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## Media Release

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### 30 Years of DUKC® at Port Hedland

This year marks a significant milestone in maritime innovation as Port Hedland celebrates 30 years of Dynamic Under Keel Clearance (DUKC®) operations — a world-first technology that has revolutionised port efficiency, safety, sustainability, and export capacity.

Since its implementation in 1995, DUKC® has enabled the Port of Port Hedland to safely maximise vessel drafts, allowing larger, deeper ships to safely navigate the port's tidally constrained, uni-directional channel with confidence. Developed by OMC International, the DUKC® system uses real-time environmental data and advanced modelling to calculate the minimum safe under keel clearance for each vessel, ensuring optimal loading without compromising safety.

In February 1996, only a few months after commissioning DUKC®, the Port of Port Hedland set a world record by exporting 499,123 tonnes on a single tide. To date, DUKC® has facilitated more than 5 billion tonnes of exports from the Port of Port Hedland.

Through close collaboration with Pilbara Ports over the past three decades, OMC International's suite of digital port optimisation and risk management technologies, including DUKC®, Dynamic Port Capacity Model, PortWeather and TransitAnalyst have helped the Port of Port Hedland navigate growth from 60 million tonnes and 1,000 vessel movements in 1994/95 to 577.7m tonnes and 6,940 vessel movements in 2024/25.

A key example of the collaborative efforts is the Channel Risk & Optimisation Project (CROP), which was a \$120m dredging campaign. Pilbara Ports utilised DUKC® to optimise the dredging profile, maximising the capacity enhancements whilst minimising the environmental impacts. The DUKC® optimised channel design reduced the dredged depth requirements by an average of 0.63m.

Another key innovation driven through collaboration is the Dynamic Port Capacity Model, the first discrete event simulation model to incorporate dynamic UKC calculations. The DPCM® helped Pilbara Ports identify and unlock latent capacity, resulting in throughput potential that now exceeds the \$20b Outer Harbour development proposed in 2008.

Port Authority reports calculate the benefits of DUKC® increasing the tonnage per vessel by more than 13 per cent, with additional port capacity also available through the wider sailing windows allowing more vessels to depart per tide. For example, the Port of Port Hedland first achieved five outbound vessels on a tide in 2009, and 1m tonnes on a tide was achieved in 2012. In 2024/25, 1m tonnes on a tide was achieved 141 times, and 5 or more vessels sailed on a tide 304 times.

Peter O'Brien, CEO of OMC International, said:

"As one of OMC's Founding Clients, OMC greatly cherish the journey we have been on with Pilbara Ports over the last 30 years. Pilbara Ports is commended world-wide for the incredible throughput it facilitates and its significance to the Australian and global shipping economy. Rightly, it is recognised for doing so through delivering world's best practice operations, and this has enabled it to continuously retain its place as the world's largest bulk export port. It's been wonderful for OMC to have been an integral part of this growth journey; we are a company built on innovation and Pilbara Ports have been a critical partner to the continual evolution of our technology to meet the growing demands, and we are very grateful for their vision and support."

Pilbara Ports Chief Executive Officer Samuel McSkimming:

"We are proud to partner with OMC International as they celebrate 30 years of Dynamic Under Keel Clearance (DUKC®), empowering vessels to safely and efficiently navigate our port's channel.

"Pilbara Ports has achieved record-breaking shipments safely over the years thanks to revolutionary programs such as DUKC®.

"We look forward to continuing our partnership with OMC International."

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## About OMC International

OMC International is a maritime technology and engineering company, with a focus on facilitating safe, efficient, resilient, and sustainable port operations through digitalisation and innovation. OMC is the inventor of a suite of multi-award winning digital port optimisation and risk management technologies including the Dynamic Under Keel Clearance System (DUKC®), BerthAlert, TransitAnalyst, PortWeather, Optical Draft Intelligence (ODIN), and the AI AirDraft detection and alerting system.