



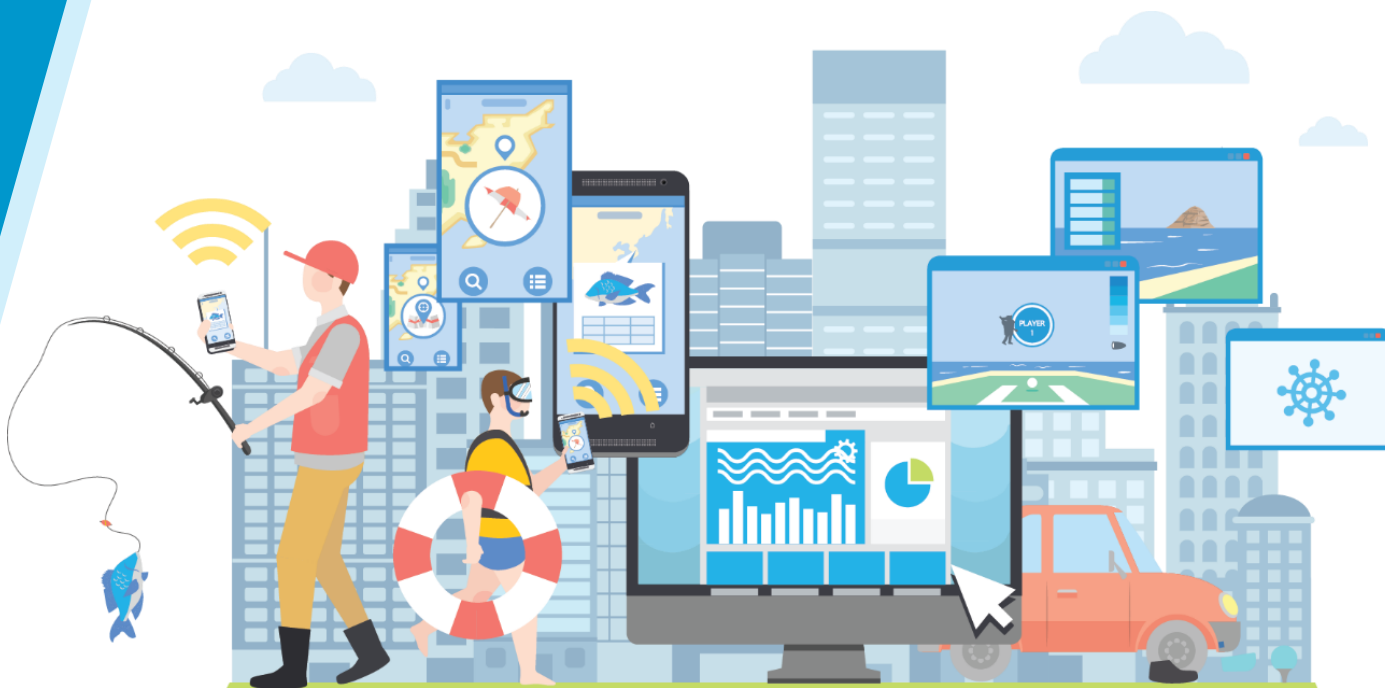
Republic of Korea

# ROK MSDI

Marine Spatial Data Infrastructure

IHO MSDI WG Meeting, 9 - 13 May 2022

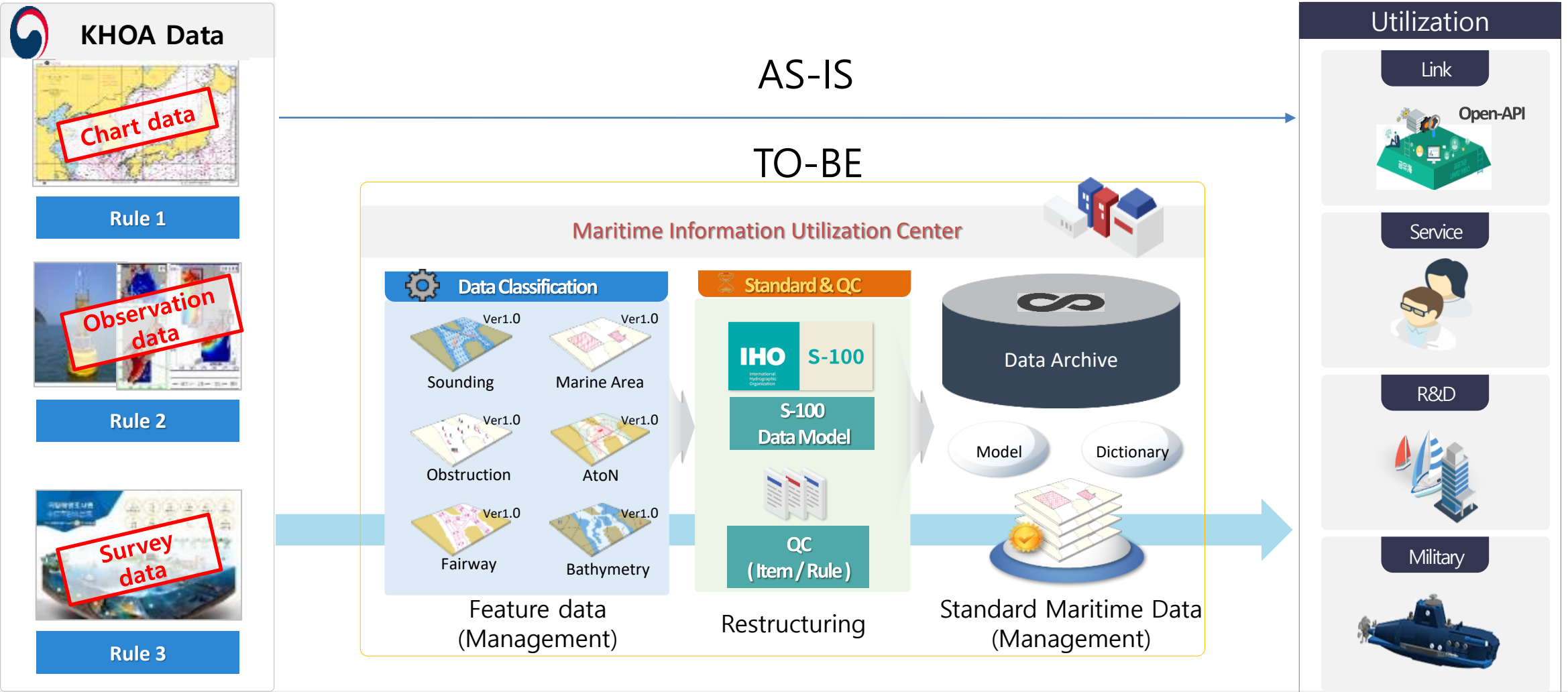
National Report



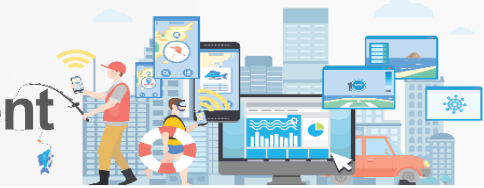


## Purpose

To provide feature-based maritime data based on the S-100 data model

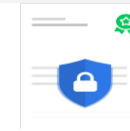
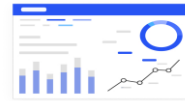


# Transforming Marine Geospatial Data Collection and Management



2021

## Roadmap establishment



### Marine information identification and roadmap establishment

### Data capture specification and data model

### Data framework/system Improvement

### Quality management

### Product utilization

2021

2022

2023

2024

2025

Marine information identification in KHOA

Derived products review

Supply chain improvement

Data creation

Derived production

Identification of standardization targets

Supply chain management

Data framework improvement

Lifecycle management

Marine information utilization

Innovative transformation assessment

Data model (logical and physical model)

Data creation

Quality management

Automated product creation

Strategic Roadmap

Registry (mainly internal level)

Standards management

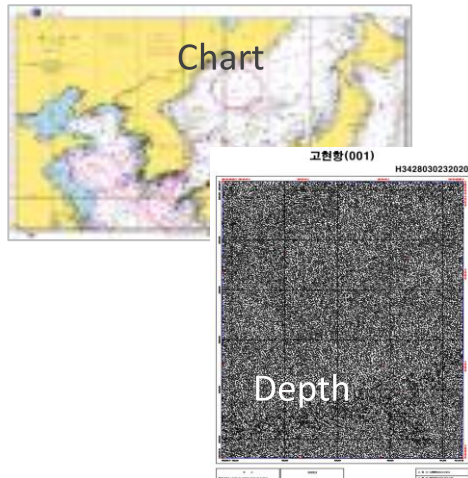


2021

### Feature Identification

#### Products

✓ Products : 1,248



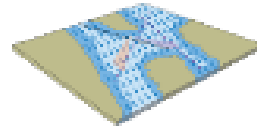
■ 도선법 시행규칙 [별표 8] <개정 2019. 8. 14>  
**도선구의 명칭과 구역 (제17조 관련)**

도선구의 명칭	구역
군산항 도선구	충청남도 서천군 마서면 송식리 지단, 연도 지단, 북위 36도00분11초 동경 126도27분53초, 북위 35도56분11초 동경 126도27분53초, 내초도 산정(해발 59미터)을 순차적으로 연결한 선 안의 수역
	충청남도 안면도 남단으로부터 대화사도 남단, 연도 지단, 마지면 초서리 지단과 연결한 선 안의 수역

Laws and notices

#### Feature data

✓ Features : 296



Sounding



Marine Area



AtoN



Fairway



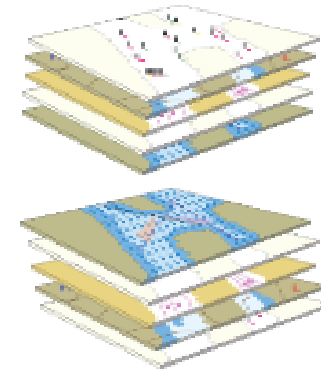
Obstruction



Bathymetry

#### Marine geospatial information based on S-100

✓ Marine geospatial information : 187



#### Marine Geospatial Information based on S-100 Data Model

- Conceptual Schema Language
- Metadata(Data Quality)
- General Feature Model
- Encoding Formats(GML)

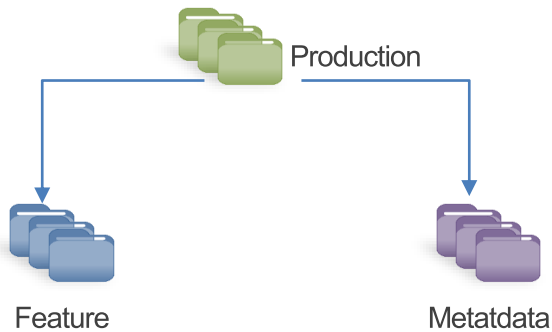


2021

## Marine Geospatial Data Collection and Management

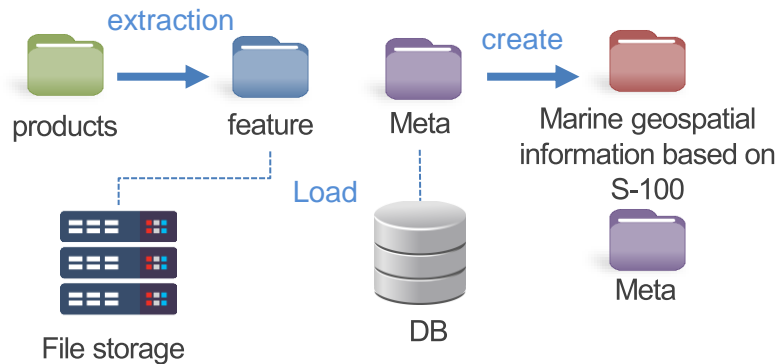
### Data Collection

Investigate products Feature Identification Metadata



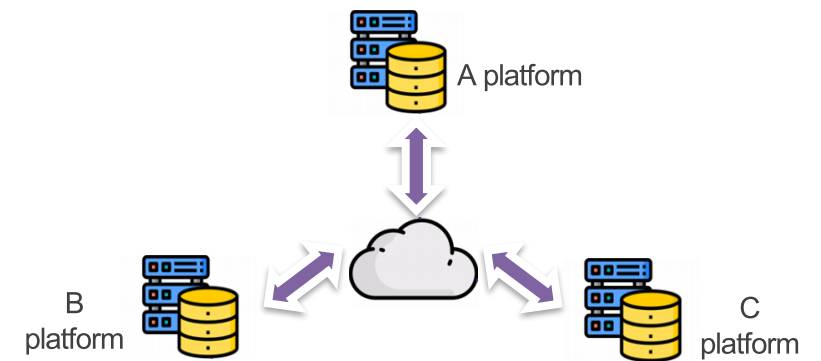
### Data Management

Update data Creation of standard marine information QC



### Product Utilization

► Metadata search ► Service integration



Key considerations related to the marine geospatial data collection and management system

✓ Feature Identification

✓ Lifecycle Management

✓ Metadata

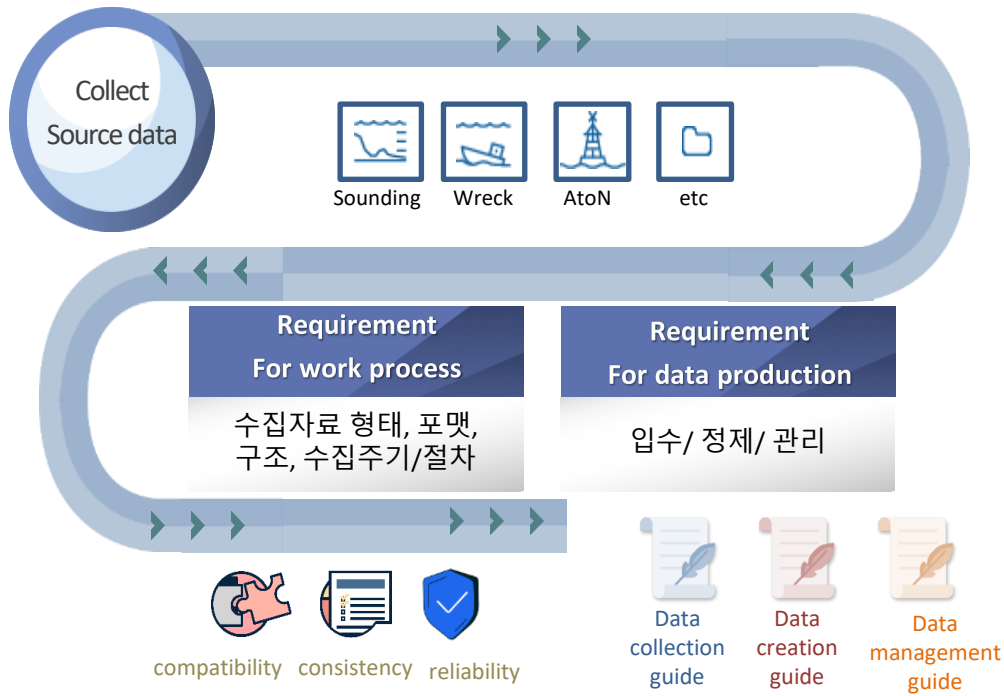
✓ Integration with other platforms



2022

## Marine Geospatial Data Collection and Management

### ❖ Supply Chain Management based on S-100 data model



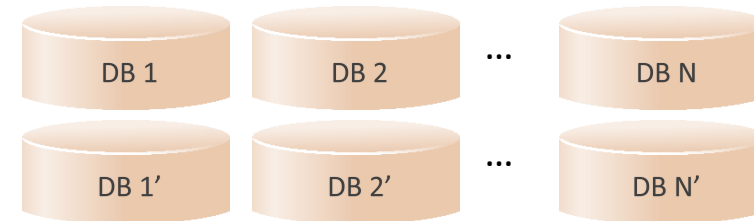
Improvements in productions by creating/updating work regulations and guidelines with other agencies

### ❖ System Architecture

● Microservice Architecture for extending services



Cloud Platform



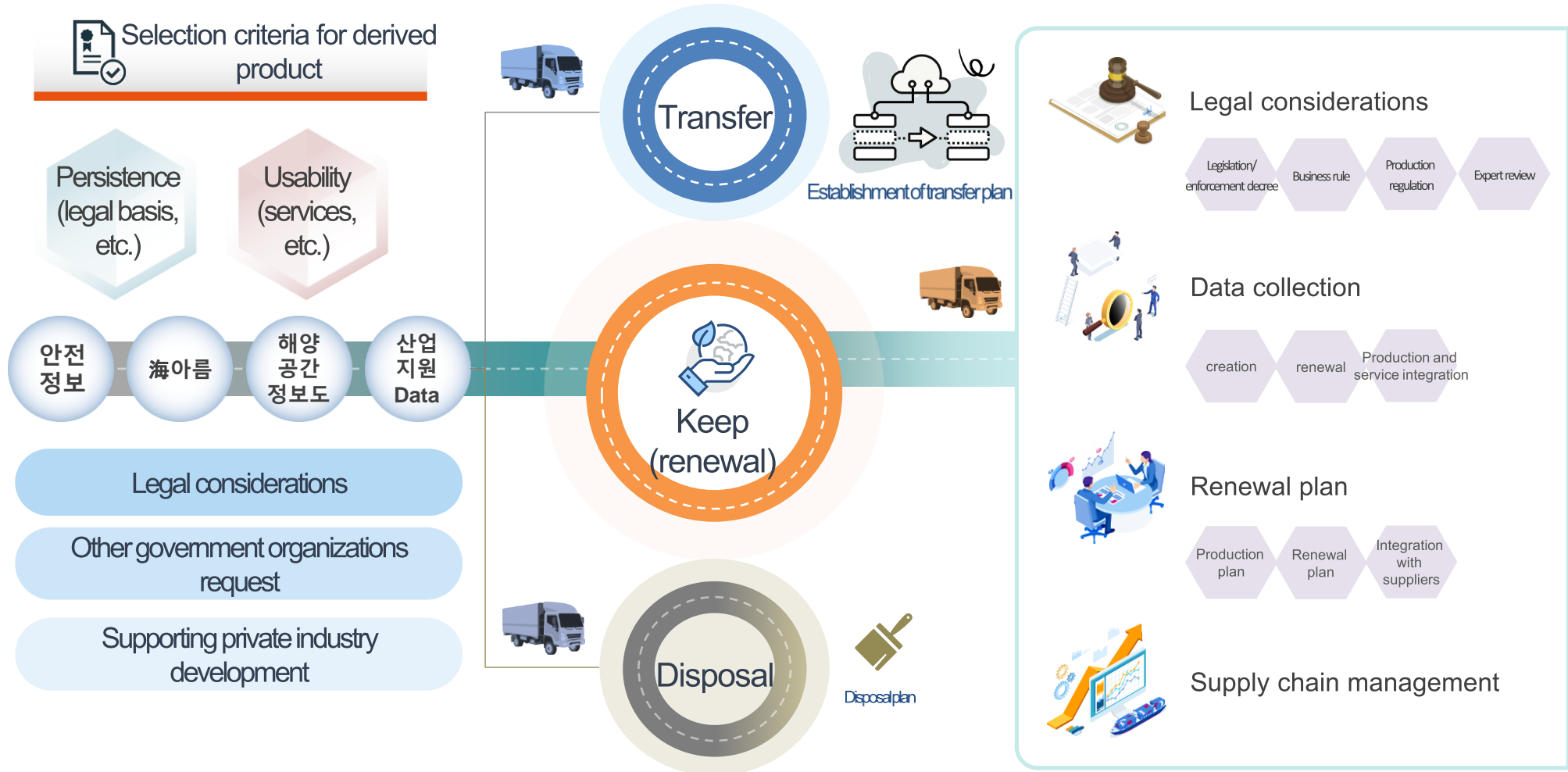
● DB Auto Scale In/Out according to the increase in marine geospatial information

Flexible distributed storage system



2022

## Production of derived products







2022

Digital marine geospatial information

### ❖ Digital marine geospatial information for revitalization of private industry

#### Marine basemap

레이어코드 정의  
도식정의

Land  
해양

연속지형기본도  
요소정의

- ✓ Sustainability
- ✓ Up-to-date
- ✓ Usability

**One Source Multi Use**

Marine geospatial information database that serves as a reference for various spatial information applications

#### Marine information streaming service

다중 플랫폼

해양정보 중첩

비항해용 목적

사용자친화적 디자인

벡터 기반 지도

항해용 확장 고려

WGS84

UTM-K

“ An integrated visualization service for marine information that anyone can quickly access ”

### ❖ Investigation on laws on the Utilization of Marine survey and Marine Information

- Deriving the ambiguous part of the law in the collection, management, and utilization of marine information
- Prepare reasonable improvement plans so that future data creation is legal