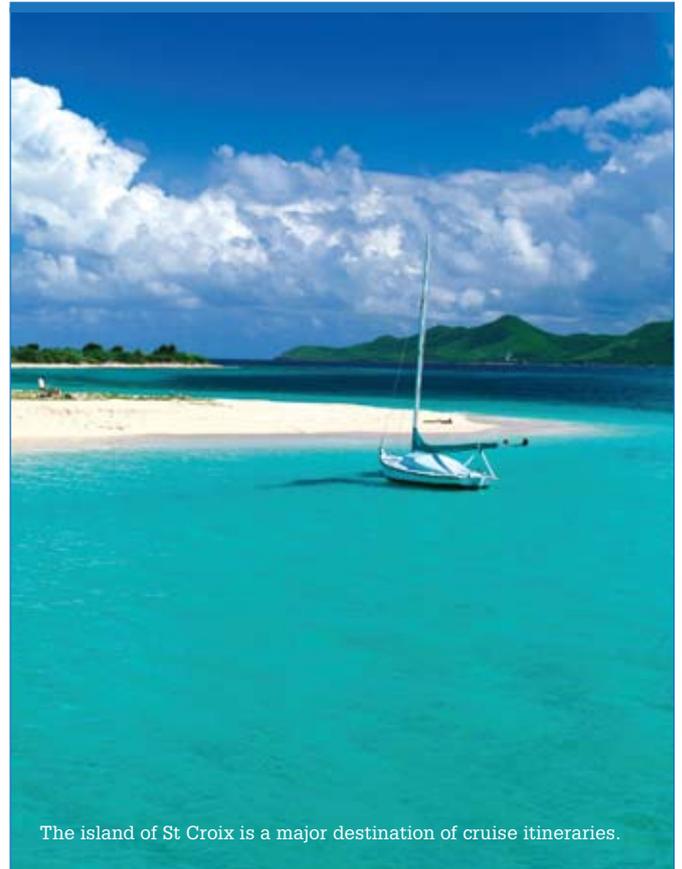
St Croix has dozens of charming restaurants, all offering eclectic menus. Found in Christiansted, Frederiksted and smaller towns, they serve local West Indian dishes laden with rich spices and flavours, as well as international cuisine inspired by Europe and Asia.

## Discover its history

St Croix is an undiscovered Caribbean gem that offers authentic cultural and historic experiences.

The St George Village Botanical Garden displays lush flora over 16 acres with more than 1,500 plant species growing amongst the renovated ruins of a 19th century Danish sugar plantation.

The Estate Whim Plantation, the oldest plantation museum in the Virgin Islands, attracts visitors with its architectural charm and history. One of 54 factories built when sugar was the island's main industry, this lovingly restored mill is situated among 12 acres of plantation buildings, tropical flora, a windmill and shops.



The island of St Croix is a major destination of cruise itineraries.

## Discover its natural beauty

The breathtaking beaches that dot the shores of St Croix provide an escape for cruise passengers in search of tranquillity and relaxation.

Equally as stunning, and just a boat ride from the northeast shore, is the Buck Island National Reef Monument, a natural wonder that stretches across 19,000 acres of protected land and pristine waters. Designated one of only two underwater national monuments in the US, visitors can swim and snorkel in the crystal clear sea.

Scuba enthusiasts can explore the largest living reef in the Caribbean along the Cane Bay underwater wall while nature lovers will enjoy kayaking through the lush tropical ecosystem of the Salt River National Historical Park. Sandy Point National Wildlife Refuge offers one of the longest stretches of white sandy beach in the Caribbean, and is a nesting site for the endangered leatherback turtle. ■

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# Caribbean cruise appeal

Grenada's cruise industry is growing at a phenomenal rate, 21% in 2009, and passengers will continue to be attracted to this beautiful island as it undergoes a range of development projects.

**G**renada received its first cruise ship, containing 780 official cruise visitors, in 1955. At the time, there were only 60 hotel rooms on the island catering for those few discerning travellers who journeyed there.

Grenada's cruise tourism industry has since developed by leaps and bounds and the island now welcomes almost 300,000 passengers annually. The industry contributes more than 60% of total visitor arrivals to the island and is one of the best means of introducing potential stay-over visitors to its unique mix of experiences.

For the past ten years, Grenada's cruise industry has enjoyed relatively steady growth. However, in 2007 and 2008 cruise passengers increased by 23.61% and 8.28%, respectively. The 2009 performance was augmented by the advent of Pulmantur Cruises, which buffered the summer months with weekly visits. Overall, an increase of 21.46% was recorded in cruise ship visitor arrivals from January to November 2009.

“Grenada is focused on the preservation and conservation of its natural and cultural attributes in a context that will maintain its reputation as an unspoilt Caribbean destination.”

## Island of experiences

Grenada offers its visitors a wealth of experiences, old and new. In recent years these have included the creation of an underwater sculpture gallery, the expansion of duty-free shopping, eco-type adventures and the enhancement of the island's natural and man-made attractions. For example, Grenada has improved its product offerings by providing easier access to the inner courtyard of Fort George. This new route creates a unique experience where visitors can relax and enjoy the beauty of the historic town, often referred to as the “city on the hill”.

The welcoming ambience at the Melville Street Cruise Ship Terminal continues to play a crucial role in attracting cruise ship passengers. It ensures that an array of unique souvenir items, such as oils and perfumes, are available at its range of shops. Visitors can also sample the indigenous art displayed on paintings, crafts and fabrics.

As well as hikes to Grand Etang, Seven Sisters, Mount Qua Qua and Concord Waterfall, visitors to Grenada now have an

In 2009, cruise visitors to Grenada increased by 21.46% compared with 2008.



additional hike to enjoy. The Morne Longue Fedon Camp eco-tourism attraction allows hikers to experience a range of birds and monkeys in their natural habitat, as well as enjoy picturesque views of the eastern seascape and the ruins of Fedon Camp, which featured prominently in the Julien Fedon Rebellion of March 1795.

The Annandale Waterfall is being upgraded to reflect a higher level of organised participation by members of the local community. Reducing congestion among vendors and other service providers via tailored tours, parking areas and a community-based management structure, are part of plans to upgrade the experience provided to all who visit this attraction.

Grand Anse Beach is benefiting from further enhancement initiatives through the construction of additional changing rooms, lockers and shower booths, as well as the provision of thatched umbrellas for added shade. In Carriacou, tourism enhancement plans include the restoration of the Beausejour Windmill and the installation of a wooden theatre at the Belair Park. The Maroon & Regional String Band Music Festival, which is planned for 23–25 April 2010, is aimed at preserving the culture of that 13m<sup>2</sup> island by having it showcased at a professional level.

Grenada is focused on the preservation and conservation of its natural and cultural attributes in a context that will maintain its reputation as an unspoilt Caribbean destination. ■

### The Grenada Board of Tourism

The Grenada Board of Tourism is charged with promoting Grenada as a preferred Caribbean tourist destination.

[www.grenadagrenadines.com](http://www.grenadagrenadines.com)





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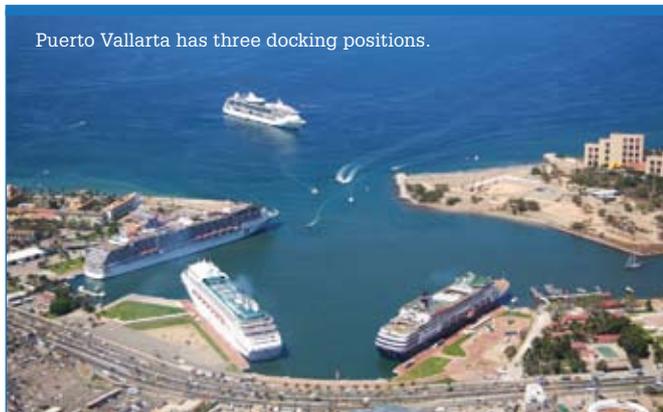
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# Leading you to Latin America

On the back of more than \$30 million invested by the government, a series of developments at Puerto Vallarta has seen it increase its capacity and improve its status as one of Mexico's prime ports of call.



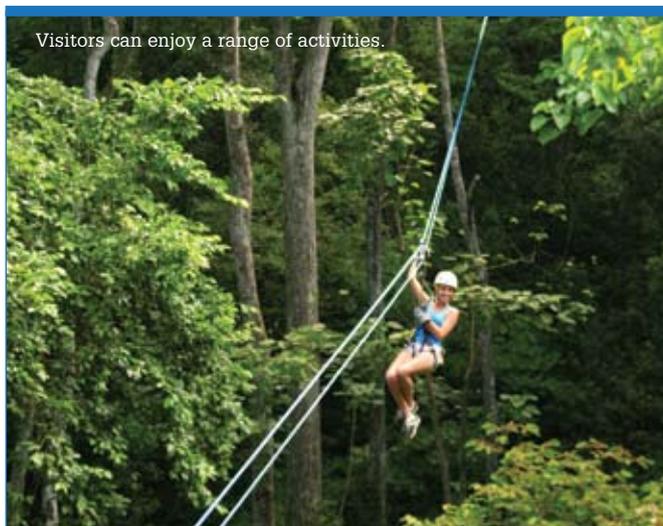
Puerto Vallarta has three docking positions.

In 2007, the Mexican federal government invested more than \$30 million in the construction of two docking positions at Puerto Vallarta, increasing port capacity to accommodate three 311m-long vessels.

This year, the port will renew a 105m-long section of the first dock, which was constructed in 1969.

“Puerto Vallarta has seen a steady growth in operations, with the port offering the largest variety of shore excursions in the Pacific.”

The project will start on 15 March and is expected to be finished by 31 August. During this time cruise calls will be received at docks 2 and 3, which are fully operational. The project includes the construction of two mooring dolphins, which will give the best possible security to the vessels calling at the port.



Visitors can enjoy a range of activities.

Puerto Vallarta is a consolidated destination for seven-day cruises and repositioning calls. The *Carnival Splendor* and *Mariner of the Seas* call at weekly, and for 2010 the port will receive 231 calls, and more than 575,000 pax.

Puerto Vallarta has seen a steady growth in operations, with the port offering the largest variety of shore excursions in the Pacific, along with more than 10,000 hotel rooms, an international airport and many service providers to meet the needs of a docked ship.



The port offers a variety of excursions.

The support of federal, state and local tourism agencies has brought Puerto Vallarta to the wider attention of the cruise industry. Many top executives of the most important cruise lines visit or regularly call in order to be kept updated on projects in the area.

The port of Puerto Vallarta will start a small homeport operation in July, when Pullmantur Cruise Line will initiate a national seven-day operation, departing from the port of Acapulco, with calls at Ixtapa, Manzanillo, Cabo and Vallarta on Fridays. ■



Puerto Vallarta will start a homeport operation in July.

## Puerto Vallarta

The port of Puerto Vallarta is dedicated to nautical tourism, and has three docking positions for vessels 311m long.

[www.puertodevallarta.com.mx](http://www.puertodevallarta.com.mx)



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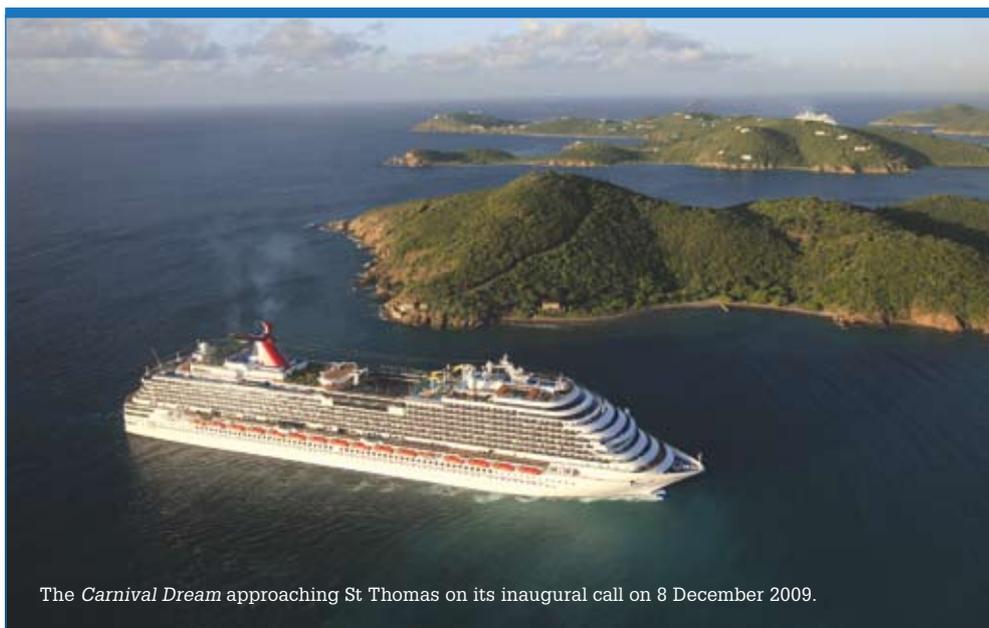
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# The sun shines on St Thomas

Despite the global downturn, the future of the cruise business in the Caribbean remains bright. **The US Virgin Islands** has welcomed some of the world's largest cruise ships and the port of St Thomas has been working on new infrastructure to make the island more accessible than ever.



The *Carnival Dream* approaching St Thomas on its inaugural call on 8 December 2009.

**T**he economic downturn poses many problems for the leisure and travel sector, not least lower discretionary spending among travellers and pressure on bookings. However, there are pockets of the cruise market that have weathered the storm. The US Virgin Islands, for instance, has a positive outlook for 2010 and beyond.

"We have been preparing for the visit of the *Oasis of the Seas* – the world's largest cruise ship – and also the *Carnival Dream*," says Edward Thomas, president and CEO of the West Indian Company (WICO), which manages the cruise port in St Thomas. "The *Oasis* will bring 5,000 passengers per week to St Thomas for retail and tours, so that will have a big impact on our economy. The *Carnival Dream* comes every two weeks and brings over 4,000 passengers, so overall the port is seeing a big rise in passenger numbers."

The arrival of these large vessels has proved a challenge for WICO and it is still busy with its development plans. Nevertheless, significant improvements to the port's infrastructure have already been made, increasing its capacity and enhancing its links to inland attractions.

"We have had to shift berths because some of the dredging at the WICO port had not been completed, so the *Oasis* came first to Crown Bay. We have, however, worked in dispatching tours in a new way and part of the road system that was being built is now open. It is now easier for passengers to get to the town," remarks Thomas.

"Some roads in the \$20 million project around the part of the island where we are located have been finished, which means

there is now a dedicated lane of traffic from the port to town. There are green lights all the way, which is important because when a ship disembarks all of the passengers arrive at the same time. When they come back, they do so sporadically and from different parts, the shopping centres or the beach, for example, so the outbound traffic is the important thing to manage."

## Harbouring ambition

Discretionary spend among passengers arriving in St Thomas has held up well, no doubt helped by the greater ease with which people can travel from the port to town, where they can access its many high-quality retail facilities.

"We have a lot of people coming here on cruises, and that is the backbone of our economy. Among Caribbean ports, St Thomas leads in terms of passenger numbers and cruise spending. There are also ongoing discussions on the use of water taxis, though no decision has been made yet. We may look at that more in the next six months, but any decision will be informed by what happens this season," says Thomas.

"For now, we have maximised what we want to do. St Thomas is the shopping Mecca of the Caribbean, so we have created a lot of shopping facilities, but we must not create too much. We don't want to be oversupplied with jewellery, for example, which is one of the specialist areas that people look for here."

The mood in the US Virgin Islands is certainly one of cautious optimism. With more dredging planned for 2010 to accommodate the large cruise vessels visiting the port, WICO's Thomas remains positive.

"The arrival of the new, big ships has been a success. As well as the *Oasis of the Seas* and the *Carnival Dream* we have NCL's *Norwegian Pearl*, and the *Norwegian Epic* will be here in the summer. The *Celebrity Equinox* visits regularly and there are many more besides. Business is good." ■

### WICO

WICO develops and promotes the attractions and businesses of the Caribbean. For more information, visit: [www.wico-vi.com](http://www.wico-vi.com)



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# Pull together

Cruise lines have kept on course through the downturn, but the industry's suppliers have had a tougher time. Crystal Cruises' **Bob Koven** and Royal Caribbean's **Henry Lopez** tell Ian Duncan how they are working closer with their supply partners.

Last year was difficult for the shore-side hospitality sector, with occupancy and rates down significantly. Starwood, one of the world's largest hotel groups, saw its revenue per available room fall by over a fifth. Industry-wide, the figure stood at 12%. Suppliers, for whom hotels are their main source of revenue, suffered greatly as a result, creating problems down the line for what has remained a relatively stable cruise industry.

Although there are differences in emphasis between the cruise lines, their strategies are similar. The key trend has been a closer working relationship with suppliers, guiding them through this difficult period while keeping a watchful eye for signs they might falter. Bob Koven, vice-president of procurement at Crystal Cruises, acknowledges it has been a difficult time for some key partners. "Everybody's uncertain about their solvency," he says. "We're seeing

a lot of bankruptcies; this didn't happen in the past when business was slow. Royal Doulton and Wedgwood went out of business, which created problems for us. We use their bone china on our ships, so after they folded we were putting out fires." The situation became so critical that Koven and his team were forced to scour the internet for replacement items until a decision could be taken on a new supplier.

Henry Lopez, AVP, hotel, food and beverage at Royal Caribbean Lines (RCL), has also been forced into adopting new measures. "The economic impact over the last year has strengthened our relationship with our suppliers," he says. "They've been under pressure from other customers, but we've partnered more closely with them to give guidance on what we expect."

At a time when stability is at a premium, operators have been able to negotiate deals and secure good prices in exchange for

prompt payment. Koven and Lopez acknowledge that there has also been a general deflation of prices for goods, especially luxury items such as champagne and caviar.

While this helps keep costs under control, there is also an emphasis on procedure to avoid mistakes. When problems are encountered, Koven aims to tackle them in plenty of time. "We like to have some of our suppliers cross-check our purchase order with their invoices so they can identify any shortages," he says, "and give us a list of items they're not going to be able to deliver, or substitutions they are going to be able to offer, at least three days before delivery. Rather than them making unilateral decisions, we can correct the problem before the delivery is made to the ship."

Koven makes it clear that the downturn has had a major impact on his work as the head of procurement. "My role has changed in the sense that I'm focusing a lot of attention on avoiding mistakes, on cost-saving initiatives, budget planning and tracking, and measuring our results without compromising product delivery."

Lopez has seen his focus shift as well. Even during the downturn it was important for the industry to move forward and he has been working on delivering a more diverse experience to guests, creating a need to find new suppliers. "Certainly it increases the complexity," he admits, "but the way we've designed our procurement process has been with that in mind. The hospitality area is not a static environment, you have to build your systems and processes and the way you source products in a very dynamic fashion." ▶

### Delicate balance

This tension between crisis management and trying to keep up with longer-term trends highlights a central dilemma for procurement teams in the industry. In particular, there has been no reigning in of the push to develop new itineraries.

When entering any new market, preparation and information gathering is critically important in order to ensure smooth operation and control of costs. When RCI made its first deployment to Dubai in January, Lopez made a sourcing visit and met several suppliers to understand their capabilities. "We looked at what other companies are doing in that area and then developed our supply strategy for that season," he says.

The ongoing threat of piracy in the Indian Ocean has caused problems for Crystal Cruises. The extended range of pirates based around the Horn of Africa means that the Seychelles, marked as a major supply stop on the line's world cruise, is now a potential target. Koven has been tasked with finding workable alternatives, including Mombasa in Kenya and Mumbai on India's west coast. "We're exploring whether we can use existing carriers to get goods in," he says.

"When you start talking about chartering a plane it gets very expensive."

The ever-widening scope of itineraries has had a significant impact on procurement and supply chain management. For operators such as RCI, which has traditionally concentrated on the North American market, sailing worldwide is a relatively new experience. The itinerary process informs supply decisions so the company has broadened its operation to cope with these new demands. "We have regional experts that focus on Australia and Asia, as well as a procurement office in Europe that takes the lead on sourcing our brands," Lopez explains. "We've definitely changed how we're organised and improved our expertise in those markets."

Crystal has greater experience operating on a global scale but still faces difficulties sourcing niche luxury items and complying with strict regulatory frameworks.

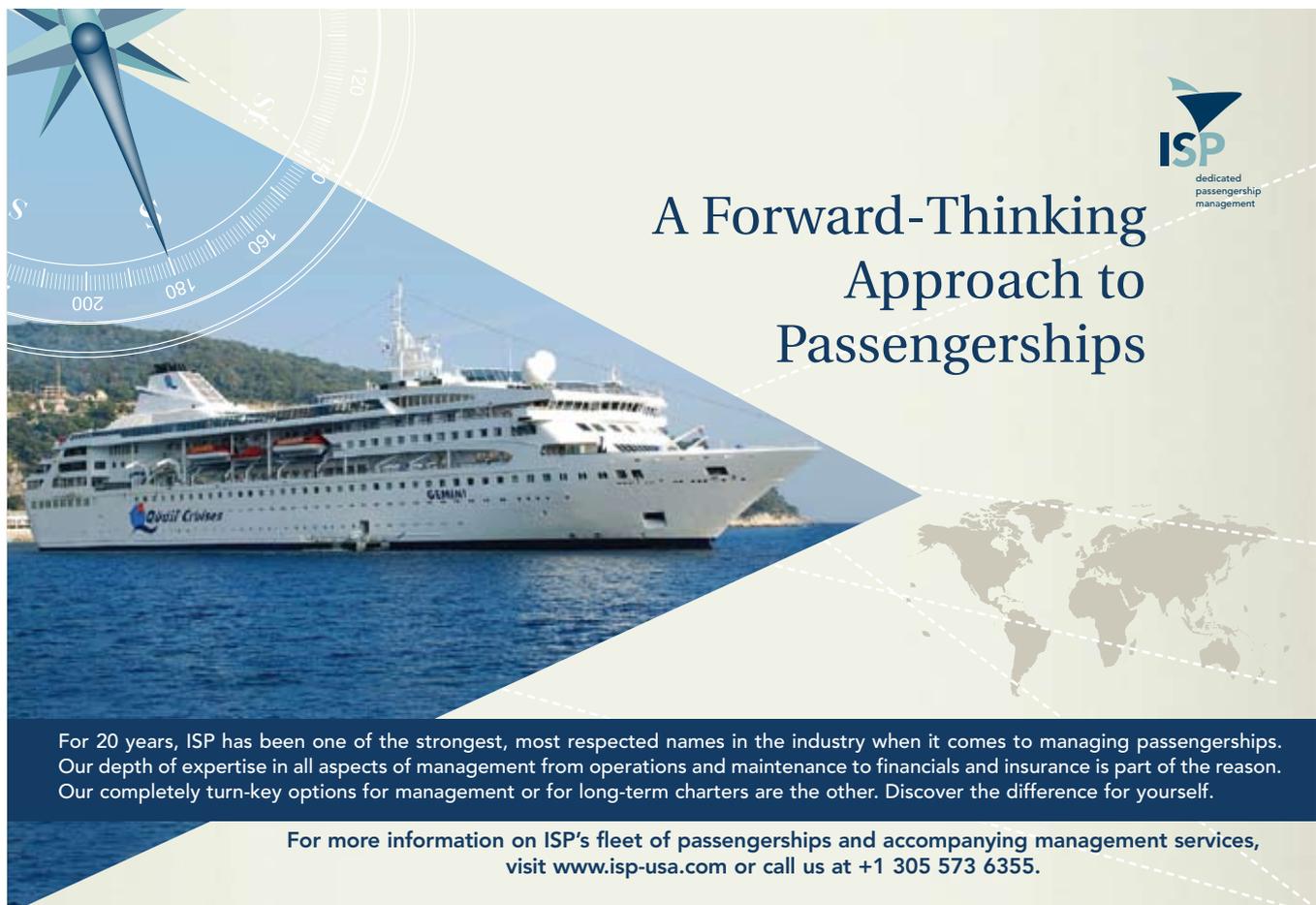
"We want to import ice cream from the US because it complements the American palette, but we need a certificate of origin before we can ship it to Europe," Koven explains. "It can't be shipped in a frozen container unless it comes from an

EU-authorized plant and it's very difficult to find a port where we can get the product to our ships so guests can get the type of ice cream they like."

Given the growing length of cruise operators' supply chains, the creation of a consortium to aid in the management of procurement could help reduce complexity. Lopez recognises it is worth considering. "We have to look at all opportunities," he acknowledges. "That's something worth investigating." For Crystal, there may be more disadvantages than benefits to such a deal. This is mainly because of the more specialised character of its business. "I don't see that happening right now because our specifications are so broad," Koven says.

Despite lingering hangovers from the downturn, Koven and Lopez are confident about the coming year, seeing opportunities to increase guest numbers. The strategies put in place to cope with the deepest months of the slump should serve the industry well.

There is still a need to be cautious because as long as credit remains tight and the rest of the hospitality sector remains weak, suppliers will be vulnerable. Meeting expectations will continue to be a delicate balance. ■



The advertisement features a large image of a cruise ship, the *Sahini*, sailing on the water. In the top left corner, there is a graphic of a compass rose with degree markings. In the bottom right corner, there is a stylized world map. The ISP logo is located in the top right corner of the ad area.

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ISP provides management services for smaller cruise lines.

**D**uring the past 20 years International Shipping Partners (ISP) has been dedicated to providing and managing passenger vessels to travel companies worldwide. ISP currently manages 20 ships and over the last ten years its fleet has consistently averaged 15–22 vessels, establishing the company as one of the world's most successful passenger ship managers, and a leading provider of tonnage to the travel industry.

For many years the trend in the cruise industry has been clear. Larger lines have merged with smaller companies and have grown so that only a few names dominate the market, making it difficult for newcomers to compete. However, there are a number of smaller cruise companies with niche markets, specialised destinations or onboard products and services. These smaller companies, typically tour operators or large travel agencies, are not equipped to manage vessels, and normally do not have the financial power to acquire ships. For such companies, ISP is the perfect partner. Today, 12 of ISP's managed vessels are provided to the travel industry on long-term charters.

“A tour operator, travel agency or small ship owner simply has to provide the passengers, ISP handles everything else.”

ISP is a one-stop shop handling deck, engine and crew management, maintenance and dry docking, insurance and certifications, port operations, classification matters, flag states, coast guards, and hotel services. A tour operator, travel agency or small ship owner simply has to provide the passengers, ISP handles everything else.

ISP's management team each has over 35 years experience within the passenger ship industry. Its operations staff is made up of captains, chief engineers and other key roles. They also have extensive

experience in passenger ship operations, with many of them having worked for the larger cruise companies.

From its beginning, ISP decided to have the highest possible quality certification and, in addition to the mandatory ISM and ISPS certifications, is ISO 9001/2000 and ISO 14000/2004 certified. It is also a member of InterManager.

## A system for success

Philosophies vary concerning the management of passenger vessels. ISP believes the captain not only navigates the vessel, but is also responsible for management, staff motivation, finances, budgeting and reporting. For this reason, ISP has fixed management teams responsible for each vessel. The same team that prepares and submits the budgets for approval is responsible for the maintenance, ordering of parts and consumables, and adhering to budgets. This strategy not only ensures that vessels are maintained at a lower cost, but also that the officers and crew are motivated to do their best.



The *Gemini*, on charter to Quail Cruises.

ISP also implements systems, procedures and equipment to ensure satisfactory safety and quality levels, and to bring efficiency to its owners and charterers. The company's accounting, crewing and certification information are electronically filed and all clients have access to their information, as well as to invoices and crew files from any computer with a network connection. ISP believes it is the only passenger ship manager that provides such an efficient system.

The benefit for owners or charterers with one to four vessels is clear: they get experienced and certified management at substantial savings compared to an in-house system. With ISP, even a one-vessel company can take advantage of the same benefits as a large cruise line, enabling them to be competitive in the global cruise market. ■

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**S**aifee is a family run ship chandler and supplier of spare parts in Dubai. Established in 1971 as Saifee Trading, it imported and stocked general ship equipment and technology, supplying local ship repair yards, workshops, ship chandlers and owners. In 1975 managing director Hasan Najmuddin joined his father in the business. Under his father's guidance, Najmuddin went on to establish Saifee Trading, one of the leading suppliers, importers and stockiest of marine hardware and equipment.

In the late 1990s Najmuddin saw the potential of the ship supply business in light of increased ship calls to Dubai, Jebel Ali and Fujairah. He set up a ship chandling company to provide ship owners with cost effective supply solutions. Saifee Ship Spare Parts & Chandlers was established in 1997.

In 2003, Johar Sarsanwalla came on board as a joint managing director. A successful entrepreneur in the marine supply business, he brought a wealth of experience.

Today, Saifee has built a reputation as a respected and reliable supplier for the global marine and offshore industries and is a leading marine chandler in the Middle East. The company's quality service is based on its founding principal of providing ship owners with cost effective supply solutions. The company works closely with clients to develop supply solutions.

“The company's quality service is based on its founding principle of providing ship owners with cost effective supply solutions.”

## Base of operations

Saifee operates from a custom-built 360,000ft<sup>2</sup> central warehouse in Dubai that includes 80,000ft<sup>2</sup> of cold stores and a temperature-controlled dry food area.

The company stocks in excess of 60,000 technical and food provision items. Its food inventory contains of a wide range of specialist products consisting of items familiar to Japanese, Korean, Philippine and European markets.

ISO-certified, Saifee acknowledges its general duty in regards to food cleanliness and hygiene and ensures the highest safety standards at work. The firm's management provides food hygiene training for those employees designated to work in the dry and cold stores and has also implemented SOP in food hygiene and safety policy.

Saifee provides 24-hour support.



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## Saifee

Saifee is a ship chandler and supplier with an inventory in excess of 60,000 marine store items.

[www.saifeeship.com](http://www.saifeeship.com)





# Press for training

Technology is playing an increasingly central role in the recruitment and training of staff, helping cruise lines maintain high levels of service and quality. Orla O'Sullivan talks to Crystal Cruises' **Thomas Mazloum**, Seabourn's **Christopher Prelog** and MSC's **Tim Skinner** about how on-board learning is going hi-tech.

**W**hen the cruise industry discusses technology, it is often about the latest state-of-the-art entertainment or cutting edge design developments. But behind the scenes, technology is helping the way cruise lines

develop staff recruitment and training.

For Thomas Mazloum, senior-vice president of hotel operations for Crystal Cruises, online applications make it easier to recruit staff, with contracts signed in half the time it took before. However, the process

does not always ensure suitability. "We get a lot more unqualified applicants," he says.

Once qualified candidates make it on board, they find that virtually everything on a ship has a computer chip in it. As Christopher Prelog, director of hotel operations at Yachts of Seabourn, notes: "The coffee maker has a computer. The engineer used to be a guy with a wrench, now he's a guy with a laptop. Embarkation is all automated and luggage handling is by bar codes." Although cruise training schools have expanded their programmes accordingly, Prelog believes software and automation training have helped crew employees get to grips with key things they need to know, such as health and safety, as well as the specific tasks of their particular position. "You used to be able to train on the job, but you can't do that any more," he says. "That's part of the reason why we created the Seabourn Academy; to get this training done beforehand, because they can no longer do it along with their work, it is simply too much."

## Switched on

For Tim Skinner of MSC, the digital age has made for highly informed customers who expect cruise staff to be able to brief them on a ship's hygiene procedures and conservation efforts. "You'd be surprised at the number that are interested, especially US and German tourists," he says. He counts the huge change in cleaning products and housekeeping procedures to environmentally safe ones as part of a broad swathe of technological change. "It's a big question because technology affects nearly everything we do," he says.

MSC's Captain Antonio Maresca says that, although the cruise line hires only graduates of shipping schools, it still needs to train them in the practicalities of working for MSC. "For example, all engine room staff spend months on board a ship that is being built to observe and learn how MSC Cruises' automation works," he says. "Once trained, employees are replaced so newcomers can benefit from the same practical training."



Online learning allows staff to train in their free time.

The Academy operates on board, training 16 cadets at a time for a month. Four suites are given over to training.

The Academy began early last year on three of Seabourn's five vessels, in preparation for the latest, the *Odyssey*, which launched in June 2009. The Academy is now focused on future launches: the *Sojourn* this

summer and the *Quest* in 2011. The plan is that each vessel will eventually have its own Academy, as the *Odyssey* does.

### E-education

The *Odyssey* carries 450 passengers, a total closer to the lifeboat capacity of some cruises. A typical cruise carries about 2,500



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passengers. "We have almost as many staff as guests," Prelog notes. A feature of Seabourn's recruitment is that top executives interview hospitality staff in person. "These aren't kids in summer jobs," he says, "but those serious about a cruising career." The company is equally serious, subsidising additional training for those who go to school between stints at sea.

adds. MSC also relies on mentors, but as Tim Skinner, corporate hotel manager, notes, he hasn't the luxury of hospitality staff being on board and off duty. "As soon as they're on board, they're working," he says, although "very deep training" takes place.

Technology makes this possible, without the need of assembling its 12,500 active crew (MSC has about 3,500 staff for its ten ships,

standardisation, we've a lot of certifications. However, Mazloum notes that the biggest benefit is that staff are happier. With staff sourced from 45 countries, Crystal employees can use technology such as the internet to keep in contact. "When they're away from their family and friends for six months they can still stay in touch." ■

**“Shadowing is key because the Seabourn way is a very different way of relating to guests than on most other ships.” Christopher Prelog**

Seabourn wanted to ensure that the high customer service ratings given to its smaller ships would also apply to its newer, larger vessels. "It was determined that, where possible, no new crew member would serve on the *Odyssey* without first having served on one of the original Seabourn vessels," Prelog says. The cruise line also has a system where new crew shadow experienced staff. "Shadowing is key because the Seabourn way is a very different way of relating to guests than on most other ships," Prelog

including crew members on rotation or standby). "Staff can watch training programs at their leisure," Skinner says.

Crystal's Mazloum echoes this advantage for staff who work seven days a week. "They can go at their own pace and can search for what they want, such as a new method of canapé presentation. They don't have to look through a whole book," he says. It also allows staff to catch up on any new developments while they were away, he adds. "The big change with online training is

**Profiles**

**Thomas Mazloum** became senior vice-president, hotel operations, for Crystal Cruises in 2003. He began his career at Crystal with the launch of the *Crystal Harmony* in 1990.

As corporate hotel manager for MSC Cruises, **Tim Skinner** is responsible for operating procedures and policies, crew training, and the general service quality delivery of the hotel side for the line.

Having worked in various hotels in Austria, **Christopher Prelog** joined the *Seabourn Pride* in 1998. Since that time, he has served in virtually every hospitality position in the company, eventually coming on shore to take over the position of director of hotel operations in 2003.

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# Total resource management

**MarineXchange's** MXP software bundles into one program an innovative management tool for the efficient handling of cruise ship resources.

**M**arineXchange Software is the first company to offer enterprise resource management software specifically designed for the cruise industry. Instead of managing large cost areas, such as payroll, fuel, port costs, or procurement with Excel and Word, cruise lines are increasingly making the transition to using the MarineXchange MXP Software.

The two most recent cruise lines to implement MXP are Holland America Line and NCL. With ships deployed all over the world, they needed better software to streamline their unique supply chain needs. MXP enterprise supply chain software uses sophisticated forecasting, process automation and e-commerce to fulfil these needs.

MXP modules can be run in offices and installations such as ships, hotels and warehouses. The software collects, retains, process and shares data across an entire organisation.

“MXP’s e-commerce portal is integrated with its supply chain, itinerary planning, port information, destination information, vendor management and shore excursion management modules.”

The software enables educated decision-making, based on historical costs, revenues, and guest perception. Efficiency gains and error reductions are realised through interfaces with financial systems and reservations systems.

MXP's e-commerce portal is integrated with its supply chain, itinerary planning, port information, destination information, vendor management and shore excursion management modules. MXP clients already process over 99% of purchasing documents through the MarineXchange e-commerce portal.

## Supply chain management

The MXP software provides all traditional supply chain management processes, combined with e-commerce, recipe and menu cycles, itineraries, and order schedules in one integrated package.

Because the system was designed for cruise operators, it allows multiple specifications per item and can automatically compare quotes in metric and imperial measurements.

MXP considers port information, including customs, import and export restrictions; and other industry-specific features. The system works with all commodity types, whether corporate purchasing, foods, beverages, hotel goods, gift shop merchandise, technical items, medical supplies, shore excursions or pre- and post-hotel land packages.

## Port and itinerary management

The unique itinerary module enables cruise lines to plan itineraries more effectively, based on how ports are rated by passengers, local port costs and fees, revenue potential of shore excursions, navigational restrictions, visa requirements, provisioning opportunities, and more. In addition, the program also makes fuel cost calculations.

This software can be linked to ports and ships' agents, as well as reservations, budgeting and voyage reports, cruise line websites for automatically updating itineraries, and interactive TVs.

## Port cost management

MXP manages the entire port cost life cycle. It obtains estimates, creates budgets, makes forecasts, and initiates pre-payments, all the way to interfacing final payments to A/P. A unique e-commerce solution allows port agents to update all port charges, including special 'first call of the year' fees and weekend or holiday surcharges.

## Tour management

A special module has been developed for tour, hotel and land programs, integrated with the itinerary and port programs, as well as with reservations and cruise line websites. It creates automation with block management through batch creation and a web solution for obtaining additional inventory. Passenger e-documents for transfers, tours and land programs can also be generated.

## Human resources and payroll

MXP allows employee management from shore and is fully integrated with the payroll module. Features include web-enabled recruiting, visual drag-and-drop scheduling/vacation planning, visa and vaccination requirements by country, certificate and course management, crew travel with a flight interface, and appraisal templates based on position. The payroll module features multiple contract templates for the same position, payment automation and wire transfer interfaces, budget tracking, and US tax calculation.

## Menu engineering

Beside standard recipe functionality, MXP integrates the preparation flow, and allows HACCP and CDC guidelines to reduce risk exposure. Based on history and load factors, MXP can forecast meal requirements. A new meal count system allows waiters to transmit their entire order in real time to the galley. ■

### MarineXchange

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When South Korea's STX bought Norway's Aker Yards in 2008 for \$924 million and became STX Europe, it was a marriage between the best of eastern and western shipbuilding. Christopher Kanal talks to recently appointed CEO **Sang-Ho Shin** about the challenges of tackling the downturn, delivering the *Oasis of the Seas* and remaining innovative when orders are down.



**Christopher Kanal: In May 2009, you became president and CEO. What is your strategy for STX Europe?**

Sang-Ho Shin: STX Europe's strategy is to be the leading builder of cruise and offshore vessels. Having STX as owner gives us a solid foundation to build upon.

STX Europe is a highly competent organisation and I have been impressed by the skills, experience and innovative ideas among its employees. Although the last two years have been challenging, I believe we are back on track. Our main focus is to continue to deliver on time, meeting or exceeding customers' expectations.

**What has been your biggest challenge so far?**

As with the rest of the shipbuilding industry, there has been a drop in orders. The market slowdown and the lack of financing have affected the ability and willingness of ship owners to invest in new vessels. Whereas the market for new ships has slowed in the short term, we believe that the underlying demand for specialised cruise and offshore vessels is still there in the long term.

Several of STX Europe's shipyards have order backlogs that ensure high capacity utilisation throughout 2010 and into 2011, and the majority of financing needs for 2009 are secured. If the situation with limited

numbers of orders persists well into 2010 and beyond, we will gradually increase excess capacity, but with a strong order backlog for many yards, STX Europe has a good foundation for ongoing activity.

**How is STX Europe coping with the economic downturn?**

We are relatively well positioned compared with other shipbuilders. Nevertheless, securing orders is essential in order to maintain activity at our yards and this is a key focus for STX Europe.

**How will STX Europe compete as an Asian/European company?**

STX Europe is a well-established cruise ship builder with an extensive network of sub-suppliers based in Europe. The competence for building highly specialised cruise ships and offshore vessels has been developed at our European yards over many generations.

STX Europe will continue to build on this position by utilising its experience in order to remain at the forefront when it comes to developing concepts and innovative solutions.

Over the decades, STX Europe has developed close relationships with some of the world's leading ship owners, and one of its hallmarks is the ability to create the world's largest, most spectacular cruise ships.

**What are Europe's strengths and weaknesses in shipbuilding? What are Asia's advantages?**

Generally, shipbuilders in Asia specialise in high volume, labour-intensive production of long vessel series, and their strengths are related to outstanding efficiency, productivity and speediness in addition to a more favourable cost base.

In Europe, our competitive advantages include the unique competence in building advanced, customised ships which are tailor-made for each customer. The competence and experience of building technologically advanced cruise ships, ferries and offshore vessels are one of the hallmarks of European shipbuilders.

**What are the advantages of being an international shipbuilder, with one foot in Asia, at a time when Asian yards are on the rise?**

STX Europe has operations in six countries located in Europe, Asia and South America. Our global operations enable the optimal utilisation of competence, capacity and resources across the group and ensure customer proximity.

With STX as owners, we have the opportunity to exchange best practices, take advantage of synergies and share knowledge and experience. By combining expertise and experience, we are learning from each other and improving.

**Does the dearth in orders allow opportunities to develop new concepts?**

Despite low orders, it is important to maintain activity to avoid losing competence. Being a group of 15 shipyards, STX Europe can allocate production to the location where we can offer the customer the most favourable conditions. This allows us to move parts of the production from a yard with a heavy workload to a yard with free capacity.

Lower activity levels also allow us to focus more on innovation and R&D as more resources are available. By utilising the time and resources available, we may have some new concepts when the market returns and customers start ordering ships.

**What lessons did you learn from the *Oasis of the Seas* project? What was the biggest challenge in the design?**

In general, prototypes are more challenging than sister vessels as the design must be developed from scratch. The *Oasis of the Seas* is not only the world's largest cruise vessel; it is essentially a floating city containing a wide range of entertainment concepts and facilities.

**How will the *Oasis* influence future shipbuilding projects?**

We definitely believe in building big and we are confident that Royal Caribbean will have great success with the *Oasis of the Seas* and

*Allure of the Seas*. Big ships offer favourable economies of scale as well as being attractive destinations themselves.

That said, for the cruise market in general there will be demand for the big, spectacular vessels as well as more intimate ships. Cruise ship owners tend to develop tailor-made concepts based on the area of operation, passenger profiles, age groups, and on board experiences. As a result, there will probably be a mix of different ship concepts going forward, with the trend moving towards the large scale.

**What is your most important cruise project at the moment?**

Obviously, the *Allure of the Seas*, which will

be in service this year, is taking the cruise experience to a new level. We are also delivering a series of vessels to MSC Cruises. Last summer we delivered the *MSC Splendida*, which is the ninth vessel our Saint-Nazaire yard has built for MSC and the sister vessel of the *MSC Fantasia*, delivered in 2008.

**How has the industry coped with tight financing and cruise ticket prices at record lows?**

Although some market fundamentals point against ordering new ships, cruise liners still report good capacity utilisation and passenger growth, with immature markets

being among the areas of greatest growth potential. The cruise industry is resilient and rebounded quickly from such incidents as 9/11 and SARS.

**Does STX Europe have any plans to scale back its operations?**

At some of our yards, lay offs have been necessary depending on ongoing activity. At most of our yards, however, activity is still high with an order backlog providing a good foundation for capacity utilisation.

**What has the impact been of the entry of South Korean-based STX Business Group on the company?**

STX Business Group is an international, industrial conglomerate with strong positions in shipbuilding, shipping, energy, equipment and construction. As part of the STX Business Group, STX Europe has a solid, industrial owner which is focused on developing the company further into its main business areas of cruise and ferries, and offshore and specialised vessels.

Through our shipyards in Korea and China, the STX Business Group has extensive shipbuilding experience and together we share best practices and learn from each other. In addition, with the entry of STX, several areas of synergy have been identified and taken advantage of from sourcing and production practices to marketing.

**Where do you want STX Europe to be in five years time?**

STX Europe shall continue to develop unique, breathtaking cruise concepts together with leading cruise ship operators and be at the forefront of the offshore industry, developing vessels for operation in harsh conditions such as deep waters and arctic regions.

With a constant focus on environmentally friendly solutions, STX Europe will be the leading builder of cruise and offshore vessels. ■



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Idling		Full load	
Single flow meter	System	Single flow meter	System
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0,3%	6,2%	0,3%	1,0%
0,5%	10,3%	0,5%	1,8%
1,0%	20,5%	1,0%	3,6%
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**Profile**

**Sang-Ho Shin** joined STX Europe in September 2008 as chief operating operator. In May 2009 he was appointed president and CEO. Shin began his career in the STX Business Group when he joined STX Corporation in 1980.

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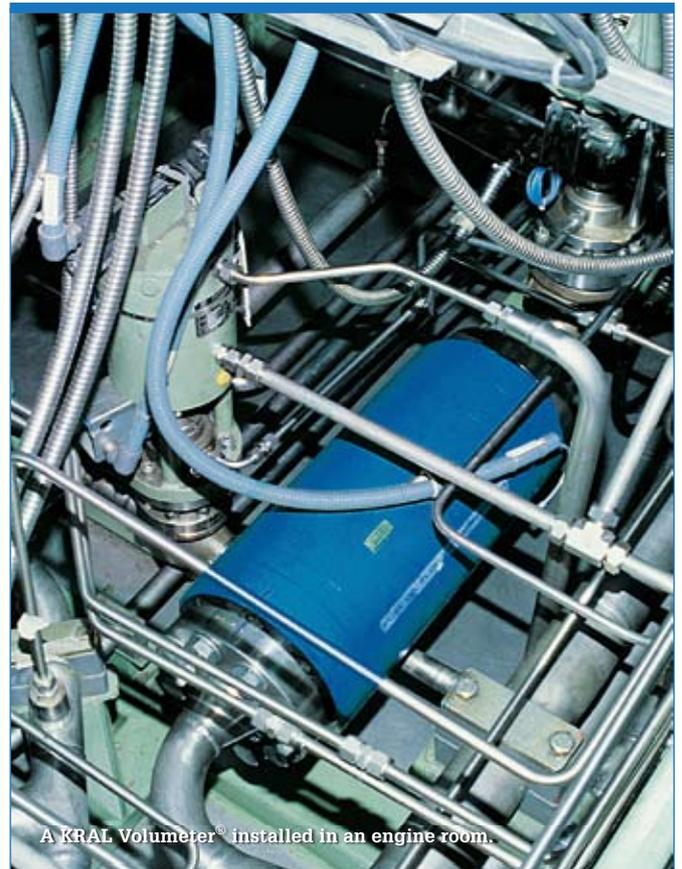
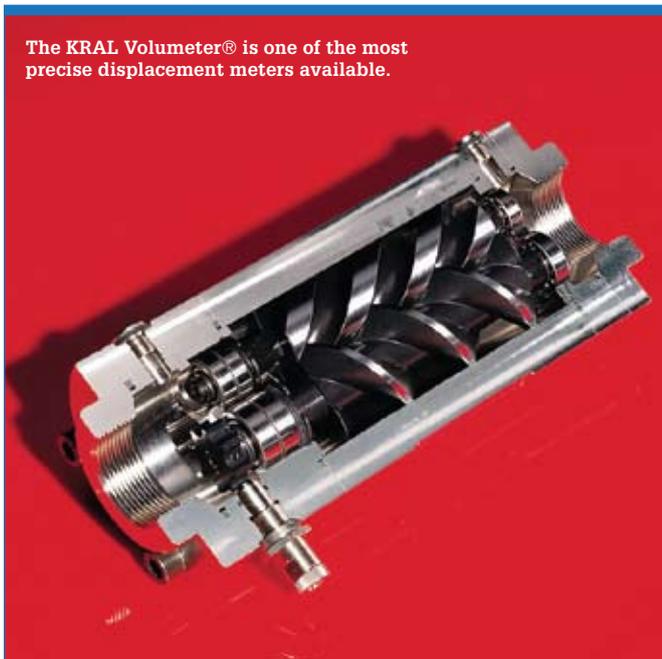
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“The system reduces the chance of error by using accurate, single flow meters.”

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The KRAL Volumeter® is one of the most precise displacement meters available.



A KRAL Volumeter® installed in an engine room.

The system reduces the chance of error by using accurate, single flow meters. The KRAL FCM can also be used for multiple engine installations by identifying the fuel consumption of each engine on a central display. Low precision flow meters are not suitable for fuel consumption measurement.

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# Refit for purpose?

Orla O'Sullivan talks to **Kevin Douglas**, vice-president of technical projects, newbuilds, for Royal Caribbean Cruise Lines, about how it may be easier to fund the building of new ships than renovate existing ones.

**R**ecalling how he approached work on the *Oasis of the Seas* – the world's biggest cruise ship – Kevin Douglas, Royal Caribbean Cruise Lines' (RCCL) vice-president of technical projects, newbuilds, calmly exclaims that: "Every big project is just a series of smaller projects."

As part of his work on a cruise ship five times the size of the *Titanic*, and 40% bigger than any ship at sea today, Douglas and his team handled some of its more novel features such as Central Park.

"12,167 plants, trees and shrubs is the figure that comes to mind," he says, "I always had a good memory for numbers. I'm great in pub quizzes."

Douglas spent the last three months of the two-and-a-half years it took to build the *Oasis* overseeing the final elements in Finland and in April he'll be in a German shipyard for the more routine task of refurbishing a ship due its seven-to-eight year modernisation.

While his job title reflects the focus on newbuilds, or "revits" [revitalisations], as

**"Sometimes we take a project all the way from a blank sheet, other times we come in and do specific projects."**

Unlike its New York namesake, the ship's Central Park has a tropical garden featuring vines, banana trees and bamboo. Does he know the number of plants used?

he calls them, Douglas also spends considerable time working on special projects, some of which are international joint ventures.

His involvement so late in the process on the *Oasis* wasn't normal, he says.

"Sometimes we take a project all the way from a blank sheet, other times we come in and do specific projects."

On the *Oasis*, built by STX Europe, in Turku, Finland, he says there was a need to bring in extra hands. "There were so many new venues and opportunities arising too late to get the shipyard to do it, it would have been a distraction from building the ship," he notes. For example, a planned hairdressers was dropped for a cupcake outlet. "It's immensely popular, but could we have predicted it would have been popular three years ago? No." The *Oasis* was ordered in February 2006, before the cupcake craze swept the US.

Douglas cites RCCL's chairman Richard Fain, who said the company's design goal with the *Oasis* was a ship that's one-third familiar to customers, one-third evolutionary and one-third revolutionary. For those working on it, that meant the *Oasis* built on incremental knowledge acquired as RCCL upgraded from earlier classes of its ships, such as the latest Voyager class, then the Freedom class and now the Oasis class. "We didn't just go to the *Oasis* overnight," he notes. ▶

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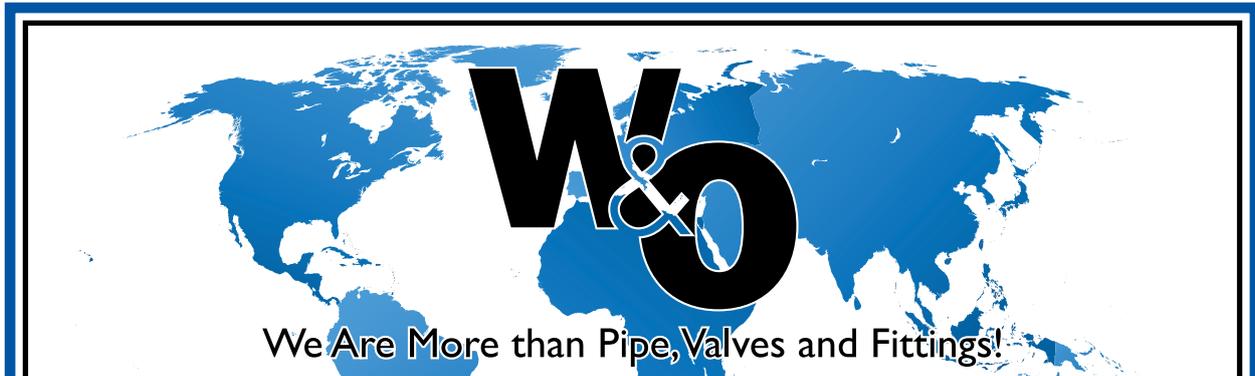
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the ship and we adapted the luggage carts to move the plants into place.”

#### Cash flow

While Douglas lives in Miami, he grew up in England, serving at 16 as one of the first technical apprentices at the Swan Hunter shipyard. Later, after years building ships for Renaissance Cruises in France, Douglas joined RCCL in 2004.

“It’s no secret the average age of our fleet is ten to 11 years,” Douglas says. RCCL must plan for major changes in the near future, he adds, given that small renovations are typical after seven to eight years, with \$30-\$40 million overhauls after 15 years.

As for the effects of the economic slowdown on the refit-rebuild decision, Douglas

says, “It’s fair to say there’s an industry-wide slowdown in large-scale revits.”

The Cruise Lines International Association (CLIA), representing 97% of the industry, says its members will launch 26 new ships in the next three years, 12 of them this year. Last year, 14 new ships were launched.

Counterintuitive as it may sound, Douglas says that it’s harder to get funding for refits than rebuilds when purse strings tighten. “Revits we tend to cover with existing cash reserves; for new ships you need a mortgage.”

While the cruise industry has generally performed well in the downturn, there are few that would argue that there is extra cash to hand. By analogy, Douglas cites billionaire Richard Branson’s memoir on how Branson couldn’t raise £1 million to change an in-flight TV system but could raise £1 billion to build a new fleet.

In April 2009, in the depths of downturn, RCCL announced that it had secured final funding for the *Oasis*. It cost \$1.4 billion to create. The 2007 facelift given to the *Majesty of the Seas* cost \$36 million.

For RCCL, at least, such investment results in passengers spending nearly twice as much on board. Douglas says this is because it’s largely from passengers paying for food from specialty outlets, such as Johnny Rockets, rather than eating in the restaurants that are included in their fare. “But you can’t just put in venues that are all about retail and making money or you’ll get a dilution. You must please your customer.”

Historically, this has meant balconies becoming almost standard and the proliferation of spas. Future drivers of refits will include, for RCCL, less obvious considerations such as ship stability, by adding ‘ducktails’. “Ships are like people, they get heavier as they get older. Think, for example, of every pot of paint. How many pounds does that add?” Keeping ahead of regulations, including environmental conservation, will also be a big focus.

One of his latest projects will bring him to the Blohm Voss shipyard in Germany to oversee a range of relatively small improvements to the *Celebrity Constellation*. Besides new carpets and renovated cabins, the Millennium-class ship will get three paid dining outlets to bring it closer to the Solstice-class of ships. “We can’t make the *Millennium* the same as the *Solstice*,” Douglas notes.

In all refits there is a risk of ‘cannibalising’ a fleet if some ships look so appealing that others seem shabby by comparison. However, Douglas says that operators can lessen that risk by moving older ships to markets where there is less competition from new ships. “The great thing about our business is that our assets are floating.”

As for his career floating between new shipbuilding, and renovations, or last-minute fix-it man, Douglas says: “There are a few differences but the stresses are the same. There is never much time.”

Douglas has two weeks to redo the thousands of cabins on the *Celebrity Constellation*. Surely a cinch after working on Central Park. ■

Kevin Douglas began his shipbuilding career at 16.

“For example, we had done things before, such as ice rinks, which we’ve done eight times,” he says. This left “lots of challenging new venues” to work on, such as an aqua theatre, which features high-diving acrobats and automated light and water shows similar to the famous Bellagio hotel in Las Vegas. Another feature was Central Park.

“It’s fair to say there’s an industry-wide slowdown in large-scale revits.”

The final touches to the *Oasis*, as with many refit projects, involved the integration of elements brought as near to completion as possible elsewhere. For example, Douglas worked on the construction of one of RCCL’s signature premium dining outlets, Johnny Rockets. Its 4.5t galley was made in France, shipped to the Bahamas, and deposited by crane onto the *The Majesty of The Seas*.

For Central Park, the 12,167 designated plants were already planted when they got to the ship, Douglas explains. In advance, RCCL had consulted horticultural experts to ensure that the plants could survive on board and that they wouldn’t blow over and be a hazard. “But we needed to understand how to load them,” Douglas says. “We developed a scheme to lift the trees onto

#### Profile

**Kevin Douglas** started his career as an apprentice at Swan Hunter. He then went on to study naval architecture and later worked on the *HMS Ark Royal*. He has worked on ferry and cruise ship projects around the globe and was formerly vice-president of new builds at Renaissance Cruises and designed and built a class of eight ships in St Nazaire in France.



The 265-seat Spiegel Tent.

# Epic adventure

Norwegian Cruise Lines has had to overcome many challenges in the building of its first 'mega-class' vessel. However, this hasn't dimmed president and COO **Roberto Martinoli's** excitement at the prospect of launching the *Norwegian Epic*, the next stage in the company's 'Freestyle Cruising' concept, writes Phin Foster.

**W**ith the launch of the *Norwegian Epic* in June, Norwegian Cruise Lines (NCL) will join Royal Caribbean and Carnival as members of the 'mega-class' elite. With at least 60% more passenger space than any member of NCL's existing fleet, the 4,200-capacity vessel promises to reinvent the cruise experience, introducing the next generation of the Freestyle Cruising concept pioneered by the operator over the past decade.

There is genuine excitement within NCL around the benefits the *Epic* will bring to a brand already famed for its innovative culture, but the build process has not proved completely smooth sailing. The initial order, made in late-2006, was for two F3-class ships. However, a dispute between NCL and shipbuilders STX in September 2008, with construction of the first vessel already well underway, saw the deal fall into

jeopardy. Reports suggested that the 50% acquisition of NCL by private equity group Apollo Management the previous August had led to design changes being made, prompting a disagreement over revised costs. Eventually a deal was reached, but it arrived with the caveat that NCL would now only be taking delivery of the one ship.

When broaching what might be a delicate subject with NCL president and COO Roberto Martinoli, however, he makes no effort to duck the question. "Yes, there were issues with the yard and I'd be lying if I said it wasn't a difficult eight months or so," he acknowledges. "But we came to an understanding and it's no exaggeration to say that the relationship today is excellent. We moved from what was a challenging situation to

A rendering of the *Norwegian Epic's* aft pool.



“The overall design is fantastic – I can say that as it was all confirmed before my arrival. From an architectural standpoint they’ve done a great job; the whole thing feels so dynamic and new.”

Work on interiors has been shared between two practices with whom NCL enjoys a long-standing relationship, SMC and Tillberg Design, and a team of in-house designers have focused on the crew areas and behind-the-scenes logistics. The hip, somewhat urban feel of the ship’s cabins feels like a departure from traditional notions of maritime design, but it is the scale and span of the entertainment amenities on board that really excite.

“When NCL launched the Freestyle Cruising concept back in 2000 it was mainly centred around the dining experience, placing an emphasis on choice and flexibility,” Martinoli explains. “What the *Epic* represents is a further step forward through applying similar principles to entertainment. Instead of one big show with two sittings of 3,000, you have several different locations, smaller capacities and the opportunity for people not to feel obliged to be at a certain place at a certain time. This is quite a significant change to the cruise experience.”

Having already confirmed acts such as Blue Man Group and Legends in Concert, the COO believes the *Epic's* output will be more akin to Vegas or Broadway than anything found on the high seas. These claims will surely attract a wide audience, but the scale on which this new level of Freestyle Cruising will be conducted might also pose problems. Sometimes being able to dictate guest behaviour in a more dictatorial manner does have its benefits, and with at least 60% more passenger space than any of the existing fleet, a lot of work is being put into minimising congestion.

“There are certainly challenges that arise around ensuring people are flowing through the ship and no bottlenecks are created,” Martinoli acknowledges. “We’ve put a lot of focus into the ‘urbanistics’ of the design and extended our on-board reservation system. Part of that was working with external consultants, using

a place where it really works for both sides; things are progressing very well.”

Martinoli may have only joined NCL in April of last year, but his first experience of the *Epic* came earlier, having become an advisor to Apollo Management in March 2008. “It was one of the first things I was told to do for them,” he recalls, “being sent out to have a look at the project and see how it was progressing. It’s a huge undertaking and a significant investment, so clearly Apollo wanted to keep a close eye on its evolution.

“That was my involvement initially, but upon becoming COO one of my areas of responsibility is for new building. Needless to say, this is one of the biggest things going on within the company, not just from a long-term perspective, but on a day-to-day basis. It requires constant monitoring.”



Roberto Martinoli joined NCL last April.

senior VP, operations at Costa Crociere and managing partner at Martinoli Group, is clearly excited by the thought that the *Norwegian Epic* is so close to completion.

“We finished loading all the cabins towards the end of the year, the steelwork

is completed and all major aspects of the project are in place,” he explains. “Systems preparation is also up and running, so it’s really just interior decoration and the finishing touches that need doing between now and delivery.

“ I’ll certainly be spending plenty of time on the ship at the beginning. It’s far preferable than being on the phone five hours a day.”

Speaking on the eve of yet another trip to the Chantiers de l’Atlantique shipyard on the west coast of France to check up on the latest progress, the cruise veteran, whose previous roles include executive VP, operations at Carnival Cruise Lines,

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a simulation programme that encourages us to take lessons from existing passenger behaviour and apply it to the *Epic*. We believe we've done a good job, but only time will tell. That's the thing with prototypes: you never know until you see them in operation."

But all the planning in the world will not guide passenger behaviour alone. The success of a project on this scale, initially at least, will rest with the quality of crew on board. The *Epic* will boast 1,730 crew members in total, a recruitment challenge Martinoli and his team began tackling more than a year ago.

"The priority has always been to ensure that the vast majority of people joining the crew are already fully trained and up to speed," he reveals.

"This has required a lot of work well ahead of time. We've gone through our fleet schedule, having people overlapping across our ships and balancing the process so that the percentage of newcomers is spread evenly across all our ships and the balance on each is the right mix of experienced crew and first-timers."

### Experience cocktail

Finding the right cocktail of experience and new talent is an ambition not confined to frontline service. Martinoli cites the variety found in the executive echelons at NCL as a key driver of its success and it is something he has tapped regularly throughout the construction process.

"When you look at the people running the company today it's a good mix of those who've spent a lot of time in the industry and others that have been brought in from the outside," he says. "That's very beneficial and the opportunities for learning from one another are immense. With the *Epic* it's not only a question of applying the lessons we've learnt before; new approaches also need to be adopted in order to meet what for us is a new challenge. Direct experience, external help and new eyes are all required to make a project of this scale work."

A concerted effort has also been made to involve people from across all levels of



The ship will offer a variety of performances.

The 153,000t *Epic* will accommodate 4,200 guests.



Dining remains a key part of the Freestyle Cruising concept.



“The core lesson is that these builds are extremely tight in terms of timing,” he says. “It is imperative that you have fast and efficient decision processes in place. Sometimes, it can even be better to make a bad decision than do nothing at all. Time is your enemy when building a big ship and regular contact is key: you don’t want anybody being surprised by anything.”

Fingers crossed, but the general sense of optimism emanating from NCL these days would suggest that any nasty surprises are well behind them. It looks as though Freestyle Cruising is about to become bigger than ever. ■

the organisation, through open forums, steering committees and regular update reports – “it’s been a real team effort,” says Martinoli. As the end looms into sight, however, the COO can start making concrete plans as to what his early role in its launch will be.

“I’ll certainly be spending plenty of time on the ship at the beginning,” he says excitedly. “It’s far preferable to being on the phone five hours a day. I’ll attend

the first few cruises and keep an eye on things, but the team we’ve assembled is highly focused and motivated – they don’t really need my help.”

After all the work that has been put in already, no one would resent Martinoli taking a break. With initial problems overcome and everything on track for delivery, it is also a good time to reflect on the knowledge gained from NCL’s first experiences of a mega-class project.

### Vital Statistics

- Gross register tonnage: 153,000
- Overall length: 1,080ft/329.5m
- Draft: 28.5ft/8.7m
- Engines: diesel electric
- Cruise speed: 22kt
- Guests: 4,200 (double occupancy)

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**W**hen Peter Fetten joined Carnival Corporation as senior vice president of refits, this newly created role was the latest step in his already impressive career. With 30 years' maritime experience, he has held a similar role at RCCL and positions with Blohm + Voss Shipyard, Barthels & Luders and his own consulting firm.

Having joined Carnival last year, Fetten sees himself as head of a service utility for the world's biggest cruise operator, mediating between brands and instituting best practices across the company. When asked which of these aspects is more important, he replies, "Both".

For example, as a mediator in a sale, Fetten says he might arbitrate between the seller and buyer on what is a reasonable cost and length of time for a ship to migrate from one brand to another, although this is not always plain sailing.

demands they have. Our function is going from the idea to the execution."

The degree of change could be from what he calls "revitalisation" or "enhancing what is already there" to a major structural conversion, such

**"Historically, a ship was modernised after 25 years, now it's every ten years."**

"Sometimes we criticise, sometimes we are being criticised," he notes with a laugh. "My function is related to support. We help individual lines with whatever

as lengthening a ship, adding a superstructure or moving decks around.

Fetten's main team comprises six architects, designers and technicians. He

# The right fit

Orla O'Sullivan talks to **Peter Fetten**, SVP of refits of Carnival Corporation, about the challenge of refitting ships that meet market expectations and changing demographic trends.



Peter Fetten's career spans 30 years.

also has access to a large corporate newbuilding group, and similar groups within some Carnival cruise brands that have their own heads of refitting.

"However, we should not take away the responsibility of the individual lines," Fetten emphasises.

Rather, he sees himself and his group as defining processes and reinforcing success by analysing what has worked best across the entire fleet. Without such a conscious effort to institute best practice, a lot of individual knowledge may not be communicated.

**"It's a huge task to take a ship out of service and modernise it in the quickest time possible."**

"Most of the job is defining the right designs and the right people for the task," Fetten says. "We don't have a formal database where you put in a profile and it pops out a name, but we keep a huge database on the latest performance statistics in the cruise industry."

This data includes information on shipyard and contractor selection and pricing. Fetten is adept at analysing data to achieve results. In the 1990s, as head of his own consulting company in his native Germany, he saved upwards of \$10 million per ship for clients by building in China.

#### Rate of change

There is no way to be an expert in all aspects of cruise life. "A cruise ship is basically a town," says Fetten.

Hence, Carnival draws on a lot of outside partners, working with many of the world's major retailers, casino and spa operators to stay abreast of current trends. The two biggest trends Fetten sees for the coming decade are an even greater escalation in the speed of refurbishment cycles, and more sophisticated customers.

Customer awareness will see a continuation of the focus on health and wellness, bringing increased dietary options, activities and, notably, spa services on board.

"Historically, a ship was modernised after 25 years; now it's every ten years," Fetten says. "It's a constant adaptation to keep ships fresh and in line with the latest building philosophy and trends."

Fetten notes there must be balance between the renewal of some ships and ensuring others do not look jaded by comparison, adding that there is a constant recycling within fleets since it takes up to four years for a single refurbishment. The slowest change to make is cabin upgrades, he notes, because there are likely to be somewhere between 1,200 and 1,500 cabins.

Refitting projects can also be deceptive in their intensity. High on the list of time-intensive makeovers are menu changes, which at first thought might seem superficial, however, the increasing

culinary sophistication of passengers means that a cruise ship, instead of having one main dining room, must have several.

"If you don't have a primary speciality restaurant, at least one – even sometimes five or six – it's possible you'll lose customers," Fetten says.

A spa-styled restaurant may require juicers and copious amounts of raw food, while a casual dining option, which ten to 15 years ago meant pizza, hamburgers and hot dogs, today also means sushi, tapas, Indian and Mexican.

"It seems easy to change a menu, but this requires hardware changes in the background that nobody sees," he adds.

However, Fetten notes how themed cruises, which have become a recent industry trend, have had less of an impact

on refits. In this area, Carnival has hosted a theme cruise based on US rock group Lynyrd Skynyrd, which included live performances by the band.

In Fetten's experience entertainment-related changes have commanded the least investment from refitting budgets. With the exceptions of the recent trends of big screens and films screened outdoors, entertainment arenas were originally designed to be multipurpose.

#### Geographical influences

By contrast, new itineraries require changes that were not envisioned when traditional routes applied.

"For example, ships now might change from sailing in Alaska to a route in the Caribbean," he explains. "In Alaska you need a more closed ship whereas in the Caribbean you need a more open ship. A lot of ships need a lot of adaptations that nobody sees."

That's not to mention changes required for ships on new cruise routes to Australia, Asia and South America. And with cruising attracting a younger demographic, a new segment is opening up for casual cruises.

"Within Carnival Corporation there is the fun ship concept, Holland America for older people and Princess for the baby boomers," says Fetten, who is also aware of the differences between markets.

"Not only is the European market different from the US, but within European countries Spain is completely different to the UK," he says. "The speed of change is increasing year by year. It's a huge task to take a ship out of service and modernise it in the quickest time possible."

While Fetten is aware that it is his job to ensure that each customer gets to enjoy "a four-or five-star experience", he is also aware that there is no alternative to facing this challenge: "The more you adapt the better you perform." ■

#### Profile

**Peter Fetten** is senior vice-president of refits for Carnival Corporation. His previous work experience includes vice president new building and fleet design for Royal Caribbean Cruises, managing director and deputy board member for Blohm + Voss Repair and deputy managing director for Barthels & Lüders. Work for his own firm, Fetten Consulting, involved projects for A&P Group, Carnival Corporation, Grand Bahama Shipyard and RCCL.

# A matter of taste

Royal Caribbean International's **Frank Weber** tells Elly Earls about the challenges involved in creating dining options to suit the myriad tastes of guests on the *Oasis of the Seas*.

**T**here is no such thing as too much choice when it comes to a vessel the size of Royal Caribbean International's (RCI) *Oasis of the Seas*. At 225,282t and boasting 16 decks and 2,700 staterooms, the world's largest cruise ship needs an array of dining options to satisfy the tastes of its 5,400 guests.

"The *Oasis* can compare to any major hotel resort in, say, Las Vegas, where guests can pick any restaurant on the strip," says Frank Weber, RCI's vice-president of food and beverage operations. "In our world, passengers expect the same diversity, meaning that variety is critical to the success of the ship. We're not necessarily looking at providing new and exotic restaurant concepts, but we are concentrating on which cuisines are the most popular across the wide range of passengers on board."

Basics such as pizza, burgers, steak, seafood, ice cream, Italian and Asian cuisine all make the cut and Weber's team ensures that the cuisine is authentic.

**"Whereas in the past you would have hidden the kitchen and everything that happens behind the scenes, today people want to practically sit at the stove. There are only two people that guests want to see: the captain and the chef."**

In order to deliver suitable variety, operations are divided into three sections: traditional, evolutionary and revolutionary. "Our repeat guests expect a certain product, which is very traditional, so we have the main dining room," Weber begins. "The evolutionary part includes features such as My Time Dining, which is a flexible dining option and really an evolution of what we already do."

As cookery-based TV becomes increasingly popular and the tastes of

consumers develop, many guests expect a certain level of sophistication and innovation, which is where RCI's revolutionary offerings come into play.

Passengers are increasingly more willing to experiment with new spices, flavours and infusions, giving modern concepts such as *Oasis's* signature fine dining restaurant, 150 Central Park, and Asian eatery Izumi, an integral place within the ship's dining portfolio.

Indeed, the *Oasis of the Seas* is leading the way in terms of innovation, despite the

difficulties of providing dining options for such a large range of guests. "We participate in all the major international trade shows and conferences," Weber explains. "It's not necessarily a question of creating the most outrageous new concept; we want to offer the options that our guests are looking for. We generated an Asian concept for Izumi, for example, which has become extremely popular. The hot rock dishes at that venue are just taking off so I think we're pretty much on trend."



Award-winning chef Kerriann Von Raesfeld runs a restaurant on the *Oasis*.

The unique, high-end dining experience offered at 150 Central Park is something that has never been attempted on a non-niche cruise ship. While companies will typically hire a big-name chef, emblazoning their name on the menu, but accepting that they will rarely grace the restaurant with their presence, the *Oasis* has taken a very different approach. "We wanted to have a chef who was going to be there everyday to not only have contact with the guests but to execute their menus and recipes on a daily basis," Weber remarks. "So we found a young, talented, award-winning chef, Kerriann Von Raesfeld, who is almost like the American Idol of the culinary world, and gave her the opportunity to run her own restaurant. We wanted to have someone who our guests could identify with."

Guest feedback is of paramount importance to RCI and just as Weber relentlessly keeps up to date with the latest developments in the restaurant and hotel industries, he organises regular feedback sessions with the ship's passengers; surveys and focus groups are particularly significant. "We ask them about the product offerings that we have today but also about things that they would like to see,"

Weber explains. "What is interesting for me is to find out what they cook when they're at home, what their expectations are and which restaurants they visit frequently. We do a lot of research in this regard."

Thorough investigation has resulted in a more interactive experience on board the *Oasis of the Seas*. "People like to see how the food is prepared and they enjoy meeting the chefs," Weber says. "Whereas in the past you would have hidden the kitchen and everything that happens behind the scenes, today people want to practically sit at the stove. There are only two people that guests want to see: the captain and the chef"

### On the menu

An increasing fascination with the source of their meals has led passengers to expect fresh produce, an obvious challenge on a ship the size of the *Oasis*. From freshly prepared products to local sourcing, the trend is moving steadily away from processed food, and the Miami-based company needs to keep up with the demands of its increasingly educated guests. "People are going back to basics," acknowledges Weber. "So that's what we do on all our ships; we bake our bread fresh daily and we cook our vegetables, stocks, sauces and soup fresh. Everything is made from scratch even on a larger operation."

Stringent quality assurance processes guarantee the standards of the food on a daily basis. "We do not try anything we cannot execute," Weber declares, emphasising that if the operator does not have the infrastructure or the people in place to implement something, it will not attempt it. "We concentrate on what we do well and carry that out on a daily basis," he continues. "We have specific standards for each and every dish that is put on a guest's plate – there is a specific recipe, presentation technique and instructions on how this should be carried out and, of course, we have the necessary management in place to accomplish this every day on our ships."

There are four main methods RCI uses to ensure that there are no lapses in quality. Firstly, product specifications are strict and a dialogue is maintained with the vendors so that the ship is sure to receive the agreed-upon product. "We work closely with our supply chain team and the vendors go through a rigorous approval process," Weber adds.

Secondly, the staff employed, from the cook to the server, to the executive chef to the maitre d', are of the highest quality and are involved in training and development schemes implemented by RCI. The third factor is the maintenance of the infrastructure and the equipment, and, finally, the processes must be in place to bring these methods together.

Staffing has suffered significant setbacks in recent years, particularly because of the growth of Dubai. "Dubai was a major competitor when it came to hiring and we were very concerned about it when the city was growing," Weber notes, highlighting that RCI recruits worldwide for the *Oasis of the Seas* to ensure the authenticity of its restaurants. But with the reversal of Dubai's fortunes and the dramatic decrease in the growth of the hotel industry, cruise operators have gained the upper hand when it comes to hiring.

Weber hypothesises that the food and beverage situation will gradually develop in the coming years, citing an important factor which is likely to affect the tastes of cruise passengers: sustainability. As the emphasis shifts to farming and environmental awareness, he feels confident that the *Oasis* will continue to provide the varied dining options guests have come to expect. "There's a focus on sustainability and it's going to continue. It really is a way of life." ■



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# Low energy, high quality

There is more to washing dishes than just getting plates clean. Jurgen-Iver Sell, marine division manager of **Meiko Maschinenbau**, explains how new technology is improving energy efficiency and hygiene.

**T**housands of guests eating several meals a day adds up to a lot of dirty dishes and cleaning them all requires large volumes of water and energy. With liners getting ever bigger, conserving resources and deploying energy-efficient technology is becoming a priority for operators.

Meiko has been working alongside the cruise industry for many years and has a clear understanding of these demands. It is the job of marine division manager Jurgen-Iver Sell to ensure the company delivers a high-quality product and service. "Customers have specific expectations related to the cruise ship because it's a microcosm," he says. "During the commissioning and the installation phases there are definitely challenges, but bear in mind that the shipyard is essentially building a small village. It's comparable to a major landside installation."

When Royal Caribbean was developing the *Oasis of the Seas*, it looked at all the possible ways to reduce its carbon footprint per guest and Meiko was brought in to supply the washers and vacuum waste disposal for the vessel. Sell says he was privileged to work on such a major project. "It was unique due to the size of the ship and because everybody in the cruise industry was watching. Even as a supplier, we felt the sense of expectation in the same way."

In a sector where green issues are high on the agenda, Sell is proud of his company's reputation for providing energy-efficient products. "We are supporting green ship technology," he says. "Our machines have the lowest energy consumption available on the market. We offer technology which is capable of reducing energy consumption to a minimum."

By reducing the water required in a cleaning cycle, the amount of energy needed to heat it and the chemical detergents used are also lowered. Meiko washers have systems to trap waste heat and feed it back to the boiler, further improving efficiency. The company's flight and rack washers conserve water by activating their rinse cycle only after the dishes have already been soaked. As the cruise industry becomes increasingly conscious of its environmental impact, even simple measures can have a significant impact.

While working on the *Oasis* might have been an exceptional experience, Meiko aims to bring the same level of commitment to all its partnerships. Sell believes there is a mutual appreciation between the company and its cruise clients. "They specialise in cruise vacations and we are the specialists in dishwashing," he says. "Even when we are not selling the equipment direct to the cruise lines, we see them as a customer. Whenever they have questions we are there to support them."

A good example of this ongoing support is the employment of a dedicated Miami-based technician, who exclusively serves the company's cruise partners. In addition to being on call in the case



of an emergency, he works to maintain onboard systems and prevent problems occurring. The company also offers extended warranties and a full spare parts service.

Of course, energy efficiency is wasted if the machines cannot achieve consistent results. Meiko offers different systems tailored to all areas of a cruise ship, from bars to main galleys, and applies technological solutions to ensure food is served on spotlessly clean dishes.

One area where guests look for an especially high standard is glassware. To prevent spots and stains on glass, Meiko is rolling out a GIO reverse osmosis system. When water is desalinated on a ship minerals have to be added to make it drinkable, but they can cause stains or spots on delicate glass. "What we do is filter these minerals, so that you have really pure water," Sell explains. "It gives the sparkling result everybody expects."

It is not only having clean dishes that is important; ships must also comply with the strict United States Public Health (USPH) hygiene standards that are enforced in many areas of the world, not just North America. "It's something we pay a lot of attention to," Sell says. "The monitoring system we provide, the MIKE-2, can record the water temperature inside the machine to ensure it complies with USPH requirements."

Driven by technology, Meiko aims to offer more than just the highest quality cleaning to guests. The company's commitment to hygiene and energy efficiency makes it well placed to meet expectations in a demanding industry and forge partnerships with long-lasting value. ■

## Meiko Maschinenbau

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# A taste of place

Traditionally associated with culinary classics, cruise ship kitchens are now addressing a demand for menus that reflect the sailing itinerary. Phin Foster hears why producing local cuisine, although posing a logistical and personnel challenge, should be seen as a huge opportunity for chefs and guests alike.

**S**pend enough time in the cruise industry and one soon becomes accustomed to the term 'floating resort hotel'. The parallels between cruise ships and shoreside resorts are difficult to ignore: numerous leisure activities, a strong focus on entertainment and an emphasis on choice.

Embracing the resort concept and looking towards Las Vegas rather than the retirement communities of Florida for inspiration has seen a sizeable shift in the cruising demographic over the last decade. Baby boomers are now the key market sector: younger, more adventurous holidaymakers than the previous generation and, even during times of economic uncertainty, more likely to embrace the new.

While the cruise experience shares many facets with the resort hotel, its key selling

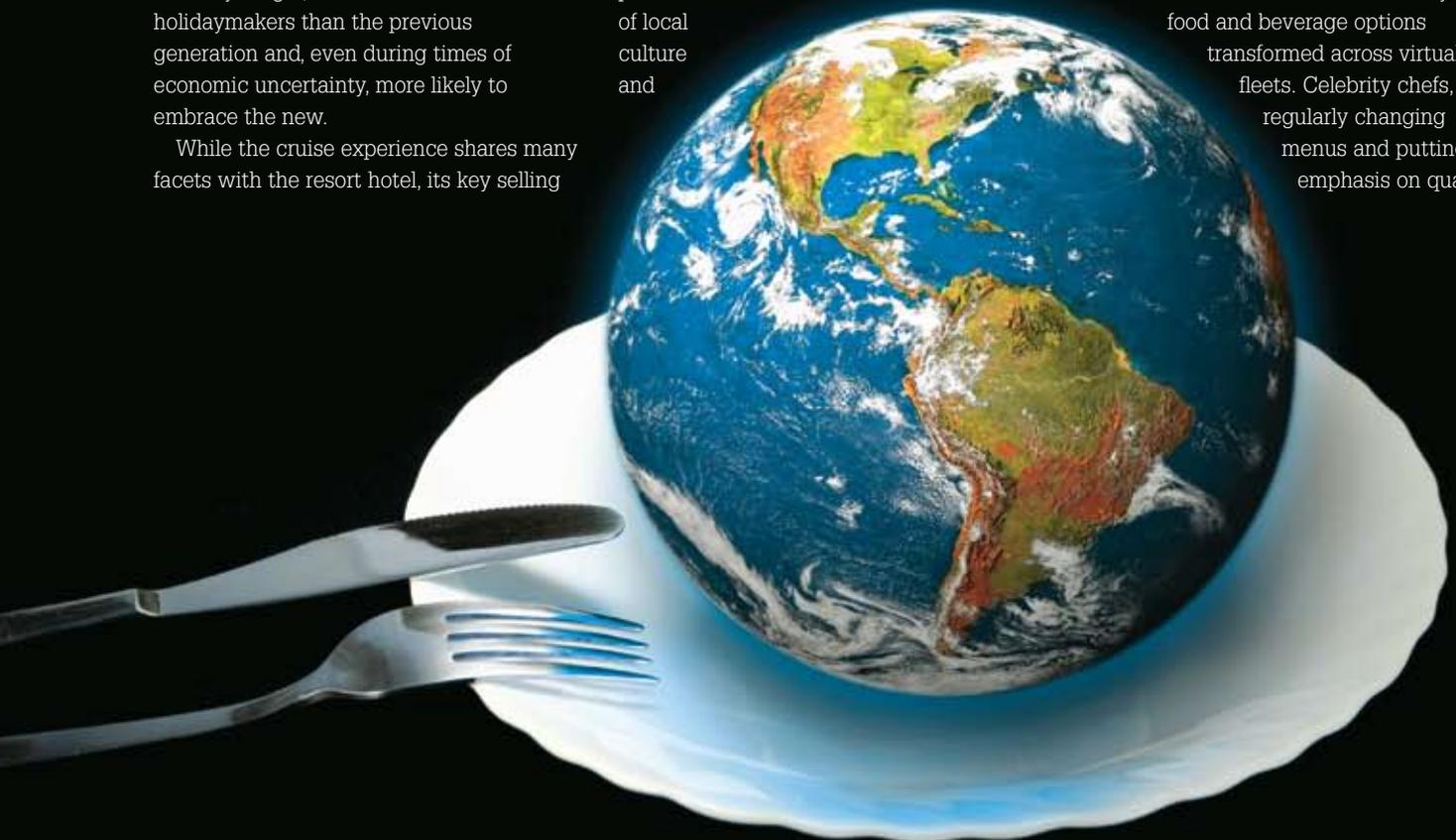
point to this group is somewhat different. Underpinning the concept of the shoreside resort is the promise of complete escape; once the gates close behind you, the outside world quickly disappears from view. Although offering comparable, if not superior amenities, the cruise experience should provide something quite different: an opportunity for total immersion in new and exotic experiences.

It could be argued that for too long the industry failed to fully leverage this unique selling proposition to its advantage. While shoreside excursions always provided a sense of local culture and

the promise of foreign sights and sounds, offerings on board had a tendency to fall back on the tried and tested.

Nowhere was this more the case than in the area of cuisine. European brasserie and North American staples were the order of the day, regardless of whether one was sailing in South America, South Africa or South East Asia, with barely a nod to local specialities.

Such a conservative approach is gradually being overhauled as those coming on board demand a taste of place. This is a natural progression of the general 'foodie revolution' that has already seen food and beverage options transformed across virtually all fleets. Celebrity chefs, regularly changing menus and putting an emphasis on quality



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produce and seasonality, have become *de rigour*. For many cruise lines, food and beverage options are now as much of an on-board selling point as star performers and innovative leisure pursuits.

The next big step is rationality. Not only will this demand the development of new supply lines, it also forces chefs on board to adopt a different mindset.

“One thing I could not believe upon first entering the industry ten years ago was that executive chefs would come on board and do six month stints without ever going ashore,” exclaims Franck Garanger, fleet corporate chef, culinary development, for Oceania and Regent Seven Seas Cruises. “What is the point of travelling the world if you never leave? I push my guys to get out there, explore and come back with fresh ideas.”

Garanger’s insistence upon his team opening themselves up to new experiences is reflected in the cruise line’s culinary offerings. Oceania is beginning to introduce far more options tailored to a ship’s itinerary, a development the lively French chef admits he cannot take full credit for.

“People were writing letters demanding to see more of the regions we travelled to reflected on the plate,” he admits. “That is where we have focused a great deal of our attention over the past two years. From the day I became executive chef, I brought a Michelin-star mentality to bear: cutting down on portion size, insisting vegetables and sauces were prepared *a la minute*, and serving fresh pasta. Looking beyond the traditional dishes to something more local is a natural progression of that.”

### Local flavour

Garanger is not alone in this view. Despite the logistical challenge, a number of cruise lines are beginning to demonstrate far more flexibility in regards to what can be served at sea.

In 2008, Holland America Lines master chef Rudi Sodamin introduced menus on the fleet’s premium ships that incorporate flavours, techniques and recipes that reflect each sailing itinerary. Elsewhere, Crystal Cruises’ wine and food voyages have been in operation on select Panama Canal, Asia, Northern and Western Europe and Caribbean voyages during 2009, with a strong focus on regional cuisine, including a Spices of the East tour on board the *Crystal Symphony*.

“One of the most enjoyable ways to immerse oneself in a destination and culture is with food,” says Toni Neumeister, vice-president of food and beverage operations for Crystal Cruises. “The guests not only want to have the cultural experience of seeing new places; they want the culinary element as well. While we have to cover all the traditional bases, we’re also obliged to reflect the area the ship is visiting. Our guests enjoy it, the chefs enjoy it and it also makes perfect sense to source produce in the areas we’re visiting.”

But how feasible is this approach when catering for large numbers? While the main dining room on an Oceania ship will always try to have one local speciality on its lunch and dinner menus each day, an expanded repertoire showcased through the chef ‘parfum’ dinners is only available to the top 12 cabins on board.

“The chef visits the local market and creates something truly special,” Garanger explains. “It is his night. The hotel manager and captain are not invited. We set up a table on the pool deck with perhaps 20 to 30 covers. The

“The chef visits the local market and creates something truly special.” **Franck Garanger**

chef cooks in front of the guests and introduces what is on the plate: where it was bought, why, and what else one can find in the region.”

The line’s new ship, *Marina*, will have a restaurant dedicated to the programme, but will remain relatively exclusive. The ability to roll out similar initiatives for the majority of guests would require more than a mere market visit by the executive chef and involve a major overhaul of the manner in which ship kitchens manage their supply chains, something that cannot be done overnight.

“The challenge of the future is going to be finding supply bases around the world in ports that can supply the specifications and quality we want,” agrees John Meszaros, vice-president of supply chain management for Carnival Corporation.

“What we need to do with these ports is either set up a logistics structure to accept inbound supplies or work with vendors to develop these areas.”

### The right recipe

A short-term solution is the employment of guest chefs chosen to match a ship’s itinerary and employed to school guests in the intricacies of local cuisine through shoreside excursions, cooking demonstrations and alternating daily specials incorporated into more traditional on-board menus.

“We really try to replicate the original recipes and buy our spices and speciality ingredients through recommended local suppliers,” Garanger explains.

“Having a guest chef on board adds an extra dimension to market trips and the food being served. There may only be one dish a night, but it is always extremely popular.”

While it is heartening to hear of local specialities being celebrated on board, the more exotic cuisines can be a challenge to the Western palate. “When it comes to Indian cuisine, for example, I prefer to select recipes that maintain the traditional character and spicing but are not too hot,” admits Garanger. “It is right that we open the guests to new experiences, but we must not push them too far.”

This also applies to regions where the local cuisine is not best suited to the more refined environment of a premiere cruise ship. Sailings to Brazil, for example, see local ingredients brought on board, but prepared in a manner more familiar to US and European guests.

This demands a degree of imagination from chefs – another key selling point of taking a regional approach in the eyes of Garanger. “It is a great opportunity for chefs to continue learning,” he enthuses. “Our executive chefs are young and ambitious; they do not want to be stuck cooking the same things day after day. They stay with us not only because we pay them well; they are constantly evolving and are treated like the stars of the show on board.”

This is a development that will only gather pace as more fleets begin to address the growing appetite for culinary adventure and provenance and, in turn, demonstrate once again that the cruise ship is far more than a floating resort hotel. ■



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“BUNN assures high-quality products by adhering to strict production guidelines.”

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Although the Bunn-O-Matic Corporation continues to be based in Springfield, Illinois, US, the number of offices and manufacturing facilities for the company has expanded to serve an increasing number of international customers. The company has plants and warehouses in Iowa, the New York metro area, and Cerritos, California. In the Western Hemisphere, BUNN has facilities in Canada and Mexico.

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Princess has renovated its atriums to recreate the feel of an Italian town square.



# Timeless elegance

While many operators are looking to overhaul their design strategies and introduce innovative on-board features, the philosophy of Princess Cruises focuses on its stylish heritage. **Rai Caluori** and **Teresa Anderson** tell Elly Earls how the cruise line is going against the grain and keeping an eye on the past as it moves forward.

Princess Cruises places a huge amount of faith in its long-serving team of in-house interior designers, giving the brand an impressive consistency across its fleet. While other lines focus on revolutionising the look of their ships, vice-president of interior design Teresa Anderson remains unconvinced of the wisdom of a comprehensive overhaul, concentrating instead on maintaining the timeless elegance which has become the cruise line's signature.

That is not to suggest that the luxury line is stuck in the past. Indeed, Anderson, who has handled the development of the fleet's interior design since 1995, describes Princess as an evolutionary cruise company. "We continue to expand upon our design philosophy when it comes to interior décor," she explains. "With our Grand class, for example, we had a similar area 'footprint' as our earlier ships, but it was our goal to introduce new and innovative features."

For Rai Caluori, executive vice-president of fleet operations, the concept of "comfortable elegance" is the defining philosophy of the line's approach to interior design. "We want our passengers to know that they're on a Princess ship," he says. "So we committed to a particular design approach and stuck with it; a motif that is going to stand the test of time."

There has always been an Italian feel to Princess's cruise ships, due in part to the company's long history with the Fincantieri shipyard, and the inspiration for the most significant upgrade to the fleet came from Mediterranean Europe. "We introduced the Piazza on deck five of the atrium initially on the *Crown Princess* in 2007," Caluori explains. "Our atriums have always been very well received but we thought we could take it to another level, so we changed the materials, primarily the flooring, replacing carpet with tiles, and tried to create an Italian town square-type of feel.

"It really has transformed the functionality of the space. What was previously a quiet area after dinner has been converted into a space where people hang around having coffee or dessert and enjoying the entertainment. It's busy from morning through to late at night."

The Crown Grill Steakhouse, a New York-inspired open kitchen venue, and the Sanctuary, an adults-only retreat based on the concept of an exclusive beach resort, have been similarly successful since their introduction.



The Sanctuary is an adults-only space.

The last Grand-class vessel to be delivered, however, was the *Ruby Princess* in 2008 and since then Princess's interior designers have had little opportunity to see their creations writ large. According to Caluori, this is not necessarily a bad thing. "We've had this hiatus for a few years, so

we decided to embark on a strategy of enhancing our existing ships," he says. "Because of the success of the features of the Sanctuary, the Piazza and the Crown Grill Steakhouse, we sought to take what have now become icons of Princess and retrofit them to older vessels."

Consistency is the cruise line's number-one priority. While Caluori recognises that there is an industry-wide move to match many of the trends developing in the shore-side hospitality industry, he is keen to point out that Princess will not follow fads.

"We have a phrase that we use here, 'evolution rather than revolution', and that's Princess," he states. "Ultimately the passenger wants to have a comfortable experience and feel that a space is accessible, warm and inviting. The concept of architecture as an entertainment form is not something we agree with. We're going back to older ships and updating them a little based on the success of the features of our newer ones, but we've never really felt obligated to make unilateral changes."

Based on the feedback Princess has received so far, their guests have little cause for complaint. "We may not get the award for the most innovative of spaces," Caluori acknowledges, "but we get a lot of kudos for the level of comfort and the style. People enjoy the sophistication without feeling intimidated."

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### Evolution rather than revolution

Achieving this balance has not been easy and, with space at a premium, the interior design team have developed four key strategies to overcome the limitations they face on board.

"Firstly, we try to create the feeling of more space with the use of voids, a prime example of which is the atrium," says Caluori, who is actively involved in the design build process. "Secondly, we do our best to raise the ceilings and the deck heads where possible."

This involves careful coordination with the shipyard and must be decided upon during the design phase. Consequently, close dialogue between the shipbuilders and Anderson's team is essential.

"Having an in-house department enables us to work closely with the various operational and technical departments involved in a new ship delivery," Anderson says. "This facilitates a speedy and comprehensive resolution of design, technical and operational issues. Over the course of a new build project we typically make three or four visits to the shipyard to review drawings, approve materials and inspect mock-ups."

The third technique on Caluori's checklist is the clever use of materials, particularly mirrored surfaces, which can enhance the psychological feeling of being in a larger space.

Finally, architectural lighting is key; backlit ceiling panels, skylights, glazed boxes and openings all contribute to the finished effect. "In the spaces where we may have challenges in terms of ceiling height, we'll look at how we can improve the feeling through the use of glazed rather than solid ceilings," Caluori adds.

The use of space supports the cruise line's overall philosophy of comfortable elegance. "We've never designed our ships thinking that we have to seat half the passengers in the theatre or half the passengers in the restaurant," Caluori notes. Rather, the company adheres to its ethos, 'big ship choice, small ship feel'.

Looking to the future, Caluori does not anticipate any radical changes. "Ultimately there will be new ships, but they'll demonstrate an evolution of our current design, nothing revolutionary," he admits, noting that the cruise company does not favour using a wide range of designers. "They need to have a period of integration with our strategy before we'll have the confidence to give them a whole space."

As the industry begins to place more emphasis on leisure activities and subsequently on the design of spas and gymnasiums, Princess plans to expand the Sanctuary concept, enhancing the passenger experience on the open deck.

The company stalwartly refuses to succumb to one of the main trends developing at sea. "We've noticed that our competitors increasingly feel the need to create the feeling of a shore-side resort," Caluori reveals, "whereas we want to remind people that being at sea is a very unique experience. You'll therefore see much more usage of floor to ceiling glass where possible."

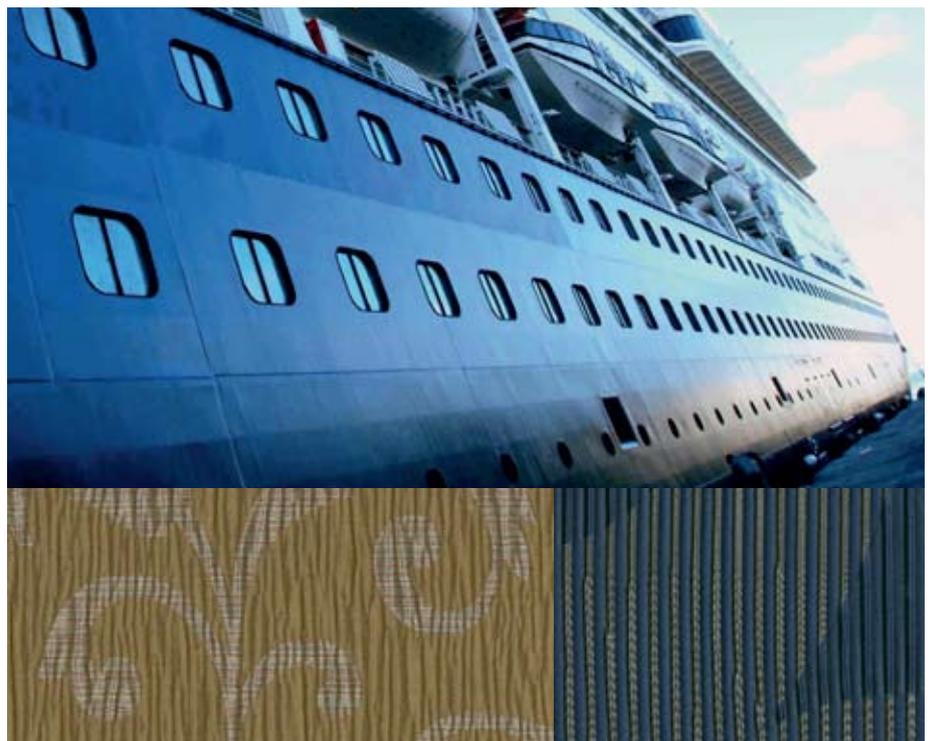
Anderson agrees: "Within the marine environment I also feel it is important to acknowledge the rich maritime tradition of bygone eras. I like to extract and adapt elements from ocean liner history and combine these with contemporary design."

While recently-built cruise liners introduce sprawling shopping centres in an attempt to simulate the experience of being on land, Princess is going in the opposite direction, focusing on intimate, quiet, relaxing spaces in order to further cement its design philosophy. "And thank goodness for that," concludes Caluori. "As long as other lines design ships that are different to ours, we will continue to encourage them." ■



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# Architect of the imagination



Scott Wilson of Wilson Butler Architects.

As the lead design team on the *Oasis of the Seas*, Wilson Butler Architects was a key creative force behind the ship's most eye-catching features. The firm's **Scott Wilson** talks to Christopher Kanal about the approach it took in making the ship an icon of cruise industry innovation.

**W**hen Royal Caribbean International's (RCI) *Oasis of the Seas* set off on its inaugural voyage in December 2009, the gargantuan ship provoked many superlatives. But the largest cruise ship ever built is an exercise not just in excess but innovation. RCI has divided the on-board recreational facilities into seven themed 'neighbourhoods' including Central

Park, with over 12,000 plants and 56 trees, a Boardwalk and 750-seat AquaTheater.

"Who wants to spend their career designing simple stuff?" asks Scott Wilson of Wilson Butler Architects, who, with his business partner Scott Butler, were the lead design team on the ship, and the first architects to be brought in to discuss how to bring to life the huge spaces on board the *Oasis of the Seas*.

The Boston-based practice is also heavily involved in the *Oasis*' sister ship, the *Allure of the Seas*, whose maiden voyage is in November this year. "We very much embody [RCI chairman] Richard Fain's mandate that we are one third tradition, one third evolution and one third revolution," explains Wilson.

"What makes the *Oasis of the Seas* special is how well quite disparate elements fit together," says Fain. "Almost anywhere you go on this ship, you're going to see places of wonder, where you turn a corner and you're surprised, because you never expected to see what you're seeing."

Wilson Butler has worked with RCI since 1997 and has been involved in designing one out of three cruise vessels emerging out of shipyards today. The practice was responsible for the main theatre designs for Royal Caribbean's Voyager-class ships and theatres on its Radiance-class of ships, including the 900-seat Aurora Theatre on the *Radiance of the Seas*, and the 915-seat Pacifica Theatre on the *Brilliance of the Seas*. "With every newbuild with Royal Caribbean our scope of responsibility has grown," says Wilson. "We are comfortable with each other and can predict what the reactions will be to things we suggest. We can almost forecast what ideas will stick and what ones won't, which allows us to focus on innovations that can be executed."

How does the *Oasis of the Seas* compare to previous Royal Caribbean projects? "Ship size has crossed a threshold where bigger is actually better, as opposed to being just bigger," says Wilson. "I think the key component is the open space that has been created, which gave the 12 architects and planners of the ship incredible design opportunities. We have enough elbow room to design without feeling cramped and squeezed."

The practice provided master planning, architecture, interior design, and project team and construction oversight for many spaces throughout the 225,282t ship. "We are up and

down the length of the ship," Wilson says "I think we work in every fire zone but that is what makes it fun. It brings you back to the core understanding of what the brand is and how the ships work and how we can make them better."

“We can almost forecast what ideas will stick and what ones won't, which allows us to focus on innovations that can be executed.”

The designer says that his team have the advantage of not being cruise executives, allowing them to step outside of the box and approach design challenges differently.

Of all the facilities the design practice worked on, the AquaTheater is perhaps the most novel and was the most challenging to design. "We had no map to follow," says Wilson of the venue, which has the largest saltwater pool of any cruise ship at sea. "We very much had to invent solutions to problems that we didn't know existed a month earlier."

The venue's stage engineering and complex hydraulics allow the depth of the pool to rise and fall to adapt to each performance. "The AquaTheater evolved when the shipyard first proposed a single hall with parallel superstructures with courtyards

in the middle," he explains. "The obvious spatial approach was to let that courtyard open up to the sea and create a big open space for an outdoor performance venue."

Wilson Butler proposed that the design should try to integrate a pool into a performance venue so that it has a 20-hour use. "We put one and one together," says Wilson. "If we have a pool we should capitalise on it and make it into a performance space." Together with the entertainment staff at Royal Caribbean, the team started to brainstorm and devised a venue that gave the producers and staff considerable creative flexibility.

However, there were major hurdles to overcome in the design of the AquaTheater, in particular

how to contain 135,000gal of water in the aft pool tank. Even when the seas are relatively calm water can still flood onto the deck. "When we began we didn't anticipate that we would have wave or wind problems but as they pop up we addressed them and figured out creative, clever solutions to problems, which appear rather seamless now," he says.

The team ingeniously reduced wave motion by designing a retractable wall in the middle of the pool that can rise up to the surface, depending on how rough the seas are, and effectively split the volume in half. There are green and red lights to make performers aware of when the wall is up.

#### Park life

Wilson Butler has a history of overcoming obstacles on board cruise ships. On its first project with Royal Caribbean, it designed the Studio B ice rink on the *Liberty of the Seas*, which remains level, even in bad weather.

The idea behind the AquaTheater was to create a unique passenger experience. With the ocean as a backdrop, the theatre features LED-lit fountain jets and diving platforms. It is an impressive performance stage for aerial acrobatics, synchronised swimming, high-diving and ballet backed up with an advanced technology suite to manage the choreography, lighting and music. The AquaTheater has three custom lifts, which are built into the pool that shuttles performers



Central Park (above) and the AquaTheater (right).

through and above the water. Situated 10m above the pool is a dive bridge specifically designed for aerial acrobatics. There are zip lines that extend from the dive bridge to rock climbing walls built into the sides of the deck above the audience. Underwater there are cameras that capture performances and project them onto two giant LED screens.

Wilson is an admirer of the landscape designer Frederick Law Olmsted, who, with architect Calvert Vaux, created New York City's Central Park. "The key to Olmsted's design work is that he never saw a landscape design as one big idea," says Wilson. "It was a whole series of human-scale vignettes that grow from intimate little

The innovations did not end there. Another space Wilson Butler designed was the 1,390-seat Opal Theatre, where the stage pushes toward the seats so that "the boundary between the audience and the performers becomes very blurred". The stage's arch moves and is made up of two oval-shaped staircases that rise toward the ceiling and connect by way of a bridge. All the parts can be moved to make the front and back of the large stage one space. The bridge, where the orchestra plays, descends to the floor at the start of a show.

## “Who wants to spend their career designing simple stuff?”

An attraction on board the *Oasis of the Seas*, which certainly drew considerable outside interest, was Central Park. The length of a football field, it features paths and wooded glades. On a less aesthetic but practical level, Central Park has its own filtration system for removing salt from the ocean water that hydrates the greenery allowing the grass to thrive.

"It was a crossroads of creativity," says Wilson. "It is probably the one area of a ship where every design team is represented. One of my responsibilities was to try and hold that together and make sure everyone's vision didn't get lost in the management."

benches and small, private gardens and grand vistas." It was a 19th century approach that Wilson reinvigorated for the 21st century. "On the *Oasis of the Seas*, it is a whole series of wonderfully crafted landscape vignettes that are revealed to you with every step along this meandering, curvilinear path," he says. "As you walk along the path, the purpose of the park changes from being contemplative to being a place to dine, a place to enjoy sculpture, and a place to gather as a community. If you go up to deck 15 and look down on the park you can see all these components in their entirety."

Despite the chutzpah of the finished project, Wilson Butler's methodology boils down to a simple approach. "We are part of an Old World breed where we sit and draw," says Wilson. "We go down to Miami and we will sit there for a week at a time just drawing and sketching and be able to respond immediately to reaction and to questions."

Overall, Wilson is very happy with the completed *Oasis of the Seas*, and, given the record bookings the ship is attracting, so are the guests. "We met everyone's expectations and that is wonderful," Wilson says contentedly. "I don't think there is much we would do differently." ■



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**“In 2009 Cruise Shipping Miami's attendance reached over 10,000, with 119 countries and regions represented.”**

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# On thin ice

**S**haken by the Liberian Bureau of Maritime Affairs report into the 2007 sinking of the *MV Explorer* in the Antarctic, most cruise lines are re-evaluating their procedures, training and equipment for future voyages into polar regions. At the same time, the industry is coming under pressure from official maritime bodies to tidy up its act before there is an ecological and human catastrophe.

“We’ve been cruising without incident in the Antarctic for 20 years but we did an immediate audit of all our systems after the *Explorer* event to check if such a thing could happen to one of our ships.”

**Sebastian Ahrens**

For Hapag-Lloyd Cruises managing director Sebastian Ahrens, cruise lines reacted to the sinking by reviewing their procedures. “We’ve been cruising without incident in the Antarctic for 20 years but

we did an immediate audit of all our systems after the *Explorer* event to check if such a thing could happen to one of our ships,” he says.

Hurtigruten’s vice-president of marine operations, Torkild Torkildsen, was also driven to check his company’s procedures after witnessing the sinking of the *Explorer*, having helped coordinate a rescue operation by his own ship, the *Nordnorge*.

“I sat down with the captain afterwards and conducted a total review of all our written procedures, not just to see if they were adequate, but also to check they are being properly observed,” he recalls.

The sinking of the *MV Explorer* in the Antarctic in 2007 made cruise lines operating in the area urgently reassess their safety procedures. ASOC’s **Jim Barnes**, Hurtigruten’s **Torkild Torkildsen**, and Hapag-Lloyd Cruises’ **Sebastian Ahrens** tell Selwyn Parker how the incident has affected the industry.

While using the event as a catalyst for re-evaluating their polar operations, both veteran shipping executives were shocked at the fate of the *Explorer*, one of the first vessels to bring tourists into the region.

“I was unable to understand how an ice-class ship could have sunk. An expedition vessel does not sink. It can only happen if watertight compartments are compromised,” Ahrens says.

Meantime, a flurry of maritime diplomatic action has been triggered by the report as bodies such as the Antarctic and Southern Ocean Coalition (ASOC) apply pressure through formal channels to establish the same safety, evacuation and ecological standards in the Antarctic that are required by sovereign states such as Canada. ▶



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### The report

The sinking of the *MV Explorer* certainly shocked the industry. Although the vessel sank on 23 November 2007, the report did not appear until over a year later. It was released just as the 45 signatory nations to the Atlantic Treaty were conducting their annual meeting in Baltimore. "It was a big shock," says Barnes, who was present. "It was very sobering reading."

Conducted by the Liberian Bureau of Maritime Affairs, through which the *Explorer* was flagged, the report showed that the vessel had sunk in relatively benign conditions: young pack ice in mild weather. A mass tragedy was only averted by nearby cruise ships that rescued the 154 passengers and crew from lifeboats, an hour or two before a severe storm that could have seriously compromised the mission.

**“I sat down with the captain afterwards and conducted a total review of all our written procedures, not just to see if they were adequate, but to check they are being properly observed.”** **Torkild Torkildsen**

According to the Chilean Navy, which arrived shortly after the rescue, the captain had sailed the vessel in darkness into thick ice chunks reportedly up to 15ft high with underwater rams as long as 54ft. The report, which has received industry-wide praise for its thoroughness, concluded that the *Explorer* "sustained puncture and slice wounds" that extended for more than 11ft along its hull. The flooding could not be contained within the affected watertight compartment. Disturbingly, crew members told investigators that a hatch between the engine rooms had faulty seals, allowing other parts of the ship to flood.

The report's verdict was that the *Explorer's* master, Bengt Wiman, who was on his first Antarctic cruise as captain, "transited the ice field with an overconfident attitude regarding the capabilities of the *Explorer* and, in all likelihood, struck the 'wall of ice' at a rate of speed that was excessive."

Although the captain was praised for taking the decision to abandon ship before it became locked in the ice, with likely difficulties in deploying lifeboats, the report was essentially damning of the seamanship.

The sinking of the *Explorer* was all the more disturbing, say Antarctic Treaty

members, because it followed four other potentially serious incidents. In less than two years, the *MS Nordkapp* had run aground; the *MS Fram* lost power and smashed into a glacier; the *MV Ushuaia* struck a rock in the Gerlache Strait, requiring its passengers to be rescued; and the *Ocean Nova* ran aground.

"We need legally binding rules, not just guidelines. A full polar code," argues ASOC executive director Jim Barnes, citing a wish list of higher standards for ship masters, more rigorous ice-strengthening, tighter specifications for lifeboats, a ban on heavy fuel, and a mandatory requirement for thermal clothing for evacuated passengers in the event of a sinking (there was no such protection on the *Explorer*). "In general, the cruise industry wants to do the right thing but individual companies can't do it by themselves," Barnes adds.

And it would seem some of the pressure is being applied from the highest level. As the Antarctic becomes increasingly popular on cruise itineraries – 38,000 mostly ship-borne tourists visited the region in the winter of 2008 – the Obama White House is taking a close interest in its protection, in contrast to the Bush administration. Non-governmental agencies with interests in the region are also lobbying the industry to adopt binding rules.

An immediate result of the *Explorer* incident has been a focus on improving passenger safety in the event of an evacuation by using alternative survival craft. For instance, the International Association of Antarctic Tour Operators has enthusiastically responded to suggestions of using Zodiac-type rigid inflatable boats instead of davit-mounted lifeboats because of the greater protection they offer. It has been several years since the relevant section of the regulations was updated and many industry sources think a review is overdue in the light of the incident.

### Trust in experience

Incidents in the area clearly worry and perplex the majority of the industry that has not run into trouble in polar regions, although

most cruise companies review their safety measures and evacuation procedures as a matter of routine. "We look at lifeboats all the time," Ahrens says. "We also look at sonar and other technology for identifying ice structures. Sonar is much more accurate than the naked eye. I see it as Hapag-Lloyd Cruises' responsibility to operate in a responsible manner in these sea ice regions."

Ahrens believes that, ultimately, safety in Antarctic waters is not a matter of lifeboats and immersion suits but about the competency of the crew. "Quite a lot of ships are not operating with a crew trained to Antarctic competence," he explains. "We have an established practice of only venturing into Antarctic waters with a bridge that has extensive experience of the region."

As a matter of routine, masters and first officers are required to have four to five years training in the polar regions. Even so, Hapag-Lloyd Cruises may introduce yet higher requirements in the light of the *Explorer* incident. For Torkildsen, who likewise puts a premium on training and experience, the key issue is that the line gives responsibility to the ship master. It is the captain who decides whether it is safe to take a vessel into the ice and, if he does not, the company must back him. "As it happens," says Torkildsen, "we did not venture into that area on that evening [of the sinking]. Our captain saw the ice was thick and he kept outside."

Torkildsen believes the industry has learned lessons. And there can be little doubt that those lessons will be applied, if not by the industry, then by official bodies. ■

### Profiles

**Sebastian Ahrens** has been general manager of Hapag-Lloyd Cruises since 2003. He joined the company after a 13-year career with McKinsey consultants, specialising in retailing, media, tourism and IT.

**Torkild Torkildsen** has been with Hurtigruten for over 30 years, having worked at IM Skaugen and Royal Caribbean, among other lines. At Hurtigruten he has served consecutively as transport manager, operations manager, director of public transport and director of shipping.

**Jim Barnes** has devoted the past 38 years working with environmental organisations around the world. He received the International Environmentalist of the Year award from the National Wildlife Federation in 1991, the Order of the Golden Ark in 1998, and the Sierra Club's Earth Care award in 2004.

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# Mild symptoms

Orla O'Sullivan looks at how the cruise industry has reacted to H1N1 – swine flu – in light of modest contagion rates.

**F**rom the extent and tone of early media reports of the H1N1 virus, it seemed that 'swine flu' was as ominous as a modern-day plague.

The disease broke out in Mexico City in March 2009, resulting in a swift death toll that drew attention from around the world. By late April, all major cruise lines had discontinued travel to Mexico, following an advisory from the US Centers for Disease Control (CDC).

However, by December an update by the World Health Organisation (WHO) reported that the H1N1 death toll was fewer than 10,000 people. According to a WHO report published in 2003, normal or 'seasonal flu' kills up to half a million people.

While the virus may not have caused the high death toll predicted by many, its presence and perceived threat made the cruise industry sit up and take notice, especially when, in May, two cases were confirmed on an Alaskan liner.

Indeed, the threat of the virus on cruising was heightened when the *Pacific Dawn*, a unit of Carnival's Princess line, became dubbed the "swine flu ship" after it became known that some of the 2,000 passengers were confirmed to have H1N1 and Australian authorities had diverted the South Pacific cruise from its intended course to the Barrier Reef. The company issued a statement at the time of the outbreak detailing its "abundance of caution" on board its vessels.

Government protectionism soon hit Royal Caribbean Cruise Lines (RCCL). The *Ocean Dream*, operated by Pullmantur, a Spanish unit of RCCL, had to cut short a Caribbean cruise after being denied dock in Barbados and Grenada and delayed embarkation in Venezuela.

"When you think of a large cruise you think of a biological island," notes Dr Phyllis Kozarsky, an expert consultant in the CDC's division of global migration and quarantine. But she warns against singling out cruising. "It's no different from people being in any other space for a long time; planes, buses or crowded shopping malls before Christmas."

## Preventive medicine

Michael Crye, executive vice-president of technology and regulatory affairs with the Cruise Lines Industry Association (CLIA), is realistic about the threat of the virus. "The morbidity rate of this virus is way less than with avian flu," he notes, "The important thing is that more people are susceptible to this illness than a normal seasonal flu."

It's not surprising that cruise industry sources suggest that their biggest challenge is the perception of H1N1 and arbitrary government reaction to it rather than the virus itself. "As our knowledge of the virus has evolved, our concern has diminished," says Dr Art Diskin, vice-president and global chief medical officer with RCCL.

Gary Bald, corporate senior vice-president of safety, security, environmental, medical and public health with RCCL, adds: "There's a reaction that isn't consistent with the concern. For example, a particular port that reacts in an unexpected way can cause challenges and disruptions. We call ahead to the port to ensure that we won't have surprises, if a particular island or nation has never had H1N1 and we're coming in with one case on board."

The recommended ways to prevent people catching H1N1 are the same as for regular flu, or most communicable diseases: an array of hand-washing; cleaning and sanitising common areas; and isolating the infected as early and as much as possible.

One industry-wide change CLIA initiated in the spring of 2009 was a questionnaire and secondary screening at the point of embarkation. Depending on how passengers answer and look, they may be further evaluated by medical personnel, including, for example, having their temperature taken. MSC cruises has even installed thermal-imaging cameras in Italy to detect possible fever/flu at embarkation.

Carnival spokesman Vance Gulliksen echoed others in saying that the numbers

of those turned away at embarkation would be "extremely small".

As with other operators, Carnival has educated crew and customers on H1N1 and carries anti-viral medications on board. Since the disease is viral, not bacterial, drugs will not kill it, but can lessen sufferers' symptoms and their duration.

However, Carnival has not added any new sanitation procedures specifically to address H1N1 beyond those routinely used to prevent communicable diseases. Gulliksen says the company's protocols are "extremely effective" already.

Kozarsky is more cautious: "Most think H1N1 doesn't take the form of tiny droplets that become airborne, but it's hotly debated." She stresses vaccination and hand washing as the best protections and warns that consumers might be disinclined to admit that they are ill and forfeit their vacation plans.

Bald says RCCL has impressed on staff to pay closer attention to tell-tale signs that someone might be sick: "someone not coming out of their cabin or cancelling dinner."

Even if cruise officials get involved, Diskin says, "We don't know if they have H1N1, only that they have flu-like symptoms." The screening tests on board, are very inaccurate, with just a 15% to 50% hit rate, he adds.

Cruise operators have the right to isolate contagious passengers and to put them off the ship if they do not comply. They are also urged to minimise the number of crew catering to sick passengers.

"It's not altogether an honour system, because we're obliged to contain diseases, but we do a lot of things, like providing movies, to help make the time pass," Bald says.

With the worse of the virus seemingly passed, there is still concern for the future.

"Our biggest concern is that the virus could mutate, grow and become resistant to medication," Diskin says, but he hopes the worst is over. "Historically, pandemics have three waves, so we may have one next year. The third wave tends to be mild."

Kozarsky is also cautious. "We have to see. We have yet to go through the typical influenza season, which peaks in the New Year."

All she can say with certainty about the cruise industry overcoming H1N1 is that "Everyone is making a good effort and a stronger effort than ever." ■

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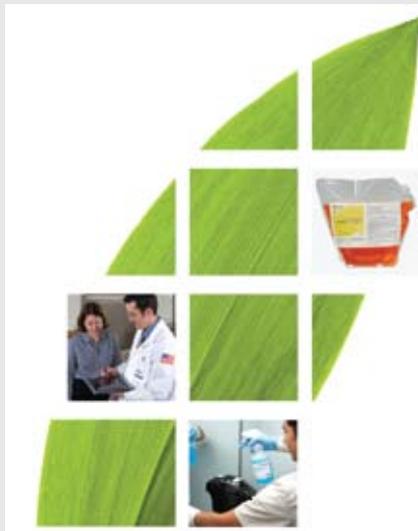
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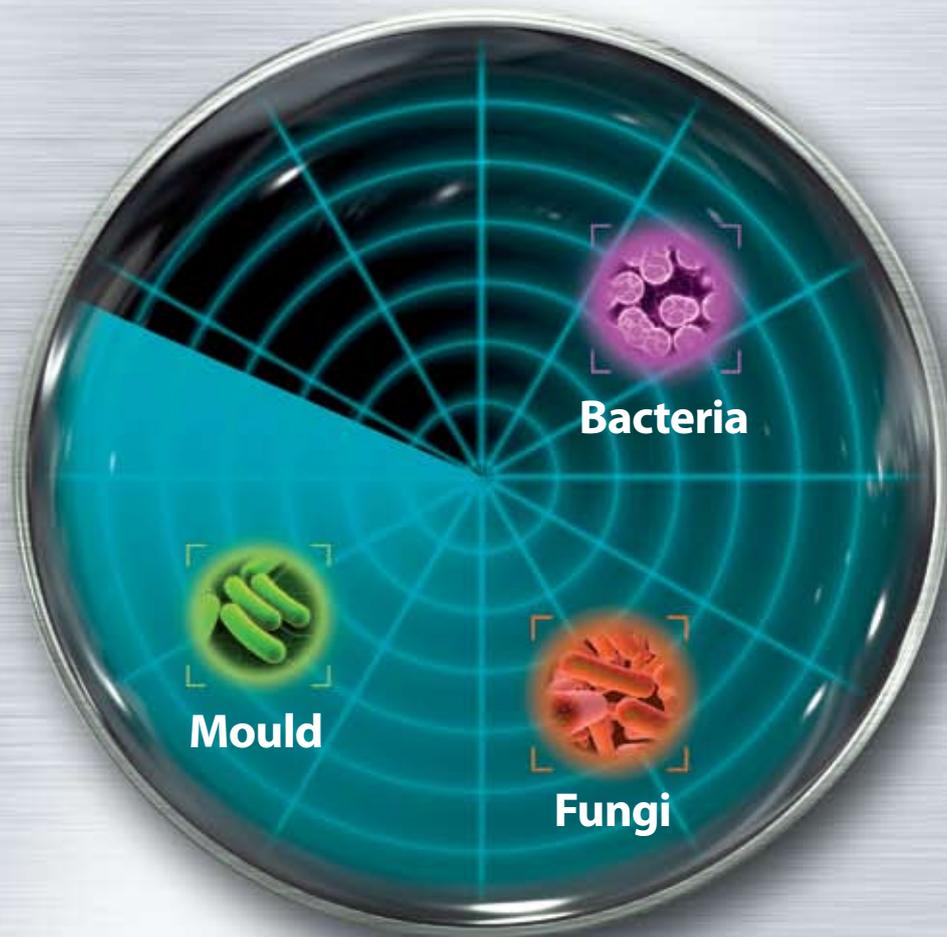


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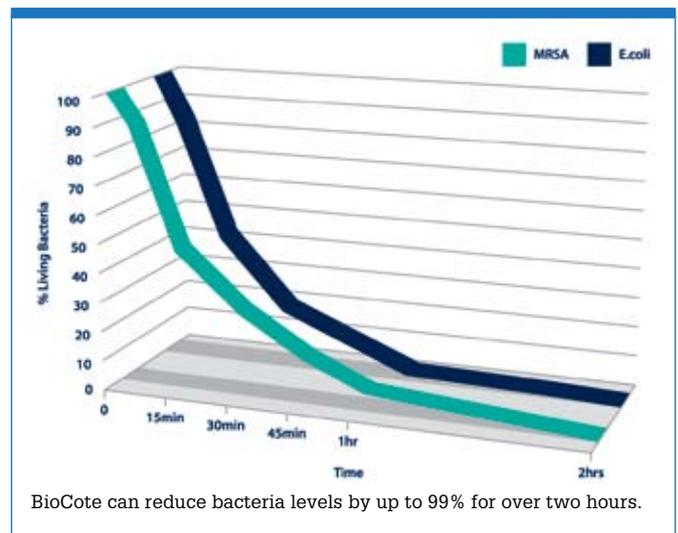
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Results showed that the BioCote-protected products were 95.8% less contaminated with bacteria than the equivalent untreated products in the control environment. In addition, untreated surfaces in the BioCote-protected ward were shown to be significantly less contaminated than equivalent surfaces in the control environment. An explanation of this observation is BioCote-protected surfaces reduced levels of cross contamination within a treated environment.

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# Safer seas

The attempted attack on the *MSC Melody* sent a clear message to the cruise industry about the growing threat of piracy. Phin Foster talks to the EC's **Dimitrios Theologitis** about how the maritime sector needs to find a long-lasting solution.



The *MSC Melody* came under attack despite sailing further from the mainland.

Despite their lack of success, last April's pirate attack on the *MSC Melody* 600 miles off the Somalian coast was a harbinger of some worrying developments within the Indian Ocean.

Following an assault on a US cargo ship the previous week, the *Melody* was actually sailing further from the mainland than usual, adding an extra 400 miles to its route and even necessitating the cancellation of a planned stopover in Safaga, Egypt.

uncomfortable truths: pirates had increased their range of operations, sailing further afield in their hunt for new targets. They were unafraid to unleash ultimate force, "firing wildly," in the words of the ship's commander, *Ciro Pinto*, while the presence of over 1,000 people on board seemingly did little to dissuade their efforts.

MSC decided to cancel all such sailings, a decision soon followed by *Yachts of Seabourn* and *Fred Olsen Cruise Lines*, but

**"Ship owners may be concerned about speed of passage or insurance costs, but trying the trip alone without any prior coordination with naval forces operating in the region is a ridiculous risk to take."** **Dimitrios Theologitis**

Despite this, it was only through the intervention of armed Israeli security guards stationed on board that the 994 passengers and some 500 crew were able to escape unharmed. Once the relief had subsided, MSC and its fellow operators were forced to face up to some rather

ships still scheduled to visit the area in 2010 include the *Queen Mary 2*, *Queen Elizabeth*, *Dawn Princess*, *Seven Seas Voyager* and *Costa Cruises' Europa*, *Deliziosa*, *Luminosa* and *Romantica*.

An increased naval presence in the region, as well as rising international focus

on the problem, may have displaced pirate activity, but it has not served to stem the tide of attacks. The Government of the Seychelles recently announced the construction of special courts and a maximum security prison to combat the growing menace of Somali pirates, sighted almost daily at the tail-end of last year.

With international naval forces already policing a vast area, it also begs another question: is it necessary for cruise ships to be there at all?

"That raises a very interesting philosophical conundrum," says *Dimitrios Theologitis*, head of unit in charge of Maritime Transport and Ports Policy; Maritime Security at the European Commission (EC). "How essential is entertainment? I would not want to go down that route too deeply, the necessity of cruising, it falls well beyond my remit."

Indeed, it would be one of the few maritime issues not under his responsibility. With the EC since 1984, the Greek native's main focus is the definition of a vision for maritime transport over the next ten years, and the further development of maritime security.

## Growing concerns

Pirates may be operating outside European waters, but they are becoming an ever increasing concern among many of his key stakeholders. These include cruise operators, as represented by the European Community Ship Owing Association.

While *Theologitis* is at pains to differentiate between areas of "community interest" and "community competence", the EC is not shy in encouraging and sharing best practices among all members.

"The IMO recently published two documents concerning ships passing the Horn of Africa and, in our eyes, their recommendations must be followed at all times," he says. "Failure to do so is unacceptable."

A key component of this advice is that ships announce their impending presence to the region's Maritime Security Centre so that a full risk assessment can be conducted and advice given as to how and when the crossing should be completed.

"Ship owners may be concerned about speed of passage or insurance costs, but trying the trip alone without any prior coordination with naval forces operating in the region is a ridiculous risk to take," *Theologitis* continues.

“Despite this, around 30% of ships entering the area don’t follow these best management practices. The vast majority of vessels captured have made this mistake.”

But what of those operators that do take precautions? The *MSC Melody* was 600 miles from the coast and had added 400 miles to its route, yet was only saved by the presence of armed forces on board. Theologitis acknowledges that there is an element of “pure bad luck” in such a scenario, but does not believe that the cruise ship’s escape validates the presence of armed guards.

“This does not fall under community competence and the Commission’s line is not binding,” he acknowledges, “but we believe there should be no security personnel on board who do not have an official mandate by the flag state in question. We want to avoid the problems of liability, responsibility and rules of engagement that private security firms might bring.

“It is also essential that we don’t escalate the violence. I hate saying this, but at the moment piracy is mainly a dirty business transaction. We must avoid escalating it into

a war. From our discussions with ship masters and mariners associations, it is clear that this is a danger they’re well aware of; start bombing and shooting and who knows where things might lead?”

**Moving forward**

The EC is conducting an ongoing dialogue with shipping interests over the implementation of non-lethal weaponry and other means of repelling pirates. However, Theologitis believes the long-term solution lies not at sea but on land.

“There are now ports in Somalia that are refuges for pirates – it’s fair to say that the International Shipping and Port Facility Code is not implemented as fully as it could be,” he says. “Under normal circumstances this should not be possible. Nearly 40% of foreign aid going into Somalia comes from the EU. We are already helping to provide capacity-building measures to strengthen some sort of sustainable government. We need to help Somalia stand on its own two feet and only then can it help itself.”

As an example of former success, Theologitis cites the combating of piracy in

the Strait of Malacca. “A lot of European funding went into the area,” he explains. “It was invested in surveillance and capacity building operations and the development of Indonesian and Malaysian coastguards. Now that they are able to police those waters themselves the instance of attacks has gone down dramatically. Through engagement we are able to get real results.”

Funding, coordination, information, dialogue and the development of best management practices will all go towards achieving this end goal, and the EC is committed to confronting member states with their responsibility to ensure IMO recommendations are followed. The results will not be instantaneous, but Theologitis believes the issue of piracy is not insurmountable.

“Cruise vessels are certainly a lucrative target,” he acknowledges, “and operators do need to be aware of that and use all the information at their disposal to carry out a full risk assessment. Stakeholders also need to support the measures that are already being taken. At some point the seas will become safe again, but it will not be tomorrow.” ■

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# High water mark

The cruise industry has been given more time to meet Alaska's high wastewater discharge standards, but is the new deadline of 2015 realistic? Holland America Line's **William Morani** and Royal Caribbean Cruise Lines' **Richard Pruitt** tell Jodie McLeod how new technologies could provide the answer.

**W**hen the environmental authorities say "jump", the cruise industry usually replies: "how high?" But in the case of the US state of Alaska's wastewater discharge standards, the cruise industry's definition of high is not high enough.

Alaska has the strictest standards in the world for wastewater quality at the point of discharge, particularly in regard to effluent limits for ammonia, copper, nickel and zinc.

The Alaskan statute, introduced three years ago, originally decreed that ships cruising in Alaskan waters had to meet these standards by this year, but a panel discussion of marine technologists, vendors and scientists held in Alaska's capital of Juneau in February 2009, conducted by the Alaskan Department of Environmental Conservation, revealed the cruise industry simply did not have the technology or means to meet these standards in the timeframe.

However, a bill has been approved that will, pending a signature from the state's governor, give cruise lines up to an additional five years to meet the standards.

While many cruise lines are already committed to developing wastewater treatment systems to comply with the standards, it is unknown whether even the 2015 target will be met, the consequences of which could see major cruise lines pulling out of Alaskan waters.

## Obstacles and issues

William Morani, vice-president of environmental compliance for Holland America Line (HAL), says that meeting the Alaska standards in the near term is, in short, impossible. "It's like saying, 'we want you to find a cure for cancer, and you've got a couple of years to do it'," he says.

The main issue with the Alaskan law is to do with the targets set for reducing metals in cruise ship wastewater. Wastewater generated on a cruise ship inevitably has higher levels of ammonium and metals than that of a shore-based facility due to the conservation methods used on board, such as low-flow shower heads and vacuum toilet flushing systems. "It's a catch-22," says Morani. "You try to conserve a resource at one end, and it catches you at the other."

The Alaskan statute has taken a hard line with reducing metals content, setting targets that are well below those for land-based facilities. The challenge for the industry is to come up with a technology that treats the great volumes (up to 1,000m<sup>3</sup>) of effluent generated daily by a large cruise vessel to meet the targets. But to date, not even a land-based system exists that can treat wastewater with the initial quality of that found on a cruise ship to the standards deemed acceptable by Alaskan law. "It's like setting a standard that does not exist," says Morani.

Richard Pruitt, director of environmental programmes at Royal Caribbean Cruise Lines (RCCL), argues that even if a suitable land-based technology had been invented, the process of adapting that technology to the unique ship environment – where space, stability and even crewing set-ups are a far cry from the spacious and predictable conditions on land – would take two years or more.

"These aren't short timelines," says Pruitt, adding that the duration of developing the technology increases the risks for all involved. "You might take a chance [on a system] only to find out three years from now it doesn't meet the latest standards, and then you have to start over again." High costs also add to the risk.

To date, RCCL, which includes cruise lines Royal Caribbean International, Celebrity and Azamara, has spent in excess of \$100 million on advanced wastewater treatment systems.

The most limiting factor for developing the technology is space. "Sewage treatment facilities [on land] usually have very large tanks and ponds, which give them the luxury of letting the water sit there and clarify; but we don't have that luxury," says Pruitt. "We're trying to get done in six or eight hours what land-based facilities have days to do. We have to figure out how to turbo-charge the process." ▶

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EMISSION CONTROL TECHNOLOGIES



### In the pipeline

While technology that reduces metal content in water continues to elude the industry, steps are being taken towards its development.

HAL already has advanced wastewater treatment systems on 12 of its 15 ships that can, according to Morani, treat water to the quality of any sophisticated shore-side system, and is currently partnering with sister cruise line Princess Cruises, also part of the Carnival Corporation, to develop technology that will reduce ammonium in its wastewater. The company is also looking at how its use of laundry detergents and cleaning products could help reduce the impact on the environment. "We're doing the best we can," says Morani.

RCCL is testing two systems that Pruitt hopes might be developed into Alaska-standard compliant technologies. One system, by US company Navalis Environmental Systems, is currently being tested on the *Rhapsody of the Seas*. The system is a new version of an old process tested by RCCL in 2000 that involved oxidation with ozone coupled with a bioreactor (a living colony of beneficial bacteria). The advantage of the Navalis system is that it does not require the use of a bioreactor, which makes it more time efficient (bioreactors can take months to replenish if they incur any trouble), while also reducing its footprint. But when breaking new ground, any R&D project is bound to hit a few walls. "We really hoped this [system] would be something we could move forward on many of our ships. But we've run into some serious snags on the *Rhapsody* to get it to meet the capacity," says Pruitt. "It's one thing to say you can take grey water and black water and create near-drinking water, but it has to treat all of the water on board. We're having some problems with getting the through-put that we need to treat all the water on board, so that probably will impact our self-imposed deadline for getting it done."

Other processes under trial by RCCL for treating wastewater include ion exchange and specific applications for reverse osmosis. While these are not new technologies, the process of using reverse osmosis after the wastewater treatment to further reduce ammonium levels is a new approach.

"The problem [with that] is we'd have to install two advanced wastewater systems on a ship that barely has space to install one," says Pruitt. If the Alaskan standards cannot be met by 2015, Morani anticipates the consequences will be drastic. "It may force us to move elsewhere or to find a different area to operate in," he says. HAL has eight ships sailing four itineraries in Alaska this year, but has reduced the number of sailings for the *MS Amsterdam* by ten, while Royal Caribbean International, which usually has three ships sailing the region, has announced it will redeploy its *Serenade of the Seas* from Alaska to San Juan in Puerto Rico. Norwegian Cruise Line has similarly redirected the *Norwegian Sun* from Alaska to Europe.

Economic reasons have been cited as the main grounds for itineraries moving out of Alaskan waters – but the strict discharging laws certainly won't make it any easier or more inviting for cruise lines to make the move back in. ■

### Profiles

**William Morani** joined HAL as director of environmental compliance in May 2003 before becoming vice-resident in 2005. He is responsible for ensuring the company complies with environmental regulations and policies.

**Richard Pruitt** is Royal Caribbean Cruises' director of environmental programmes and is responsible for the regulatory compliance efforts of a fleet of 38 ships and the cruise line's environmental programme.



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# Green just got cool

**GEA Grenco's** environmentally friendly refrigeration systems use natural refrigerants that allow cruise lines to drastically cut some of the emissions that contribute to global warming, helping them improve their green credentials.

**I**s there an industry in the world today not concerned about the environment? If it exists, it is not the cruise industry. Cruise customers are aware of environmental issues and increasingly expect cruise lines to follow greener practices. One way the industry can improve its standing is through the application of environmentally friendly refrigeration technologies.

GEA Grenco is a market leader in implementing environmentally friendly refrigeration systems for the marine industry. Headquartered in Den Bosch, The Netherlands, it has a second office in Miami, US.

There are two factors related to environmental refrigeration systems: the loss of refrigerant into the atmosphere and the energy efficiency of the refrigerant.

Some of the most commonly used synthetic refrigerants have ozone depletion potential (ODP). There has been pressure for years to ban so-called HCFC refrigerants.

The Montreal Protocol, which came into force in Europe in January 2010, practically brought an end to the use of HCFC refrigerants with a total production ban of the synthetic refrigerant known as R22, and the topping up with virgin R22.

“GEA Grenco is a market leader in implementing environmentally friendly refrigeration systems for the marine industry.”

Technically, R22 is a good refrigerant and widely used. However, when it leaks into the atmosphere, it damages the ozone layer. The next generation of synthetic refrigerants has no ODP. However, the total environmental global warming potential



Efficient refrigeration can help ships improve their environmental performance.



Cruise line's are increasingly improving their green practices.

(TEWI) has become an issue. TEWI describes the combined effect of refrigerant leakage and energy consumption on global warming. The impact is comparable to the emission of 1kg of CO<sub>2</sub>. The leakage of 10kg of the refrigerant R404 has the same impact on global warming as driving a medium-sized car approximately 90,000km. In comparison to natural refrigerants, the use of synthetic refrigerants increases fuel consumption for marine refrigeration systems.

The refrigeration industry has re-introduced natural refrigerants as they have no ODP and practically no impact on global warming. It is expected that the next generation of larger cruise ships will apply this technology.

GEA Grenco also uses these refrigerants for other marine applications and sees possibilities of using 100% natural refrigerants. By implementing this technology, the cruise industry will take another step towards offering environmental friendly holidays for its customers. ■

## GEA Grenco

GEA Grenco is a market leader in refrigeration installations for the food, non-food, process and marine industries.  
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# A greener future

**Christina Riccelli**, Prestige Cruise Holdings, **Jamie Sweeting**, Royal Caribbean Cruises, and **Marcie Keever**, Friends of the Earth, tell Andrea Ashfield how the cruise industry is tackling its environmental practices.

**W**hen it comes to the environment, the cruise industry hasn't always enjoyed the best reputation, but in recent times, operators have made substantial efforts to improve their practices. Experts now agree that when visiting some of the world's most ecologically sensitive regions, cruise lines are duty bound to help preserve these vulnerable areas.

For operators, this means a range of measures including the reduction of fuel consumption, cutting down on unnecessary waste and the introduction of the latest technology to help re-use water and conserve energy. While there is always more that can be done, the cruise industry is taking significant steps to reduce its impact upon the environment.

"It is vital that cruise operators take environmental responsibilities seriously," declares Christina Riccelli, director of environment and public health at Prestige Cruise Holdings. "Our livelihood depends upon the environment."

Riccelli, who is responsible for seven ships across the Regent Seven Seas Cruises and Oceania Cruises brands, says customers expect environmentally friendly cruising. "Pick up any magazine or periodical and

you'll notice that environmental consciousness has progressed from a trend into a global way of life," she says. "And our guests have a right to expect a product that fulfils our environmental responsibilities as a cruise line."

Jamie Sweeting, vice-president of environmental stewardship and global chief environmental officer at Royal Caribbean Cruises, admits that in the past, the industry wasn't as green as it could've been, but he thinks operators should be given more credit for the improvements they have made in the last 15 years. "The industry had a wake-up call in the late 1990s and really began to change its focus," he explains. "In the first decade of this century there has been increasing awareness of the issues and we have come a long way.

"The environment is the defining issue of our time and we are doing what we can to play our part and minimise greenhouse gases," he says. "We are currently focusing on reducing fuel consumption; the less you burn, the smaller the carbon footprint."

The cruise line's most recent stewardship report shows that advances in hull design and coatings have enabled the company to save as much as 5% of fuel usage for

propulsion per ship. Eight of the fleet are also fitted with smokeless gas turbine engines, which can reduce exhaust emissions of nitrous oxide by 85% and sulphur oxides by more than 90%. In addition, the company's ships now use lighting which uses 80% less energy. In the long term, Royal Caribbean aims to reduce its carbon footprint by one third per available passenger cruise day in 2015 from 2008 levels.

Riccelli says it is a challenge for cruise operators to keep up with the continual changes in environmental laws. "Our



Sweeting believes the *Oasis of the Seas* has a lower carbon footprint than its predecessors.



Royal Caribbean uses advanced wastewater purification systems where possible.

itineraries span the globe and each country or port state essentially has the authority to enforce their own unique environmental regulations," she says. "Fortunately, industry collaboration is a valuable asset in keeping ahead of the curve."

**“It is vital that cruise operators take environmental responsibilities seriously. Our livelihood depends on the environment.”**

**Christina Riccelli**

#### Liquid assets

Royal Caribbean has taken steps to reduce the amount of water used on board and is finding new ways to deal with wastewater. This includes the introduction of advanced purification systems, with 16 of the fleet currently equipped. "Our new ships have been launched with wastewater purification systems in place, and we have an aggressive timeline to retrofit," Sweeting says.

The cruise line is also concentrating on waste management. "We are proud of avoiding trash going to landfill," he adds. "We have a facility on our ships, which enables us to separate materials for recycling and on-board incineration." Through careful management, the cruise line has been able to make big differences. "In 2007, the amount of solid waste per passenger was 2.2lb per day, but in 2008, this was cut to 1.5lb.

"By contrast, the solid waste footprint in the US is 4.6lb per person per day." Through shipboard incentive programmes and

educating passengers and crew, the company was also able to recycle between 15-30% of all waste in US ports in 2008.

Sweeting believes operators have a responsibility to make these improvements, and he believes the sector is working together in order to change. "Essentially, we're pretty collegial within the industry," he says. "This is a non-competitive space and we share developments. When trying new things, we believe that it is in our best interest to share information about what does and doesn't work. We encourage our colleagues to improve their practices because we are only as good as the weakest operator."

However, keeping up with environmental law can prove a challenge. "We operate in approximately 420 ports around the world," he adds. "This covers many countries with different regulations, from those governed by the International Maritime Organisation right down to specific rules for individual ports."

In recent years, Sweeting has noticed a significant increase in the amount of regulations introduced. Despite this, the company takes its role in each port seriously, and works on a local level to help sustain each destination. "We have four million

passengers on our vessels each year, so we play an important role in how to be good tourists," he says. "We strive towards sustainability and work with these destinations to be part of the solution."

#### Looking forward

The industry has undoubtedly made huge steps forward, but environmental campaigners argue there is always more to be done. Marcie Keever, clean vessels campaign director at Friends of the Earth, is encouraging the industry to continue its investment in the technology that can help it to protect vulnerable areas. "Cruise ships visit some of the most ecologically-sensitive places in the world, so they need to do as much as possible to reduce their impact," she explains. "The livelihood of these companies depends on these areas remaining pristine."

Keever welcomes the efforts already made, and hopes operators will continue to move forward. "We would like to see the latest

#### Cooling Off

From 31 December 2009, the use of R-22 refrigerant on cruise ships was outlawed. In line with the terms of the Montreal Protocol, this means that vessels within the European Union are no longer permitted to maintain, service or top up systems that use the refrigerant, which has long been recognised as potentially harmful to the ozone layer.

While some companies have already dispensed with its use altogether, those that have not are required to find an alternative, such as Unicoool R-417A, which does not contain any ozone-depleting substances. The phase-out schedule was established in 1993.

technology used to deal with sewage, and more use of shoreside power, in partnership with ports. This is starting to happen on the east coast of the US. We would also like to see ships using cleaner fuel and we're really pushing for the introduction of stronger industry-wide standards."

Riccelli describes the steps Prestige Cruise Holdings has taken to become more environmentally friendly. "We've invested in upgrading wastewater treatment systems, which results in a much cleaner effluent," she explains. "When feasible and without implication to our guests, we adjust our operations in order to conserve water usage. We're continually seeking opportunities where we can recycle."

Sweeting thinks the industry's environmental image is sometimes misunderstood. "I have brought colleagues in from the conservation world who have been stunned by what we are doing," he says.

Despite the improvements already made by Royal Caribbean, Sweeting acknowledges that there is always potential for further development. "The greatest opportunity is when we design and construct new ships," he says. "We have broken new ground with the launch of the *Oasis of the Seas* and based on sea trial data for our first few months in operation, we believe the carbon footprint per passenger per day is around 30-40% lower than ships built a dozen years ago." However, the company is not resting on its laurels. "We are far from perfect, but we are paying attention," he adds. "Our mantra is that we will be better tomorrow than we are today." ■

# A breath of fresh air

Cabin air quality and temperature is one of the few issues that cruise passengers complain about. **Novenco**'s latest HVAC system ensures that air quality and temperature control is easier and more cost effective than ever.

**N**ovenco has a long tradition of developing heating, ventilating and air conditioning (HVAC) systems in cooperation with clients to add value to their products. Carnival Cruise Lines' technical department contacted the company with an idea for an HVAC system that met three targets:

- Energy consumption as low as a fan coil system
- Maintenance work handled in a dedicated service space away from passenger cabins and alleyways
- Air quality better than a fan coil system.

Cruise ship passengers rarely complain, but when they do it typically concerns food, room air quality and temperature, and the presence of maintenance staff. While Novenco cannot influence the menu, it guarantees room air quality and temperature, and plans services to avoid maintenance staff in passenger areas.

The HVAC system is a main consumer of a ship's energy. When in harbour, the system uses approximately 40% of the total energy used, making it one of the main focus areas for future green ship design. The close cooperation between Novenco's design engineers and Carnival resulted in the Novenco system Flex-Air.

“Flex-Air provides the lowest energy consumption ever seen.”

## The system

The Flex-Air system is an air conditioning system that treats air in two steps: in the primary air handling unit, and in the Flex-Air unit. The constant flow of fresh air to cabins is treated in primary air-handling units (AHU) with an enthalpy exchanger (1). Air from the primary air-handling units is distributed to Flex-Air units (2), which are placed in service spaces within the accommodation. Flex-Air units are selected to serve blocks of similar cabins, public areas, offices and service areas.

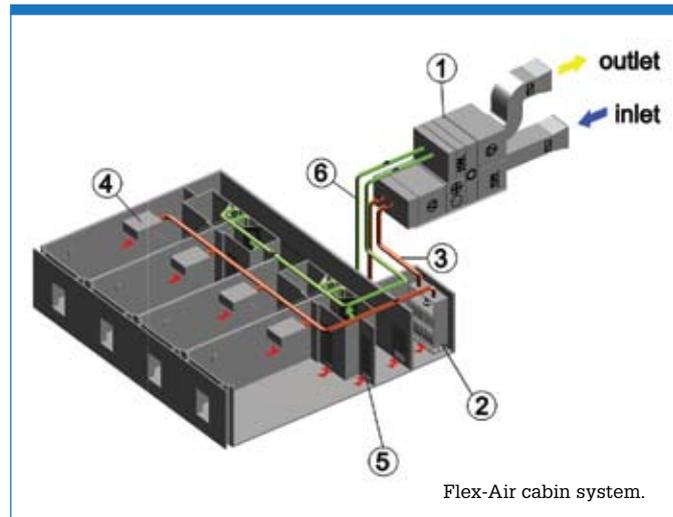
The Flex-Air units distribute air to cabins through constant air flow or variable air flow (VAV) units (4). Part of the air is re-circulated (5) back to the Flex-Air units. The remaining air is exhausted through the bathrooms and returned back to the primary AHU.

Fresh air requirements for public spaces are treated in the primary AHU. The VAV is controlled by the CO<sub>2</sub> level in the room: no people, no fresh air. A Flex-Air unit is placed in each zone. The air from the Flex-Air units and the fresh air are mixed and supplied to the rooms. The Flex-Air units work with 100% return air and VAV for capacity control.

## Quality and cost

The initial reasons given by Carnival for choosing such a system were:

- Energy consumption: Flex-Air provides the lowest energy consumption ever seen. The main fans in the AHU are axial flow fans Novenco-type ZerAx with 90% efficiency.
- No service in passenger areas: the Flex-Air units are placed in 1.5m<sup>2</sup> service rooms, in electrical rooms or in the vertical trunks in the centre of the ship.
- Air quality: the air in the Flex-Air unit is fully cleaned by three stage filters – the cleanable F4/F5 filters for dust, then the F7/ carbon filters for odour and most bacteria, and finally a UV light kills remaining bacteria and viruses.



Four other important reasons for choosing Flex-Air are:

- More cabins: space for additional cabins will become available.
- Less capital cost: 10-20% lower equipment and installation costs.
- Superior control system: total monitoring and control from every service space.
- Larger cabins: cabins can be approximately 0.5m<sup>2</sup> larger. ■

## Novenco

Novenco is a world leader in the supply, development and manufacture of HVAC systems.

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# Pure water

**Enwa's** range of water treatment technology offers cruise ships more than cost benefits; they can also help improve cooling efficiency and environmental performance.

**T**he amount of fresh water a cruise ship needs is quite phenomenal. A large cruise liner can consume more than 1,000m<sup>3</sup> of fresh water every day. The majority is potable water used for showers and food preparation.

In addition, hundreds of tons of water are circulated through water systems for various heating and cooling purposes, such as HVAC and engine cooling systems.

Water is obviously readily available wherever a cruise ship travels. However, in order to be suitable for consumption or as an energy carrier, water must, in most cases, be treated. Enwa provides a range of reliable water treatment solutions for sustainable and efficient use on board cruise ships.

These solutions reduce workload while improving safety and operational performance, resulting in clean water free from bacteria and other contaminants.

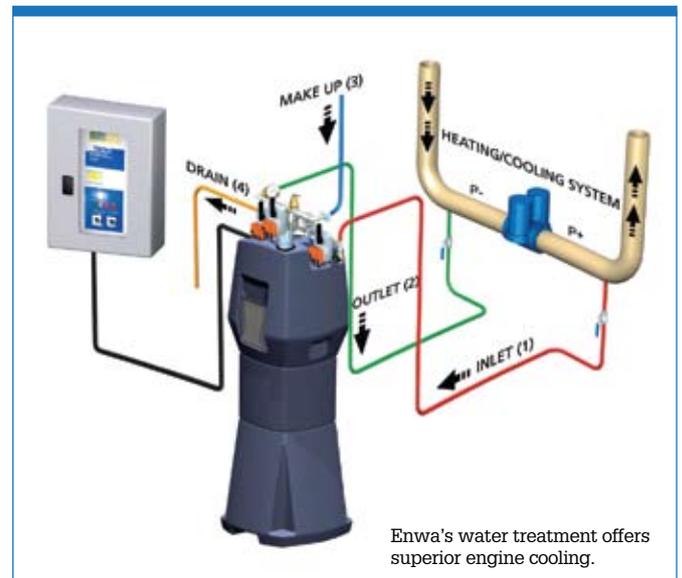
Enwa Bin-X offers a chemical-free bacteriological barrier for potable water. While other water treatments kill microbes, they leave behind a biological residue. The patented Enwa Bin-X technique removes biological contamination and provides safe potable water.

At a time when cruise lines are looking to reduce their emissions and improve environmental performance, perhaps it is time to expand the focus on energy efficiency to include the maintenance of energy-efficient solutions to safeguard the effect ships have on the environment?

The quality of the water used in heating and cooling systems is often overlooked and poor treatment may lead to corrosion and general fouling. This will lead to excessive wear on the system's



Enwa's ultrafiltration system.



components as well as a reduction in heat transfer and overall efficiency.

The conventional approach is to use chemical inhibitors, although these are toxic and can scour existing systems. The inhibitors can also promote biological growth and cause the formation of bio-film, which has a dramatic impact on heat transfer. Biocides are sometimes necessary to tackle microbiological growth.

EnwaMatic Maritime is an automatic side stream filtration and water treatment unit that provides water conditioning for the removal of corrosion, sludge and deposits. The unit also provides balanced water treatment and removes particles in one operation. In addition to HVAC systems, EnwaMatic Maritime is ideal for diesel engine cooling systems.

EnwaMatic Maritime has achieved a 25% reduction of compressor energy consumption on cruise ships, without any hazardous chemicals and reduced maintenance intervals.

Enwa products are easy to use, require little maintenance and eliminate the need for chemicals. The range of applications includes fresh water production, potable water disinfection and the treatment of circulating systems.

Enwa's chemical-free water treatment products and systems and range of filtration and membrane technology have proven to be environmentally friendly and superior in terms of energy efficiency. ■

## Enwa

Enwa provides a wide range of products and services to the international maritime industry as well as to the oil and gas industry.

[www.enwa.com](http://www.enwa.com)



There is no doubt that reducing emissions is a crucial factor in cruise operations today. While emitting fewer pollutants into the environment should be motivation in itself, for operators the main driver in recent years has been the rising cost of fuel.

However, according to Sauli Eloranta, STX Europe's vice-president of product development and innovation, cruise and ferries, the tough economic conditions have helped the environmental cause.

"The high cost of fuel has always been a concern for the cruise industry: the less fuel consumed the better the results for the cruise lines, and the more value they can give their passengers," he says.

"Cruise ship energy management today is developing with greater emphasis on operational cost efficiency."

Implementing technologies to reduce emissions is expensive and, in a tough economy, cruise lines understandably want to keep expenditure to a minimum. But streamlining operations can result in the added bonus of keeping costs and emissions at low levels. "Cruise lines are responding to the downturn by improving their cost efficiencies where they can and this, in turn, is leading to less energy being used," says Eloranta.

#### Back to the drawing board

For shipbuilders such as STX Europe, the most effective way that operators can improve efficiency and reduce emissions begins at the drawing board.

"When looking to reducing emissions, many people focus on technical solutions, but the most effective way is to start at

the concept design phase, by finding out how you can minimise the ship's overall energy demand," Eloranta says. "When you know this, you then work to meet that demand with technology." A ship's body is a major factor in fuel consumption. STX has pioneered a wave-dampening aft body, a hull form that dampens the wave system and results, Eloranta claims, in substantial energy savings. "In the last ten years, we have improved the efficiency of propulsion power by 10-15%," he says.

Weld-seam grinding and covering the bulk thruster tunnel openings also achieves resistance savings. "Streamlining the performance of the hull is a question of dimension optimisation and correctly working with measurements to look at the waterline length, the length to beam ratio and hull fullness," explains Eloranta.

# Sleek, clean, green

The challenging economic climate means that the push to cut energy emissions has become less of a priority for cruise lines, but as **Sauli Eloranta** of STX Europe tells Shirley Accini, fuel efficiency measures can lower costs, helping cruise operators turn the downturn to their benefit.

STX's Eoseas vessel concept.

Keeping the hull clean through the use of silicon paints reduces marine growth, which can add up to 40% resistance. "Even the slime on the surface can increase resistance by 1-2%," Eloranta adds. "Using podded propulsion technology rather than the traditional shaft propulsion can create propulsion efficiency savings of up to 15%."

### The next generation

STX's ideas incorporate a common sense strategy: ships, no matter how large, have limited space, and a cruise ship design that is based on simplicity and versatility is key.

In March 2009, Eloranta introduced his company's latest concept: the xpTRAY, where all public passenger areas and activities are based in one location, on a wide 'tray', reducing ship volume by up to 15%, resulting in higher space ratios and more efficient service operations.

"Centralising all the restaurants means you have a central galley that is more efficient in energy and size," says Eloranta.

"When you use less energy there is less weight; less weight means less displacement and less resistance, which in turn means less power and less energy consumption."

The xpTRAY offers economies of scale, but with a lower gross tonnage compared with a standard post-Panamax cruise vessel – 130,000t rather than 160,000t – which results in substantial savings in building costs, electrical load and propulsion power.

The xpTRAY has similarities with STX's Eoseas vessel concept, part of the company's new Ecorizon project. The five-hulled ship boasts a new architectural design, uses renewable energy and incorporates environmental technical solutions to reduce carbon dioxide (CO<sub>2</sub>) by 50% and nitrogen oxide (NO<sub>x</sub>) by 90%, while sulphur oxide (SO<sub>x</sub>) and particulate matter are completely eliminated, claims STX.

The ship's other technical energy-saving solutions include:

- an advanced heat recovery system that turns waste heat into energy; water is recycled through a waste and water recycling system; rainwater is recovered from the upper decks
- an air lubrication system that enhances hydrodynamic efficiency by injecting air beneath the hull
- an innovative propulsion system that helps improve the ship's efficiency.

The multi-hulled design also provides added stability at sea and opportunities for creating new passenger areas and amenities. Inside the cabins, the décor and furnishings are made from recycled materials.

### Burning issues

Within the Eoseas's engine room, a trigeneration liquefied natural gas (LNG) energy plant supplies heating, electricity and cooling needs.

"LNG produces less CO<sub>2</sub> and no SO<sub>x</sub>, but there are practical problems in having it on board a ship," Eloranta explains. "Its storage requires large tanks because of its low density." While such fuel efficiencies are attractive, Eloranta points out that LNG is still a fuel of the future. "It is not widely available enough for cruise lines to base their consumption needs on it exclusively," he says. "An LNG vessel can be operated easily in areas such as Norway

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because the fuel is available in that country, but this is not the situation in the rest of the world.”

The same issues arise with biodiesel and low-sulphur fuels. “These fuels have availability and cost problems,” Eloranta says.

“Once regulations shift towards less sulphur content in fuels, the availability will improve, but today the 0.1% fuel is extremely expensive, so one possibility is a scrubbing system, which would clean sulphur exhaust gases. But it requires a lot of investment to install the equipment and for the volume of energy they consume when in operation.”

**Wide-scale approach**

A true push for sustainability requires a holistic approach and most ships have adopted energy management programmes including power management, automation, energy-efficient LED lighting, timers and motion detectors, and environmentally friendly materials and practices.

“It’s important to fine-tune the energy consumption of vessels in different situations and find out what can be done to reduce consumption,” says Eloranta. STX built Royal Caribbean’s 225,000t *Oasis of the Seas*, which boasts the latest energy-efficiency



The xpTRAY concept positions all passenger public areas in one space.

technology. When vessels reach such proportions, economies of scale mean that the ratio of fuel consumption per passenger is reduced. While vessels of this size are hard to beat with their 30% potential energy savings compared with smaller vessels, the main challenge today is how similar efficiencies can be made in vessels that are half the size.

However, the *Oasis* has set a hard-to-beat benchmark in energy efficiency for any future vessel design. “The greatest potential for energy savings is in the larger size of ship,

but the downtime might force operators to acquire smaller vessels, and in these cases, the energy management plan is the best option,” says Eloranta.

By building a new ship or making adjustments to existing vessels, every company can do something to reduce their fuel consumption. When the downturn is over and the economy improves, the industry will no doubt focus on sustainability again, but whether the driver is cost or sustainability, both ideals are heading in the same direction. ■

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## The Lisbon fuel stop



The port of Lisbon.

Lisbon is a growing cruise destination and a mandatory port for transatlantic cruises. Because of this, it is a significant fuel supply option for cruise ships entering and leaving Europe.

Oil refiner and distributor Petrogal, part of the Galp Energia Group, is the main bunker supplier in Portugal and is

able to offer fuel supply services to cruise ships visiting the country. Based in Lisbon, Petrogal offers high-quality services and products including a professional bunkers team, high-quality fuels, marine distillates and the most stringent safety standards for bunkering activity. The company's bunkering products fulfil the ISO

8217: 2005 specification in all grades.

To help its customer's achieve their environmental targets, Petrogal supplies low-sulphur fuels at several ports with the main one situated in Lisbon.

Aware that its customer's main concern is product cost, Petrogal offers competitive prices without compromising

service or quality. Petrogal is therefore the perfect partner for customers used to working with a professional team.

As a founder member of Lubmarine, Petrogal is also able to supply lubricants at all Portuguese ports.

The company's two refineries together represent 100% and 20% of Portuguese and Iberian refining capacity, respectively.

Petrogal operates a cracking refinery in Sines that has a distillation capacity of approximately 10.5 million tonnes a year. It is Portugal's principal refinery, accounting for approximately 70% of the national refining capacity, and is one of the largest refineries in Iberia.

The Oporto complex currently has an annual distillation capacity of approximately 4.4 million tonnes a year (90,000 barrels per day). The Oporto refinery includes petrochemical aromatic and base oil plants. ■

Further information: Petrogal

Tel: +35 121 724 0654 Fax: +35 121 724 2957 Email: [bunkers@galpennergia.com](mailto:bunkers@galpennergia.com) Website: [www.galpennergia.com](http://www.galpennergia.com)

## Welcome to the Port of Livorno

Port of Livorno 2000 is the company created by the Livorno Port Authority to manage the city's passenger port, and cruise and ferry terminals.

Livorno is the natural gateway to the cities of Tuscany, which can be easily reached thanks to the accessible rail and road connections.

Over the last two years the Livorno Port Authority and Port of Livorno 2000 fostered the development of the passenger port, which became fully operational in 2009.

The new dock, Molo Italia 42 South Side, was christened at the end of 2008 welcoming the 154,000t, 240m-long *Independence of the Seas*.

In 2009 a new 300m berth – N.75 – was dedicated to cruising. Located in the middle of Porta a Mare, it is a short walk from the town centre and promenade.

More passengers will cruise in 2010 from Tuscany and Livorno will handle 43 calls.

Having established a three-year agreement and taking advantage of the air connections of neighbouring Pisa Intercontinental Airport, MSC Cruises confirmed the 65,000t *MSC Sinfonia* will visit Livorno on Saturdays, turning-around about 800 passengers per call.

In 2011 the port will expect calls from the *MSC Musica*, turning around about 1,000 passengers per call.



The Port of Livorno became operational in 2009.

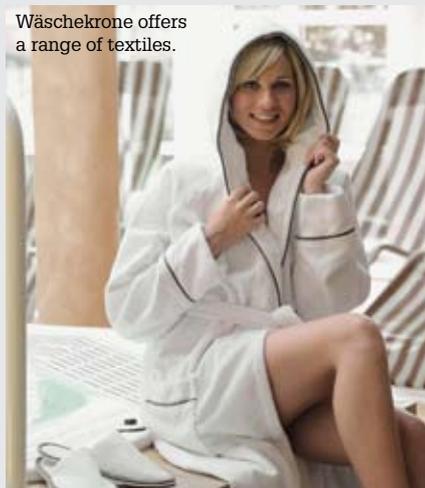
Costa Cruise Lines recently announced the maiden voyage of *Costa Deliziosa* in Livorno. ■

Further information: Port of Livorno 2000

Tel: +39 058 620 2901 Fax: +39 058 689 2209 Email: [info@portolivorno2000.it](mailto:info@portolivorno2000.it) Website: [www.portolivorno2000.it](http://www.portolivorno2000.it)

## Show your colours with Wäschekrone

Wäschekrone offers a range of textiles.



Wäschekrone is a leading specialist in the hotel and catering textiles sector and offers one of the most extensive collections of linenware in Germany. Wäschekrone's product portfolio includes exquisite table and bed linens, top-quality towels as well as

beds, bedding, mattresses, slatted frames, kitchen linens and industrial apparel. Five decades of textiles experience have made Wäschekrone an expert in its field with product and advisory competence that is highly valued worldwide. Wäschekrone is also setting new standards with forward-looking linen solutions from one source.

Wäschekrone's products are designed for heavy-duty wear in a professional environment. With great attention to detail and an eye for special touches, Wäschekrone creates modern textile collections that are outstanding in their quality of materials, simplicity of care and extremely high durability. Its range of stain-resistant table linens is tailor-made for use on ships.

These specially treated elegant tablecloths are easy to clean and suited for indoor and outdoor use. The cloth is droplet-resistant, allowing water splashes or red wine stains to be easily dabbed off. In

addition, this range of table linen is available in easy-iron or non-iron.

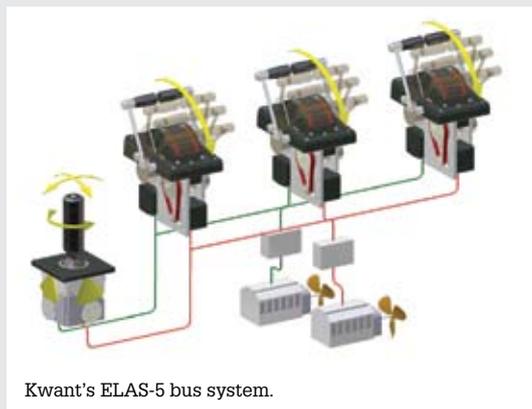
Wäschekrone's crown trademark symbolises its high standard of quality: only the best is good enough. This professionalism is found in every product and a commitment to service. A team of highly qualified agents provide on-site customer support and develop individual soft furnishing concepts with the passion that only a textiles professional can employ. Wäschekrone products are tailored to customers' wishes in the company's design studio where special sizes, customisation, small orders and logo stitching are implemented to order.

At Wäschekrone, service is not merely a buzzword; it is a company culture. That is why so many customers have put their trust in Wäschekrone for generations, knowing they will always find a safe harbour at this long-established company. ■

Further information: Wäschekrone

Tel: +49 733 380 4831 Fax: +49 733 380 430 Email: [info@waeschekrone.de](mailto:info@waeschekrone.de) Website: [www.waeschekrone.de](http://www.waeschekrone.de)

## Touching technology



Kwant's ELAS-5 bus system.

For more than 70 years, Kwant Controls has designed and produced innovative nautical instrumentation and control systems for ocean-going vessels.

Kwant pays special attention and effort to ensure its instruments match the visual design and harmony of its yacht interiors. This combination of product

flexibility, technical integrity and high quality is achieved by Kwant's creative and dedicated employees.

The instrumentation range consists of control units and indicators for all existing propulsion applications: bow/stern, thrusters, main propulsion as well as azimuthal propulsion.

Kwant Controls recently launched a matching joystick control and enhancing the harmony of the wheelhouse design.

A combined twin screw rudder control unit, suitable for one-hand control, has also recently been added to the product range.

Another new addition to the Kwant Controls range is the control unit to bus interface, which can be used as part of a

combined electric shaft/telegraph system and as part of a remote control system.

In addition, Kwant Controls recently launched the ELAS-5 bus system, which merges telegraph and electric shaft systems into one rugged unit that uses a controller area network to improve flexibility and offer cost savings. The first ELAS-5 system has been successfully installed on board Costa Cruises' Costa Romantica.

The ELAS-5 has been designed to minimise the amount of wiring between operating positions, reducing production and installation costs.

All Kwant Controls instruments and systems are designed and produced under strict quality conditions, with ISO 9001 certification approved by the world's leading classification societies. ■

Further information: Kwant Controls

Tel: +31 515 413 745 Fax: +31 515 422 478 Email: [kwant@kwantcontrols.nl](mailto:kwant@kwantcontrols.nl) Website: [www.kwantcontrols.com](http://www.kwantcontrols.com)

# Energy management solutions

W&O Integrated Solutions provides a fully integrated fuel and energy system solution that measures fuel usage for environmental compliance and energy and asset management.

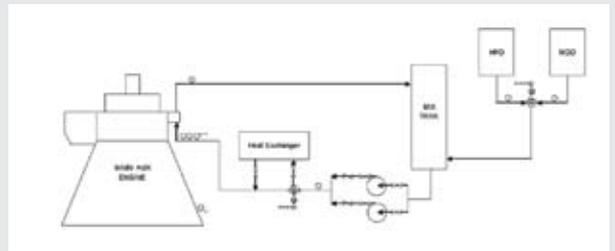
The W&O energy management system is extremely accurate ( $\pm 0.10\%$  of rate) and uses failsafe flow measurement technology that can be integrated with existing ship systems and measurements, along with multivariable process control systems. W&O integrates these technologies to create an energy management solution tailored to the individual requirements of ship managers.

Accurate, reliable and safe fuel usage measurement is a key challenge for maritime operators. In order to achieve accurate flow measurement at varying temperatures, viscosities and densities, while avoiding flow interruption, W&O has partnered with Emerson Process Management Micromotion to provide

Coriolis mass flow, temperature, density and viscosity measurement.

W&O integrates fuel measurements with engine data, electrical loads and GPS data to provide a complete picture of energy consumption. The data is synchronised, time stamped archived and can be exported into the operator's ship management system or enterprise resource planning system.

Effective fuel and energy management varies widely across the maritime industry, from ferries to cruise ships. The range of measurement and compliance requirements, along with differences in ship controls and internal reporting, means that there is no one-size-fits-all solution. W&O is able to configure management systems to meet the needs of any operation.



Applications for the W&O fuel and energy management system include:

- Real-time and historical tracking of fuel consumption and efficiency for a single vessel or an entire fleet.
- Accurate and reliable bunkering measurement with exact mass flow and viscosity measurement and the ability to automatically record and generate transfer confirmation ticket.
- Automated fuel switching and compliance verification. ■

Further information: W&O Supply  
 Tel: +1 904 354 3800 Email: corporate@wosupply.com Website: www.wosupply.com

# Send the right signal

Chemring Marine is the leading manufacturer of marine distress signals for the cruise line industry.

Its Pains Wessex and Comet ranges are approved and manufactured in compliance with the latest SOLAS/Marine Equipment Directive (MED) requirements. Chemring is trusted for its reliability and consistent superiority by cruise ships, rescue services, navies, merchant ships and fishing fleets.

Pains Wessex products:

- Linethrower 250: a self-contained line-throwing appliance with a solid propellant rocket, which guarantees a highly accurate flight path, even in strong side winds.
- Manoverboard 360: a self-activating, combined light and smoke lifebuoy marker, featuring a patented water-activated lighting system that gives a complete circle of light.



The Linethrower 250.

- Red or White Handflare MK8: these day and night, short-range distress and collision warning signals have a telescopic handle that allows easy extension and saves on stowage space.
- Parachute red rocket MK8A: long-range distress signal designed to withstand exceptional environmental exposure and to perform reliably even after immersion in water.
- Lifesmoke MK8: compact, flat-top

daytime orange smoke distress signal providing effective position marking or indication of wind direction.

- Ship's bridge kit: designed to meet the SOLAS/MED/USCG regulation, which requires 12 Para Red rockets on a ship's bridge and is stowed in a large waterproof polybottle.

Comet products:

- Light and smoke signal: combined light and smoke lifebuoy marker, which meets all SOLAS/MED requirements.
- Smoke signal: a 15-minute orange smoke lifebuoy marker.
- Red hand flare: a short-range distress signal with a unique, compact telescopic handle for safe operation.
- Red parachute signal rocket: long-range distress signal, designed to withstand exceptional environmental exposure and to perform reliably. ■

Further information: Chemring Marine  
 Tel: +44 014 898 841 30 Fax: +44 014 898 84131 Email: info@chemringmarine.com Website: www.chemringmarine.com

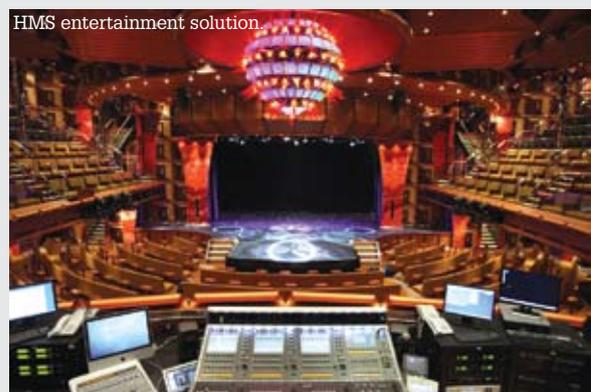
## A formula for success

HMS is well known in the cruise industry for its innovative solutions in the entertainment and internal communication sectors. With nearly 25 years' experience, HMS provides expertise in the fields of audio, video, lighting and rigging for every type of installed application, such as theatres, broadcasting and meeting rooms, swimming pools, discotheques and more. Entertainment facilities are the most effective way to attract passengers who expect the highest level of sophistication when choosing a cruise.

It is not easy to create an environment and keep it functional, entertaining and cost effective. As the biggest space on the ship, the theatre is the heart of entertainment. HMS not only guarantees flexibility and the seamless integration of sound, light and video but also ensures that these are maintained at the highest level of quality. HMS strives to keep one step ahead by

meeting ever-growing market demands with innovative features and solution-oriented business approaches. As a designer, the company looks at its project more holistically. Every solution has a different level of scenery, lighting, audio, video and effects. As a system integrator, HMS links its knowledge of analogue and digital systems to new networking technologies.

By focusing on customer needs and maximising the lifelong value of its investments, HMS offers a breadth of lifecycle services. It assumes total responsibility for designing and supplying hardware, engineering design, installation supervision, calibration, start-up and



commissioning. Clients can choose between individual devices or completely engineered systems from all major manufacturers.

Thanks to its years of experience, the integration of new elements into existing systems and programmed maintenance are possible. HMS is certified to the international quality standard ISO 9001:2000 and delivers solutions on a global level. ■

Further information: HMS

Tel: +39 048 171 6311 Fax: +39 048 171 6333 Email: [marketing@hmsweb.com](mailto:marketing@hmsweb.com) Website: [www.hmsgroup.com](http://www.hmsgroup.com)

## Denmark's home of art and culture



The Ny Carlsberg Glyptotek in Copenhagen, Denmark, is an absolute must-see for anyone interested in art and architecture.

Founded in 1888 by the brewer Carl Jacobsen in the heart of the capital, Ny Carlsberg Glyptotek has the largest collection of French Impressionist art in Denmark and includes works by Monet, Sisley and Degas along with paintings by Gauguin, van Gogh, Cézanne and many others.

The museum is also home to one of Europe's largest collections of ancient Mediterranean art. The collection of antiquities allows visitors to enjoy 6,000 years of art and history from the Ancient Near East, Ancient Egypt, Greece, Greek and Etruscan Italy, and Rome.

The Ancient Mediterranean collection covers early high cultures of the Middle East to the fall of the Roman Empire.

Visitors can also relax among subtropical evergreens reminiscent of a more southern climate under the huge glass dome of the indoor garden where they can enjoy the home-made specialities of the Café Glyptoteket and browse in the adjacent museum shop. ■

Further information: Ny Carlsberg Glyptotek

Tel: +45 334 181 41 Email: [info@glyptoteket.dk](mailto:info@glyptoteket.dk) Website: [www.glyptoteket.com](http://www.glyptoteket.com)

## A taste for the traditional

Three years ago, inco Denmark, one of Denmark's largest wholesalers, made its first delivery to a cruise line. Since then the company's turnover in this sector has increased steadily every year.

"Summer 2009 was a good season for inco Denmark's cruise division," says sales manager Lis Haukohl, "we added new customers while our existing customers increased their orders.

"The cruise industry is becoming greener and is increasingly choosing local suppliers instead of transporting goods across Europe, which doesn't make sense from an environmental point of view. Cruise lines also benefit from the quality and flexibility of having a supplier close by."

With over 25,000 items in its wholesale store, and situated only 15 minutes from Copenhagen harbour, inco Denmark is a reliable and convenient food and beverage supplier.

**Key ingredient:** inco Denmark excels at supplying Scandinavian cuisine.



Innovation is a top priority at inco Denmark, which delivers to most of Denmark's top restaurants. It also has close contact with suppliers, which ensures continuous development and solutions that bring value to the food service market.

"inco Denmark would like to share its broad knowledge of the Scandinavian food market with cruise lines," adds Haukohl. "Nordic cuisine has become well known the last couple of years. The old 'grandma cooking' is having a renaissance, with

famous chefs making new and fancy dishes from local fruit and vegetables. Many small suppliers are producing unique delicacies.

"It would be very interesting, working in cooperation with cruise lines, to get these concepts on board. Whether it is a five-course menu from a famous Michelin-starred chef or a Danish dinner evening, we are able to provide the recipes and raw materials to give passengers an exceptional experience from their Scandinavian tour." ■

Further information: inco Denmark

Tel: +45 332 114 21 Fax: +45 332 114 31 Email: inco@inco.dk Website: www.inco.dk

## Hull performance technology

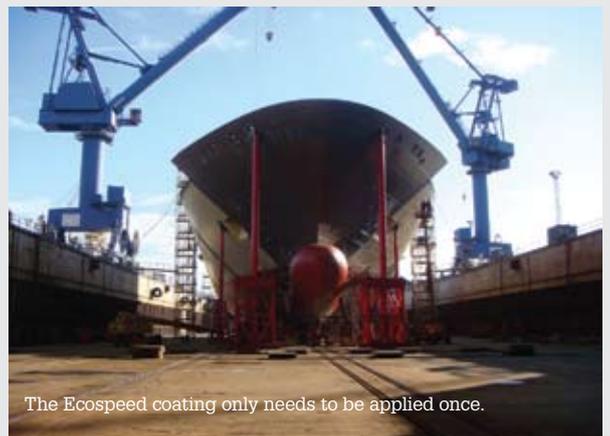
Ecospeed is an environmentally safe hull coating system that improves ship performance and offers long-lasting protection. It consists of a unique system that combines the advantages of a superior coating applied by a specialised method, a surface treatment for hydrodynamic optimisation and a long-term underwater maintenance service system.

Ecospeed comes with a ten-year guarantee and is expected to last the lifetime of a vessel. This is in contrast to traditional anti-fouling paints where a new application is necessary during each drydock. With Ecospeed, only one application is required and the cost of any future repainting is eliminated. Planning upcoming drydock sessions becomes a far simpler procedure, giving ship owners the benefit of being able to focus on the technical maintenance of the vessel and reducing the time in drydock to the

absolute minimum, which in turn results in less off-hire time.

A key feature of Ecospeed is that it is conditioned underwater after curing. It is carried out with specially designed tools and brings the smoothness of the paint surface to an optimum condition. This makes it difficult for fouling organisms to attach themselves to the hull. In this manner, superior antifouling properties are achieved.

Conditioning is followed by regular underwater cleaning to remove any marine fouling at an early stage of development, thereby maintaining and even improving the ideal surface



The Ecospeed coating only needs to be applied once.

characteristics throughout the service life of the vessel. This procedure is made extremely easy by the coating's properties and can occur whenever needed, at any point in its life span, without causing damage or deterioration in quality. ■

Further information: Ecospeed

Tel: +32 321 353 18 Fax: +32 321 353 21 Email: info@ecospeed.be Web: www.ecospeed.be

## A history of quality

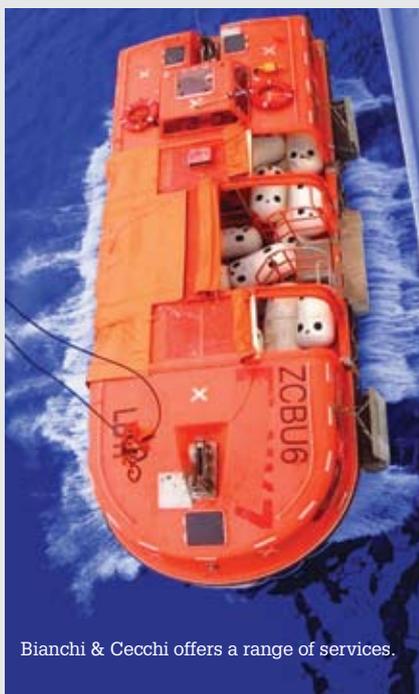
Bianchi & Cecchi Service was established in Genoa, Italy, in 1942 and has grown exponentially into an internationally known and accredited brand. Its offices are located in Genoa, Italy; Ft Lauderdale, Florida, US; and Panama.

Bianchi & Cecchi's teams focus on mandatory inspection and certification (SOLAS 1206-1277) for life-saving equipment on cruise ships and commercial vessels.

Years of experience and dedication to the industry make Bianchi & Cecchi the perfect partner to provide a full range of services for everything concerning life-saving craft.

Its technicians and engineers provide:

- Fibreglass works
- Structural works
- Repairs
- Polishing
- Painting
- Carpentry



Bianchi & Cecchi offers a range of services.

- Mechanical works
- Engines works
- Spare parts
- Hook testing
- Load testing
- Certifications
- Inventory control
- Project management
- Maintenance

Bianchi & Cecchi Service is recognised and authorised by Lloyd's Registry, Panama Flag Authority, RINA, DNV and others. ■

Further information: Bianchi & Cecchi Service  
Website: [www.bcserviceinc.com](http://www.bcserviceinc.com)

## The superior outfitting solution

R&M Ship Tec is a global company with more than 100 years' experience in the planning and interior outfitting of all types of vessels. Concentration in the shipyard sector has seen the company become a leader in European markets.

The R&M Ship Tec Group is an established and well-trusted partner for sophisticated outfitting and insulation projects in the shipbuilding industry.

R&M provides a wide range of maritime services including newbuilds, repair and conversion projects.

Its services include conceptual engineering work, such as sound and noise prediction; the assembly and time-critical mounting of cabins, public areas, insulation, heating, ventilation and air conditioning systems; as well as other outfitting components for passenger ships, navy vessels, mega yachts, merchant vessels and offshore and authority vessels.

R&M's Cruise & Ferry competence centre in Hamburg, Germany, realises conversion, repair, refurbishment and maintenance projects for passenger vessels and newbuilds. The centre specialises in the installation and outfitting of passenger and crew cabins, offices and conference rooms, sickbays, galleys, refrigeration chambers as well as public areas such as bars and restaurants, lounges, libraries, wellness and beauty salons, cinemas and theatres, stair towers and halls.

The company's production facilities provide high-quality marine furniture, prefabricated cabins, wet units, accommodation systems and accessories.

R&M excels in the following areas:

- Integrated project management
- Engineering and consulting
- Sound analyses and predictions

- Thermal-acoustic insulation and fire protection
- Heating, ventilation and air conditioning systems
- Interior and material design
- Production and installation of walls, ceilings, floors and doors
- Furnishing and fitting of living areas
- Technical rooms and wet units
- Prefabricated cabins
- Worldwide installation, start-up and support

R&M will be at Seatrade Cruise Shipping Miami 2010, in the German Pavilion. ■

Further information: R&M Ship Technologies  
Tel: + 49 407 524 440 Fax: + 49 407 524 4450 E-mail: [hamburg@shiptec.info](mailto:hamburg@shiptec.info) Website: [www.shiptec.info](http://www.shiptec.info)

## See the light

JT Kalmar is one of the world's leading specialists of custom-designed and manufactured solutions for architectural lighting projects in the cruise ship industry.

It offers lighting concepts that range from classic chandeliers to contemporary decorative luminaries as well as functional lighting solutions.

Its products have appeared at international exhibitions from the 1893 World's Columbian Exposition in Chicago, US, to EuroLuce 2009 in Milan, Italy.

JT Kalmar has been associated with some of the most prestigious projects in the cruise industry such as RCI's *Oasis of the Seas* and MSC Cruises' *Splendida* and *Magnifica*. In 2010 the company's lighting will illuminate RCI's *Allure of the Seas*, NCL's *Norwegian Epic* and Cunard's *Queen Elizabeth*.

More than 40 cruise ships, including RCI's *Voyager*, *Freedom* and *Genesis*

class, along with Cunard's *Queen Victoria* and *Queen Mary 2*, lay claim to its expertise as a provider of lighting solutions.

JT Kalmar develops its lighting concepts in Vienna. Its key competence is customisation according to specifications from architects and planners.

Besides the cruise ship industry, it also provides lighting installations for government buildings, hotels, palaces and museums. ■



Further information: JT Kalmar

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## The harbour of grace



The French city of Le Havre de Grâce was established in 1517 by King Francis I of France. In September 1944, 80% of the city centre was destroyed and its port was completely devastated. It has taken 20 years for Le Havre to find a new lease of life and in 2005 the city centre was the first 20th century urban settlement in Europe to be added to the World Heritage

An aquatic complex, designed by French architect Jean Nouvel, was delivered in 2008, while the 'Les Docks' shopping mall opened in October 2009. A new sustainable development centre will be composed of a 120m-high metallic structure dominating Le Havre, and will include a panoramic restaurant offering views over the city and the bay of the Seine.

List by UNESCO.

Le Havre is a city of outstanding heritage, offering sites such as the Malraux Museum (the second biggest impressionist collection in France after the Orsay museum in Paris), the historic showflat, the shipowner's mansion, and the hanging gardens.

Le Havre is the gateway to Paris, connected by the TGV train to Paris Charles de Gaulle International Airport. It is also a perfect stopover to discover Normandy, offering its own version of France, with local dishes, verdant landscapes, historical towns and friendly people.

The port of Le Havre can handle the biggest cruises ships. There are 67 calls scheduled for 2010, totalling 115,000 passengers, a 25% increase on 2009.

The cruise centre offers a friendly welcome as well as shopping and services such as internet access, and car and bicycle rental.

By March this year, Le Havre will see the completion of a €1 million project that will include facilities to handle turnarounds of up to 500 passengers. These facilities will help Le Havre meet the expectations of cruise lines and draw French customers to the cruise market. ■

Further information: Tourist office of Le Havre

Tel: +33 023 274 0407 Fax: +33 023 542 3839 Email: cruises@lehavretourisme.com Web: www.le-havre-tourism.com

# Holistic concepts in interior design



The Baumann collection showcases a modern hotel suite.

Baumann Dekor, Austria is a supplier of holistic interior design concepts for residential projects, hotels and cruise ships. The company provides an extensive range of high-quality woven and printed upholstery and curtain fabrics with a broad collection of Trevira CS qualities. Its state-of-the-art production facilities include weaving, printing, dyeing and finishing.

In cooperation with seven strategic partner companies, Baumann Dekor launched at Heimtextil, Frankfurt, Germany in January a hotel showroom with a living and sleeping area showcasing the latest

partners at the Baumann show suite included Artemide, Italy, Baulmann Leuchten, Germany, and Carpet Competence and Sign Design, Austria.

Baumann recently launched a contract collection, BAUMANN INSPIRATIONS 2011, which includes three themes: PROFILES, CHARACTERS and ILLUSIONS.

PROFILES presents itself in a pronounced sublime relief structure with three dimensional effects.

This appearance is achieved by combining shrinkable yarn with dimensionally stable yarn. The fabrics offer

themselves as an eye-catching highlight in any interior.

CHARACTERS consists of faux unis, chenille fabrics and classic upholstery designs that complement the other two themes. The final theme, ILLUSIONS, distinguishes itself with a simulated folding structure and has a leather-like appearance with glossy effects. By using subtle interlacing techniques a light and shadow effect is achieved that causes a shine. The main colour varieties are petrol and emerald green combined with yellow or anthracite-brown plus warm blackberry/pink with shades of yellow.

The print collection plays with seven different patterns in five colour variations. Beige, cream, anthracite or aubergine/lilac combined with a cream base; shades of orange combined with natural colours as well as a vintage theme with kiwi, mauve/turquoise and shades of beige. ■

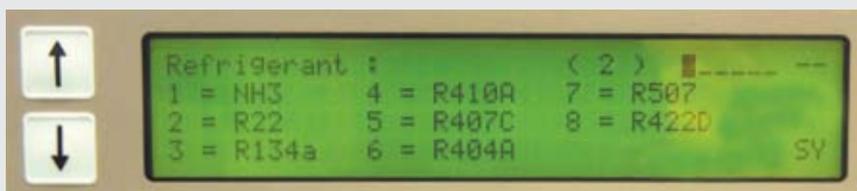
Further information: Baumann Dekor Austria  
Tel: +43 285 290 080 Fax: +43 285 290 08209 Email: baumann@baumann.co.at Web: www.baumann.co.at

# R22 and energy efficiency

In marine air conditioning and refrigeration, two issues are top of today's agenda: energy conservation and the phasing out of R22. Unfortunately these two objectives are in conflict: cooling capacity is either maintained at the expense of higher power consumption, or power consumption is reduced at the expense of lower plant cooling capacity. It is not possible to achieve both at the same time without changing out main mechanical components of the system.

While there are many claims that new refrigerant blends can solve this problem, Johnson Controls Marine states that only equipment makers are able to deliver optimal and sustainable plant performance when replacing R22.

Size does matter: while new refrigerant sales reps often refer to trials and tests carried out on small systems (a few kilowatts), AC cooling capacity installed on a 90,000 GRT cruise ship is some 15MW.



An optimal R22 retrofit may result in plant performance differences of up to 20% compared to a less well engineered quick fix. For the annual operation of a typical cruise ship this equates as:

- 2,000,000kW/h electric consumption
- \$200,000 in fuel costs
- 1,300,000kgs of CO2 emissions

This clearly demonstrates the importance of optimising an R22 retrofit solution. Highly trained service engineers can also identify and suggest remedial actions required to bring the plant up to maximal performance.

Johnson Controls Marine offers complete engineering support, along with a variety of unique capacity and efficiency enhancement products, such as:

- Control upgrades, including VSD drives
- Compressor and heat exchanger technology

These solutions, which can be applied on plants already running on environmentally friendly refrigerants, provide significant energy savings. With offices around the world, Johnson Controls Marine Group is within reach wherever vessels operate. ■

Further information: Johnson Controls, Marine Service & Parts  
Tel: +1 954 538 7916 Email: cg-service.marine.usa@jci.com Web: www.york-marine.com

## The call of Cartagena

In 2009 the port of Cartagena received 49 cruise calls and 67,931 passengers. Compared to 2008, this was a 29% increase in the number of calls and a 94% increase in the number of passengers. The vessels that visited Cartagena were the *Grand Princess*, *Costa Marina*, *Celebrity Equinox* and *Solstice*, *AIDAbella*, among others. This year will see more than 70 cruise calls

carrying more than 100,000 passengers. In May 2008, an initiative was set up in Cartagena whereby associated retail partners guaranteed the opening of their establishments when a cruise with more than 300 passengers calls. This service also includes a call centre, which handles passenger inquiries.

The Roman Theatre of Cartagena was discovered in 1987, one of the most

amazing finds of the town's archaeology. With a capacity of 6,000 spectators, it consisted of a stage, seating, gardens, cloisters and leisure areas.

The commemorative inscriptions indicate that it was built in the late 1st century. The theatre is linked by subterranean tunnels to the palace Pascual de Riquelme.

In 1998 the ancient city of Caravaca de la Cruz, located in the north-west of the region of Murcia, was declared a Holy City, making it the fifth city in the world, along with Santiago de Compostela, Santo Toribio de Liébana, Rome and Jerusalem. In 2010, Caravaca celebrates its jubilee, an event that occurs every seven years, and expects visits from thousands of pilgrims. The Santísima and Vera Cruz Sanctuary is made up of the sanctuary and the walled area with 14 towers. ■

In 2009, Cartagena received nearly 68,000 passengers.



Further information: Port of Cartagena  
Tel: +34 968 325 800 Fax: +34 968 325 815 Email: cartagena@apc.es Web: www.apc.es

## Maintenance below the waterline

With occupancy rates on every cruise executive's mind, maintaining vessels within regulatory compliance while in service without jeopardising the itinerary, safety and efficiency are vital to commercial success today.

Incorporating the unique services provided by the Subsea Solutions Alliance (SSA) has allowed cruise vessel operators to achieve operational efficiency and equipment performance with minimal periods spent in dry dock. By reducing off-hire maintenance to one or two cruises every five years, occupancy rates have remained strong, even in a downturn.

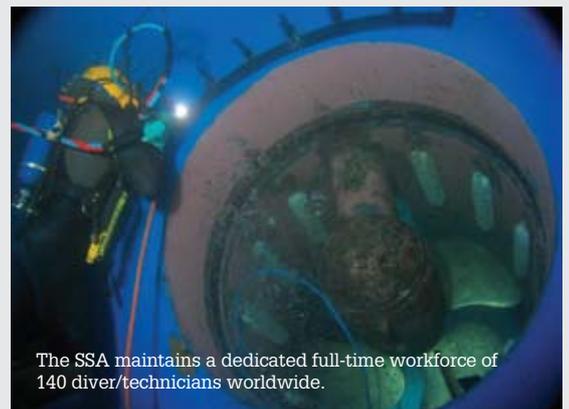
Working with original equipment manufacturers (OEM) of propulsion equipment, shaft seals, thrusters, steering and stability equipment, the SSA applies underwater maintenance and repair processes to specific equipment in a wet

and dry environment based on the OEM's guidelines and regulatory requirements within the vessel's itinerary.

Because delays and cancellations impact cruise lines significantly, the SSA has developed maintenance and repair processes that take into account the vessel's obligations. This allows the OEM, the cruise line and the SSA to develop innovative solutions with defined plans and contingencies.

Maintenance and repair in the water provides the most value to today's competitive cruise industry market.

The SSA maintains equipment available on a global basis along with a highly skilled workforce of diver/technicians. With two training centres in



The SSA maintains a dedicated full-time workforce of 140 diver/technicians worldwide.

operation (and a third under construction) the SSA continues to develop personnel with skills necessary to provide top-notch services accepted and warranted through OEMs globally

The SSA remains a cruise industry leader in underwater equipment maintenance and repair. ■

Further information: Subsea Solutions Alliance  
Tel: +1 914 826 0045 Email: Subseasolutions@comcast.net Website: www.subseasolutions.com

## Clean air, clean water



To comply with new international requirements concerning lower sulphur emissions from ships – Emission Control Areas – shipowners must switch to fuel with low or no sulphur content, or clean their vessel's exhaust gases.

Based on proven in-house technology, Aalborg Industries develops new and cost-saving sulphur emission abatement technologies to clean exhaust gases from ship engines.

With Aalborg Industries' exhaust gas scrubber it is possible to clean the exhaust gas from a ship's main and auxiliary engines by washing the exhaust gas with sea or fresh water added to caustic soda.

The cleaning of exhaust gases is a vital and cost-saving alternative and a supplement to using fuel with low or no sulphur content. Apart from cleaning SOx emissions, the exhaust gas scrubbers have also proven to be more effective in removing harmful particles from exhaust gases of diesel engines when compared to switching to low sulphur fuels.

Aalborg Industries' AquaTriComb is designed to clean ballast water without

the use of chemicals while keeping energy requirements relatively low.

The system offers outstanding efficiency combined with low operating costs and a small footprint for onboard installation. Ballast water is cleaned using UV light in combination with ultrasound for disinfection on a continuous and waste-free basis. Thanks to the use of ultrasonic technology the system is self-cleaning and almost entirely maintenance-free.

To be in full compliance with IMO legislation, the AquaTriComb is active during deballasting where the water is again passed through the system for cleaning and filtration.

This ensures that bacteria and microorganisms in the inaccessible ballast tanks and channels of the ship are effectively eliminated and only clean water is returned to the sea. ■

Further information: Aalborg Industries  
Tel: +45 993 040 00 Fax: +45 981 028 65 Email: aal@aalborg-industries.com Website: www.aalborg-industries.com

## Kitchen confidence

MKN is an independent German producer of professional-quality catering equipment found in the best kitchens in the world. MKN equipment is used in demanding environments such as star-rated hotels and restaurants, community catering and commercial chains, and the maritime sector.

MKN strives to meet its customers' needs through its outstanding quality, innovation and technology, even when its customers are on the high seas.

Designed to handle the most demanding requirements, MKN cookware offers reliability every time. The MKN range is particularly suited for the maritime sector, with safety features available for ranges, hobs, oven door latches, electrical equipment and cupboards. All MKN products meet SOLAS regulations for safety and hygiene.

MKN's HansDampf sets new standards in combination cooking technology. An innovative performer, it has been designed to meet the requirements of chefs and has won several prizes.

Offering intuitive user guidance, the HansDampf allows for individual preferences: users have the freedom to choose between manual and automatic cooking modes.

Automatic cooking programmes, which have been developed by MKN's chefs, are quickly and easily selected and can be individually varied and saved.

The HansDampf gold modern steam generating system, with patented PHieco-technology and integrated heat recovery, ensures that steam is generated where it is needed – directly inside the cooking chamber. Professional cooking has never been so easy. ■



Further information: MKN Maschinenfabrik Kurt Neubauer  
Tel: +49 (0) 533 189 207 Fax: +49 (0) 533 189 418 Email: km@mkn.de Website: www.mkn.eu

# Advanced marine solutions

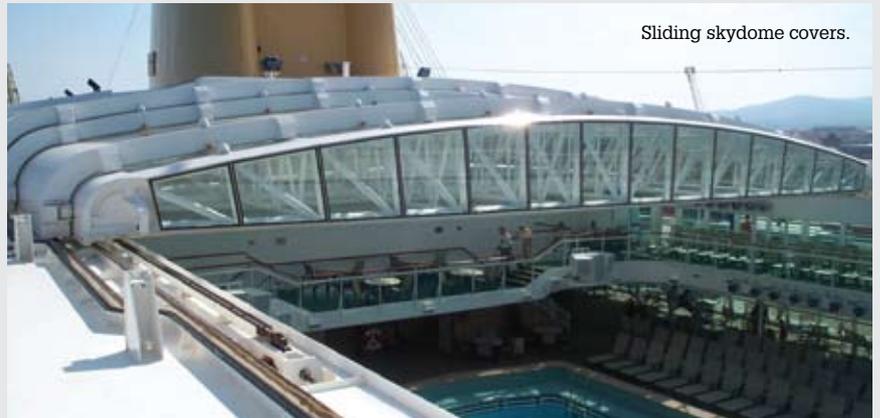
Navalimpianti Group, established in 1971, with headquarters based in Ceranesi, near Genova, includes two branch offices – one in Genova harbour and the other in Monfalcone (near Gorizia) – and various controlled companies.

Tecnimpianti, established in 1973 in Termini Imerese (near Palermo), specialises in the production of lifeboat, rescue and raft davits. Navalimpianti USA, established in 1994 in Miami, focuses mainly on after-sales service.

Navalimpianti Pula, started in 1996 in Croatia, is an engineering studio for structural design works in 3D.

Navalimpianti China, which opened in 1994 in Shanghai, offers commercial, technical and service support to ship owners operating in the Far East and local shipyards.

Most recently in 2007, Navalimpianti Japan opened a commercial site in



Sliding skydome covers.

Tokyo while Tecnimpianti Antwerp opened in Belgium.

Navalimpianti Tecnimpianti is a leader in the design and supply of marine equipment for merchant shipping, navy craft and mega-yachts. The group's core business focuses on the design and production of embarkation davits (life

raft and rescue boats), sliding skydome covers, cargo access equipment for ro-ro and ro-pax ferries, valves systems (standard and WINners) and access and handling systems.

Over the last 40 years, the group has supplied equipment to more than 15,000 plants and 600 vessels. ■

Further information: Navalimpianti Tecnimpianti Group

Tel: +39 048 149 0152 Fax: +39 048 141 0659 Email: [marketing@navim.com](mailto:marketing@navim.com) Website: [www.navim.com](http://www.navim.com)

# Assured supply

JetOil is well established throughout Greece.



As cruise lines work through the difficult economic climate, it is crucial that they choose the right partner – a partner that understands the needs of a cruise vessel and can deliver quality fuel, at the ordered quantity, and with no delays. JetOil Bunkering is the perfect partner for customers used to working with a

professional team.

JetOil Bunkering is part of Mamidoil-JetOil SA. Mamidoil-JetOil is involved in the trading and distribution of petroleum products. It controls an extensive network of 600 gas stations around Greece and is the largest Greek privately owned petroleum trading company. JetOil Bunkering is the largest

privately owned supplier of marine bunker fuels in the country.

JetOil supplies high-quality fuel for ships of all types. All bunkering products fulfill the ISO 8217 specification in all grades. To help its customers achieve their environmental targets, JetOil supplies low and high sulphur fuels, as well as gasoil.

Availability, competitive pricing and responsive service is delivered by a team of bunker specialists. Barge and crew inspection and training programmes guarantee safe and effective deliveries. Consistent product quality and around the clock operations are coupled with the highest standards of safety and environmental awareness to ensure customers receive a high-quality product via a trouble-free delivery service.

Over the last 40 years, with more than 75,000 deliveries, JetOil has never had an accident. The company recognises that the safe storage, transportation and delivery of products are a top priority. JetOil Bunkering is the first choice for bunkering needs in Greece. ■

Further information: JetOil

Tel: +30 210 876 3140 Fax: +30 210 876 3139 Email: [bunkering@jetoil.gr](mailto:bunkering@jetoil.gr) Web: [www.jetoil.gr](http://www.jetoil.gr)

## Testing times



The Draeger DrugTest 5000.

In line with current legislation and the need to ensure passenger safety, more and more cruise companies are testing crew members for the presence of

drugs and alcohol. The Draeger DrugTest 5000 drug detection system detects six different substance categories simultaneously, within just a few minutes.

The Draeger DrugTest 5000 analyses oral fluid samples as a preliminary test for traces of opiates, cocaine, cannabinoids, amphetamines and designer drugs and tranquilisers.

Extremely sensitive, it is able to detect even the smallest trace of drugs in oral fluid samples and virtually excludes interference from other substances.

When compared to laboratory oral fluid tests, the DrugTest 5000 achieves an overall accuracy of more than 95%.

Comprising two main components, the Draeger DrugTest 5000 test kit and the Draeger DrugTest 5000 analyser are simple to use. Once the protective cap has been removed from the oral fluid

collector, the subject places the collector into his or her mouth. The built-in indicator tube will automatically turn blue when sufficient oral fluid has been collected. The test administrator then inserts the test cassette into the analyser which, after a few minutes, displays the detected substance groups on a full colour display and emits an audible signal by way of confirmation. The analyser is able to store the number, progression and results of up to 500 tests. Any user and device errors can also be documented and read. In addition, and for those applications where an immediate printed report is required, an infrared interface allows the system to be connected to a mobile printer. ■

Further information: Resmar

Tel: +44 (0) 845 803 3399 Fax: +44 (0)160 684 1954 Email: [enquiries@resmar.co.uk](mailto:enquiries@resmar.co.uk) Website: [www.resmar.co.uk](http://www.resmar.co.uk)

## Clean and safe

Pool cleanliness on board cruise vessels is paramount. It is essential that facilities remain operational, with the minimum of downtime for cleaning and sanitation. Wilhelmsen Ships Service has launched a total solution for pool and spa needs.

It supplies the tools customers need to comply with the demanding requirements of the Vessel Sanitation Programme.

Besides delivering the products, Wilhelmsen Ships Service also understands the technical, regulatory, and commercial requirements of cruise

vessels, and the operational challenges customers face every day. It has developed a total solution covering all of these aspects.

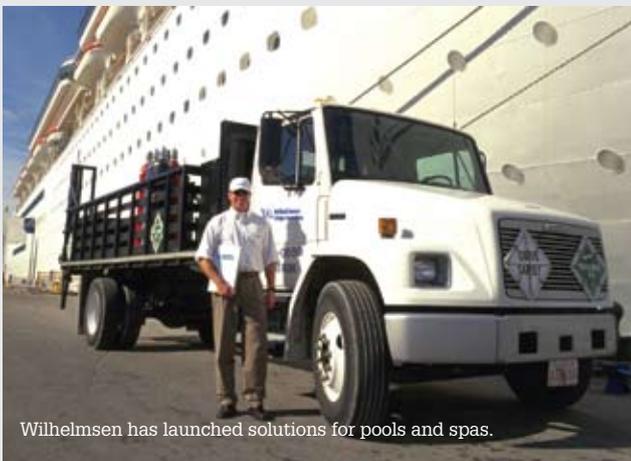
All of the company's chemicals are environmentally adapted and its quality standards are among the

highest in the industry. In addition to chemicals, dosing and testing equipment, the pool and spa range also provides:

- A globally standardised product range
- World-wide availability
- Tailor-made supply programmes customised to meet vessel itineraries
- Balance between better business and a cleaner environment

For more advice and information on Wilhelmsen Ships Service solutions designed to fit specific needs, contact a Wilhelmsen Ships Service representative.

Wilhelmsen Ships Service Material Safety Datasheets are available for all its products. ■



Wilhelmsen has launched solutions for pools and spas.

Further information: Wilhelmsen Ships Service

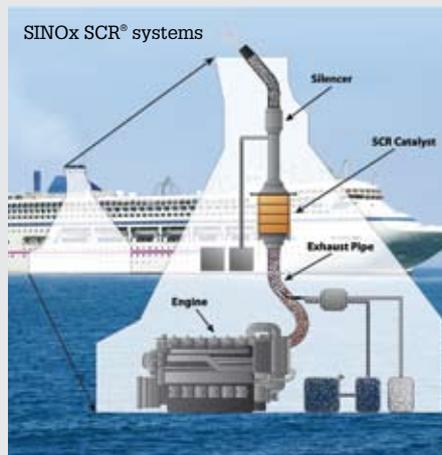
Tel: +47 675 845 50 Fax: +47 675 845 70 Email: [wss.info@wilhelmsen.com](mailto:wss.info@wilhelmsen.com) Web: [www.wilhelmsen.com/shipsservice](http://www.wilhelmsen.com/shipsservice)

# Marine NOx control

Cruise companies were among the first to embrace exhaust after-treatment. By the mid-1990s a number of vessels operating in Scandinavian waters were equipped with Selective Catalytic Reduction (SCR) systems to reduce emissions of nitrogen oxide (NOx).

NOx, a ground level ozone precursor, is harmful to the environment and is known to cause respiratory illness. About one quarter of global NOx emissions come from shipping. The marine industry has a mixed reputation in air pollution. The 'dirty' fuels, typically used to power fuel-efficient marine engines, generate significant amounts of acidic gases including NOx and sulphur oxide (SOx).

While SOx can be addressed through the removal of sulphur at the fuel refinery, NOx – a product of engine combustion, produced at its most



significant volumes in efficient engines – requires treatment in the engine, or for more effective removal, catalytic after-treatment of the exhaust.

Johnson Matthey's SINOx SCR systems remove up to 95% NOx. Already a market leader in mobile catalytic emissions

control, Johnson Matthey acquired Siemens' SINOx technology in 2007 and is now establishing itself in the marine and maritime sector through technological advances in catalyst performance and systems engineering, designed to meet tightening legislative emission standards.

Regulations requiring significant reductions in emissions already exist and are set to become more stringent and wide ranging. Local regulations and incentives such as those in the Baltic have helped reduce the impact of emissions from local shipping – helping maintain the natural beauty of the region's landscape.

Johnson Matthey's SINOx SCR systems have been successfully installed on more than 160 marine engines and boilers, including several cruise ships, actively minimising the impact of NOx on the environment. ■

Further information: Johnson Matthey  
Tel: +44 207 269 8400 Fax: +44 207 269 8433 Website: [www.matthey.com](http://www.matthey.com)

# Lantal Textiles: transportation fashion

The textile industry is the world's oldest mechanised sector and the origin of the machine and chemical industries. Swiss textile mills are highly specialised niche players focused on core competencies.

Lantal is the world's only textile mill with a single-source offering of carpets, velvets, and flat weaves for the transportation sector.

The company is a leader in the design, production and distribution of textiles and services for aircraft, railway, bus, and cruise ship operators.

It offers forward-looking services with the objective of achieving the ultimate in passenger well-being.

With 120 years of experience, Lantal is a systems-focused provider of high-end solutions that fulfil the strictest airline safety codes. Now Lantal has leveraged its competencies for the cruise ship market by developing a brand new

cruise collection for 2010 that includes:

- a broad range of exceptionally tasteful decoration and upholstery fabrics
- compliance with all relevant safety, easy-care, and durability requirements
- haptic wool qualities (all IMO-certified) as well as standard Trevira CS
- fast and flexible development of any pattern in any colour precisely to customer specifications possible
- no intermediaries; direct deliveries from the Swiss mill.



Lantal has been producing fabrics for over 120 years.

Lantal crafts turnkey interiors that express taste and style, and help designers project their client's corporate identity in surprising and seductive ways. ■

Further information: Lantal Textiles  
Tel +41 629 167 245 Fax +41 629 232 532 Email: [guido.gander@lantal.ch](mailto:guido.gander@lantal.ch) Web: [www.lantal.com](http://www.lantal.com)

# Heavenly quality

500 count tissues.



Stefco's Heavenly Choice double layer products are made from heavy basis weight tissue in a unique manufacturing process that gives the product the look, strength, softness and functionality of a two-ply tissue at a substantial saving to cruise line operators.

Heavenly Choice offers a wide range of

double layer bath tissue products of 500, 700 and 850 counts to meet every capacity need. The 850 count ensures fewer roll changes and less packaging. It is also extremely dispersible.

Stefco Heavenly Soft facial tissue offers cruise lines softness, strength and the best value. Its hand-drying products

include high-quality folded towels and dispensers that offer greater portion control leading to cost reduction while meeting all of a cruise line's needs. ■

Heavenly Choice tissues are strong and soft.



Further information: Stefco

Tel: +1 800 835 1854 Fax: +1 800 835 1898 Email: [info@stefcoindustries.com](mailto:info@stefcoindustries.com) Website: [www.stefcoindustries.com](http://www.stefcoindustries.com)

# A way with water

ACO Marine specialises in complete system solutions for the management and treatment of ship wastewater. Manufactured within the EU and using the highest quality materials, the product range includes:

- ACO Maripur® technology wastewater treatment plants, which use advanced membranes for combined black and grey water applications. The plants are fully certified and type approved to IMO MEPC 159(55) and MED Module B. They are available in modularised versions with shelf-mounted vacuumators and wastewater transfer pumps.
- ACO Lipator® and ACO Lipatomat® biological and automated grease separators, available in sizes suitable for the largest cruise ship.



- Push-fit pipe systems in stainless steel AISI 304 and AISI 316 with or without special external coating, suitable for gravity and vacuum applications.
- Push fit pipe systems in galvanised steel, suitable for gravity and vacuum applications.
- Stainless and galvanised steel deck drainage scuppers and channel/grating systems.
- Large-scale bespoke solutions for sludge collection or freshwater collection tanks. ■

Further information: ACO Marine

Email: [mbeavis@acomarine.com](mailto:mbeavis@acomarine.com) Website: [www.acomarine.com](http://www.acomarine.com)

# Baby buoyancy

The Thermo Cruise Baby 2010.



Regatta, one of the leading producers of buoyancy aids in Europe, has developed a new thermal life-jacket for infants, Thermo Cruise Baby 2010. An evolution of the Norway-based company's previous model, Thermo Cruise Baby, the new flotation device has been approved according to the latest MSC 200 (80) regulations, which will come into force in July 2010.

Resembling a water-resistant coat more than a traditional life-jacket, Thermo Cruise Baby 2010 is easy to put on and closes simply with click-buckles and a zip. The isolating layer, which covers vital parts of the body, effectively protects against hypothermia and the isolated hood further prevents loss of body temperature through the baby's head. The substantial extra layer also functions as a buffer against physical injury.

A multi-functional belt known as the 'mother's line' makes it possible for parents to connect their infant to their own lifejacket as well as safely lifting the child. Due to a revision of Regulation III/7 of the

SOLAS convention, it is required that all passenger ships must hold infant life-jackets for at least 2.5% of the total number of passengers on voyages of less than 24 hours and for all infants on board for voyages of 24 hours or more, rules that Regatta strictly follows.

The company does not take such regulations lightly and has become the first supplier in the world to achieve approval from the US Coast Guard for its new generation of life-jackets, the Kon-Tiki Royal US. After an extensive testing programme, this new line exceeded the new MSC 200 (80) regulations a year before they were due to be implemented.

The new guidelines stipulate that life-jackets must be functional when worn by people of all shapes and sizes and assessments including load tests, climatic tests, climb tests and jump tests guarantee this. ■

Further information: Regatta  
Tel: +47 701 769 00 Fax: +47 701 769 01 Email: office@regatta.no Website: www.regatta.no

# Dubai's new success



The offices of Pacific West Ship Supply.

Established in 2003, Pacific West Ship Supply is part of HK Enterprises, one of the largest foodservice companies in the UAE. HK Enterprises was one of the first companies to introduce frozen meat and poultry products into the UAE in 1984. Since

inception the group has grown to supply the UAE with a full range of food products.

Pacific West was established by the group in 2003 after recognising the potential of the UAE's ports, especially the port of Dubai. However, over the years it became apparent that Dubai was positioned to become the regional hub for the cruise industry. Pacific West therefore started a dedicated cruise supply division, which can cater to all the needs of its clients.

The company is proud of the high level of service that it provides to its clients.

Its roots in the foodservices industry allow its staff to better understand the needs of the vessels. Pacific West's staff has received special training to ensure the smoothest delivery possible. The company recently obtained its ISO certification, further enhancing the professionalism of the company.

Today, Pacific West is working on a contract basis with most of the cruise lines calling at Dubai. Its synergy with its parent company and extensive food knowledge allows it to offer the cruise lines with one of the most competitive quotes possible.

Apart from foodservice, Pacific West's cruise division is also able to offer its clients with floral arrangements for long-term contracts, container clearance and hotel/cleaning items. ■

Further information: Pacific West Ship Supply Co  
Tel: +971 434 726 88 Fax: +971 434 733 05 Email: office@pwships.com Web: www.pwships.com

## Set the safety standard

The Premier 2010 life-jacket from Cosalt is the first inherently buoyant life-jacket in the world to pass the more stringent safety at sea MSC regulations (MSC20(80)), due for implementation in July 2010.

The product was created out of an extensive research and development project that involved hours of in-water testing and discussions with leading cruise and ferry operators.

The result is a ground-breaking life-jacket that reaches new levels of performance. With a number of innovative patented design features, the Premier 2010 will outperform existing products by a considerable margin.

It offers dramatically improved average mouth freeboards of 145mm, average self-righting times of 1.7 seconds and improved body angles and face plane. All these features have been designed to increase survival times.

Available in three sizes – adult, child and

infant – the adult life-jacket offers 190N of buoyancy and has a patented design neck system that can adjust to the wearer's neck size so it can be worn by anyone from 43kg up to 140kg while still maintaining good face angles and mouth clearance above the water. There is a high visibility (adult only) version available designed especially for crew on cruise or passenger vessels.

Recessed pockets for stowing a releasable buoyant line and whistle help to minimise snagging. These features are especially important when using marine evacuation systems and boarding a liferaft. The product also has a lifting becket to aid retrieval and can be fitted



The Premier 2010 life-jacket.

with a MED/SOLAS-approved light.

Finally, and most importantly, the product has been designed to look like a traditional life-jacket. This feature ensures that the Premier 2010 is still intuitive to put on, remaining simple to don and adjust. Fastenings have been kept to a minimum so it can be securely fitted with ease by all. ■

Further information: Cosalt

Tel: +44 147 250 4504 Fax: +44 147 250 4200 Email: sales@cosalt.com Website: www.cosalt.com

## Good for Guadeloupe

Guadeloupe has expanded its cruise hospitality services.



As part of a widening plan to improve its cruise hospitality infrastructure, the island of Guadeloupe's tourist authorities have implemented a raft of new services.

The city of Pointe-à-Pitre offers welcoming services specially designated for cruise guests. The services include 30 bilingual men and women to inform, guide and help passengers feel

comfortable when they arrive.

The guides are easily identifiable in their yellow polo shirts, and will be positioned at various sectors of the city. They will work from 8am to 6pm during the entire cruise season.

A new map has been designed to guide visitors through the city, based on a pirates and treasure hunt theme. A partnership has been developed with local retailers who display stickers on their windows offering a 10% discount on presentation of the map.

The Port Authorities of Guadeloupe have made tremendous improvements as far as the cruise terminal is concerned, the main objective being the safety and security of the guests.

The cruise terminal provides parking area for taxis and a space dedicated to food outlets. ■

Further information: The Guadeloupe Islands Tourism Board

Email: info@lesilesdeguaadeloupe.com Website: www.lesilesdeguaadeloupe.com

# More than just a port: Puerto Chiapas is a new experience

Puerto Chiapas is located in south-west Mexico, close to the Central American border and 15 miles away from Tapachula City, the second largest city

of Chiapas state. With dedicated port facilities, Puerto Chiapas offers visitors an exotic climate, vibrant culture and a rich archaeological heritage.

The cruise terminal at Puerto Chiapas has an impressive wooden infrastructure made of wood and palm and is surrounded by lush vegetation.

It offers high-quality products and services and creates a welcoming and traditional atmosphere.

During the 2009 season, the port recorded 19 cruise calls from lines such as Holland America Line, Crystal Cruises, P&O Cruises, and Oceania Cruises. It ended the year with double ship calls, demonstrating its capacity to receive more than 3,000 passengers. The port has 24 arrivals scheduled for 2010, a growth of 26%.

Puerto Chiapas is well known for its amber, coffee, and marimba and its exotic and beautiful landscape, which create an unforgettable experience for visitors. ■



A traditional welcome awaits.

Further information: Puerto Chiapas  
Tel: + 52 962 628 684 143 Web: [www.puertochiapas.com.mx](http://www.puertochiapas.com.mx)

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