

## Sanlorenzo unveils LIFE MYSTIC, the project to build the first green methanol bi-fuel superyacht by 2027

*The project, co-funded by the EU and developed in collaboration with Nanni Industries and Ranieri Tonissi, will last 54 months and involve a total investment of over €4.8 million.*

Press release, 18 October 2024 – Sanlorenzo presented today at its headquarters in La Spezia the LIFE MYSTIC\* (Methanol for Yachting Sustainable energy Transition applied to Internal Combustion engines) project, realised in collaboration with Nanni Industries and Ranieri Tonissi, for the realisation of the **first green methanol bi-fuel superyacht** that will see the light by 2027.

The event, entitled **'The first bi-fuel methanol superyacht and the management of alternative fuels in Italian marinas'**, gathered representatives of institutions, the nautical sector, port authorities, and Assomarinas, the Italian Association of Marinas, to discuss the objectives, timing, and difficulties to be tackled together to promote the spread of alternative fuels in Italian marinas.

Coordinated by Sanlorenzo, with an official kick-off of 1 June, the project will last 54 months and involve a **total investment of over EUR 4.8 million, 60% of which will be covered by European funds** obtained under the **'Circular Economy and Quality of Life'** funding line of the LIFE programme.

The aim of the LIFE MYSTIC project is to test engines and generators for superyachts powered by a combination of diesel and methanol, and **significant results are expected in terms of reduced environmental impact:**

- reduction in greenhouse gas emissions: 150 t/y CO<sub>2</sub>eq
- reduction in fossil primary energy consumption: 700 MWh/y
- reduction in air quality contamination: 630 kg/y

Under the guidance of Sanlorenzo, LIFE MYSTIC plans to house two high speed 4-stroke MAN diesel engines on board a superyacht - in collaboration with Ranieri Tonissi as a developer partner - along with two 4-stroke diesel generators - made by Nanni Industries - adapted to operate in bi-fuel green methanol - diesel.

The production of bi-fuel adaptation kits involves a very careful engineering process to ensure efficiency and reliability in the combustion of two different types of fuel in a single engine, having to guarantee a safe switch from diesel-only at any time and making these engines the ideal solution for a transitional market.

The boat's design will be adapted by Sanlorenzo, which will convert two traditional diesel fuel tanks into additional methanol tanks and will integrate the distribution system with the required lines and equipment, completing the conversion to bi-fuel of the entire boat.

There will be two **main challenges in the realisation of this project**. The first is **the design of the structural methanol tanks** with the realisation of the related plant engineering, a solution that will be complex both in terms of integration in the relatively small space of a yacht, and in terms of fuel management, which requires special attention and must meet the stringent safety regulations in force. The second is **the conversion of endothermic engines to bi-fuel**, starting from existing engines, which is a particularly challenging **innovation that is being done for the first time on this size of diesel engine**.

The decision to use methanol to power bi-fuel engines in order to reduce environmental impact stems from the fact that this fuel is one of the most promising alternatives for the future of maritime transport. It is liquid at

ambient temperatures and is already available in more than 100 ports globally. Moreover, when generated from renewable energy resources, it becomes a **zero-emission fuel**, as required by the *net-zero* strategy.

That said, **the accessibility of green methanol is a crucial point for the success of the LIFE MYSTIC project**: the availability of renewable methanol is therefore required by the project itself, in order to concretely demonstrate that this solution allows significant reductions in CO<sub>2</sub> and other pollutants.

In this regard, the involvement and collaboration of all the parties involved, including regulatory bodies, the supply chain and the distribution network, starting with central customs, is essential to demand changes and additions to the regulations on methanol, which is not currently considered a fuel in Italy, regulations that also impose constraints on the distribution chain.

For all the aspects considered so far, the LIFE MYSTIC project represents **an important step forward in the sustainability of the yachting sector**, and will bring **benefits to the entire marine industry**, both in terms of technological development and strengthening the alternative fuel supply chain.

LIFE MYSTIC is part of the '**Road to 2030**' plan with which **Sanlorenzo aims to be a pioneer in environmental sustainability**, making it a strategic lever for business growth. The initiative therefore represents a fundamental step in that journey that recently saw the launch of the 50Steel, the first superyacht in the world to use the Reformer Fuel Cell green methanol system to generate electricity, and which aims to launch the first carbon neutral vessel by 2030.

*\* Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.*



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***Sanlorenzo***

For over 60 years, Sanlorenzo has been a **worldwide-recognized Made in Italy icon**, producing **custom-built, top-of-the-line** motoryachts that blend **quality, design** and **craftmanship with the most advanced and sustainable engineering and technological solutions**.

The shipyard, the world's first mono-brand in the production of yachts and superyachts over 24m, was founded in 1958 in Limite sull'Arno, near Florence, by two shipwrights, Gianfranco Cecchi and Giuliano Pecchia. In 1972 it was taken over by Giovanni Jannetti, who moved its headquarters to Ameglia (SP) in 1999. In 2005, **Massimo Perotti** - with twenty years of experience in the sector - picked up the baton by purchasing the company. Under his guidance, Sanlorenzo registered an extraordinary growth: the net revenues from new yachts increase from €40 million in 2004 to €840 million in 2023. In 2019 the company was listed on the Euronext STAR segment of the Italian Stock Exchange.

Today, the production of the Business Yacht Unit (in composite from 24 to 40m) and the Business Unit Superyacht (metal from 44 to 73m) is distributed across 5 shipyards: La Spezia, Ameglia, Viareggio, Massa and Arbatax (Sardinia).

The strong drive for innovation that has characterised the company's vision has enabled the company to introduce numerous solutions over the years that have profoundly changed the yachting world, such as the **terraces within the hull**, the **asymmetrical layout** or the **open space concept on board**. Fundamental in this path was the close collaboration with the world of design and architecture, developed entrusting the realisation of the interiors of its yachts to authoritative signatures such as Rodolfo Dordoni, Citterio Viel, Piero Lissoni (since 2018 Art Director of the company), Patricia Urquiola and Studio Christian Liaigre.

If design, innovation and art were the drivers of the 2010-2020 decade in Sanlorenzo's vision, for the decade up to 2030 the focus lies on sustainability and technological revolution, attention to the supply chain and services dedicated to its clientele.

The company has set out a clear path toward carbon neutrality, the "**Road to 2030**," which is embodied in exclusive strategic agreements with the world's largest players in the fields of mobility and sustainable energy, such as Siemens Energy and Rolls-Royce Solution GmbH - Global Marine (MTU), for the development of the most innovative and environmentally friendly solutions for Sanlorenzo and subsidiary Bluegame's yachts, such as green methanol and hydrogen, which will revolutionize the boating world in the coming years.

Two important milestones will be achieved in 2024, in terms of both technological and sustainable innovation of Sanlorenzo. The launch of the **Superyacht 50Steel**, with the first installation of the Fuel Cell system powered by hydrogen reformed directly on board from green methanol, for power generation feeding hotel services - resulting from the exclusive agreement with Siemens Energy and certified by Lloyd's Register -, and the deliveries of the **Bluegame BGH** tender, powered exclusively by hydrogen and zero emissions, which in October will compete in the America's Cup as a supporting "chase boat" for both the New York Club American Magic team and the French Orient Express team.

Consistent with its identifying values, Sanlorenzo's commitment to sustainability and the promotion of marine culture is also expressed through two prestigious projects.

The **Fondazione Sanlorenzo** strongly wanted by the Perotti family, which, born in 2022, implements actions aimed at supporting Italy's minor islands and improving the economic and social conditions of their communities, starting with their youngest members.

**Sanlorenzo Arts Venice**, the Group's new cultural research center, a founding member of the Venice World Capital of Sustainability Foundation: a hybrid space dedicated to culture and the arts, encapsulating Sanlorenzo's values of sustainability, innovation and design, which aims to contribute to a global movement to foster positive change, for a more sustainable future.