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Luxury Expedition Sailing Vessels: Sustainable by Design, Proven at Sea

Captain Arctic and the Orient Express Sailing Yachts showcase how luxury expedition sailing vessels are evolving from mere design statements into fully operational models. Engineered to combine environmental responsibility with adventure, these yachts treat renewable energy, hybrid propulsion, and reliability as inseparable essentials. Zenitel supports this new generation with onboard safety and communication systems engineered for consistent, reliable performance at sea.



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The vessels that redefine sustainable luxury

Luxury expedition sailing is entering a new phase. Sustainability has become a core component of the commercial specifications for these vessels. Owners and operators are now expected to demonstrate lower environmental impact while ensuring reliable, predictable performance across long, complex voyages.

Two exclusive projects – Captain Arctic and the Orient Express Sailing Yachts concept – illustrate how the sustainable luxury ship segment is evolving. Each tackles the same challenge in a different way. Sustainability only matters if a vessel can deliver predictable, day-to-day performance across long itineraries in real-world conditions.

Together, these projects set a new benchmark for premium operations in remote and polar environments.

Captain Arctic: polar sailing designed around renewable energy

Captain Arctic is engineered to combine sustainability with adventure. This 69-metre expedition sailing yacht is designed to host small-group voyages for around 30-36 guests in remote regions such as Norway, Iceland, and Greenland.

Designed for polar charter expeditions, Captain Arctic is a truly sustainable polar expedition sailing yacht. Its concept emphasizes renewable energy and energy recovery through wind assistance, rigid solar sails, hydroturbine power recovery, and hybrid-electric propulsion. With a reported emissions reduction of up to 90%, Captain Arctic ranks among the first near-zero-emission luxury expedition yachts.

This vessel is engineered to maintain sustainability even in harsh polar weather conditions. It demonstrates that low-impact operations and premium expedition experiences can coexist without compromising the reliability demanded in extreme environments.

Christophe Chauvière, Vice President at Bureau Veritas Marine & Offshore, describes Captain Arctic as a *“trailblazing example of what’s possible in sustainable maritime design.”* The yacht represents a significant step in integrating renewable energy systems into modern expedition vessels, and is positioned as a benchmark in the luxury expedition segment.



Orient Express Sailing Yachts: heritage-led sustainable luxury

The Orient Express Sailing Yachts concept is built around a clear idea: exploration with responsibility, expressed through history and innovation. Its design language is deliberately precise: elegance and adventure, shaped by French rigor and the untamed nature of the sea. Yet the proposition is fully operational. Presented as an ultra-luxury sailing yacht concept of around 220 metres with only 54 suites, it is designed for exclusive itineraries in the Mediterranean, Adriatic, and Caribbean regions.

Orient Express approaches sustainable luxury travel through a fusion of design heritage and advanced naval engineering, translated into a large-format sailing yacht. Its propulsion concept combines wind power via SolidSail with LNG and hybrid engines, aiming to reduce environmental impact.

At the same time, the concept is designed to preserve the essentials of high-end hospitality: quiet operation, stable service delivery, and controlled onboard routines. **Architect and designer Maxime d’Angeac** describes the vessel as *“a dream at sea combining technology and comfort.”* It is presented as a vision of the future of cruise ship design and a new maritime chapter of sustainable energy. In remote or polar itineraries, where external assistance and spare parts are not immediately available, system reliability becomes even more critical.



Portrait of Maxime d’Angeac, Artistic Director of Orient Express (left). Interior renderings of the 2026 Orient Express (right). Images © Orient Express 2026

Where both concepts converge: onboard safety and communication systems

Despite differences in geography and concept, the operational realities of both vessels converge around the expedition model. Large crews coordinate complex service delivery, safety procedures must be executed with precision, and communications must remain clear and intelligible in all conditions.

This is where Zenitel’s approach becomes indispensable. The company delivers maritime communication systems for luxury vessels that are engineered for high availability and predictable performance under stress. Zenitel’s PA/GA messaging and reliable internal communications enable crews to respond in a coordinated and controlled manner improving safety outcomes and reducing the risk of escalation during incidents. In practice, that means communication systems that support both routine operations and abnormal scenarios, without creating friction for guests.

What comes next for luxury expedition sailing vessels

The direction of the segment is clear: deeper integration of renewable energy and increasingly stricter expectations for low-impact operations. As a result, the bar for onboard safety and communication systems continues to rise. These systems must perform not only in ideal conditions, but also when weather is severe, decisions are time-critical, and external support is distant.

Within this demanding operating envelope, communication systems for luxury vessels must deliver consistent performance under stress. Zenitel provides this mission-critical layer, enabling the next generation of sustainable luxury ships to operate safely while preserving the premium experience these voyages demand.