



How can ports benefit from a 5G adoption? 5G impact in ports

5G can allow port operations to be smarter, more flexible and secure in order to handle changes in technology, demography and economy. Automation and analytics may allow for more efficient operations and reduce operational costs.



Up to 30% reduction in operation time



Up to 15% reduction of CO2 emissions

5G's high bandwidth, low latency and the ability to support a massive number of devices can enable new and improved opportunities to **increase ports' operations efficiency, in addition to helping enable new business models, enhance worksite safety and reduce operational costs.**

Key benefits of 5G in ports



Increased operational efficiency

Optimization and automation of tasks, such as crane control, can lead to higher operational efficiency.



Reduced operational costs

Higher levels of automation of the operational processes may have the potential to reduce operational expenditure (OPEX) costs.



Enhanced worksite safety

CCTV systems enhanced with AI capabilities might be able to identify when safety requirements are not being met, increasing worksite safety.

5G use cases for ports



Remote control and monitoring of containers



Automation and remote control of cranes

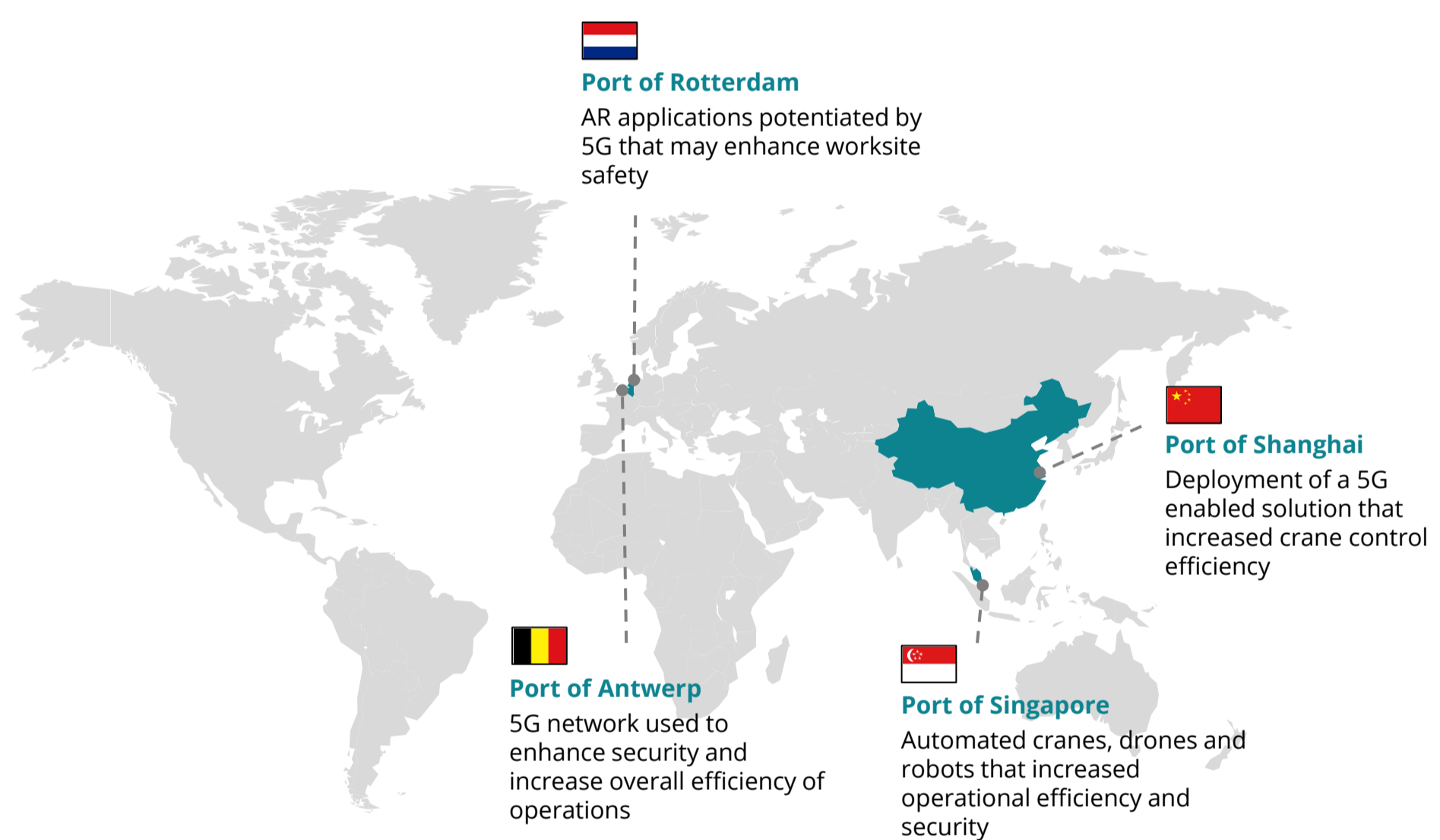


CCTV system with AI capabilities



Augmented reality (AR) and Virtual Reality (VR) support for operations and maintenance teams

Where are major deployments taking place?



How can Deloitte help?

Deloitte translates business and industry needs into technical requirements delivering value added end-to-end 5G solutions that can lead to **meaningful business outcomes.**

- IDEATE AND PRIORITIZE**: Select the areas to be improved with 5G use cases, ideating, identifying and prioritizing the top 5G use case opportunities
- DEVELOP THE BUSINESS CASE**: Formulate the operational benefits of the 5G use case(s) defined and associated business case value proposition
- DESIGN TECH REQUIREMENTS**: Define and design use case technical solution architecture and requirements, considering deployment strategies and application requirements
- BUILD AND EVALUATE**: Start with a point of contact (PoC) first to monitor and evaluate the 5G use case(s) performance and then proceed with rollout
- OPERATE AND MAINTAIN**: Define overall governance, operating model and procedures to ensure the sustainability in business as usual (BAU)

Sources: Deloitte TMT Predictions 2021, Huawei, IDC, Gartner, The business research Company

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