Successful models of inclusive innovation

IMO Innovation Forum

Mr Kenneth Lim, Assistant Chief Executive (Industry), MPA
The Maritime sector needs Innovation as an engine of growth

**Digitalisation**
Increasing pace of digitalisation & automation. Opportunities to improve efficiency of navigation & maritime safety & security

**Disruption**
Rise in new business models, shifts in global supply chain, changing market structures

**Decarbonisation & Environmental Protection**
Increasing global pressure on businesses to decarbonise. Prevention and control of marine pollution from ships.
Adopting an Ecosystem Approach to Tackle These Challenges
An Ecosystem Approach to tackle these challenges
Bringing together Demand and Supply

PIER71™: Port Innovation Ecosystem Re-imagined @ BLOCK71

➢ > 60 start-ups accelerated
➢ 32 received grant funding
➢ 13 solutions deployed in maritime sector
An Ecosystem Approach to tackle these challenges
Bringing together Stakeholders across the Value chain

Global Centre for Maritime Decarbonisation

- Platform for tech development, test-bed and trials
- Joint Industry Projects (JIPs)
- Knowledge Sharing

6 MOU Partners

31 Expressions of Interest
An Ecosystem Approach to tackle these challenges
Bringing together Players across the Ecosystem

DigitalOCEANS™

Foster global interoperability across the maritime transport chain through Open/Common Exchange And Network Standardisation for efficient data exchanges and service integration across the global digital platforms, and create new business opportunities for Port of Singapore

- Enhance Port Efficiencies
- Expand Digital Connectivity
- Create New Business Opportunities & Catalyse Ecosystem Development

Where We are Today

- Established MoU with strategic partners
- Developing Port Clearance API standards
- Developing technical standards referencing IMO’s FAL compendium (non-technical)
Inclusive Innovation: For IMO Members’ Consideration
Playbooks to serve as a Guide

Maritime Digitalisation Playbook
MPA, Singapore Shipping Association, Infocomm Media Development Authority, Boston Consulting Group

Decarbonisation Guide
Centre of Excellence in Maritime Energy and Sustainable Development @ Nanyang Technological University
Innovation Processes and Infrastructure

Maritime Innovation Process

| Short-Term - Students | Short/ Medium-Term - Startups | Long Term – R&D community |

Enabling Infrastructure for Innovation

Distilling Industry Problems to Solver Communities

- Designated Sea Spaces & Drone Estate
- Singapore Maritime Data Hub
- Maritime Innovation Lab
Possible avenues of collaboration for all IMO members

Joint Authorship of Playbooks

Sharing of Industry Challenge Statements

Contributing to inclusive decarbonisation through NextGEN

PIER71 Smart Port Challenge 2021

Examples of industry-wide challenge statements:

- Ensuring drinking water quality onboard vessels
- Monitor, detect and improve workforce physical & mental health in maritime sector

- Contribution of project information to NextGEN database
- Participating as a stakeholder in NextGEN workshops and workstreams
- Seeding collaboration for capacity-building and technology transfer