

# Safer for us

## *Sensemaking analytics for maritime event recognition*

With the expected increase in maritime vessel traffic and capacity, MPA is working to ensure that the Port of Singapore is safe, secure, efficient and sustainable.

Project Safer is a collaboration between MPA and IBM Research to develop and test-bed new analytics-based technologies aimed at improving maritime and port operations to cater to increasing growth in Singapore's vessel traffic.

The Safer system is capable of automating and increasing the accuracy of critical tasks that previously relied on human observation, reporting, Very High Frequency (VHF) communication and data entry.

### Pilot boarding detection

Automatic detection of pilot boarding time reduces staff workload and speeds up dispute resolution



### Illegal bunkering detection

Machine learning based vessel models are used to detect and report illegal bunkering activities and help weed out undesirable bunker suppliers

### Prediction of vessel arrival time

Vessel arrival time is accurately predicted and updated continuously and this facilitates Just-in-time provision of services



### Utilisation Prediction

Advance information on traffic density in high utilisation is provided to help ensure port water safety



### Infringement analytics

Machine learning based vessel models are used to detect suspicious or abnormal vessel behaviour; this allows port inspectors to employ a targeted approach in carrying out daily tasks

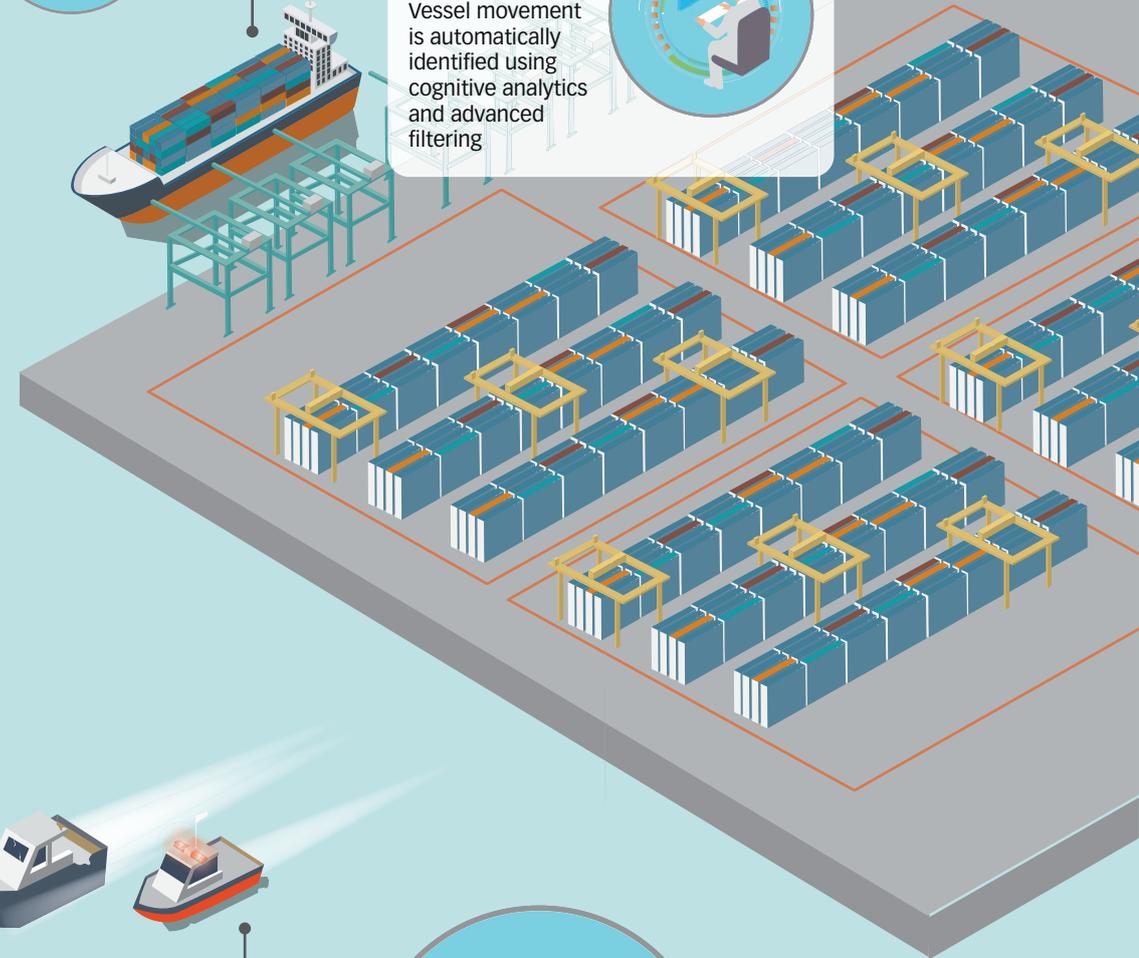
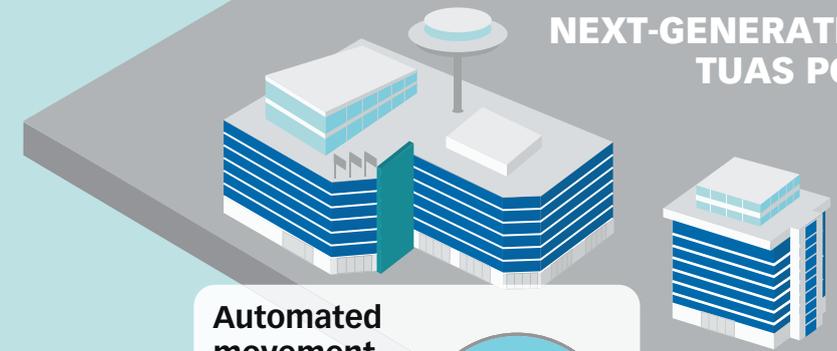


### Automated movement detection

Vessel movement is automatically identified using cognitive analytics and advanced filtering



## NEXT-GENERATION TUAS PORT



### Detection of vessel entering prohibited areas

A virtual fence is created in port waters to identify and localise authorised entry into prohibited areas