Ocean Data and Information System

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UNESCO

IODE

Context

In April 2016, a team of external auditors was engaged by UNESCO to undertake an audit of the following aspects of Intergovernmental Oceanographic Commission (IOC) operations:

- Management framework
- Budget management
- Human resources
- **IOC activities and programs**

"Section 5: Information exchange system and marine data management.", outlines observed barriers and issues related to marine data and information discovery, access, and exchange, along with other organizational issues likely contributing to the current state of the marine data and information system landscape.

Recommendation No. 15. *The External Auditor recommends that a draft resolution be submitted to the IOC Assembly calling for Member States to work together, with the support of IOC, to construct a universal information system and ocean data portal, along with a cost-benefit analysis prepared in advance by the IODE project.*

Response to the IOC audit

A concept paper was developed and presented at IODE XXIV (https://www.iode.org/odisconcept2017) which:

- Analyzed the points raised in the ***information exchange system and marine data management*** section of the IOC audit report

- Elaborated on the current state of the marine data and information system landscape, current challenges and root causes, and relevant ongoing efforts

- Outlined options considered and recommended in order to address the recommendation from the audit

- Presented a conceptual model (Ocean Data and Information System) and proposed steps towards achieving this goal

- The Assembly expressed its support for the proposed development of an Ocean Data and Information System (ODIS) concept paper and *stressed that ODIS should focus on leveraging existing efforts*.

Building on existing efforts

Examples of the types of efforts we hope to leverage:

- Knowledge platform efforts

- Thematic networks

- Metadata and data brokering/exchange

- Semantics and other foundation activities

- Platform development

- Sharing of best practices

Deliverable 1: Ocean Data and Information Sources Catalogue

- online browsable, searchable catalogue of existing ocean related web-based sources/systems of data and information

- provide information on products and visualisations of ocean data and information landscape (source entities and their connections)

- contribute to Agenda 2030 objectives and UN Decade on Ocean Science for Sustainable Development

http://www.iode.org/data-national

Preparatory work: simple list of online data services provided by Member States: > 200 sites
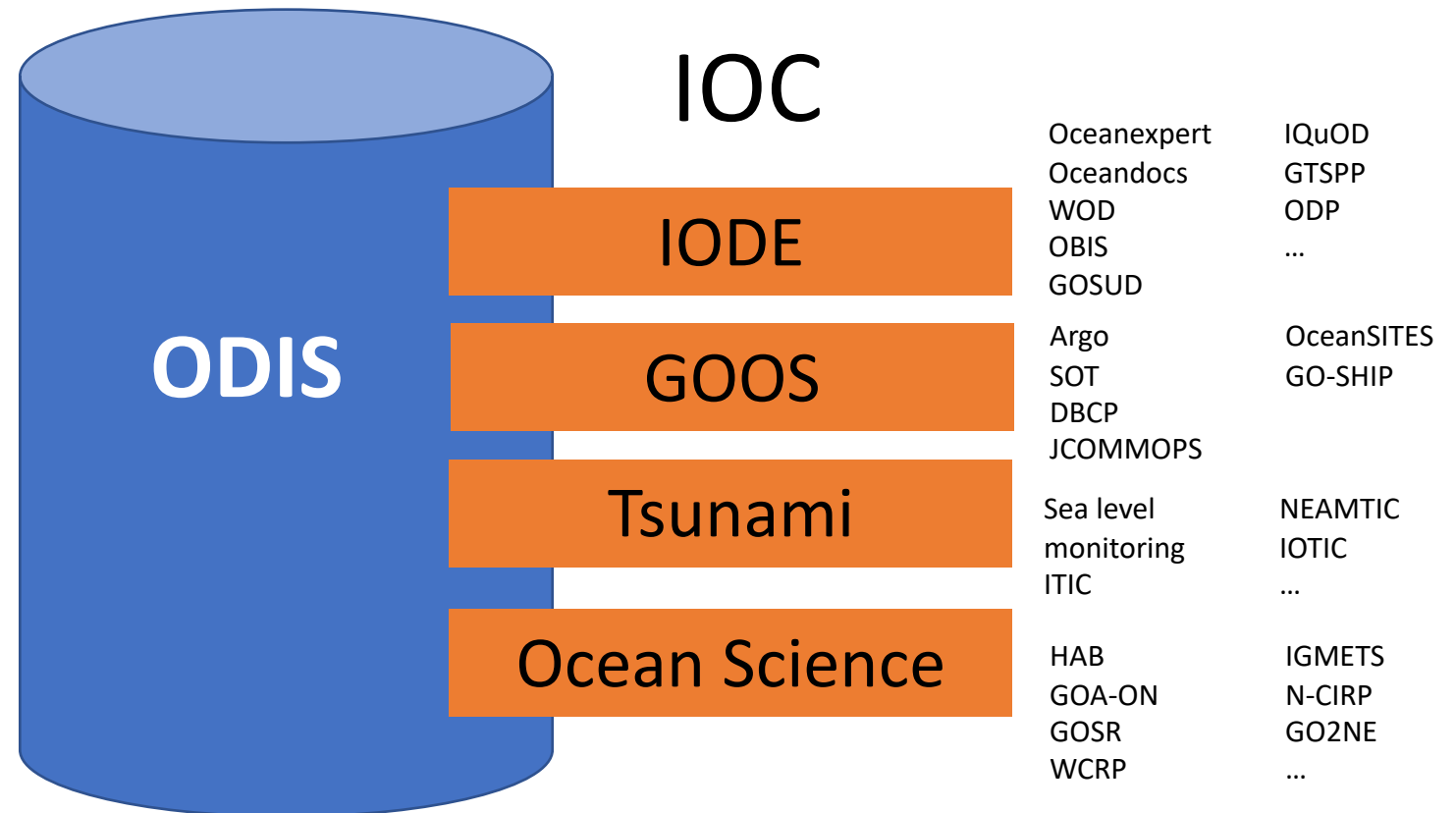
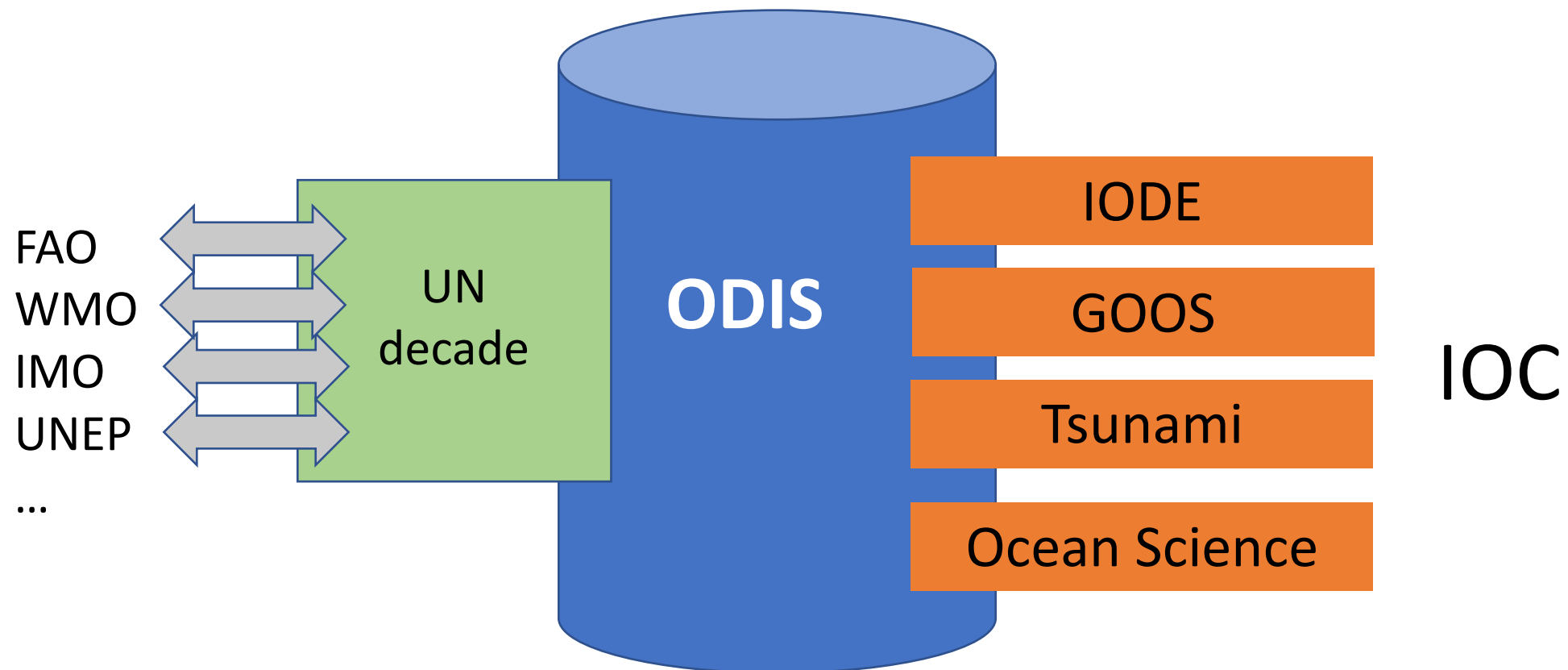# Deliverable 1: Ocean Data and Information Sources Catalogue - prototype

- online browsable, searchable catalogue of existing ocean related web-based sources/systems of data and information

- Prototype will be available end of 2018

Deliverable 2: ODIS concept paper

- Each IOC programme and activities will contribute their data, information, products and services to ODIS

- Users will have one-stop access

IOC

ODIS

| IODE |
| GOOS |
| Tsunami |
| Ocean Science |

Oceanexpert	IQuOD
Oceandocs	GTSPP
WOD	ODP
OBIS	…
GOSUD	
Argo	OceanSITES
SOT	GO-SHIP
DBCP	
JCOMMOPS	
Sea level	NEAMTIC
monitoring	IOTIC
ITIC	…
HAB	IGMETS
GOA-ON	N-CIRP
GOSR	GO2NE
WCRP	…

UN decade: further extend ODIS

Next: Further expand system

Schematic showing elements of the proposed
IOC Ocean Data and Information Sources (ODIS) architecture.
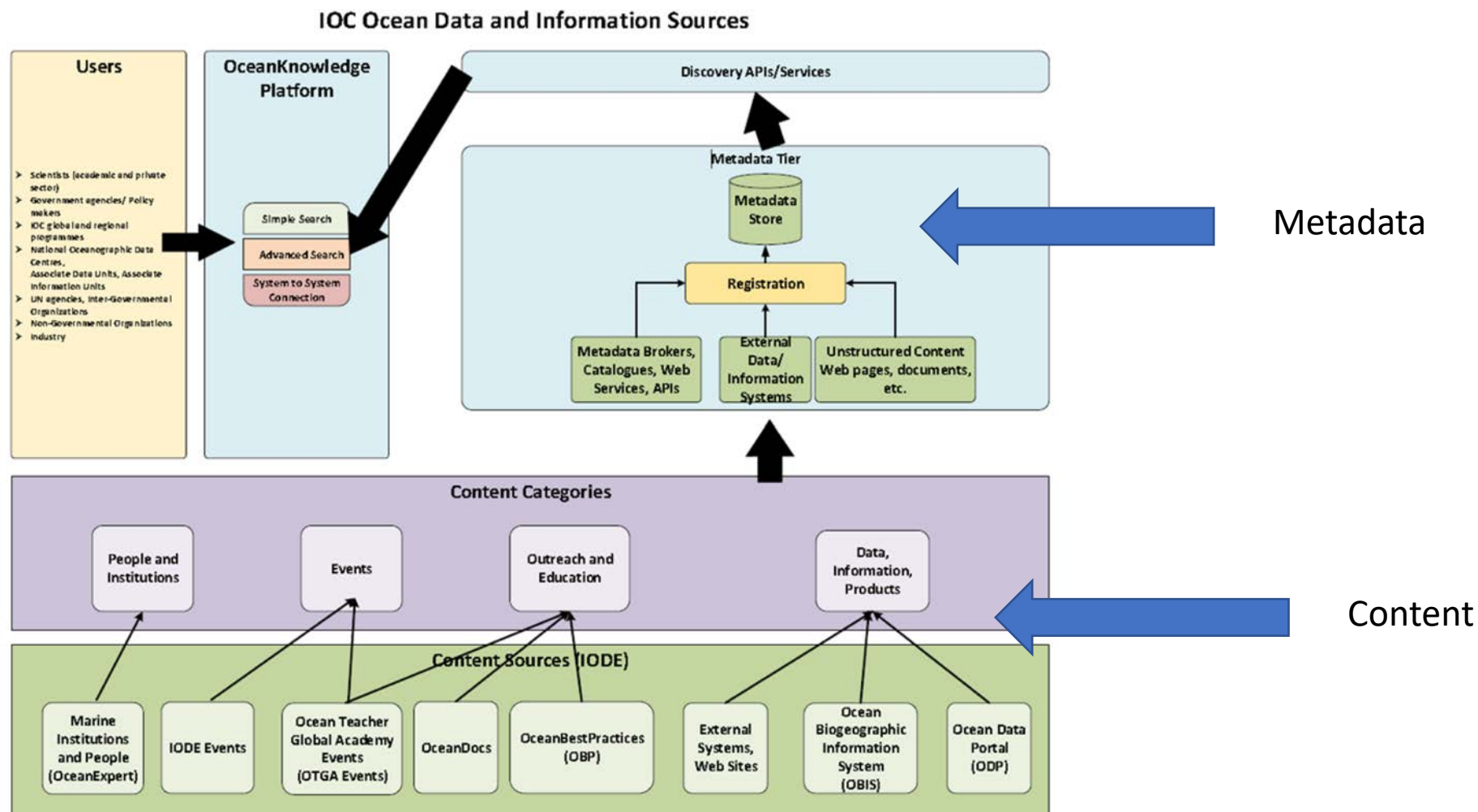
Future: global data/information portal

- Linking global distributed data, information, product, service sources that allow discovery and download

- Currently not possible due to wide variety of metadata schemas, lack of uniform formats, lack of interoperability, lack of widely used quality control processes and flags, duplicates and near duplicates,…

- Need more efforts on agreement on "Best Practices"