

Consultant says that containerised bulk solutions economical and fast

Ray Lee has 43-years' experience in container and bulk ports, more recently acting as a consultant to the sector via his business Portside Solutions. He spoke to ABHR editor Charles Macdonald about his enthusiasm for containerised bulk export solutions.

Lee was closely involved in the advent of one of Australia's earliest pit-to-port containerised solutions. As director of operations for DP World in Port Adelaide, he was instrumental in IMX Resources starting containerised exports of iron ore in 2009.

"IMX didn't have a conveyor system on the wharf, so this was a way of loading bulk without the expense of a conveyor system or need for sheds," said Lee. "It's really interesting that you can turn a container terminal to a bulk terminal with the change of a spreader on the crane, and then service bulk ships."

Containerised solutions cost a fraction of conventional conveyor and bulk shed-based systems. The latter frequently run into hundreds of millions of dollars. In contrast, a container fleet might cost between \$15m and \$20m but can also be rented. A mobile harbour crane is around \$3m to \$4m, with a tippler or rotating spreader coming in at around \$750,000.

The containerised solution is quick, too. "It doesn't take long to get it up and running," said Lee. "You can go from nothing to having an operation up and running in six months, whereas traditional infrastructure would take a lot longer."

Containers are custom-made. For powdery and flaky cargo, like copper concentrate, the inside of the container will resemble a bathtub, with a Teflon-style finish. The containers come with lids, are self-locking and are gravity fed off the weight of the spreader. Containers can be of lighter build for commodities like wheat, or can be more robust for denser cargos of coal or iron ore.

After IMX at Port Adelaide, Lee got involved in another containerised iron ore system, this time for Exxaro Resources Mayoko project in the Republic of Congo in West Africa.

"Exxaro was using the container bulk handling system while they were building their conveyor system at the wharf (at Pointe Noire). So it was an opportunity to move some cargo; while you don't get the volume of a conveyor system they were able to commence producing for export and get it to market while they were putting other



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infrastructure together. The plan was to maintain the bulk container as it was a \$20m outlay. So they kept it going in tandem with the conveyor system."

Since then, Lee, in his consulting capacity, has investigated containerised bulk solutions in various localities. He looked at opportunities for grain in Australia, and minerals, including coal and graphite, in South Africa, Nigeria and Mozambique.

Lee's broad background in container and bulk ports means that Portside Solutions offers a wide variety of services.

"We offer services across every facet of the port industry," he explained. "We have looked at terminal design, and port operations is our core business; also training and development, safety and security, and negotiating enterprise agreements with unions."