

CASE STUDY: AUTOMATED STRADDLE CARRIERS

# PORTS OF AUCKLAND, NEW ZEALAND



**A-STRAD****PORTS OF AUCKLAND LTD.**

**Ports of Auckland Ltd. (POAL) has been operating a fleet of manual 1-over-2 straddle carriers together with ship-to-shore cranes with low ground clearance. These machines are no longer able to meet the demands of growing container traffic and the ambitious growth targets of this terminal operator.**

It is not possible to extend the terminal because of its specific location. This is why the terminal operator has decided to go forward by automation of the terminal.

POAL is opting for a total of 27 new automated 1-over-3 Konecranes Noell A-STRADs to increase storage capacities significantly and process road trucks.

The port will keep its 1-over-2 machines for horizontal container transport in future, since these machines can work under the STS cranes despite their low ground clearance. For this reason, 21 existing manual 1-over-2 straddle carriers are being upgraded so that they can work side by side with the fully automated machines. They will continue to be manual machines, upgraded with safety-relevant vehicle control systems and sensor systems that will enable them to interact smoothly with the fully automated machines.

The delivery will be turn-key. Konecranes will supply the required sub-systems including an interchange system, TEAMS fleet management system, and the Navimatic® navigation system.



Manual 1-over-2 Konecranes Noell Straddle Carriers working in the Port of Auckland. Automated straddle carriers (A-STRADs) from Konecranes will stack containers 1-over-3 here in the future.

<b>Customer:</b>	Ports of Auckland Ltd. (POAL)
<b>Timeframe:</b>	<ul style="list-style-type: none"> <li>• Date of order end 2016</li> <li>• First deliveries planned 2018</li> <li>• Full operability planned mid-2019</li> </ul>
<b>Project scope:</b>	<ul style="list-style-type: none"> <li>• 27 new Konecranes Noell N SC 644 E as A-STRAD versions</li> <li>• 21 upgrades of existing machines to enable them to operate, in manual mode, with the A-STRADs</li> <li>• TEAMS fleet management system</li> <li>• Navimatic® navigation system based on terrestrial radio system with antenna</li> <li>• Interchange and fence control system</li> </ul>
<b>Special feature:</b>	Side-by-side operation of manual and fully automated machines
<b>Customer benefit:</b>	<ul style="list-style-type: none"> <li>• Medium-term increase in capacity from 0.9 m TEU to approx. 1.7 m TEU</li> <li>• Greater safety during operation</li> <li>• Low operating costs, e.g. up to 10% lower fuel consumption</li> <li>• Considerable reduction in emissions (exhaust emissions, noise, light)</li> </ul>