

The Superyacht Business Report

A REPORT WORTH READING

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TECHNOLOGY

“VR allows the next generation of clients to become genuine co-creators who are dynamically involved in the design of their future yacht rather than just passive viewers.”

CEO and founder, Anchor VR,
Anastasia Yushkova

FLEET

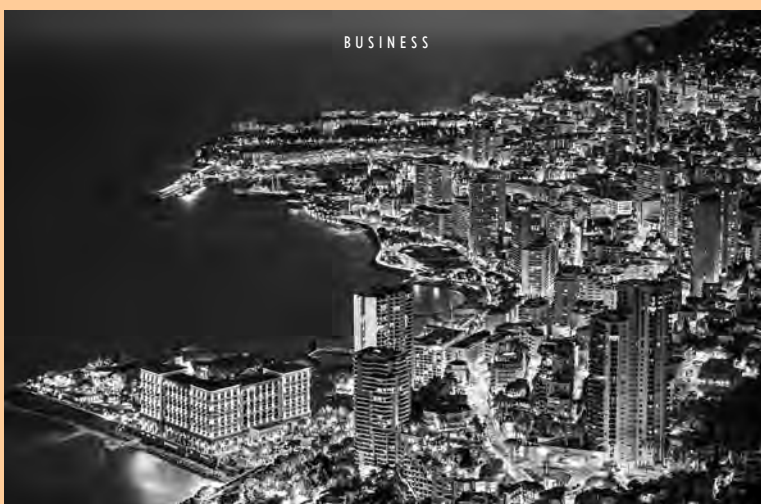
€440,424,140

Sum of four Burgess sales, accounting for 37% of all sales in the first half of 2019.

OPERATIONS

Is Genoa more than just a centre of shipbuilding? We explore the many ways that the region is developing its superyacht offering.

BUSINESS



OWNER

“The industry chases a slick, corporate professionalism with a superficial facade because that’s what’s expected. But our customers don’t want that; they actually really like interaction on a smaller scale, having a real conversation.”

Kiran Haslam, Princess Yachts

DESIGN

Let the new wave be[gin]

TSR returns to the pub, but this time it’s with the next generation of design talent.



Tech Revolution

Exponential technologies are changing every corner of global business, culture and society as we know it. Here, Matthew Griffin explores what some of these new technologies mean for the future of superyacht design.

ABOUT MATTHEW GRIFFIN

311 INSTITUTE

STARTED AS HE WAS TIRED OF COMPANIES MAKING PEOPLE REDUNDANT BECAUSE THEY WERE UNABLE TO SEE OR ADAPT TO CHANGE IN THEIR MARKETS

WORLD FUTURES FORUM ORGANISATION

FOUNDED IN THE PAST YEAR AND HAS ALREADY CHANGED HOW GOVERNMENTS EDUCATE AND PREPARE OVER A MILLION CHILDREN

EVERYONE

HAS THE POTENTIAL TO CHANGE THE WORLD, IRRESPECTIVE OF ABILITY, BACKGROUND OR CIRCUMSTANCES

CAVE DIVING

KEEN CAVE DIVER BUT TODAY HE DOESN'T HAVE THE TIME SO THE SCUBA GEAR'S IN THE LOFT

When we look at a superyacht's energy footprint, we can already see technologies emerging to eliminate it entirely, whether to save energy in new ways or generate energy in new ways.

It could be argued that superyachts represent the pinnacle of personalisation and design, with nothing left to chance and no square inch ignored. But as the industry's best designers create ever more spectacular floating masterpieces, new and increasingly powerful technologies are helping to overhaul the industry – from the mast to the keel and everything in between.

In spite of the industry's rich heritage and tradition, many leading artisans and designers have come to realise that while new technologies often changed their relationship with their craft, what they took away was more than recouped, often in new and unexpected ways. Today, with not just tens but hundreds of increasingly powerful emerging technologies, the industry's stakeholders have the opportunity to build new legacies and transform it forever. To say that every part of the design and build process, as well as how superyachts are enjoyed and operated, will be revolutionised by these new technologies is an understatement.

The arrival of new so-called creative machines – artificial intelligence (AI) platforms that can both design future superyachts and innovate them thousands of times faster than the most experienced designers or alternatively augment the human creative process – will transform the industry. When you consider that these same platforms could also help to reduce the weight of superyachts by up to 30 per cent by optimising their shape and geometry, as well as introducing new ways to create ultra-lightweight superstructures and hulls that rather than being solid are made up of internal honeycomb-like structures, then the benefits of experimenting with just this one technology are staggering.

Combine this technology with 3D printing, arguably its perfect partner that

gives designers – human or machine – the freedom to imagine and then manufacture hitherto unimaginable forms, and the limitations of today's approaches and technologies become all too apparent.

This revolution doesn't stop there, though. When we look at a superyacht's energy footprint, we can already see technologies emerging to eliminate it entirely, whether to save energy in new ways or generate energy in new ways; energy-saving technologies such as new zero-energy air-conditioning systems that beam heat into space via infrared radiation, nanotech-based omniphobic hull coatings that are already helping the US navy cut down drag and reduce the fuel consumption of their battleships by up to 80 per cent, or the use of AI to optimise energy consumption by up to 40 per cent as demonstrated by Google DeepMind.

However, that almost pales into insignificance when we consider the new energy-generation technologies that are on the way. These include hydrogen fuel cells; flexible photovoltaic materials with energy efficiencies today exceeding 30 per cent and tomorrow exceeding 50 per cent; new 3D-printed lithium-ion batteries that have four times more energy in a package half the size of today's systems; solid-state batteries and polymer batteries that complete a full charge in seconds not hours; or structural batteries that one day will be able to turn the entire superstructure of a superyacht into the battery itself. And all of that is just the tip of the proverbial iceberg.

Materials are also getting a makeover, whether it's new bio-manufactured leathers and woods that are grown in labs without the need for cows or forests, or new 3D-printed photochromic materials that can change colour with the flick of a light switch. Talking about

3D-printed materials, breakthroughs in Graphene and Aerogels mean that one day we'll be able to 3D-print superstructures that are 10 times stronger and 99 per cent lighter.

Of course, no superyacht would be complete without entertainment and there are changes afoot here too. On the one hand, we now have nanotech-based paints that can create perfectly dark rooms, where more than 99 per cent of the light is caught and turned into heat by nano-sized structures in the paint to create the ultimate in dark gaming rooms, and on the other we have a myriad of new display technologies emerging – from 11k displays that have a natural 3D effect and flexible and rollable OLED televisions to new atomic thin displays and transparent displays that simply vanish when they're turned off.

The perfect complement to these new displays is personalised sound, courtesy of new metamaterials that mean everyone in the room only hears what they're watching and aren't annoyed by the sound from everyone else's gadgets – without the need for headphones. And if you have a craving for nibbles during your favourite show then why not dip into some 3D-printed gourmet food or, even better still, sample the delicious delights from your fully autonomous robotic vertical farm, complete with lab-grown Wagyu fillet steak on demand from your superyacht's own personal bioreactor?

As these technologies – and hundreds more like them – continue to emerge at an increasingly furious pace, designers will find they have countless new possibilities. But perhaps the biggest revolution of all will be the realisation that, finally, the bold designs and ideas we always dreamed of creating within the industry can finally become a reality. **MG**