

HD Hyundai selects Siemens Xcelerator for integrated digital shipbuilding platform

- **Siemens to provide the digital backbone of group's "Future of Shipyard" project to develop next-generation design and production platforms**
- **The scope of the integrated digital platform is expected to extend across a range of vessel types, including commercial vessels and specialized ships**
- **Korean shipbuilder to leverage Siemens' Digital Twin Composer software to build industrial metaverse-based environment for decision-making, collaboration and learning**

Siemens announced today that it has been selected by HD Korea Shipbuilding & Offshore Engineering ("HD KSOE"), the intermediary holding company of HD Hyundai, as a preferred partner to establish an integrated platform to manage the entire shipbuilding process as a single data flow to help ensure consistency across all its global shipyard facilities.

The planned platform will form the core foundation of HD Hyundai's "Future of Shipyard" project, a future-oriented shipyard that it aims to complete by 2030. The project forms part of HD Hyundai's ongoing efforts to address data discontinuities that have existed across ship design and production processes and to establish a more structured, digitally enabled shipbuilding environment. Through the integrated platform, HD Hyundai aims to strengthen collaboration between engineering and manufacturing functions and to support stable execution of increasingly complex shipbuilding projects.

"The selection of Siemens Xcelerator represents an important milestone in advancing HD KSOE's digital shipbuilding strategy," said Taejin Lee, Executive Vice President

and Head of Digital Innovation Office at HD Hyundai. “By establishing an integrated digital platform that ensures consistency from design through production, we aim to address long-standing data discontinuity challenges and create a more structured and collaborative shipbuilding environment. This initiative will strengthen our ability to execute increasingly complex projects while enhancing efficiency, quality and competitiveness across our global shipyard operations.”

“Since 2022, Siemens’ collaboration with HD Hyundai has been focused on the future of shipbuilding and the development of next-generation digital design and production platforms,” said Tony Hemmelgarn, president and CEO, Siemens Digital Industries Software. “Siemens Xcelerator and our comprehensive digital twin technologies are well-positioned to support a unified digital thread across design, engineering and production. We look forward to helping HD Hyundai establish a scalable, open and future-ready manufacturing innovation platform that supports sustainable growth and operational excellence.”

Based on the Siemens Xcelerator open digital business platform, HD Hyundai’s “Integrated Platform for Ship Design-Production Consistency” project will deliver a consistent digital thread of key data from design through production. Design and production will be connected in real time through a unified data backbone, significantly reducing inefficiencies and errors caused by data discontinuities between processes.

Within this unified digital environment, standardized data flows and system interoperability will connect key domains including computer-aided design (CAD), product lifecycle management (PLM), digital manufacturing, automation and simulation, enabling major shipyard activities such as planning, construction, expansion and modification to be reviewed in a virtual environment prior to on-site implementation.

HD Hyundai also plans to expand the application of model-based engineering practices and improve collaboration efficiency across organizations and functional teams. In particular, block assembly, welding information, piping, and electrical data will be managed in an integrated 3D model, improving design accuracy, optimizing production planning, and standardizing shop-floor operations.

The scope of the integrated digital platform is expected to extend across a range of vessel types, including commercial vessels and specialized ships. Key areas of application include structured management of equipment and component data, digital model-based performance analysis, lifecycle-oriented maintenance engineering and technical support frameworks for overseas shipbuilding projects.

Additionally, HD Hyundai is working on building photorealistic digital representations of ships and shipyard sites within the Industrial Metaverse. This involves the use of AI trained in a virtual learning environment with synthetic and industrial data. The result is the interactive visualization and physics-based modeling of complex production environments, all powered by Siemens' digital twin technology.

The two companies will take a phased implementation approach expected to begin in 2026, with application to operational vessels targeted from 2028.

This press release is available at: <https://sie.ag/7MB1FE>

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