

Yachts & Marinas

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Top yards thrive, smaller ones struggle to stay afloat

The sector may look like it is enjoying a golden era but the picture is not uniform, says *Richard Donkin*

All summer long the sea lanes from Nice to the Caribbean have been packed with yachts. So much so that anyone could be forgiven for believing that yachting is enjoying a golden era. But parts of the market are far from buoyant, struggling to recover from the downturn that began with the financial crisis in 2008.

Moreover, something of a pall hangs over the Monaco Yacht Show that starts today. It is difficult not to contrast the concentrated wealth in billions of euros' worth of leisure craft at anchor, for the use of a fortunate few, with the plight of thousands of refugees and migrants not far away on the other side of the Medi-

terranean, risking everything in leaking hulks for the chance of a better life in Europe.

But the refugee crisis will not dominate concerns in the bars and restaurants around Monaco's Port Hercules this week. Yards and brokers are hungry for customers and, in the superyacht market, the focus is on a tiny percentage of the world's billionaire elite. In spite of the falls in oil prices and the rouble, market nervousness over China and continuing strife in Syria, demand for yachts endures among the super-rich.

"Big builds at the top end of the market, 70 metres and beyond, among half a dozen high-quality yards, are enjoying good times with little spare capacity,"

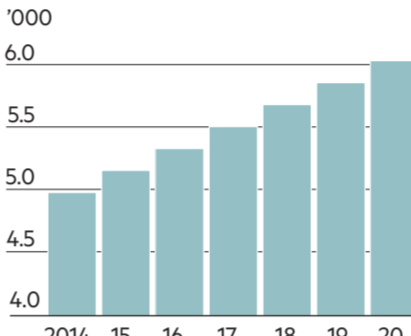


Cannes Marina welcomes the world's super-rich and their boats — Ullstein Bild / Getty

Superyacht deliveries vs orders (year-on-year)



Fleet forecast '000



The economics of buying a superyacht

New-build (Three-year build, two years of use)

€40m
Total contract price:
€4m
Deposit
€36m
Balance (€12m p.a. x3)
+€3m
Chartering a yacht during build period (Three years at €1m p.a.)
+€5m
Running costs (two years at €2.5m p.a.)
= €48m
Total costs over five years
Less €28m
Resale value after two years of use
€20m
Net cost

Source: Superyacht Intelligence annual report 2015

Secondhand (Five years of use)

€20m
Purchase price
+€2m
Refurbishment
+€15m
Running costs (five years at €3m p.a.)
= €37m
Total costs over five years
Less €12m
Resale value after five years
€25m
Net cost

says Martin Redmayne, chair of the Superyacht Group, a stable of industry publications. "But parts of the sector have fared poorly in the last year."

Following the closure of New Zealand's Fitzroy Yachts in 2014, Alloy Yachts, another New Zealand builder, was forced to lay off most of its workforce this year, keeping on a skeleton staff in the hope of orders and investment. Christensen Shipyards in Vancouver, meanwhile, went into receivership in the spring, and a number of Italian yards are under pressure with flagging orders. In the Netherlands, Moonen Yachts has suspended production.

This month, Palmer Johnson Yachts, known for an eye-catching range of superyachts, announced it was moving production from its Sturgeon Bay yard on the shores of Lake Michigan to the Netherlands before the end of the year,

Brokers are hungry for customers, and the focus is on a tiny percentage of the world's super-rich elite

with plans to focus on its composite SuperSport series of yachts. The Palmer Johnson move is the strongest indication yet that northern Europe is consolidating its dominance at the high end of the market, where shipyards such as Lürssen and Abeking & Rasmussen in Germany, and Feadship, Oceanco and Amels in the Netherlands, all have strong order books.

"The top yards are doing well, but there are a huge number of yards with stalled orders, delayed contracts, speculative builds and unsold boats," says Mr Redmayne. "What we see in the order book is often a poor reflection of reality."

This year, the annual report of

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Britain's contender is its most credible in the history of the contest

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The drive to perfect peak performance with alternative fuel continues at a rate of knots

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Builders and designers are on a quest to persuade clients that greener is better

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Leap like a dolphin

Onboard toys are growing ever more entertaining. Rohit Jaggi takes to the waves in a speedy example.

Video at www.ft.com/seabreacher



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Yachts & Marinas

Incredible hulls that make for a smoother ride

Design Innovation through lateral thinking is providing solutions for boat builders, says *Simon de Burton*

While most people who travel aboard boats worth £1m or more might be mainly concerned with the size of the sundeck, the quality of the refreshments and the comfort of the cabins, the designers of such vessels are becoming ever more focused on making them lighter and more efficient.

In many ways, however, their task is thankless because ever greater demands for luxury mean more on-board equipment and greater weight, which in turn usually means increasing engine sizes – and therefore fuel consumption and emissions – in order to maintain performance.

To solve the puzzle, some designers and builders are thinking laterally in an attempt to introduce innovative – and not always obvious – solutions to make their boats better, both in terms of



Niche automotive firm BAC has joined forces with broker Camper & Nicholsons to create an on-board toy for the fast and furiously wealthy: a 170mph, single-seat sports car, supplied with a carbon fibre crane to lift it on and off ship, and a deck-mounted, temperature-controlled storage unit to keep it in while at sea,

writes Simon de Burton. The Mono Marine features corrosion-resistant components and bespoke finishes to match the livery of its host vessel. The car pictured is a featherweight 580kg propelled by a 305hp engine, but costs a heavyweight £500,000. A standard Mono – offering the same performance – costs £80,000.

the way they move and the comfort that they offer.

One such person is the celebrated naval architect Nigel Irens, who is noted for creating the trimaran used by Ellen MacArthur to break the record for a solo circumnavigation of the world back in 2005.

“Our particular approach in recent

years has taken us away from planing hulls because, while they provide the obvious means of going fast, we feel that there is an exciting opportunity to explore the ‘mid-ground’ speeds between those offered by alternative displacement hulls,” says Mr Irens.

“The vessels we have developed are quite slender for their length, so that their weight is carried on a longer-than-usual waterline length. Low displacement/length ratio – or LDL – is the term we use to describe these hulls, and their objective is radically to reduce resistance in the chosen speed range for which they are designed,” he says.

As an example, a 60-foot vessel with a planing hull would typically have a cruising speed of 20 knots, whereas a boat of the same length with a conventional displacement hull would be restricted to little more than 10 knots.

A 60ft LDL hull, however, will allow a speed of 15 knots, with the added benefits of increased fuel economy, greater range, reduced noise and vibration, and a more comfortable ride.

“The yachts of this type produced so far have lived up to our expectations in combining low energy use with smooth and comfortable operation at speeds that could be described as swift rather than fast,” he adds.

“Another benefit of low power consumption is that long-range cruising under power becomes feasible – especially as levels of noise and vibration are so low.”

Indeed, the twin problems of noise and vibration are considered so undermining of the feeling of “luxury” that is central to the success of a high-end boat that Princess Yachts, based in Devon

in south-west England, recently completed a three-year, government-funded research and development programme to find ways of suppressing these annoyances.

One of the results is an “actively damped” generator platform that Princess will demonstrate for the first time at January’s London Boat Show.

“The location and installation of the generator plant is really important, especially during the night when you want as near to total silence as possible,” says Julian Spooner, who joined Princess 10 years ago as head of composites.

He explains: “The system we have developed uses little shakers – rather like you would see in an audio speaker – which sense the vibration input and produce an anti-vibration movement to cancel it out. The reduction in noise and movement is remarkable, making the yacht considerably more comfortable.”

Mr Spooner’s main role at the company, however, is to develop new, more efficient methods of hull construction, the latest of which is known as “resin infusion”. Rather than create a traditional thick, heavy skin made from glass fibre reinforced with ribs, resin infusion takes the form of a “sandwich” construction, in which layers of laminate are held apart by a foam core. “The

‘The system uses little shakers which sense the vibration and produce an anti-vibration movement; the reduction in noise and movement is remarkable’

result is that you have a very solid structure, but without the space-consuming ribs that are required in traditional open-moulding techniques,” says Mr Spooner.

That means a larger interior volume for the same external hull size. That, in turn, means living areas can be larger, as can space for the engines.

“There is also a weight reduction of up to 25 per cent, which leads to fuel savings and improvements in performance,” says Mr Spooner.

“One of our key aims at Princess is always to enhance efficiency, and the resin infusion technique has proved to be a real leap forward, so much so that it is now used across the range, from the 39ft V39 model right up to our 40m, £15m flagship.”



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Top yards thrive, smaller ones struggle to stay afloat



Continued from page 1

Superyacht Intelligence lists 68 yards among 181 builders worldwide that have delivered just one 30-metre-plus yacht each in five years.

“If someone risks building a one-off yacht at a [yard] that has only built two yachts in the past five years, you can imagine the potential for fallout,” says Mr Redmayne. “Clients must be surer than ever in due diligence when choosing a yard.” The trend in the superyacht sector, he says, is moving to about 50 yards producing most of the inventory.

In the higher-volume powerboat market, competition among builders is fierce, as relatively new owners of some brands demand improvements in sales and profits. The Chinese owners of both Ferretti in Italy and Sunseeker in the UK have made management changes after their respective takeovers. Late last year, Dalian Wanda recruited Phil Popham, former Jaguar Land Rover group marketing director, to become chief executive of Sunseeker.

“Longer-term planning has not looked as far as it does in the motor or aircraft industries’

Mr Popham has already put his stamp on the business, reshuffling his team to include seasoned professionals within the business, plus others brought from outside to tighten up governance and manufacturing disciplines.

“It’s a fantastic brand and great product, but longer-term planning has not looked as far as it does in the motor or aircraft industries. We’re moving to seven to 10 years’ product planning, and five to seven years’ business planning,” he says.

After 300 job losses, the company is

recruiting again, including 38 new apprenticeships.

The company recently celebrated selling its 100th yacht of more than 100ft (30m) long, emphasising its contribution to the superyacht sector. Its main British competitor, Plymouth-based Princess Yachts, has responded to difficult market conditions by extending its product range after pushing out its own series of 100ft-plus yachts – the M class – in three years.

Chris Gates, managing director, says he expects sales to be higher in this, the company’s 50th anniversary year, in a difficult market. “We’re working hard, broadening our customer base and bringing out new products.”

Italian yards and companies, meanwhile, are experiencing mixed fortunes, although family-run Azimut Benetti continues to thrive after selling a 12 per cent stake to Tamburi Investment Partners, whose chairman Giovanni Tamburi, himself a yacht enthusiast, has joined the Azimut Benetti board.

Such developments point to increasing professionalism in an industry responding to clients looking for a depth of experience. Traditionally, a proportion of new-to-market buyers are generated from charter, which has performed well this summer among the biggest yachts. “You couldn’t find anything to charter over 70m after the end of July,” says Barry Gilmore, executive chairman of Royale Oceanic, the superyacht services company.

“Most of the bigger, quality yachts have sold in the secondhand market,” he says. “New construction, on the other hand, is a mixed bag, still quiet across many areas. But we could be on the verge of an upturn. People seem to be becoming more interested in yachts.”

Mr Gates at Princess Yachts, however, is less sanguine. “We have to accept that today’s market is the new norm,” he says.

Yachts & Marinas

Vessel class reaches the parts that others cannot

Explorers

Opulence is blown out of the water in favour of rugged, fuel-sipping yachts with a lot of room for toys, says *Will Mathieson*



Away from it all: holiday with ice

This year is set to be a period of unprecedented activity for the niche explorer sector of the superyacht market.

With 15 boats in the order books scheduled to hit the water by the end of 2015, according to The Superyacht Intelligence Agency, this represents a halcyon year for this thriving class of vessel, with double the number of explorers introduced to the superyacht fleet compared with last year.

Although rugged oceangoing boats have been around since the 1960s, their recent rise to prominence has been pronounced, and is perhaps typified by the emergence of Ancona-based shipyard Cantiere delle Marche. Established in 2010, the yard has already delivered 10

explorer yachts, with four currently in the process of being built.

Vasco Buonpensiere, the yard's sales and marketing director, says it has effectively annexed a niche client pool.

"The market craved reliable, seaworthy, low-fuel yachts, with lots of volume for their length, over-engineered and lots of space for toys."

Mr Buonpensiere places particular emphasis on the latter, with Cantiere

delle Marche's research of 50 potential clients' cruising patterns indicating that an astonishing 89 per cent of time is spent at anchor.

"This means that they need something to spend their time on – having kayaks, subs, diving stations, wakeboards, wakesurfs, fishing gear and inflatable toys is of paramount importance. And explorers are made for this."

Mr Buonpensiere believes the market has veered away from designs based on opulence and luxury towards more utilitarian and efficient vessels.

He says: "Yachtsmen are fed up with spending so much money and finding themselves in crowded bays with so many other yachts that are basically identical. They want to reach new destinations and they don't want to be limited to just a few cruising grounds; and they want to have a vessel that distinguishes them from the others."

This is a view shared by Sergio Cutolo, founder of Hydrotec, an Italian naval engineering company, and one of the industry's most respected designers of explorer vessels. He feels that these yachts have evolved from converted

tugs and trawlers into customised superyachts, specifically designed to cope with challenging water in comfort.

Mr Cutolo says this indicates that a new generation of yacht owner wants access to off-the-beaten-track locations and the open ocean.

Ben Lyons, whose company Eynos Expeditions has emerged as one of the leading providers of such rugged adventures, says demand for remote cruising itineraries is on the rise for clients.

"Getting into a popular restaurant in Monaco is not nearly as important to them as being anchored alone in a bay in Antarctica, kayaking near humpback whales," he says.

Previously untapped regions such as the Northwest Passage, the polar regions or the Amazon basin are now increasingly accessible, thanks to companies such as Eynos and the support of local agents.

Eynos has been advising on the latest superyacht project from Dutch shipbuilding behemoth Damen Shipyards, the SeaExplorer range, which will be officially unveiled at the Monaco Yacht Show.

However, as with any trend, there are pretenders. Some owners are commissioning yachts with explorer looks but very different capabilities. It is Mr Cutolo's analogy that perhaps sums up this element of the market best: "It is connected to aesthetic preferences rather than content. A client might prefer an 'explorer look' the same way some people buy sports utility vehicles even if [they have no intention] of crossing a desert or driving in the snow."

Despite this, the real explorer class is far from overcrowded.

The market "will undoubtedly continue to grow", Mr Lyons says. "More owners see what is possible and want their yachts to be similarly capable. In addition, a new demographic of younger, more active owners is becoming attracted to yachting."

These seafarers want to exploit the potential of their vessels and see rugged places that are accessible only by sea.

"The more capable the yachts become," says Mr Lyons, "the more exciting the places they can reach, and the more that will generate additional demand."

British hope to rule the waves after 166 years

America's Cup

The latest UK entry is the strongest to challenge for the title, says *Simon Greaves*

The build-up to the America's Cup in 2017 is proving that Britain is fielding its most credible challenge yet in the 164-year history of the oldest international trophy in sport.

Skimming the waves will be the fastest and most technically advanced boats ever, in a contest that the US has dominated. In 1851, members of the New York Yacht Club beat 14 English wooden cutters and schooners with their yacht America round the Isle of Wight.

It was not until 1983 that Australia broke the Americans' 132-year winning streak. Britain has tried and failed to win almost 20 times.

The speed of these boats has tripled in eight years, through advanced hydrodynamics and aeronautics. A move to drag-reducing hydrofoils means that speeds of up to 45mph are possible.

Sir Ben Ainslie is charged with translating the British effort into victory in the contest. The Land Rover BAR (Ben Ainslie Racing) 45ft carbon-fibre catamaran used in early rounds is complex to sail – the helmsman controls the sails with one hand and the foils with the other. The organisation was set up 12 months ago by Sir Ben with former McLaren F1 boss Martin Whitmarsh as chief executive. The £80m campaign saw Land Rover providing financial and technical support to develop performance gains on the water and a solid business model. BAE Systems provides high-technology engineering. The announcement of another commercial partner is expected.

Jono Macbeth, BAR sailing team manager and a three-time America's Cup winner, says: "We need to keep improving if we are going to be successful. When we started this series, I didn't think there would be one team that dominated, as the fleet is so strong."

In the opening races, fleet positions have been clear. The British, American and New Zealand teams have been

Providers of services vie to exceed expectations

Marinas Green issues are among the areas in which operators are competing, writes *Don Hoyt Gorman*

As the size of superyachts has increased over the past decade, so too have the expectations of their owners and users about the service they receive, both on board and ashore.

In response, marinas that cater for the largest yachts have stepped up their facilities, and now offer concierges and business centres, while also managing more closely the environmental impact of their operations.

One of the newest superyacht marinas in the Caribbean is to be found on the island of St Kitts at Christophe Harbour – a private island community that will soon have a Park Hyatt hotel and Tom Fazio golf course.

Alongside the YU Lounge (an exclusive terminal for private jet charter on the island), Christophe Harbour now offers a convenient way of easing the transition from air to water.

Over at OneOcean Port Vell in Barcelona, Martin Bellamy, chief executive of Salamanca Group, which developed and operates the port, says the pressure is on in the Mediterranean to improve all aspects of yacht ownership. His company has invested \$100m over the past five years.

Aside from having dedicated space for yachts up to 190 metres in length, the marina includes a private members' club, restaurant, cocktail bar, a 24-hour concierge, a gymnasium, wellness centre, business hub and crew lounge, in an eye-catching, high-spec design.

It is a move to enrich the marina experience in a highly competitive market, where a 21-year lease for a 180m yacht sells for a negotiable €6,000 per sq metre (length x beam) – and typically increases in value.

The number of superyacht marinas with the capacity to accommodate at



The exclusive, man-made Eden Island in the Seychelles, built to accommodate vessels of more than 50m – DPA/Alamy

least a 50m vessel has now reached 412 around the world, according to Superyacht Intelligence, the industry analyst.

Just under half of these are in Europe, with a further 9 per cent in Florida and the Caribbean, and 9 per cent in the Pacific.

A growing trend among yacht users is cruising to remote areas where few such luxury facilities were available in the past. But the desire to capitalise on traffic has driven investment in locations far from the well-travelled routes of the Riviera or Leeward Islands.

In the Seychelles, for instance, Eden Island marina has evolved to service yacht owners and charterers. In operation since 2007, the marina recently expanded its facilities so that it can cater for all sizes of vessel.

Mike King-Harman, chief executive of Hunt, Deltel & Co, which developed

and manages the marina, says: "Of the current list of the 100 largest superyachts, 26 have visited the Seychelles."

But that traffic does bring potential problems – owners, captains and guests may expect more elaborate services in keeping with the supersize boats.

"We occasionally get suggestions about providing more facilities," says Mr King-Harman. "But our view is that if you want St Tropez, then go there. Seychelles has a unique and unspoilt environment to offer."

The issue of local impact is growing in importance. Marinas have to ensure that they adhere to stricter marine pollution regulations. Several have submitted to the sustainable development standard ISO 14001, and have pledged to ensure that owners and guests also help to protect the environment where they are holidaying.

Marinas are expected to perform

better on a number of levels – without losing sight of the basic services that all boats inevitably need.

Marina construction, for instance, has an environmental impact, but examples such as Port Adriano on Mallorca, which became operational three years ago, try to address green issues throughout.

Along with using a 100 per cent renewable energy supplier, the port was designed to use the sea to reduce reliance on electricity.

"Port Adriano is the only superyacht marina that has implemented an air conditioning system using 19-degree seawater as a source of energy," says Antonio Zaforteza, head of Ocibar, which developed and operates the port.

"It cools in the summer and warms in the winter, and results in a reduction of 30 per cent in electricity consumption and thus in an important reduction of CO₂ emissions."

Ships fit again for royalty, billionaires and tycoons

Classic restoration

A UK company brings magnificent historic vessels back to their former glory, reports *Richard Donkin*

Just back from Liverpool's imposing waterfront stands the former headquarters of Martin's Bank, whose Art Deco interior exudes the atmosphere of the interwar years. It now houses the offices of GL Watson, whose pedigree is without equal in the history of yachting.

The company sales ledger is a Who's Who of 19th-century wealth creators and royal households. What was good for Edward VII was also good for Kaiser Wilhelm II in those heady days before the first world war, when the crowned heads of Europe were content to settle their differences in friendly competition on the water.

In the last quarter of the 19th century, George Lennox Watson was the designer of choice for powered yachts. His business was rivalled worldwide only by William Fife, also of the UK, and Nathanael Herreshoff in the US.

Like Fife, GL Watson was based on the Clyde in Glasgow in its heyday. Fife is no more – although it has left a legacy of its three generations of designers in a fleet

of venerable classic yachts – but GL Watson survives, designing and restoring yachts after decamping some years ago to its current Liverpool base.

William Collier, the managing director says he has the dream job for someone who studied the history of yacht design and yacht building to PhD level. His interest in old boats was sparked in childhood, touring houseboats in the mud berths of East Anglia.

"It was surprising just how many important yachts had survived," he says. He became involved with projects to restore Fife yachts, helping set up Hamble-based Fairlie Restorations: "I traced and repatriated lost Fifes, as well as undertaking research."

He was still working for Camper & Nicholson when he embarked on finding the GL Watson-designed Nahlin. Built on the Clyde in 1930 for Lady Yule, one of the richest women in England at the time, the vessel represented the zenith of motor yacht design, before the Great Depression and the second world war put an end to the first generation of privately owned superyachts.

Lady Yule sailed Nahlin around the world in the 1930s, even chartering it to the future Edward VIII in 1936, who used it for a Mediterranean holiday with Wallis Simpson. But before the second world war, the yacht was sold to the King of Romania, and after the Communist takeover it disappeared from view.



Grace, beauty and elegance: the Nahlin, built by and restored by GL Watson

"I had a news item from 1967 saying it was a floating restaurant on the Danube, so there was a good chance it still existed," says Mr Collier. "I sent a telex to the shipping authority, making an offer, and they replied the boat was not for sale. This was the confirmation I'd been seeking that it still existed."

The next year he went to Romania to see the Nahlin and began to put together a deal to buy it, but that went into abeyance after the overthrow of Nicolae Ceausescu in 1989. Later, Nick Edmiston, chair of yacht broker Edmiston, found a client for the restoration.

It took another 10 years of negotiations and red tape until the yacht could

It restored the Blue Bird, built for Sir Malcolm Campbell, which was sitting in a Dutch canal

be brought back to the UK and into a dry dock on the Mersey. The only company that possessed drawings of the Nahlin, crucial to its restoration, was GL Watson. "I had lunch with the managing director and found he wanted to sell the company, so I bought it," says Mr Collier.

Demand for original drawings, even in the rarefied superyacht market, is limited to a handful of potential customers who want to restore a historic yacht. This means GL Watson focuses on big projects. It restored the Blue Bird, built for Sir Malcolm Campbell, which was sitting in a Dutch canal; today it belongs to Tara Getty, the oil heir.

GL Watson's third big restoration, completed more recently at the Falmouth-based shipyard Pendennis, is that of the 50m yacht Malahne, a 1930s vessel that had been rendered almost unrecognisable beneath a crude 1980s refit. Like Blue Bird, the Malahne took part in the evacuation of troops from Dunkirk in 1940.

The success of GL Watson's re-emergence in classic yacht restoration is central to the UK's strengthening reputation for such work. Several UK yards have broadened their skills, working on its projects.

The next job will be another 1930s restoration. Mr Collier is also trying to save a 1920s yacht, Caritas, that is sitting in a San Francisco trailer park. "I'm hoping she'll be saved," he says.

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Yachts & Marinas

Race for solar power heats up

Alternative energy
Sun, sea and wind: peak battery performance drives innovation, writes Victor Mallet

In 2012 Acciona, the Spanish alternative energy group, sponsored what it called the world's first zero-emission sailing yacht for the single-handed Vendée Globe race. It was a lightweight racing machine plastered with solar panels, and without the usual auxiliary diesel engine.

Since then, electrical energy and propulsion systems for boats, cars and even aircraft have continued to proliferate. Hybrid cars such as the Toyota Prius — which can be propelled by a battery-powered electric motor or by an internal combustion engine, or both together — are routinely used by commuters and for city taxi fleets around the world.

Solar Impulse 2, the experimental sun-powered aircraft created by Bertrand Piccard and André Borschberg, is halfway through its pioneering flight around the world (albeit grounded for now in Hawaii after its batteries overheated).

Among owners of large, heavy motor-yachts, however, initial enthusiasm for hybrid propulsion systems (and for the tried and tested diesel-electric, in which a generator powers an electric motor) is waning in the face of complaints about cost and complexity.

While lightweight cars and aircraft can roll along the ground or fly through the air with relatively little friction, it takes a lot of energy to push a ship or a large boat through the water.

Yachtmakers say that — for the time being, at least — the best way of doing this for long periods at a manageable cost and with a power source of moderate weight remains the trusty internal combustion engine and its diesel fuel.

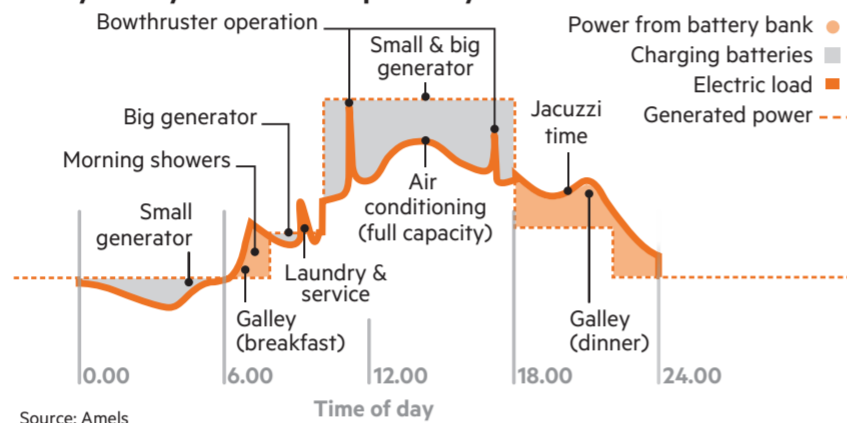
"Most power requirements for boats are quite high," says Perry van Oossanen, director of Van Oossanen naval architects. "Water is quite heavy — 1,000 times heavier than air."

Among the drawbacks of hybrid



At jacuzzi time, electric load peaks and the big generator kicks in — Eric Galliard / Reuters

A day in a hybrid electrical power system



Source: Amels

propulsion for superyachts, therefore, are the huge power requirements (500kW or even a megawatt to drive a ship at 10 knots) and the cost of lithium-ion batteries, plus uncertainty over how to dispose of them at the end of their lives.

One of the supposed advantages of a system in which a diesel engine works consistently at its most efficient speed to charge batteries has not yet been found in the real world.

There is only a 10-15 per cent gap between the most and least efficient engine speeds, and any gain is typically

cancelled out by losses in converting diesel power to electricity and transmitting that to an electric motor.

Hans Konings, head of design at Amels, sees little financial benefit from a hybrid system for a motoryacht that travels the typical 8,000 to 10,000 sea miles a year. He says: "In the superyacht industry, you don't see these systems much at all. They are not so efficient," he says. "The cost of ownership of such a system is tremendously high."

That is not to say that there is no merit at all in hybrid power or in other innovations of the energy systems of super-

yachts — sometimes so large that they are equivalent to floating hotels with gas-guzzling air conditioners and roll stabilisers that also use plenty of electricity.

True, it is no secret that many yacht-owners are rich enough not to care about the cost of fuel, and that only a handful even of those who do talk about sustainability and environmental issues will make a serious investment in green technology.

But owners do care about comfort: hybrid propulsion systems give a skipper the option of cruising for short distances without noise, at slow speed with just the electric motors.

Sufficient battery power also allows a yacht to spend the night silently at anchor in a beauty spot — without the offensive throbbing of the diesel generators to disturb.

So the 50-metre Project Nova yachts being launched at Monaco by Heesen Yachts, advised by Van Oossanen, will not only be of lightweight aluminium construction with a fast-displacement hull form offering high fuel efficiency, but will also come with the option of a hybrid package.

Amels offers a method of recovering waste heat from the engines — for swimming pools and hot water, for example — and what Mr Konings calls a "hybrid switchboard".

This is essentially an electricity management system including a battery pack, a small generator and a large generator, to ensure that each piece of equipment is used as efficiently as possible.

The hunt for innovative ways of generating and saving energy is unending on land, at sea and in the air.

The 2009 sailing yacht *Ethereal*, a 58-metre ketch built by Royal Huisman, can recharge its batteries from its propellers when under sail, just as a Toyota Prius car can harvest power from braking in traffic, and incorporates numerous energy-saving appliances and design features.

However, *Ethereal* and Acciona are, in fact, useful reminders that there exists an age-old method of propelling a vessel swiftly across the oceans, without using a single drop of fuel. It is known as sailing.

Splashing out Should one go for brokers?

You've built your business empire and it's time to enjoy the rewards. There's the country pile, the smart cars and a watch for every day of the week. A friend has invited you on to his yacht, and now you want one — preferably something bigger and better.

But you know nothing about how to buy a yacht. Can you knock on the door of a shipyard? A Lürssen or a Feadship wouldn't turn you away, but they might ever so gently ask you to join the queue.

Buying a custom-built superyacht is one of the most complex purchases one can make.

They don't come off the shelf, though you can buy one second-hand.

Monaco Yacht Show is the place to come for second-hand — and new ones, but that could take five years to build. Can you wait that long?

What features do you want? Is a helipad, for example, essential?

If it's size you're after, something in excess of 50 metres, say, you will need help, someone you can trust, who doesn't have something to sell. In fact, you're going to need a team.

So where do you start? It depends who you ask. A broker will say: "Start with me" — and that might not be a bad idea. Experienced brokers know the market, but how many of them are truly independent? Sometimes, they're taking commission from the yard on build cost; surely a conflict of interest?

Alternatively, you could start at a design office. But brokers, designers and industry specialists almost all agree on one thing: try before you buy.

Matthew Chatt-Collins, director at Andrew Winch Designs, says: "Charter a few yachts to compare them. You might try four or five, then commission a company. Or you could do another year of charter, and while you're thinking over designs, buy a second-hand one."

But even buying a secondhand yacht is perilous as there are so many duds on the market. "A buyer may look at one that's just five years old," says Chris Cecil-Wright, a broker, "but if it hasn't been looked after, there will be problems. I'd advise not to order a new boat; best to charter first. The next step should be a good secondhand boat."

So how can you find one in a market dominated by brokers? One answer is to use another broker, independent of the seller, or lean on a trusted captain.

If using a broker, how can you be assured of their independence? Barry

Gilmour, chair of Royale Oceanic, says: "It's a good idea to ask around for an intermediary. You need to know your broker. Some have relationships with certain builders and will drive business that way."

If a family office represents your interests, it may have to seek out a knowledgeable intermediary. In fact, before you have finished, you will have dealt with a whole slew of agencies — lawyers, registration agents, naval architects and technical consultants.

The yacht never sleeps, generating mooring, maintenance and staff costs every day. These vary, but a rule of thumb is 10 per cent of the sale price each year.

Mark Cavendish, marketing director of Heesen yachts, lists four golden rules: if the deal looks too good to be true, it is; for new builds, you should ask about the reliability of the yard; you should also look at its reputation on after-sales service; and think about secondhand values.

"If secondhand value matters, you should buy a boat that will appeal to a wider ownership rather than individual tastes," Mr Gilmour advises. "More dreams have been broken in building luxury yachts than any other industry."

Richard Donkin



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