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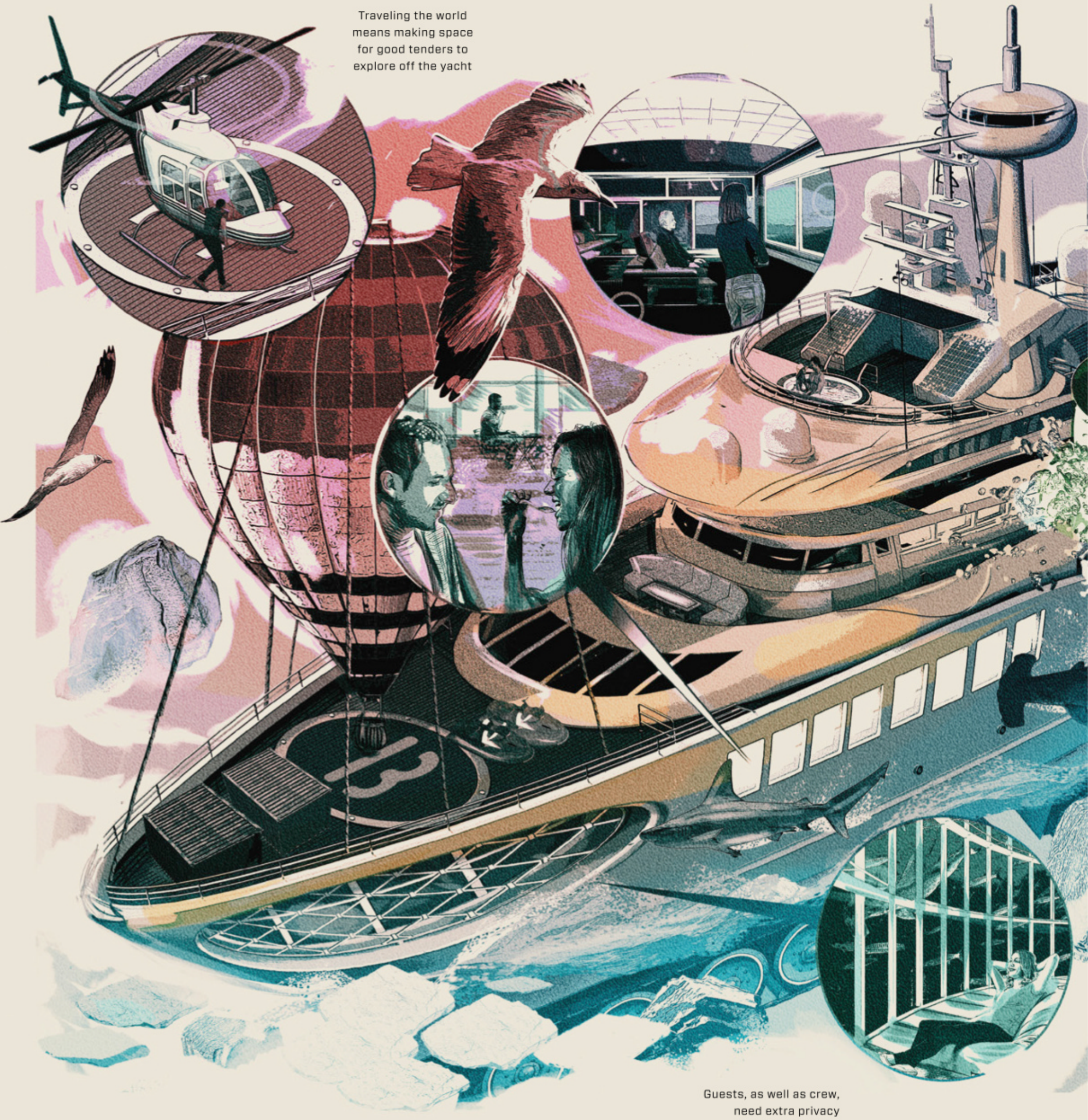
Why the BVIs are back in style

An observation lounge is a must for enjoying scenery and watching wildlife

Traveling the world means making space for good tenders to explore off the yacht

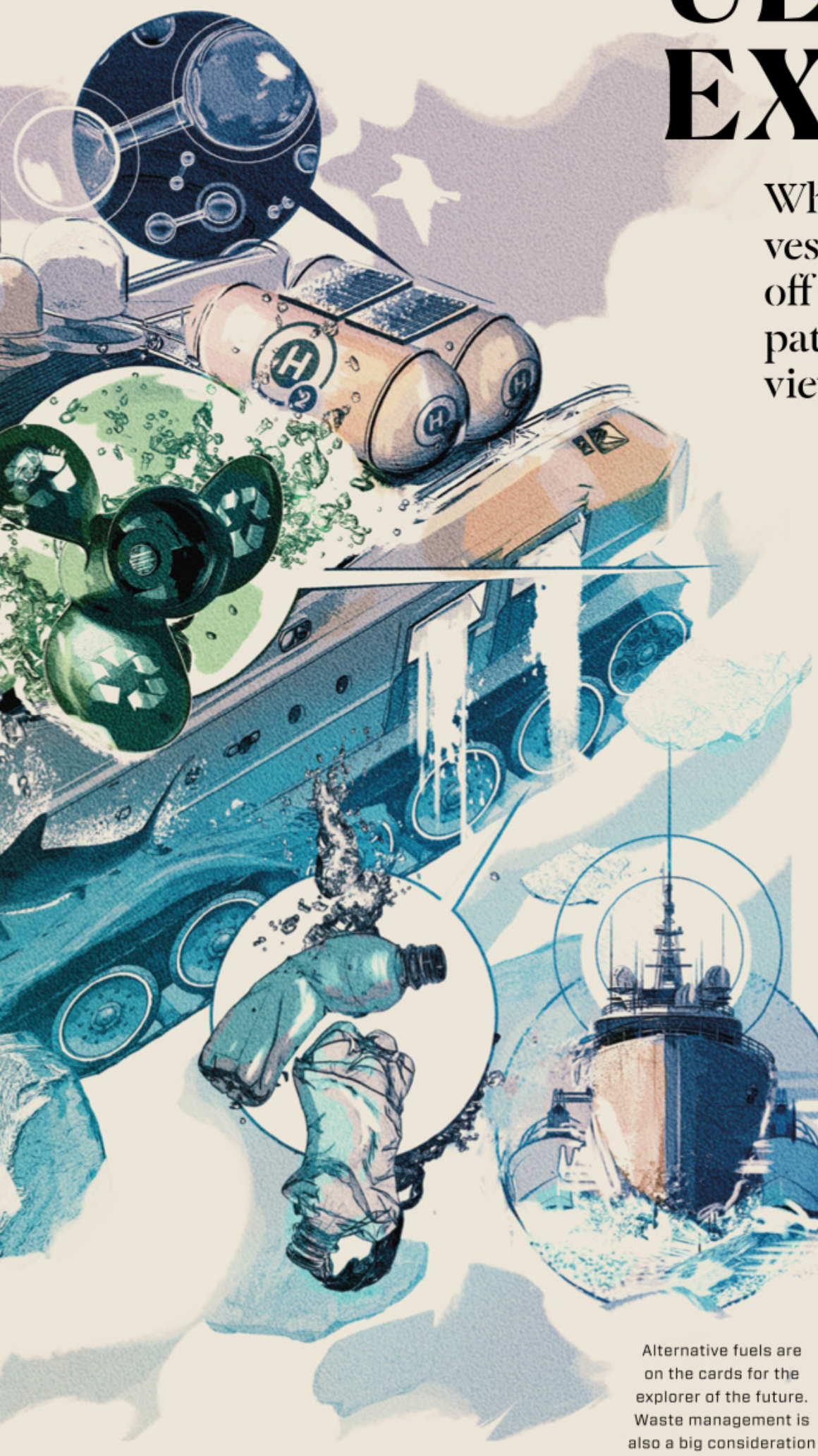


Guests, as well as crew, need extra privacy on longer voyages

ILLUSTRATION Chris Malbon

THE ULTIMATE EXPLORER

What makes a "go-anywhere" vessel truly suitable for venturing off the well-beaten yachting path? Top designers share their views with *Sam Fortescue*



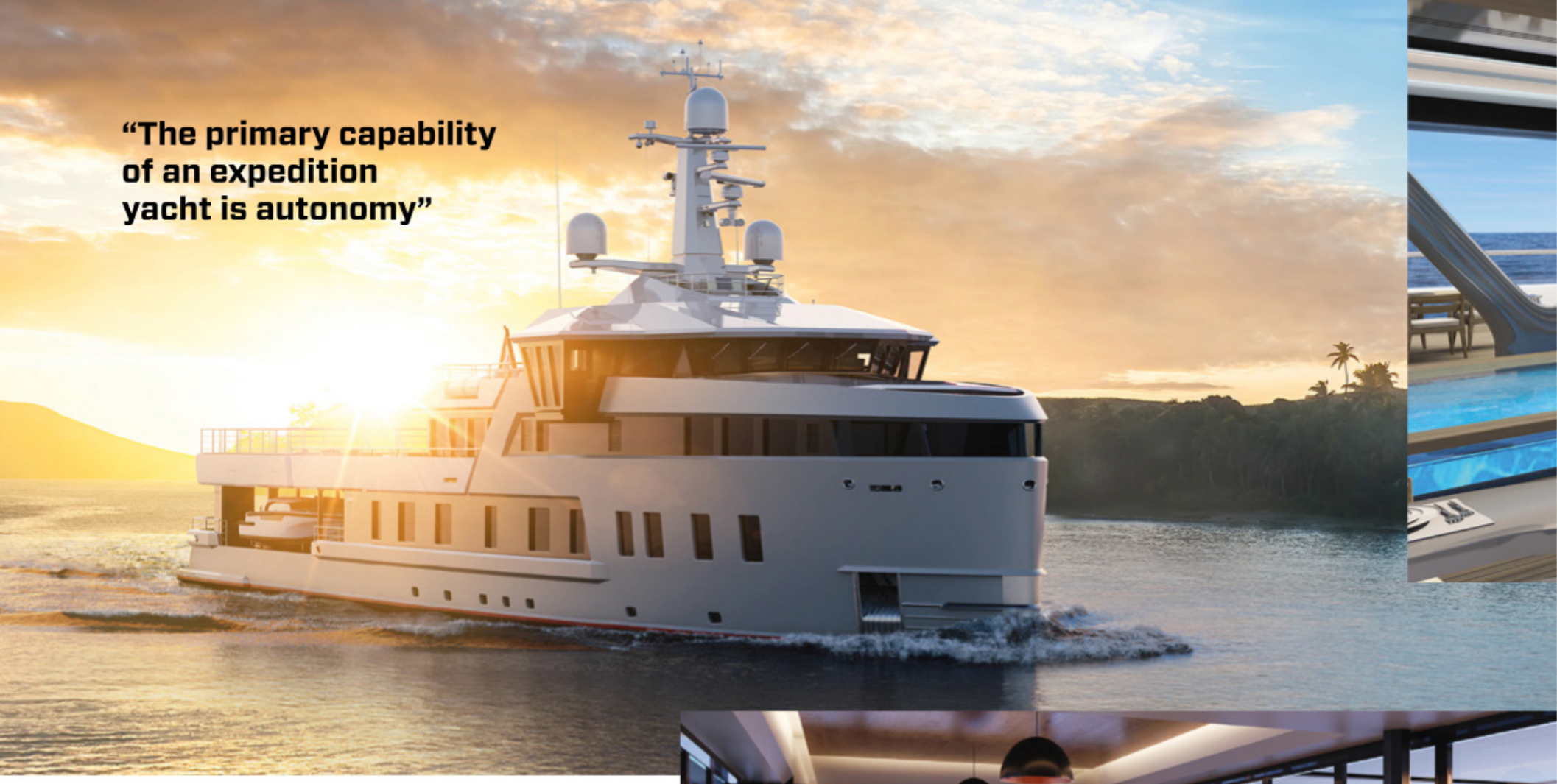
Alternative fuels are on the cards for the explorer of the future. Waste management is also a big consideration

It seems like almost everybody is designing explorer yachts these days. With boats well below the 80ft mark now badged as "go-anywhere," you might well be wondering what the term means. In an effort to draw a distinction between the marketing hot air and the icy blast across the deck of a true Antarctic explorer, we spoke to some leading designers.

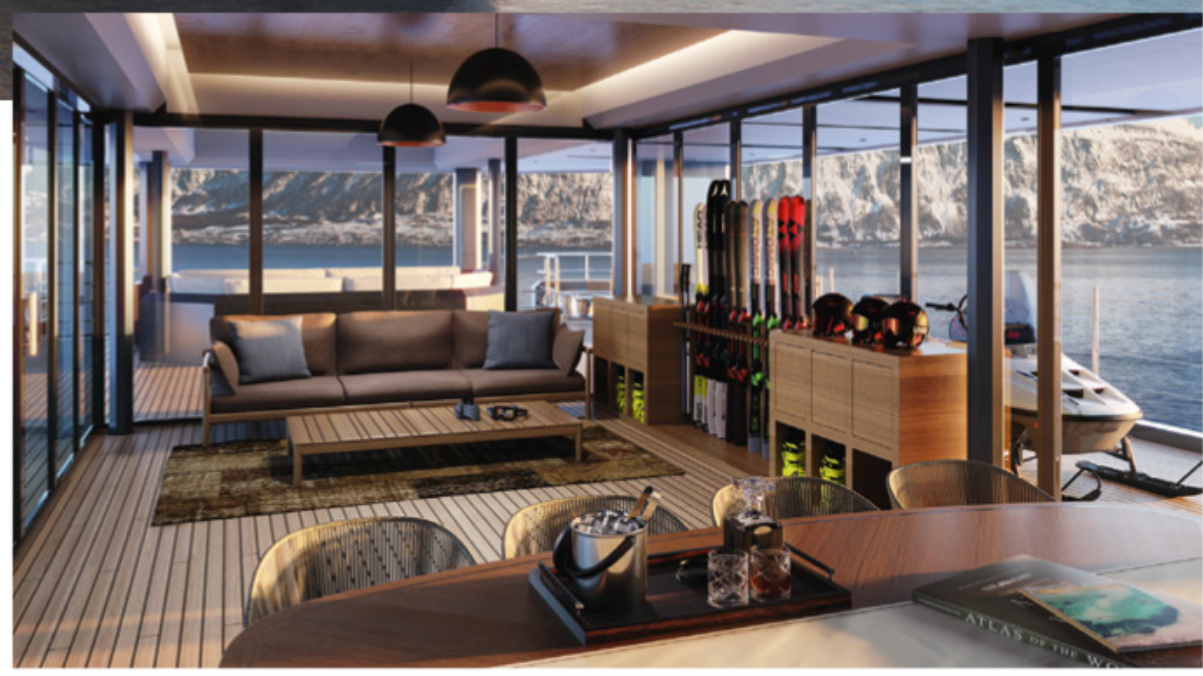
First, to get something straight, every expedition yacht is an explorer, but not every explorer is capable of expeditions. EYOS Expeditions co-founder Rob McCallum is something of an expert here, being part of the team that designed and specced the SeaXplorer line of 180ft to 345ft yachts with Damen Yachting.

"Explorer yachts are defined as vessels that have the range and capability to undertake an oceanic crossing unsupported," he says. "Expedition yachts are those that can operate self-sufficiently in remote areas; places where there is no shore-side support or infrastructure.

So in one sense, an explorer is simply any seaworthy boat that can cover the 2,600 nautical miles between Gran Canaria and Barbados on a single tank of diesel. To be suitable for expeditions, however, a yacht must go further – much further. "The primary capability of an expedition yacht is autonomy," McCallum continues. "It is about provisions storage, garbage management, additional berthing for guides and technical staff and the technical capability to operate within the weather conditions at the destination. Sadly, we see a number of 'expedition vessels' which are little more than classic boats with a ruggedized cosmetic veneer."



“The primary capability of an expedition yacht is autonomy”



By EYOS’s definition, autonomy means at least 40 days of operation away from fresh supplies. That’s sufficient for the Northwest Passage (30 days), the remote Ross Sea (30 days), Antarctica and South Georgia (28 days). But it also allows the vessel to stay at high latitudes while guests are flown in for back-to-back charters.

On the 345ft SeaXplorer 105, provisions storage amounts to 215 square feet, with another 215 available if required – that’s not far off the average size of an apartment in New York City. Managing garbage is hardly the sexy stuff of superyacht dreams, but it assumes major proportions the longer you stay offshore. On the SeaXplorer, the solution is to powder glass, crush metal and macerate perishable waste.

“But it’s far more than logistics that we have input on,” McCallum says. “A fundamental part of what we do is shaping the vessel to best suit the guest experience, from bow observation areas for wildlife spotting to ensuring the yacht can accommodate all the toys needed for adventures.”

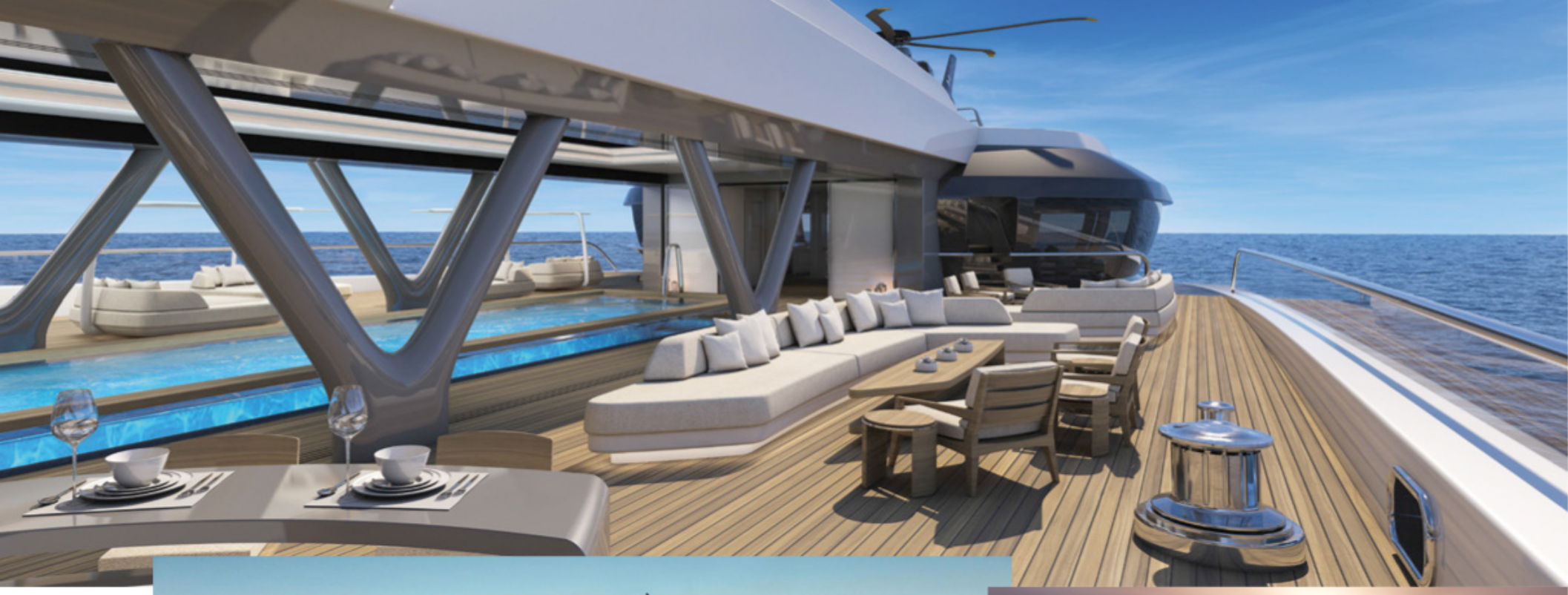
When she’s finally delivered, the world’s largest private yacht, REV Ocean, will also be the largest expedition yacht. Her completion has been delayed until at least 2024 but her dimensions are on another order of magnitude. Her 600ft length will host 106 crew, scientists and guests, keeping them supplied with provisions for at least 114 days. She will have an awe-inspiring 3,284 cubic feet of fridge space, 2,684 cubic feet of freezers and carry more than 400 tons of drinking water.

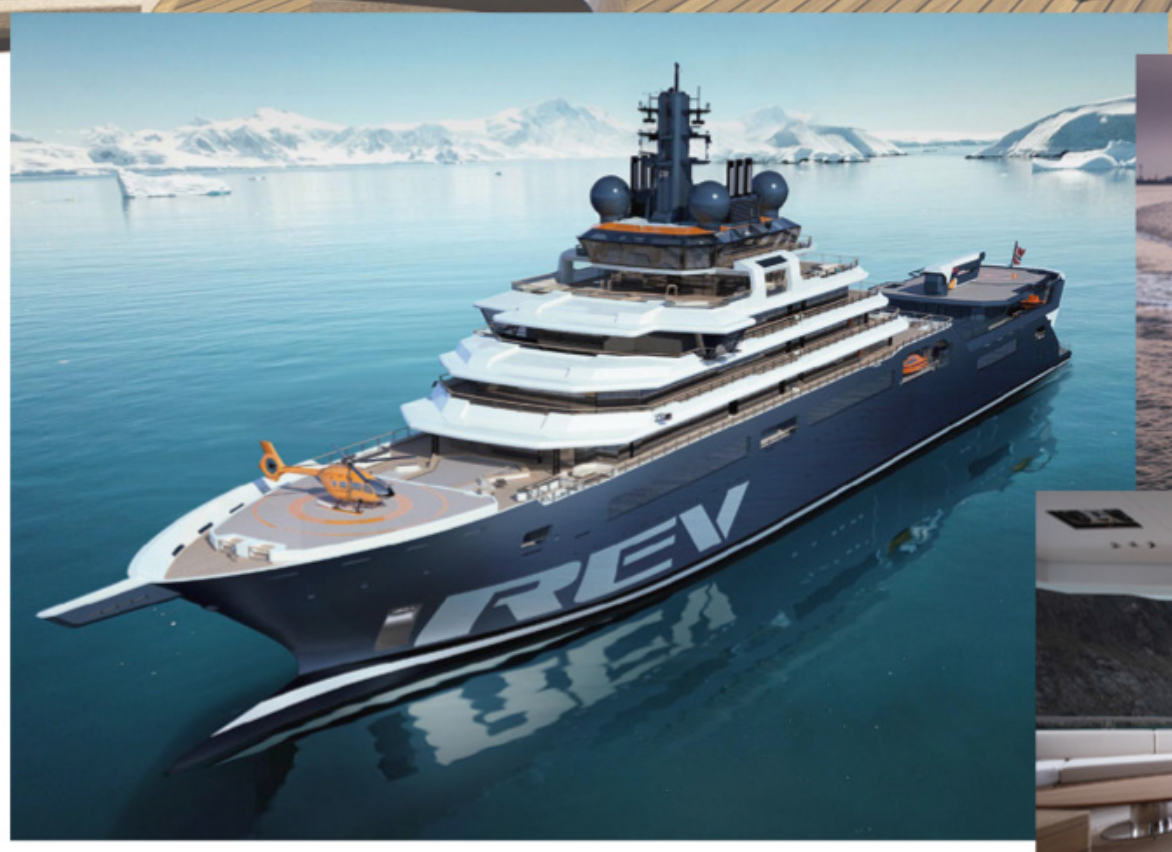
Of course, it is not simply a question of storage. People also need their space aboard, whether crew, staff or guests. Expeditions tend to manage with fewer crew for service, but require more ancillary staff, such as ice pilots, ski guides or wildlife experts. In addition, longer periods away from port mean that accommodation must offer real privacy – for crew and guests.

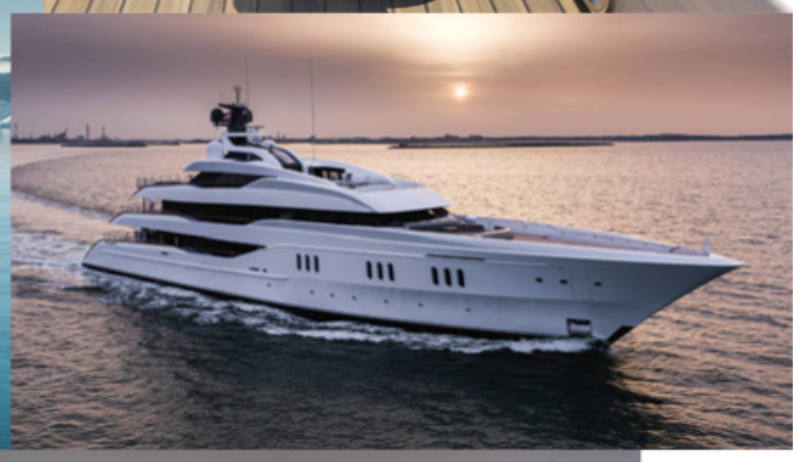
This page: the 197ft SeaXplorer 60 by Damen Yachting has an Ice Class hull that meets Polar Code 7, capable of cruising in first-year ice up to 39 inches thick. Its ski room shows off the sports equipment and a snowmobile is carried just outside on the side deck

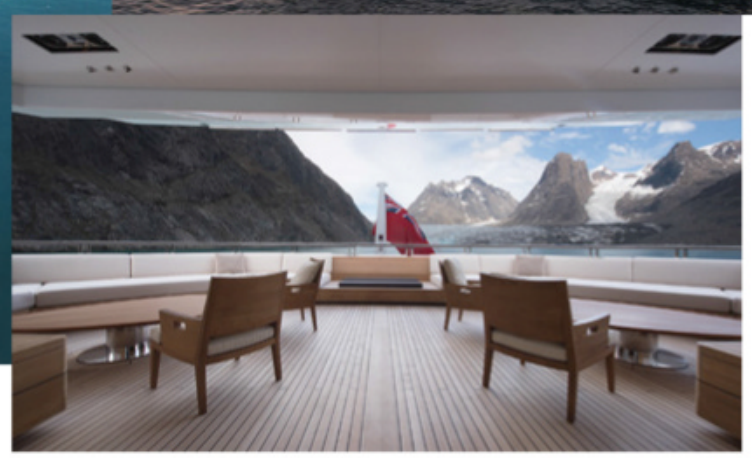
Rosetti Superyachts has delivered a 125ft explorer based on the learnings of decades building bulletproof commercial vessels. “From the crew area you can get out of the boat at the bow to get fresh air,” sales director Andrea Giora says. “Normally you’d have to go all the way through the boat to get privacy.” The size of the crew cabins on the explorer is also pretty generous. “When you’re out there for weeks and weeks, you want to make sure that the crew is happy.”

Designer Peder Eidsgaard says he tries to encourage owners to see that their guests might like not to see them all the time. “It can be a painful discussion,” he admits. “But it’s not so much about the size of the cabin. To spend time there during the day, you need to have big windows, and we want to provide each guest cabin with a permanent terrace. It allows you to sleep with a sliding door open for fresh air. You are seeking a bit more nature rather than being in an air-conditioned glass box.”









A WELCOME DIVERSION

With all this talk of technical matters, you might be worrying that there's no fun to be had aboard an explorer. But there's no reason you shouldn't have some creature comforts as well. A forward-facing observation lounge is a must for wildlife spotting and marveling at the scenery. But Eidsgaard's concept for the 417ft Rex includes a 45ft lap pool for guests and a private glass-fronted pool forward on the owner's deck. There's also a movie theater, gym and spa.

"We have sliding-glass panels next to the pool so when the boat is in the Med, it's outdoors with a cover, and when you go the Arctic you can close it off and have it air conditioned or even heated," Eidsgaard says. He also favors a spa pool high up with a forward-looking view. "We had that on board *Vanish* [235ft Feadship] in Alaska and we used it every day."

The point is to design a boat whose features can be adapted for both tropical and Arctic climates without losing functionality. Another example is Rex's dedicated helicopter hangar, which doubles as a squash court when the aircraft has vacated it.

Top: the Rex concept has a 45ft indoor/outdoor pool. Above left: REV Ocean will be the world's largest expedition yacht. Above, center right: *Vanish* has a forward-facing spa pool. Above, lower right: *Cloudbreak*'s upper aft deck can be enclosed into a winter garden

Designer Espen Øino sees no contradiction between hot and cold climate functions in a yacht. "A pool or a Jacuzzi can be heated up," he says. "Another thing we've done on some boats is to create a winter garden. On [247ft Abeking & Rasmussen] *Cloudbreak*, it is on the bridge deck aft – about 550 sq ft. The glass panels are suspended in a ceiling track and you just pull them out. It takes the crew about a half an hour."

With REV Ocean, Øino took a radically different approach. The boat will be able to accommodate the Norwegian owner and his family, up to 54 scientists or 28 charter guests in style. But this hugely capable ship is focused on marine science and protection, so key features include an auditorium for lectures, a large theater, several submersibles and a moon pool to launch them from inside the boat. There's also a hyperbaric chamber to decompress after deep dives.

Owners set different requirements according to their passions. For instance, those heading to high latitudes are often keen to take the helicopter for skiing, so a ski room becomes important. "To dedicate a room to skis

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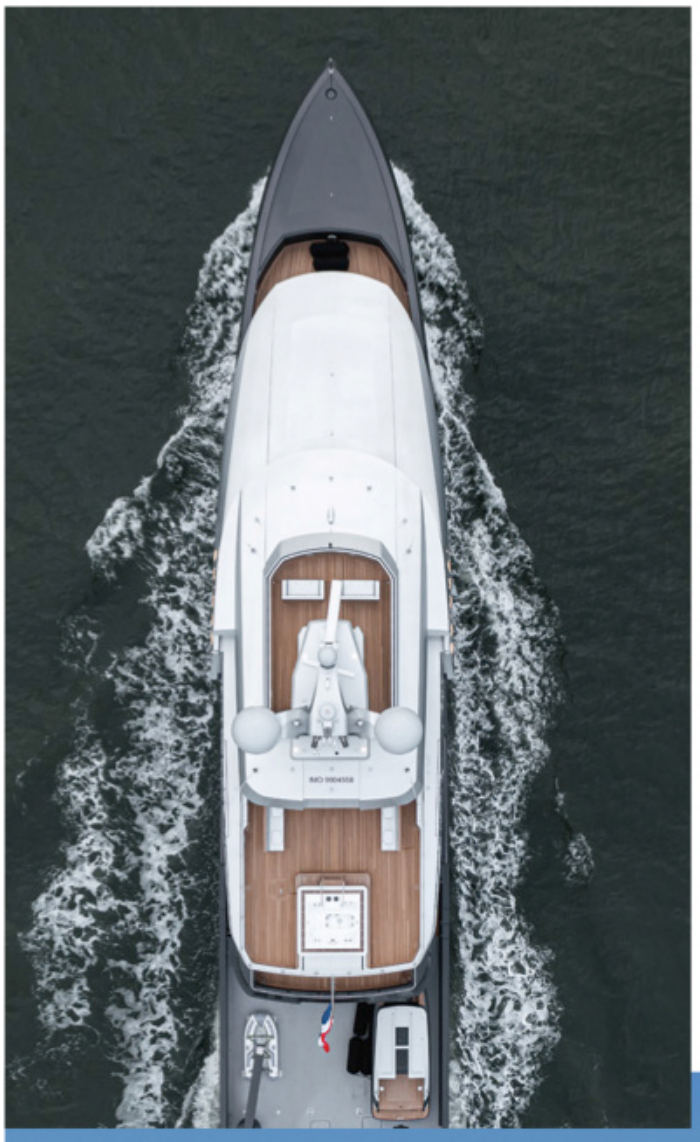
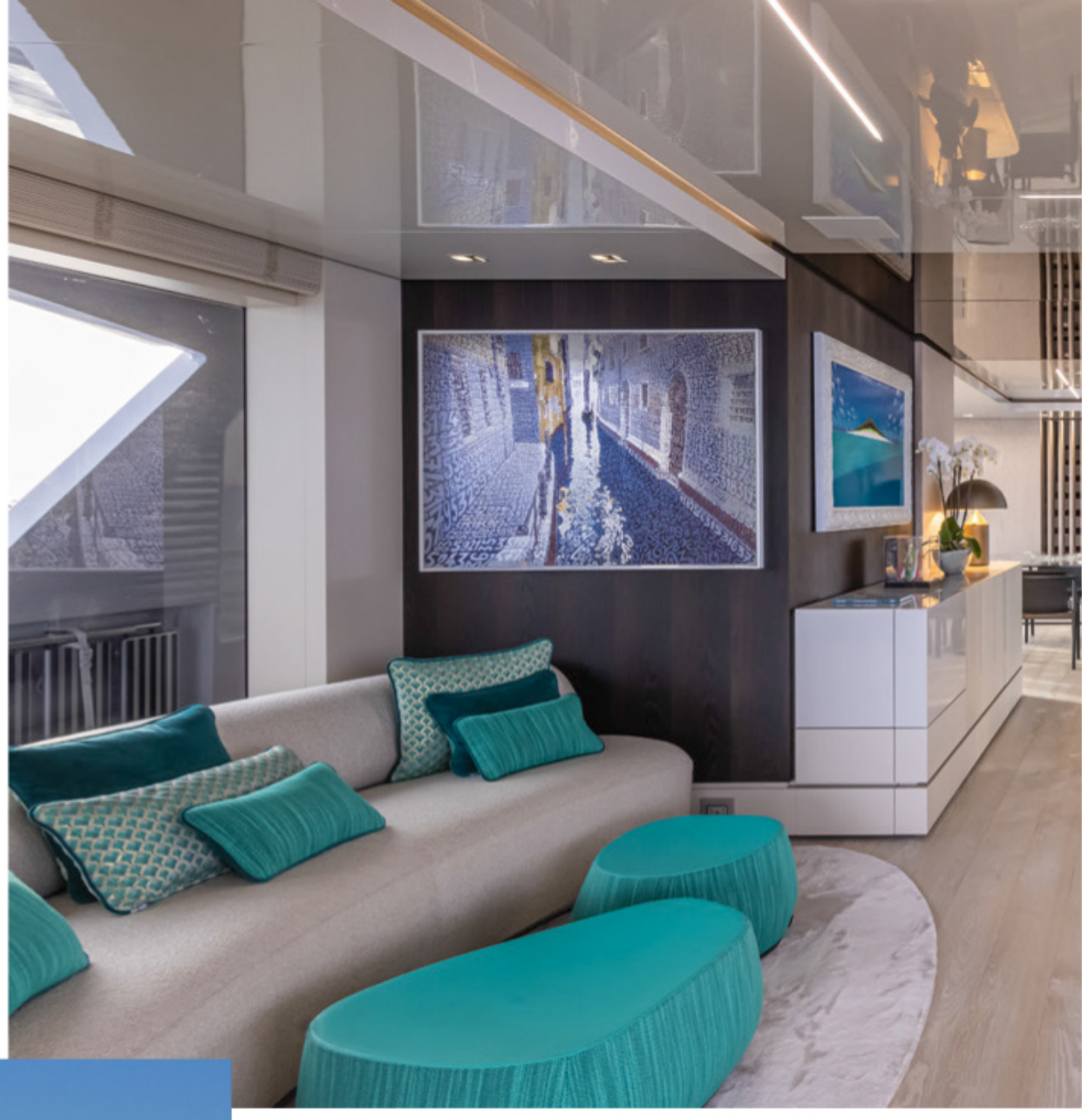
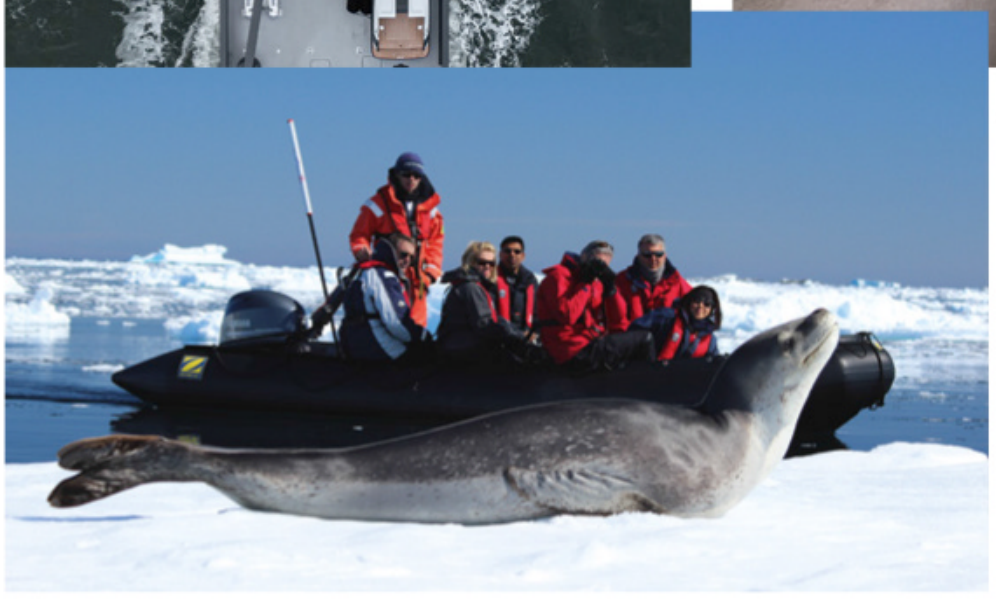






on board, you have to be a dedicated skier, so why not make it a display room to show off to your friends?" Eidsgaard says. "In one boat, we put it on the foredeck, close to where the helicopter takes off."

A dive center might be desirable for exploring in the Pacific, while vehicles are another point to consider. Off-road bikes and 4WD vehicles are useful on a steep or rocky coastline, while snowmobiles are handy in winter. "When people want to have an explorer yacht, this means that they are going to travel around the world and they want to enjoy different landscapes," says Alejandro Crespo of Daroca Design. "So, it is important to have a place for good tenders, submarines, etc. I would also include a hangar for a helicopter that gives the possibility to go to the coast at any moment."

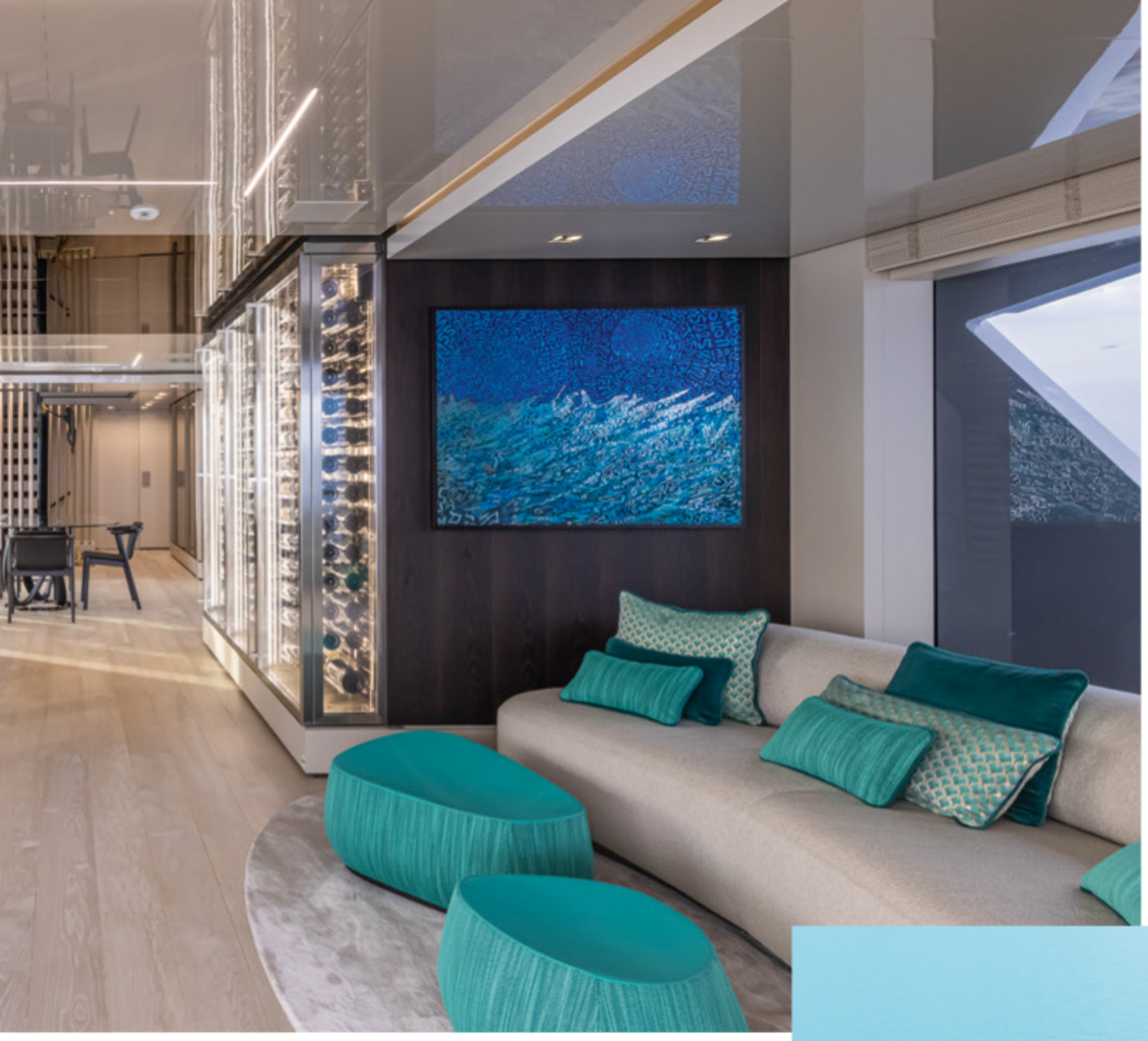
A helicopter brings additional extra considerations with it. First on the list is a hangar, so that the aircraft can be adequately protected and secured in rough conditions or inclement weather. Then there's the question of fuel, which requires careful bunkering and handling aboard – the SeaXplorer 77 carries 4,000 gallons of Jet A-1. The pilot will need their own cabin, and you'll want space for spare parts – along with a mechanic who can fit them.

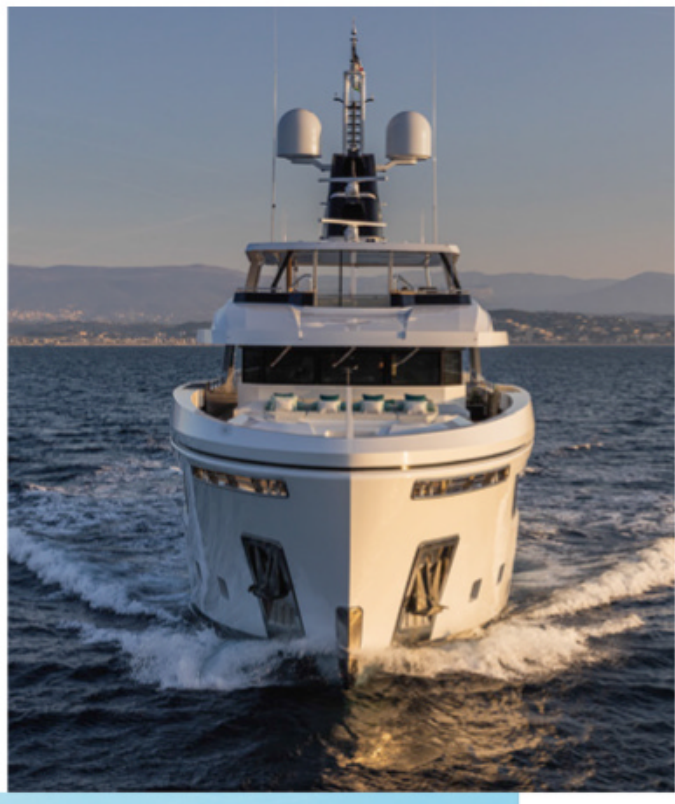
Above: the robust Zodiac Milpro tender is ideal for wildlife-spotting trips in rugged environments. Top left: the 180ft Feadship *Shinkai* uses her deck space to stow tenders, including a submersible, instead of for a swimming pool that's more suited to the Med

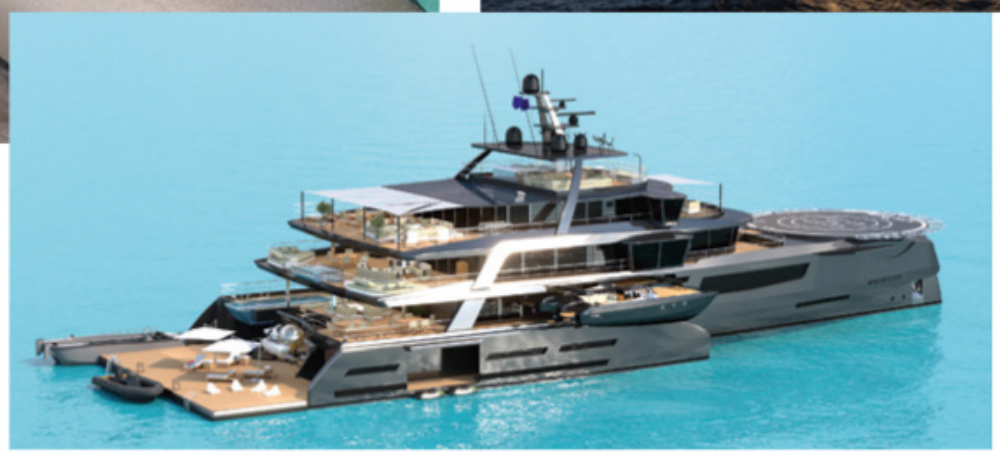
Tenders also require careful thought, along with their garaging. You'll probably want different tenders for different occasions, from the limo on the Côte d'Azur to a more robust craft in the Arctic. "We are keen fans of the Iguana, which combines excellent seakeeping capability with the very cool feature of simply driving up onto the shore," McCallum says. "But without doubt the most useful expedition craft on the market is the Zodiac Milpro MK 5; it is the backbone of the entire expedition industry."

WHAT NOT TO HAVE ON BOARD

Opinion is split here. Some designers take more of a pragmatic approach – such as Philippe Briand, who designed 180ft Feadship *Shinkai* for an owner who wishes to take her through the Northeast Passage. "Pools and glass observation rooms underwater are more suited for Med yachts," Briand says. "That is 90 percent of the market, designed with a lot of open space outside." *Shinkai* has just a compact spa pool, leaving space for a seven-tonne submersible on the aft deck, and the heavy-duty crane necessary to launch it. The boat also carries an eye-watering 37,000 gallons of







diesel tankage – enough to give it a range of 5,500 nautical miles at 12 knots.

Rosetti's Giora believes that some owners tool up excessively before setting off. "I ask myself whether all those toys on the flush deck are necessary. You don't need three tenders and four jet skis in Alaska." Other designers, like Eidsgaard, believe that there are no limits on the facilities appropriate for an expedition yacht. "It is possible to do anything," he says firmly. "We have a lot of crazy requests, which we try to pare down a little. But anything is possible."

GOING POLAR

Dedicated owners sometimes opt for hulls that meet Ice Class. The term covers a huge spectrum of capabilities – from vessels that stray into waters with first-year ice less than a meter (39in) thick (Polar Class 7) to those capable of operating year round in any ice conditions (Polar Class 1). To date, no vessels have been built to PC1.

Going Ice Class raises hull costs by 10 to 35 percent, and imposes certain restrictions on the designer. The hull is thicker to make it harder for ice to pierce, and frame spacing is much closer to increase hull strength. "An ice-classed hull is not necessary unless you're really going into the ice, where you need protection for the bow," Eidsgaard says. "For the very rare occasion it's useful, you pay for it the rest of the year. It is also harder to create that superyacht finish on the thicker hull."

EYOS Expeditions organizes those "rare occasions;" Antarctica is among its most requested itineraries. So the SeaXplorer does feature an Ice Class hull. It meets PC7, with a double-acting hull, meaning the yacht can part the ice going astern too. Besides a bigger safety margin, vessels can reach high latitudes much earlier in the season and have access to the best skiing spots.

Not one for sea ice, but well suited for exploring, the trimaran is the hull form of choice for Spanish naval architect Marcelo Penna. "Compared to monohulls and catamarans, they stand out for their stability, seakeeping and, above all, propulsion efficiency," he says. His 184ft Triexplorer concept is based on a successful design for the oil and gas industry, and it offers the storage and cabins of a 230ft monohull.

Briand believes that a 164ft-plus sailing yacht would make an ideal platform, because it has almost unlimited range and its keel makes it notably seaworthy. In the end, every explorer will differ according to the owner's desires. According to McCallum, the next generation is already in the pipeline: "Double acting hulls, augmented reality, alternative fuels, hybrid energy, interior flow, enhanced autonomy are all going to combine into the most capable expedition vessels ever designed." ■

Top center and top right: the 125ft Rosetti *Emocean* is an explorer in terms of functionality but her style is all superyacht. Above right: Marcelo Penna's Triexplorer concept has a stable, efficient trimaran hull form and the space of a much larger monohull

PHOTOGRAPHY: MARCELO PENNA YACHT DESIGN; FEADSHIP; ALBERTO COCCHI