



QUBE Ports and Bulk

Driver Training and Assessment System for a PCC (Pure Car Carrier) Simulator

The company

Qube Ports & Bulk is the pre-eminent provider of wharf-side port logistics and port management services in the Australian region. It is part of QUBE Holdings, a listed Australian company with a 150-year heritage.

The challenge

QUBE wished to improve the training of drivers who unload or load 700,000 new imported and exported vehicles per year from the Pure Car Carrier (PCC) ships that dock in Australia from Japan, China, Korea, Europe and USA. QUBE's aim is to achieve Zero Damage to the vehicles being unloaded and Zero Harm to its employees; this high standard is set by their clients and accepted as the minimum operating level.

The solution

QUBE decided to establish QUBE Training Dojos (*Dojo* = Japanese for 'training centre') in its seven port facilities around Australia. Forum8 worked with QUBE to supply a key element of the QUBE Training Dojo, the PCC simulator.



The PCC simulator consists of a drive simulator with a 3D virtual model of a PCC ship and the yard (or wharf) to which the vehicles are unloaded and parked. The 3D virtual model was developed in Forum8 software UC-win/Road; as well a special plugin was developed for the driver training and assessment function.

The Driver Training and Assessment system permits a Trainer to select a driving scenario for the driver seated in the simulator, who then drives in the 3D virtual model, down a number of ramps in the ship to the wharf



and then to a specified parking spot. He may encounter a number of hazards and different day/night and weather conditions, and also is required to keep to certain speeds and maintain safe distances with obstacles and cars in front.



The driver's actions while driving are logged: at the end of the drive he is assessed for correct operating procedure

and driving skill, against criteria that also include maintaining an ideal route, manoeuvring skills, parking accuracy, collision risk control, steering and pedal control.

Both trainer and driver are able to view a real-time replay of the drive, which assists in pinpointing areas for improvement.



The outcome

The realistic 3D virtual model of the ship and wharf facilities promotes driver engagement with the system. Initial use has shown a reduction in damage incidents. Public relations impact has been significant, and QUBE was awarded the Large Employer of the Year at the NSW Training Awards 2013.

QUBE believe that the use of such a simulator training system is an Australian-first for its industry, and the new system has been confirmed as best in class by QUBE clients who have visited the site.

Port Kembla gets state of art training centre



The Illawarra Mercury reported on the opening of the QUBE Dojo.