

# Enhancing Maritime Safety Through Technology

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# Tuas Port planned for 65mil TEU capacity



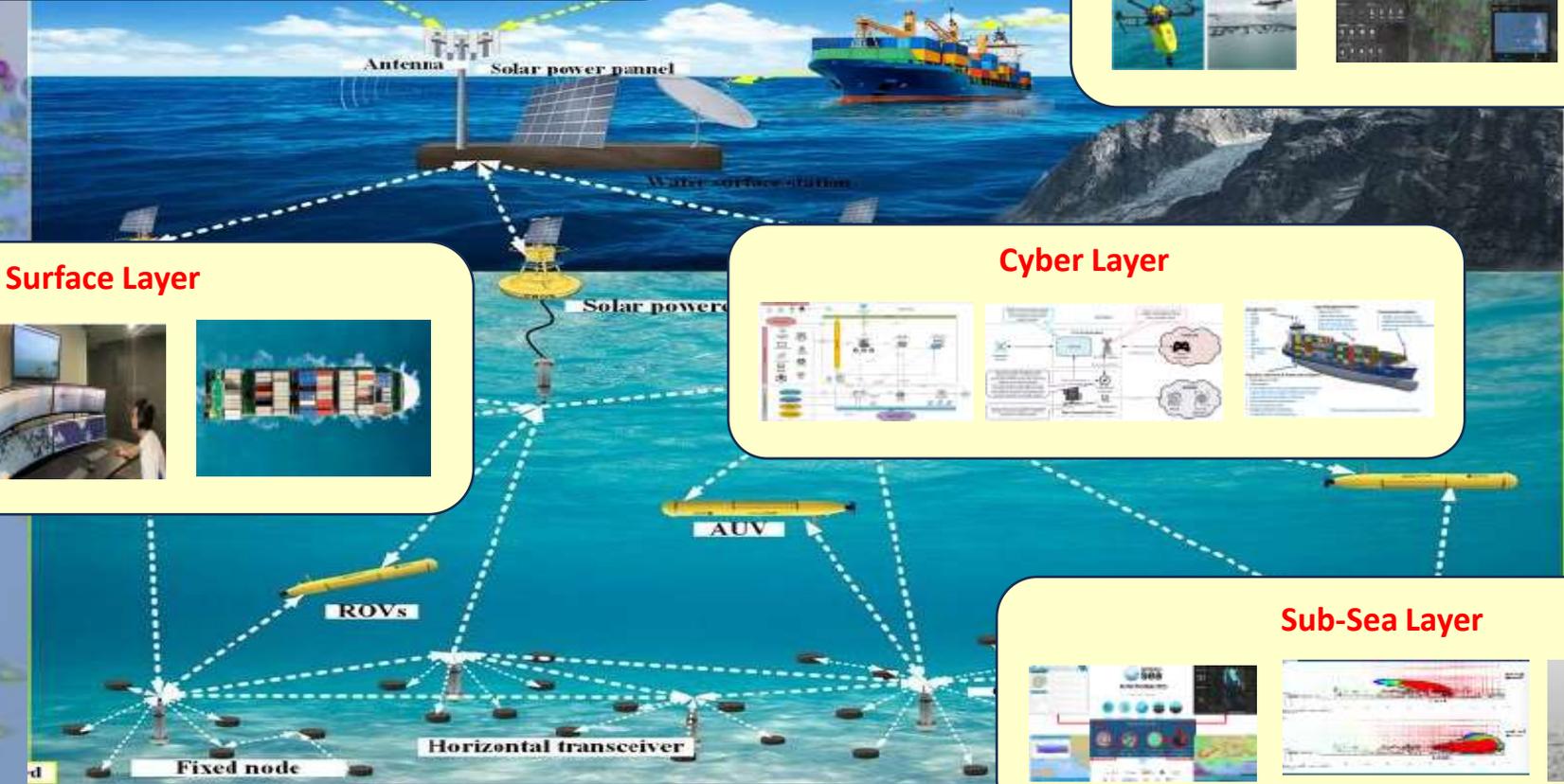


# Comprehensive Multi-Domain Awareness

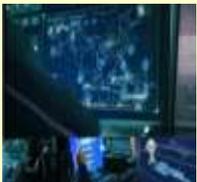
## Space Layer



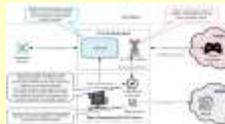
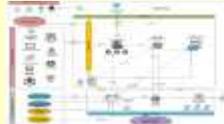
## Air Layer



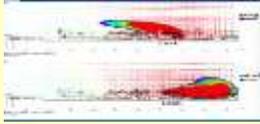
## Surface Layer



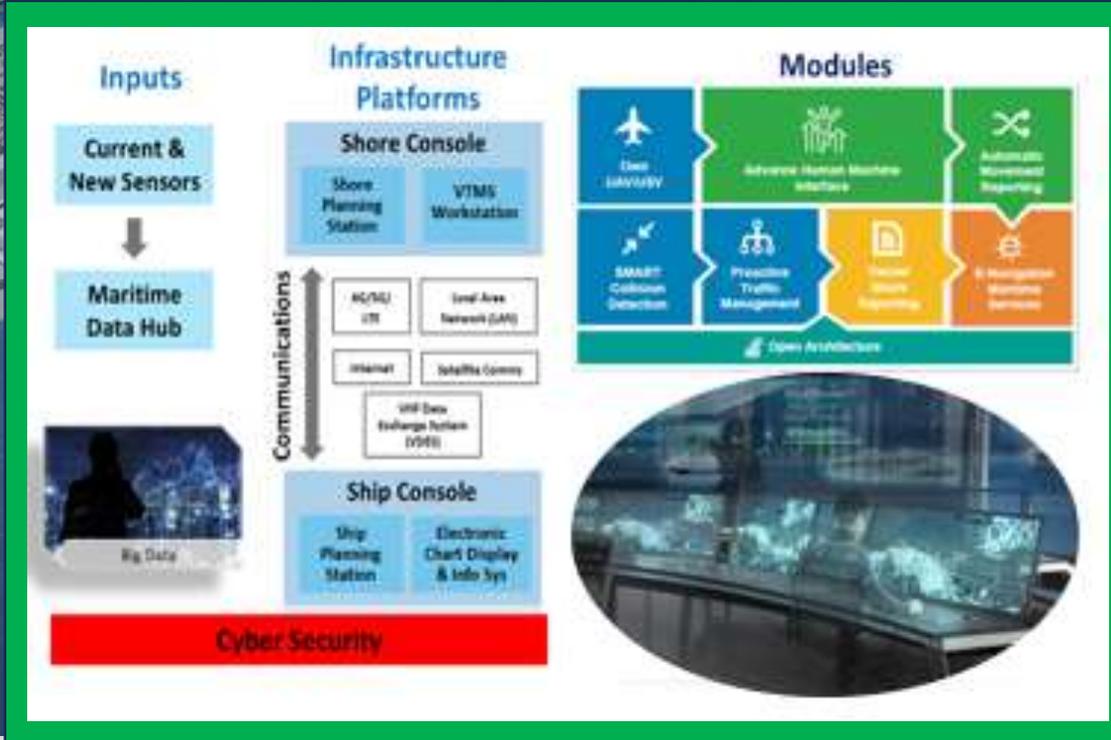
## Cyber Layer

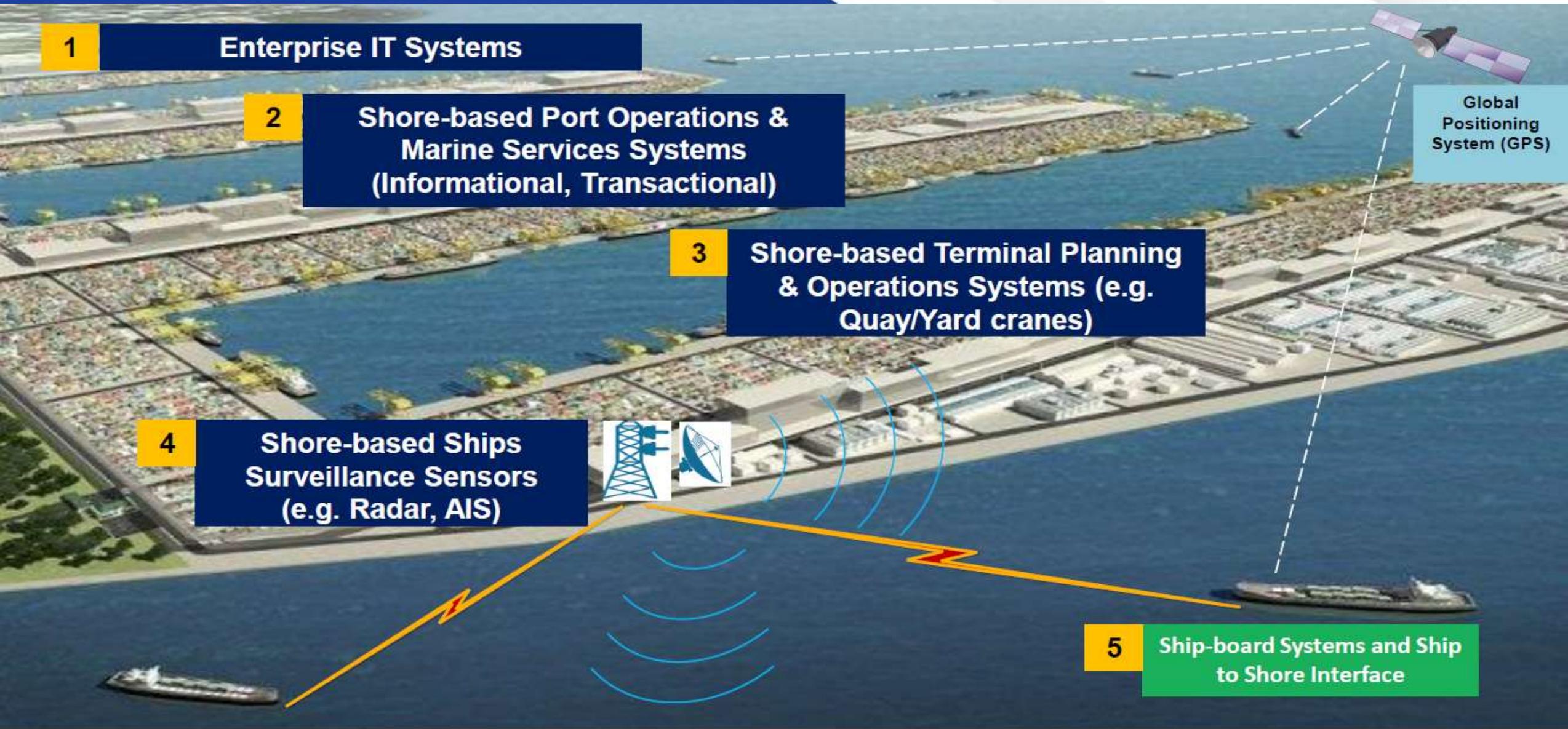


## Sub-Sea Layer



# Next Gen Vessel Traffic Management





# Collaboration and Innovation



Maritime Innovation Lab @ PSA Vista; Maritime Drone Estate



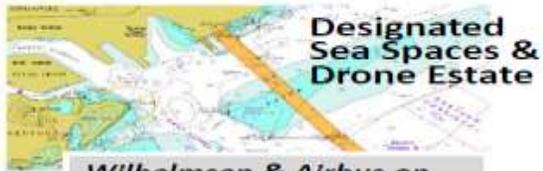
2 operational berths at Pasir Panjang Terminal



Test-bed Energy Solutions for Next Gen Multipurpose Port



## Physical Test-Bed



Designated Sea Spaces & Drone Estate

Wilhelmsen & Airbus on shore-to-ship drone delivery



## Digital Test-Bed



## Data Repository

Singapore Maritime Data Hub (SG-MDH) as a one-stop data repository and centralised API gateway for maritime community data



Scan here for the link

## Regulatory Sandbox

Facilitate full scale trials in a safe and controlled environment.

Maritime Autonomous Surface Ships Pilot Projects



## CoE for Maritime Energy & Sustainable Development (MESD)



Green Technologies

## CoE for Modelling & Simulation for Next Generation Ports (C4NGP)



Next Gen Ports

## CoE for Maritime Safety (CEMS)



Smart Shipping

## CoE for Autonomous & Remotely Operated Vessels (CEAOPS)



Smart Shipping

## Global Centre for Maritime Decarbonisation (GCMD)



Green Technologies

# Maritime Incident Management

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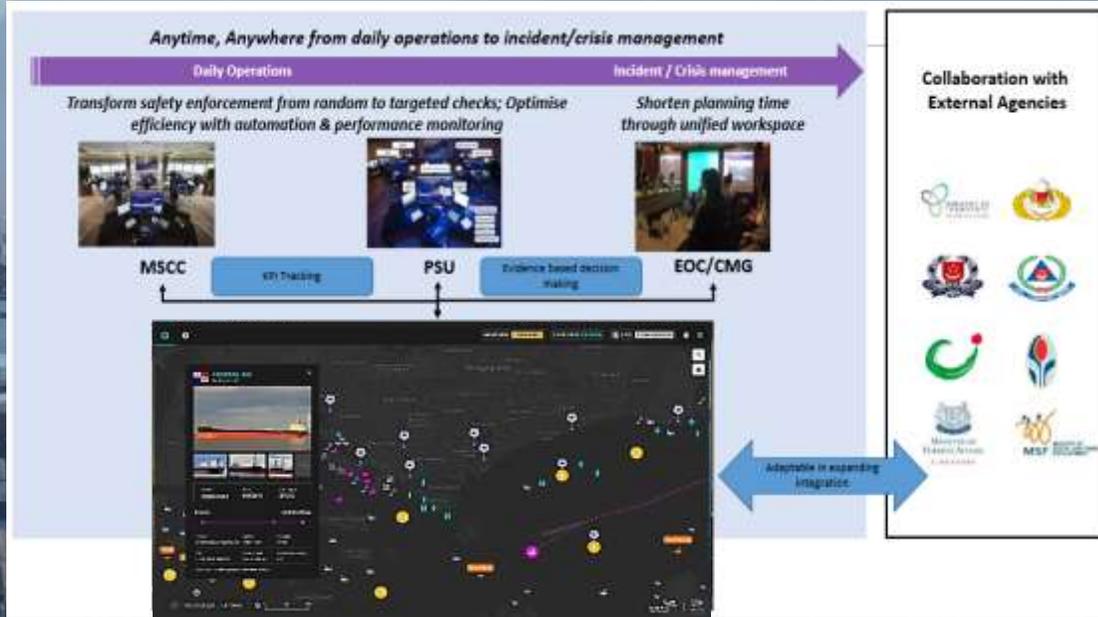
No Common Sit Pic
- 

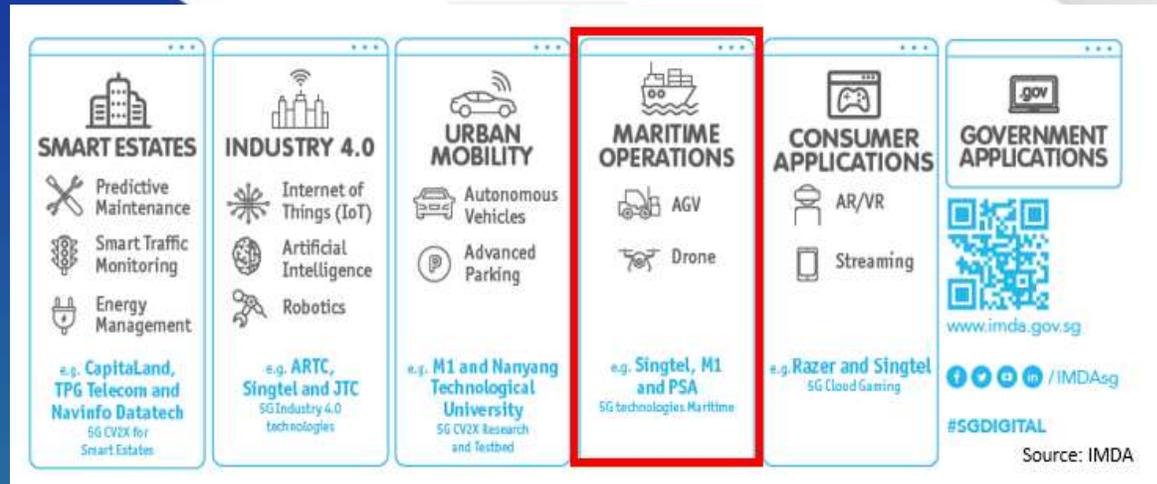
Disparate Systems
- 

Manual Consolidation
- 

Limited Collaboration
- 

Diverse Stakeholders





## Improving Connectivity in Port Waters for Maritime Safety

Maritime Autonomous Surface Ships (MASS)



Remote Pilotage (RAPA) Services



Telemedicine



Sensors on Drones and Patrol Craft





M P A  
S I N G A P O R E



MARITIME  
SINGAPORE

**For Information**