With the growing popularity for yachts above 90m, one of the challenges for designers has become how to create an interesting and well-proportioned exterior. How can you make a large vessel look like a yacht and not a cruise ship and still provide the interior volume expected? Is bigger necessarily better? We asked a panel of industry representatives for their opinions.
What are the main challenges in making a vessel of 140m-plus look like a yacht and not a cruise liner?

Matthew Chatt-Collins and Associates

We design each of our projects as floating works of art—combining elegant lines and unique shapes to create exquisite exteriors for each of our clients regardless of size and scale. To design a 140m-plus yacht that does not resemble a cruise liner requires knowledge of how to balance line with proportion. When an owner wishes to have a yacht of this size, not only does the exterior profile need to be considered, but the exterior general deck arrangement needs to be laid out to ensure it is tailored to the client’s lifestyle. Often, fully certified helicopter landing areas are requested by the client, resulting in the allocation of dedicated open deck. Integrating this into the overall exterior proportions is an aspect designers need to think about early on. In addition, the scale of the onboard technology is vital in retaining the look of a yacht and not that of a cruise liner. Items such as the exhaust trunks and communication equipment could lead to an oversized mast, so to retain an elegant look of a yacht and not that of a cruise liner.

Terence Disdale Design

The success of yacht styling, large or small, hinges on a balance of proportion. A short foredeck will never make for an elegant yacht, whatever the size of the vessel. The right proportions are key and so designing vessels over 100m requires the same sense of proportion and design philosophy as a smaller yacht.

Donald Starkey Designs

A cruise liner is designed for commercial reasons and is all about achieving maximum return on investment. On a 140m vessel, there is more concentration in the design process to achieve the maximum number of cabins and all the entertainment features and support facilities for possibly 200-plus passengers. Hence why they look like a floating box/hotel with shaped ends. I think the real challenge would be the reverse of the question asked. How do you make a 140m-cruise liner look like a yacht?

Superyacht Design

Once you arrive at the 140m range, superyachts have an abundance of personal space and as such are a sign of affluence. Cruise ships are designed with a totally different mindset, getting as much internal space into the footprint of the LOA, beam and air draft of the vessel. Superyacht design focuses on the owners’ preferences and the design develops down a completely different path, aimed at achieving similar space and facilities as that found in a private house or office. The goal is to cater for an owner and a few select guests accustomed to six-star services. Designers need to be mindful that adding extra decks leads down the cruise ship proportion route. A superyacht should not need to have extra decks added to it for the sake of more space. Without them the superyacht has good overall proportions, enabling the designer to develop very exciting shapes, sparking the imagination and the owner’s desire to be on the superyacht.

Rob Doyle Design

The fact that decks are typically at a constant elevation along the entire length of a vessel tends to influence long window lines, also follow a constant elevation, effectively creating long, horizontal stripes along the vessel, much like on a cruise liner. An effective solution is to embed windows within darker, variable-elevation stripes on the hull side and superstructure, and to allow windows (or groups of windows) to span multiple decks. Blohm+Voss's Palladium does a nice job of using contrasting colours, dark window surrounds and aggressive-curving style lines to create an exterior that has a good amount of verticality. An alternative—though considerably more complicated—solution is the introduction of staggered deck elevations, either interior or exterior, or both. This tends to complicate the general arrangements and increase the cost of design and construction, but it simultaneously creates an interior with more character and introduces the potential for verticality to be introduced in a vessel’s windows and exterior styling features.

Peter Buescher and Associates

The current trend in cruise ship superstructure and the distribution of these volumes. The current trend in cruise ship design is to maximise the internal volume, which reflects adversely in the styling of these vessels. In the past, cruise ships were long and sleek but they no longer have those characteristics and instead look like top-heavy birthday cakes.
From an aesthetical and operational point of view, would it be better to opt for a smaller 70m mothership and a shadow vessel of a similar size rather than one large vessel?

Matthew Chatt-Collins
Andrew Winch Designs

In the past, we have delivered both types of projects and can see equal benefits. The most obvious advantage of having a mothership and shadow vessel is the option to undertake a world cruise and to discover smaller anchorages and harbours. It is much easier with two smaller vessels that both have a shallow draft, in contrast to a single larger yacht, which could be restricted to only accessing commercial ports. A support vessel should be designed to operate independently and cruise faster than the actual mothership. This will allow the owner to operate independently of the support vessel’s crew—loading and unloading toys and equipment. For example, while the mothership continues its cruise, the support vessel could relocate at higher speed and prepare the next anchorage in anticipation of the yacht’s arrival. However, in our opinion a vessel that just ‘shadows’ the movements of the actual yacht cannot perform this task fully. In contrast, a yacht that is not intended for extensive cruising and exploration and is meant for representation and to entertain large numbers of guest, staff and entourage is more suitable as a single, larger yacht, containing all the features in one vessel. In addition, a large yacht offers the added benefit of larger spaces and decks, which make the inclusion of fully certified landing decks for helicopters easier to accommodate.

Peter Buescher
Donald L Blount and Associates

Regarding the contributions to both exterior aesthetics and operational characteristics, I appreciate what shadow vessels have to offer. Considering purely the aesthetic design of a vessel, the presence of features such as hatch seams, hardware and articulating panels that exist solely to allow for the launch and retrieval of tenders and toys often detracts from a yacht’s inherent beauty. However, I’m not suggesting that nobody’s done it well—beautifully integrated tender garages and launch/retrieval systems are becoming increasingly common. Rather, I think that for a yacht of a given size, its aesthetic (sculptural) character as a ‘designed object’ would probably be more beautiful and pure in form if it had no reason to concede to the implications and features associated with tenders and toys. Even if the only benefit were the potential removal of a single seam around a tender garage door, a vessel that didn’t require a tender garage would probably be more beautiful (in terms of elegant geometric form) than a similar vessel that requires the integration of a tender garage.

Evan Marshall
Evan K Marshall/Usonia V

No, not necessarily. If we separate the aesthetics from the operational my feeling is that the aesthetics of a very large private vessel can still be maintained to the same high standards as a 70m yacht and smaller. I can’t see any constraints that would limit the styling of vessels in the 140m-plus range in a way that would prevent them from resembling the most exciting private yachts currently on the market. From an operational point of view the issue becomes about what additional toys and amenities the client wants. If the owner wanted to include a large submarine or a large helicopter, this may compromise the styling of the mothership. For this reason one might decide to travel with a smaller shadow vessel to accommodate these items.

Rob Doyle
Rob Doyle Design

The idea of having a shadow vessel is really appealing; it offers the ability to have extra crew, stores, fuel and a huge array of toys from helicopters and seaplanes, to sail boats and powerboats. It allows the owner and guests to explore where the larger vessels can’t go. All the toys can be stored on a robust platform ready for quick deployment. It allows the spaces on the prime vessel to provide the owner and guests with more recreational space, with large spas, gyms, beach clubs and an array of private lounging areas. The prime vessel thus becomes very efficient in catering for the owners’ needs whereas a 140m superyacht will have a lot of restriction in terms of docking and anchorage ability. A support vessel also allows the crew to have a private space/hangout area away from the owner and his/her guests. This is a great asset in keeping both owners and crew happy.

Terence Disdale
Terence Disdale Design

Cruise ships by their very nature of maximising real estate and cost-effective construction never really feature any significant foredeck area, simply because of financial constraints. The concept of a 70m yacht being supported by a shadow vessel will never provide an equal parallel to the facilities, ambience and possible prestige that a 140m might bestow. Often the main criteria motivating the owners of larger superyachts is privacy, independence and, of course, maximising comfort and stability at anchor.

Donald Starkey
Donald Starkey Designs

From an financial point of view, a mothership and support vessel would mean two design projects instead of one, which is good for the designer! From an operational point of view, this question is better answered by an owner who bears the expense of running two vessels rather than one. It may also be considered a matter of status symbolism—owning a 140m yacht will generally be regarded as a more impressive asset than two 70m that would not feature in the top 100 list. It is rather like being a billionaire and not being rated in the Forbes list every year.
Are multihull platforms the best option for larger projects and if so how does this impact on the design of the superstructure?

The fact that multihulls offer a greater beam-to-length ratio will have an impact on the exterior styling. A multihull could achieve a similar volume over a given length with a lower superstructure compared with a monohull of the same length, which could perhaps allow the exterior lines to be sleeker. At the same time, when dealing with a multihull, because of the greater beam, it is also important to look at the proportions and to be careful not to allow the beam to dominate the appearance of the vessel, making it look lower and flatter in the water as opposed to a monohull.

Multihulls have not found their way into the mainstream of motoryacht design. In sailboat form the largest is 50m or so in length. Their extreme beam restricts their mooring possibilities and their hull capacity is limited by comparison with monohulls. We have been involved in the design and completion of approximately 40 yachts over 50m and all of these clients have specified monohull vessels.

Multihulls offer a huge amount of space for their length but, as they are very unconventional, they will always struggle to be accepted as a proven platform for superyachts. The benefits are huge with regards to performance, range and space and they have the ability to create interesting deck and interior general layouts. Because you are now dealing with layouts that are more rectangular than the conventional monohull outlines, the superstructure needs special treatment so that it doesn’t look too boxy. It is an easy trap to fall into and designers need to hold back from using all this space and focus a bit more on the form rather than function in this particular area. The multihulls do have an Achilles heel in that they are constantly in motion. The ideal motion for a vessel is a low rate of roll, but the very reason that a multihull is such an attractive option on paper is what gives the vessel this very fast reaction time to sea states and so on. This in turn is likely to induce seasickness.

The simple answer is no. Multihull platforms have been designed for high-speed sailing and have proven to be very successful. Motor-driven multihulls may be better suited for other more commercial applications where large platforms have real benefits, such as ferry boats or oil rig accommodation vessels. They do not look as elegant as monohulls, which can generally accommodate all that is necessary for yachting activities. Berthing in popular places would also be a problem. If it really made sense you would see more of them and that is why you don’t.

There are both positives and negatives to having a multihull platform on a larger project. A negative of a multihull platform can be its movement in the water. Spread over several hulls, a multihull platform has a far more rigid boat structure resulting in a much faster and stiffer rolling movement as the yacht rights itself. Unless properly considered in the design process, this can compromise the comfort for guests on board. However, multihulls can offer the benefit of better beam-to-length ratio and subsequently cruise more efficiently. Regarding general arrangement, multihull platforms offer fantastic large spaces due to their beam being spread over both hulls. However, there is a ‘trade-off’, as their narrow hulls can make for very small engine rooms and crew areas below deck. In addition, a departure from the traditional hull and propulsion arrangements can also mean higher costs for most yards not used to building this type of vessel.

In the past, we have looked at various concepts for catamarans and trimarans that offer fantastic space for the owner’s areas as well as large exterior deck spaces. A multihull is also a great way to include a large helicopter landing area on a smaller vessel. Commissioning a vessel of this type would certainly take an adventurous and independently minded client, as they still don’t quite fulfil the general perception of a large motoryacht. However, when well designed, a multihull can be a fantastic yacht, sure to turn heads wherever she goes.

On account of the large beams typically associated with multihulls, I have a hard time agreeing that a multihull would be the best option for a large vessel. We’re already seeing that the beams and drafts of larger vessels restrict their operations around the world, and that issue, to a large degree, has contributed to the necessity of large tenders. Large yachts with a beam and/or draft that is restrictive can anchor outside marinas, and guests can be ferried ashore via tenders and limousines. For a multihull of a given length, while the deck space that exists between the hulls opens up possibilities for the architecture of the superstructure, the usable deck footprint and volume within each hull is typically compromised versus a monohull of the same length. I think an owner considering a multihull superyacht for any reason—especially if primarily on account of the toy-carrying capacity—would be better served to consider a yacht/shadow combination.