

# How to successfully introduce automation into a container terminal

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# INTRODUCTION

- Patrick Terminals Auto strads
- Patrick Terminals ARMGs
- Automation at other container stevedores in Australia
- Other operators have chosen AGVs instead of straddles
- Addressing workshop topics
- Conclusions

# DRIVERLESS STRADDLE CARRIERS



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# PATRICK TERMINAL SYDNEY AUTOMATED RMGS OVER RAIL

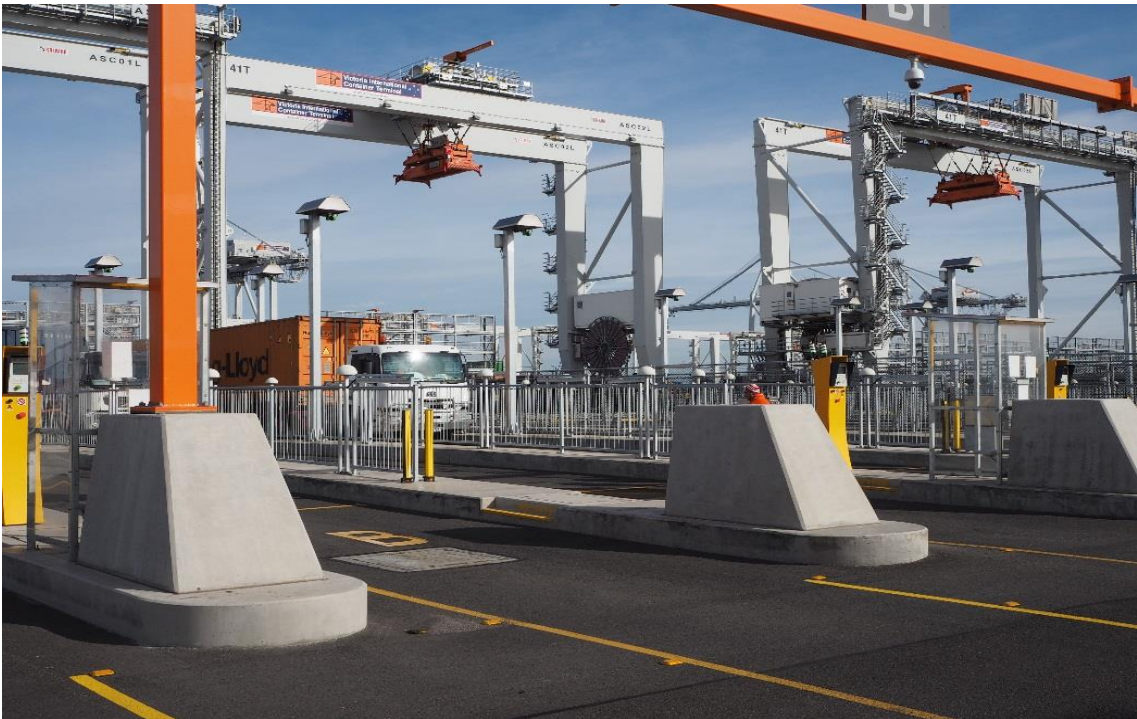


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# AUTOMATION AT OTHER CONTAINER TERMINALS IN AUSTRALIA



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# OTHER OPERATORS HAVE CHOSEN AGVs



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## WORKSHOP TOPICS

- How to introduce automation successfully
- Safety, liability and cybersecurity in automation
- Interoperability of data exchanges
- Efficiency gains in automation (ROI)
- Pitfalls in introducing automation
- Any standards in automation
- Possibility for SMEs to take up automation
- Conclusions

# CONCLUSIONS

- Automation is happening across all links in the supply chain
- Some technical issues still to be resolved
- Connectivity and cybersecurity are major issues
- Impact on the labour force
- Artificial Intelligence will speed up introduction of increased automation
- Difficult if autonomous equipment operates in part manual/part automated environment