

ADVERTISING FEATURE

3D Technology

Virtual shipyard boosting SA's industry

In a world where the complexity of economic challenges sometimes seems to overwhelm the ability of government policy to address them, global technology leader, Dassault Systemes, South Australian government, and the Advanced Manufacturing Growth Centre are betting that enterprise software-enabled collaboration between groups that previously operated in silos, namely government, academia and industry, is the answer.

Dassault Systemes, headquartered in France, is the software technology arm of the Dassault Group which was established in 1929. Dassault Systemes provides the software used to design and manufacture civilian and military aircraft, including Mirage fighter jets. Dassault Systemes is deploying its proprietary 3DEXPERIENCE platform, specifically in a program called Virtual Shipyard, to further improve the capability of South Australian industry.

Dassault Systemes' plans for deployment of industry software solutions on the 3DEXPERIENCE platform are wider than South Australia, however. It also has the mining and agriculture sectors in its sights.

Managing director, Asia Pacific South, Masaki Konno characterises the 3DEXPERIENCE platform as basically a business experience platform delivering industry software solutions for every organisational unit in a company – but one that is turbo-charged by its data-handling capacity.

"There's a lot of enterprise platforms out there. But for a platform to be able to handle 3-D images, 3-D CAD, unstructured data, experimental data, data from devices, data from machines, data from IoT (Internet of Things) devices, real-time devices – it's incredible."

South Australia's Minister for Industry and Skills, David Pisoni, says the Virtual Shipyard is providing a real boost to the state's capability.

"The project is helping South Australia create a high-value, world-class supply chain," Mr Pisoni said.

"It is positioning the state, including our regions, at the forefront of industrial digital capability development in Australia and across sectors including defence, mining, agriculture, healthcare, space, ICT, cyber and information security.

Masaki Konno describes what's happening in South Australia as a "lighthouse".

"We call South Australia a lighthouse because it's an example of what can be done with governments, academics and commercial interests linked together.

"The Virtual Shipyard is about the transition of South Australian SMEs to digitally interconnected manufacturing ecosystems such as those anticipated for the future shipbuilding and submarine programs."

The South Australian experiment with the Virtual Shipyard program, which began in late 2017, grew out of Dassault Systemes' existing relationship with Naval Group, the French company that will manufacture the new Australian submarines in Adelaide under the federal government's Future Submarines program that is set to start in 2020-21.

Dassault Systemes will be directly involved in



Dassault Systemes' Managing Director for Asia Pacific South, Masaki Sox Konno. PHOTO: ESTHER LEE

construction of the submarines, eventually deploying the 3DEXPERIENCE platform to build what Konno describes as a master 3D virtual model providing a "single source of truth" that integrates all related data from which stakeholders across the supply chain can access to collaborate with one another. This model can be re-configured at lightning speed according to data streams.

As well as the Virtual Shipyard and submarine projects, Dassault Systemes has a partnership with the universities of South Australia and Adelaide to build what it calls the Workforce of the Future through science, technology, engineering and maths education, as well as new ways of working.

"The ability to handle data and adjust data and work with others and collaborate are skills that you can't ignore any more," Konno comments.

"It's not just about individual productivity, which it was before. It's about how do you, as a group, work better."

Dassault Systemes has an impressive roll call of clients within the big infrastructure sectors around the world. Those clients are in shipbuilding, submarines and other defence industries, rail, mining infrastructure, minerals processing, power, and water.

"The project is helping South Australia create a high-value, world-class supply chain."

David Pisoni, Minister

In Australia, Dassault Systemes wants to work with mining and agriculture, two industries it believes need to embrace change to be fit for the future.

Mining in particular, despite the vital role it plays in global development, has been under the spotlight for its impact on the environment and workplace safety practices.

"The mining industry is about health and safety, but also about better yields and importantly, sustainable development," says Konno. "Less waste and better water management solutions mean less pollution."

Konno says the use of specialist mining software within its 3DEXPERIENCE platform gives Dassault Systemes a head start in delivering valuable data management expertise to the

Australian mining sector. "Since I've been coming to Australia, over the last two years, I've seen a huge change in attitude towards technology in the mining sector.

"Now it's an industry looking at technology to continually improve sustainability practices and profitability. They're saying, this is going to be our competitive advantage."

Konno characterises Australia as a country with a comparatively high level of education, but one that can be nimble to compete on the world stage.

"When it comes to technology applications, I don't see Australia competing directly against Silicon Valley. But there are certain industries where the existing deep knowledge base can be used to give the country a competitive advantage."

In his view, those sectors are mining, shipbuilding, energy, engineering and construction and agriculture.

"Dassault Systemes has sent our top people into Australia to cross-pollinate existing knowledge with their experience in aerospace, electronics, biotechnology.

"We're working on redefining Australian business processes based on industry software solutions on the 3DEXPERIENCE platform."

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