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## **CT to research smart automated fabrication 4.0 for large composite parts for the naval sector.**

**A ground-breaking proposal that combines sustainability and Industry 4.0 in the fabrication of naval components**

CT launches the KAIROS R&D project, which will develop an innovative technological solution to efficiently fabricate large composite parts for the naval sector, with a high degree of automation, as well as quality and cost optimisation.

This solution will involve the use of sustainable materials and a substantial improvement in the safety and decrease in the structural weight of the naval components, with the consequent reduction in fuel consumption and polluting gases.

**Madrid, October 4th 2022** - CT, a leading engineering company in technological innovation over the entire product life cycle, is leading the KAIROS R&D project, which aims to research emerging technologies (new composites, manufacturing processes, artificial vision, IoT, AI and digital twin) to achieve a technological solution smart automated fabrication 4.0 for large composite parts for naval applications.

The project, slated to run for 4 years and with a budget of 6.3 million euros, is part of the CDTI's National Business Research Consortia (CIEN) Strategic Programme 2021. The consortium is made up of companies like CT that span multiple disciplines and industries, including, Izertis, Segula, Sofitec, SP Consultores, Cramix and Global Nabuurs, and several prestigious research centres such as Gaiker, ITCL (Technological Institute of Castilla y León), Air (International Institute for Artificial Intelligence Research Foundation), CATEC (Advanced Aerospace Technologies Centre) and UCCA (University of Cádiz).

The project's automation is expected to generate an important technological advance in terms of the monitoring and smart control of the infusion process of large composite parts. To achieve the goals, the CT team will work on the tasks of modelling, process simulation and structural monitoring of composite, in addition to acting as the leader to ensure the efficient collaboration between the different entities.



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"The modernisation of the naval sector still faces several pending challenges, such as the integration of cutting-edge technologies in industrialisation, what we understand by Shipyard 4.0, and the use of composite materials that would reduce weight by 30-40% compared to steel structures. There are many advantages to using composite naval parts: their mechanical performance is as good or better than the performance of existing components, in addition to fire and corrosion protection, and the cost of the complete supply cycle (design, materials, labour, quality control and defects) is 40-50% lower compared to existing technologies.", explains José Antonio Vicente, Project Manager.

KAIROS was born with the ambition to face these challenges and introduce a highly competitive product to the global market. The efficiency of the process that will be obtained, together with the sustainability component (use of non-polluting materials and reduced fuel consumption) are two key contributions to the viability of the product.

Marketing such a solution would have a very positive impact on the consolidation of Spain's industrial and technological fabric. However, this will require strong technological and commercial alliances, which will give Spain's naval sector the tools that it needs to be more competitive and sustainable.

### About CT

CT is a leading technological company that provides innovation and engineering services in the aeronautical, space, naval, automotive, rail, energy and industrial plants sectors. CT pushes the boundaries of technology through innovation, raising performance to new levels throughout the entire life cycle of products, from design, manufacturing to post-sales support. With over 30 years of experience, today CT's success is driven by more than 1,800 talented employees based in seven countries, spanning three continents. [www.thectengineeringgroup.com](http://www.thectengineeringgroup.com)

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