

# National Approach to Goal 2: Increasing the use of hydrographic data for the benefit of society – Implementing Marine Spatial Data Infrastructure (MSDI)

## IRCC WORKSHOP

VTC, 7 October 2021

Singapore

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# Content

1. Introduction to Singapore's NMSDI: GeoSpace-Sea
2. National Approach and Perspective to Goal 2



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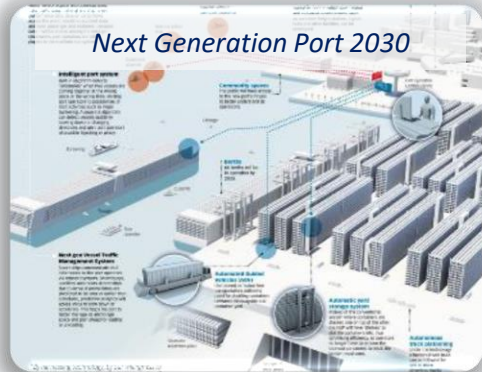
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# Singapore's Sea Space

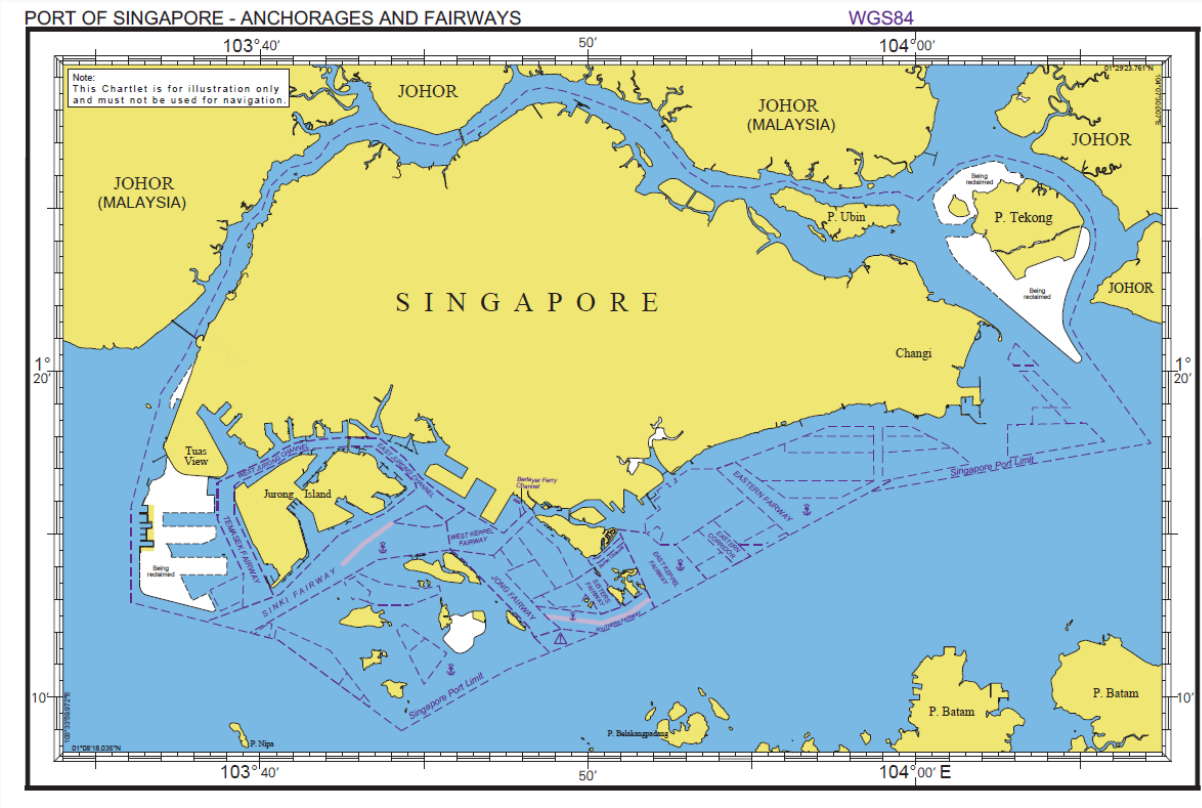
## Diverse uses and users of Singapore's Sea Space



Shipping & Navigation



Sea Space Planning



Waterfront Use Planning



Marine Biodiversity



Desalination Plants



Reclamation & Dredging



Tourism



Aquaculture



Submarine Cables/Pipelines



Recreation



Power Plants/Refineries



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# Singapore NMSDI: GeoSpace-Sea

## PARTNERHIPS & DATA SOURCES



Basemaps



Administrative



Physical



Ecological



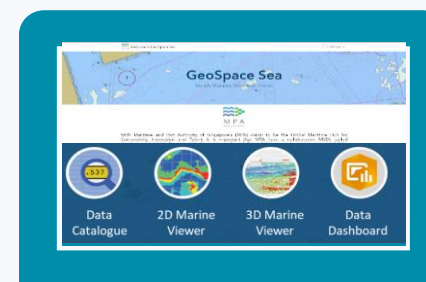
Human

## NATIONAL CENTRAL MARINE & COASTAL REPOSITORY

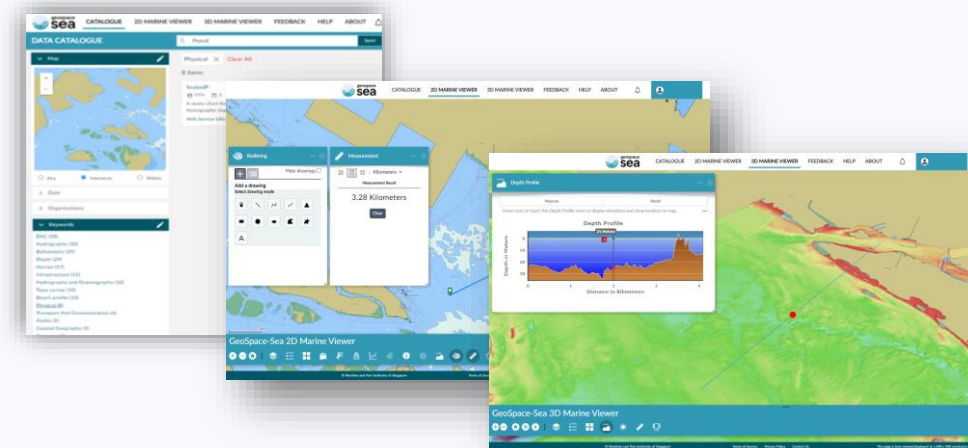
Data consolidation,  
standardisation, harmonisation  
and integration



## OPEN WEB-BASED PLATFORM



Data  
discoverability,  
access,  
visualisation  
and analysis



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# Aligning with the UN Agenda

## GeoSpace-Sea Strategic Direction

**Government Agencies** (Sep 2019 – 2021)

**Research & Education Entities** (2021 – 2022)

**Public Users** (2022 – 2023)

### Long Term

Contribute to regional and global agendas by:

- Being an authoritative source for marine coastal digital data;
- Enabling solutions to achieve SDGs and;
- Contributing to regional and global data ecosystems.

## GeoSpace-Sea Application and Research Fronts

Marine &  
Coastal Spatial  
Planning

Blue  
Economy

Climate  
Change

Marine  
Science  
R&D

Marine  
Conservation

UN  
SDGs

UN Decade  
of Ocean  
Science

Disaster  
Response



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# The IHO Strategic Goal 2

Vision: Advance Maritime safety and efficiency, support the protection and sustainable use of the marine environment

Goal 2: Increasing the use of hydrographic data for the benefit of society

Targets	SPI (measure for success)
<b>2.1</b> Build a portal to support and promote regional and international cooperation in marine spatial data infrastructure (MSDI)	2.1.1 Number of hits downloading data/information from the portal
2.2 Promote new tools and methods to accelerate and increase coverage, consistency, quality of surveys in poorly surveyed areas	2.2.1 Percentage of adequately surveyed area per coastal state 2.2.2 Number of new applications of the new version of Standards for Hydrographic Surveys (S-44)
<b>2.3</b> Apply UN shared guiding principles for geospatial information management in order to ensure interoperability and extended use of hydrographic data in combination with other marine-related data	2.3.1 Number of HOs reporting success applying the principles in their national contexts (2026: 70%)



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# The IHO Strategic Goal 2

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**Precondition:** There is hydrographic data and MSDI(s) managed and ready to be used more widely for the benefit of society

- Implementation of MSDI, GeoSpace-Sea



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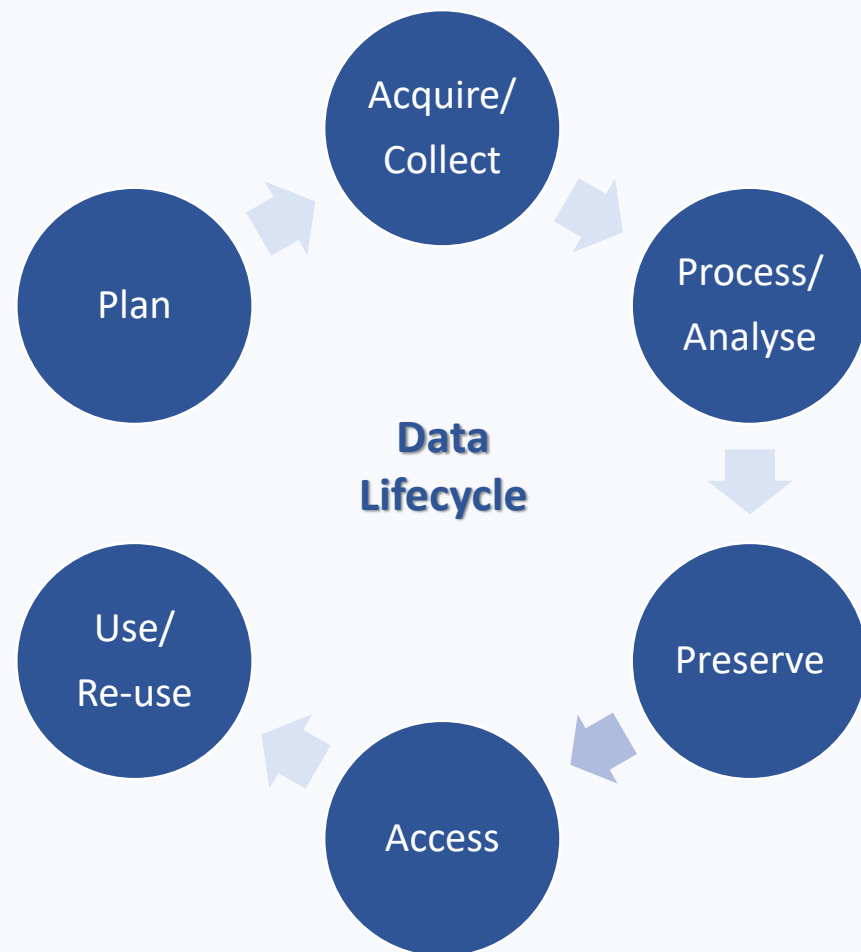
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# Data – Oil in a Digital Hydrospace





# Hydrographic and Marine Spatial Data Management



Target	SPI (measure for success)
2.3 Apply UN shared guiding principles for geospatial information management in order <b>to ensure interoperability and extended use</b> of hydrographic data in combination with other marine-related data	2.3.1 Number of HOs reporting success applying the principles in their national contexts (2026: 70%)

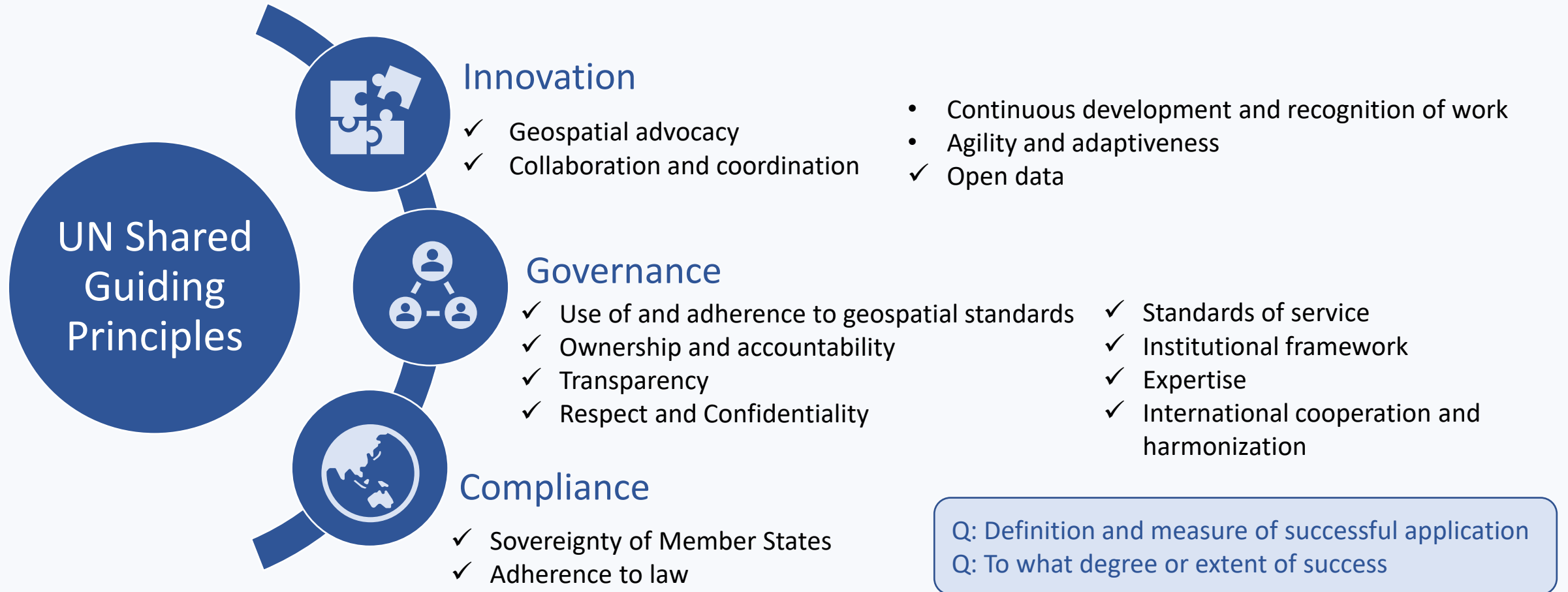


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# Application of UN Shared Guiding Principles

Principles and common values to guide the behaviour of, and serve all national and global geospatial entities engaged in, the collection, production, management and dissemination of geospatial information



# Participation

## Target

2.1 Build a portal to **support and promote regional and international cooperation** in marine spatial data infrastructure (MSDI)

### International

- IHO Strategic Plan: Goals, Target, SPI
- IHO MSDI WG: Targets 2.1, 2.3 and 3.1

### Regional

- Regional Hydrographic Commission
- Regional MSDI: East Asia Hydrographic Commission (EAHC)-MSDI

### National

- National MSDI: Singapore GeoSpace-Sea

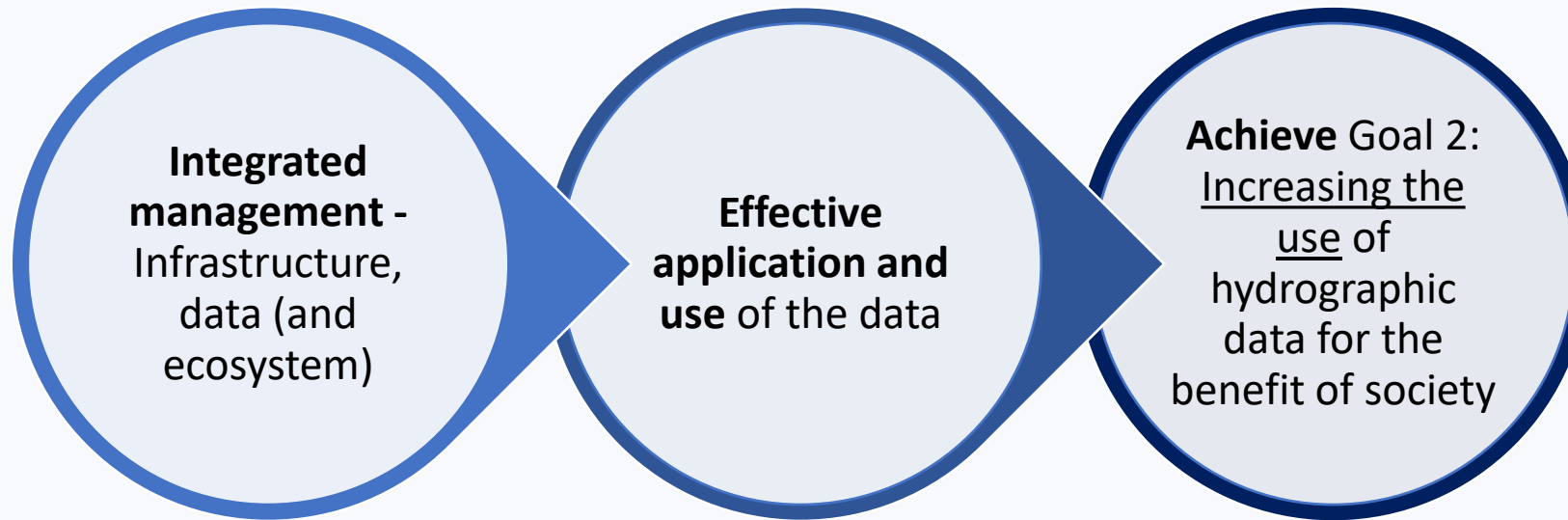


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# Looking ahead

## *Implementation of MSDI*



- Moving towards effective application and use, and successfully increasing its use
- S-100 universal hydrographic data model from MSDI perspective to increase the use of hydrographic data
- Next step: Questionnaire on Target 2.1 Portal from IHO MSDI WG to be circulated



# Thank you



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