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Press

Digital Shipbuilding Centre of Excellence to Help Seed Australia's Manufacturing Renaissance

- Siemens flags intent for multi-million dollar in-kind advanced software to support Australia – should Germany be selected for future submarines (replicates approach in Virginia Naval shipbuilding industry US)
- thyssenkrupp Marine Systems' Shipbuilding Centre of Excellence (SCOE) in Adelaide following the establishment of the Digital Shipyard will give Australian firms more access to global supply chains
- Australian industries and students can access digital platforms used by NASA to build Mars Curiosity Rover, by Maserati to make the Ghibli and by the US Navy
- SCOE announcement follows Siemens' $2.73 million software grant in partnership with South Australian Government and Simulation Australasia

Visiting global President and CEO of Siemens PLM Software, Chuck Grindstaff, whose technology is behind projects such as the Mars Curiosity Rover through to US Navy USS Gerald R. Ford aircraft carrier, has flagged a multi-million dollar software in-kind grant should Germany be selected to build Australia's next fleet of submarines.

At an event held in Tonsley, Adelaide's innovation hub, Grindstaff highlighted how the establishment of a Digital Shipyard in Adelaide could help the state transform into a hub for high-tech manufacturing, innovative ideas and increased employment. Drawing on his experience with the manufacturing renaissance in the US and the approach of Naval shipbuilding in the State of Virginia, he said the Australian economy could benefit greatly.

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"The manufacturing industry in America is on the rise and is being transformed by a software revolution that is enhancing productivity, increasing efficiency and speeding time to market," said Chuck Grindstaff. “Australia is faced with a unique opportunity through its defence investments to help local industry rapidly transform and prepare to participate in advanced manufacturing and Industrie 4.0.”

In Virginia where shipbuilding is core to the state's economy, Siemens provided $1billion of in-kind software to equip students with the Digital Enterprise Software Suite that will help them build the world's most complex ships for the US Navy.

“Should Germany be selected to build Australia’s next fleet of submarines, I could see a multi-million dollar in-kind Siemens PLM software grant to help re-tool Australia’s next generation of workers,” said Grindstaff. “It’s no longer about who has the strongest back, but who best uses their brain and receives the best training in areas like mechanics, mechatronics, computers, software, design and engineering.

“Digitalization of industries weaves digital threads through the entire value creation chain. We are witnessing this in the US state of Virginia where, through a $1 billion Siemens grant and the establishment of a Shipbuilding Centre of Excellence (CoE) the state is focusing on equipping students with tools and training that will help them build the world's most complex ships. This digitalization is up-skilling students, academia and the workforce in advanced manufacturing technologies used not only in shipbuilding, but also aerospace, automotive, machinery and other industries.

“A combination of Germany’s Industrie 4.0 vision, the access to advanced manufacturing technologies already in application in the US Navy and Australia’s Innovation Agenda will help retool Adelaide and Australia for the digital age of manufacturing,” said Grindstaff. “Put simply, I could see a rebirth of shipbuilding in Australia with flow on effects to all industry and the potential to seed Australia's manufacturing Renaissance - similar to what we're seeing in Virginia.”

The comments from Mr. Grindstaff, who is based in the US, support German company thyssenkrupp Marine Systems’ recent commitment of building a Shipbuilding Centre of Excellence (SCOE) in Adelaide. According to thyssenkrupp

Marine Systems Australia chairman John White, such an approach would greatly reduce risk for the Royal Australian Navy.

“The Shipbuilding Centre of Excellence in Australia would benefit all defence programs and ensure common software platforms to strengthen Australia’s approach. It would help connect the Royal Australian Navy to academic institutions and industry so we embed a continuous and sustainable hi-tech shipbuilding industry. SEA 1000 has the scale to change the way ships are built in Australia; it provides a generational chance to advance the manufacturing industry.

“An advanced (digital) integrated product development and support environment (IPDSE) would avoid the pitfalls of the past where data has been difficult to manage and major programs have often relied on 2D paper diagrams. With modern technology everything can be designed and tested collaboratively in a digital world before going anywhere near a prototype,” said White. “This eliminates geographical boarders. It reduces cost and waste.”

These digital systems use sophisticated 3D design/development/monitoring tools and an unbroken digital thread that facilitates error-free numerically controlled production, operation and support.”

Also commenting on thyssenkrupp Marine Systems’ SCOE, Jeff Connolly, CEO of Siemens Australia and New Zealand said, “Australia has a one-time unique opportunity to ignite its economic growth engines by leveraging the investment in submarines and frigates for the benefit of the whole of industry.

“We recently made an in-kind grant of $2.7m of software with the SA government and Simulation Australia. Whilst this underlines that we are in the country for the country, what is critically important is that by using the right tools Australian industry becomes more globally competitive”, said Connolly. “If Australia were to leverage the future submarines and frigates investment for the whole of industry, then the economic benefits could be vast with rapid transfer and adoption of key skills and tools. With the right skills and tools, Australia can combine its renowned ingenuity to kick start the ideas boom of the 21st century.”

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