

# Port of Durban embraces Fourth Industrial Revolution

The Port of Durban demonstrates a solid business case in introducing digital initiatives with some operations being conducted through wireless technology. The new era of the Fourth Industrial Revolution which involves developments in genetics, artificial intelligence, robotics and 3D printing, among other things, has informed the future introduction of the Smart People's Port.



[Image Source: Transnet Port Terminals](#)

South Africa's busiest commercial port is leading the pack in embracing this new industrial revolution by recently completing a three month 'proof of concept', providing a glimpse into a new era in port surveillance, monitoring, and communication using wireless connectivity and technology. The Smart People's Port concept is aligned to the company's Market Demand Strategy, which will not only see all commercial ports in South Africa increasing capacity ahead of demand but also increasing customer satisfaction by running seamless port operations.

Speaking at the African Ports Evolution 2016 Conference, Ristha Joga, information, management and services manager at Transnet National Ports Authority's Port of Durban said: "A Smart People's Port will result in an efficient data-rich and information-rich eco-system connecting port assets, port employees, terminal operators and the port community including road and rail.

## Port technology

"It will also help the ports to achieve a more focused customer centric technology that will reduce the latency of information sharing and result in a more informed decision-making process."

Aerial and underwater drones, as well as track and trace technology used to track port assets such as tugs and dredgers, have been piloted successfully at the port. The 'proof of concept' exercise showed that drones can be used in a number of ways including inspecting infrastructure and the condition of the seabed, which can be done safely without interrupting port operations. The drone technology can also assist in collecting information on port traffic.

Sensor technology provided port and terminal performance management data, including capacity utilisation, berth occupancy, port limit access and civilian count during surveillance and security management.

The port has also introduced a mobile application (app) designed to streamline complaints and issues reported while ensuring improved accountability, transparency, and communication with port stakeholders, users, the government and community.

Smart meters converted analog information to digital data for electricity and water metering.

3D printing was explored to make port and precinct modeling easier for port planning and development projects.

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