



**NOAA EDM**

Welcome to the third annual  
**NOAA Environmental Data Management Conference**

*Ensuring NOAA's data are documented,  
discoverable, accessible and preserved*

May 15-17, 2012  
University of Maryland Inn & Conference Center

*Twitter: #noaaedmc*



## NOAA Environmental Data Management Conference

# *Opening Plenary*

### Agenda

#### **Opening Remarks**

*Jeff de La Beaujardière, Conference Chair  
NOAA Data Management Architect & EDMC Chair*

#### **Leadership Keynote**

*Joe Klimavicz, NOAA CIO & HPCC Director*

#### **Conference Logistics**



**NOAA Environmental Data Management Conference**

*Setting the Stage*

# Vision for NOAA Data Management

All NOAA data will be:

- Discoverable



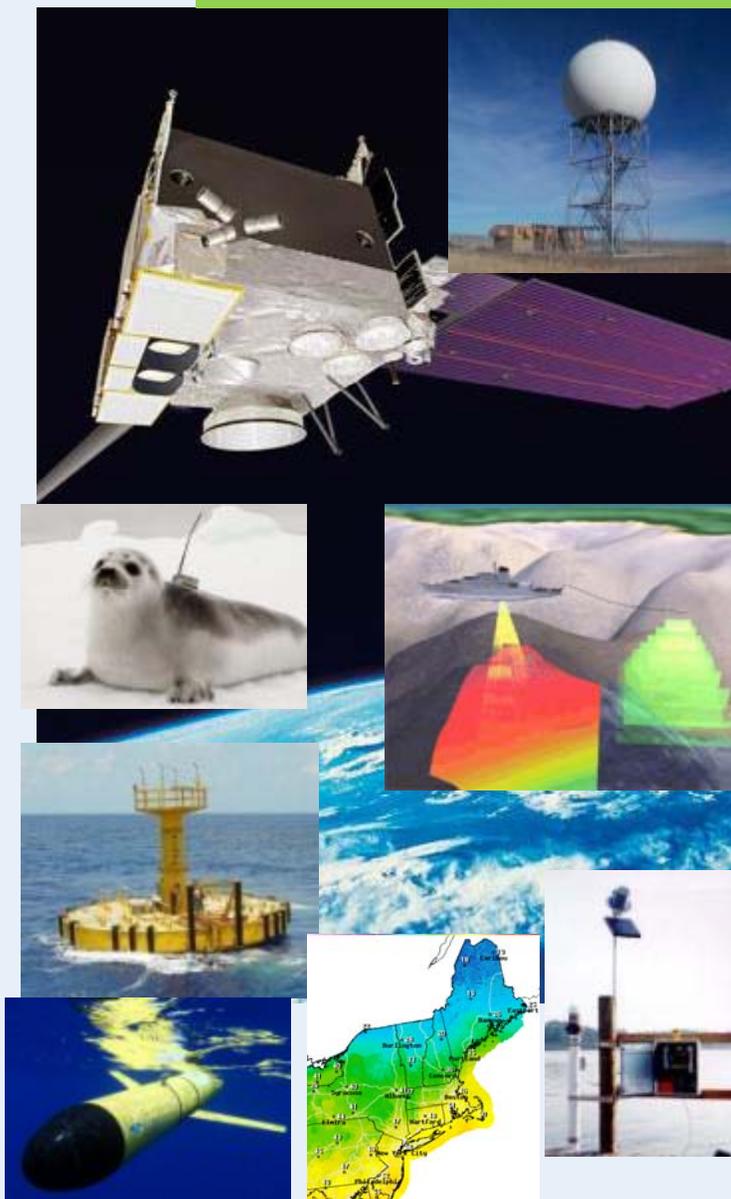
- Accessible



- Documented



- Preserved



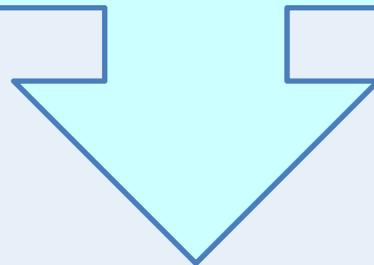
for all types of users and applications.

# Approach: Policy and Technical Implementation

## **EDMC**

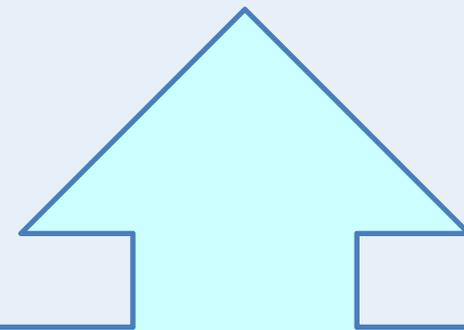
Environmental Data Management Committee

**Procedural Directives to  
provide policy and guidance**



*top-down*

*bottom-up*



**Technical collaborations to share  
solutions and best practices**

**Cross-NOAA technical groups:**  
DMIT, Geoportal WG, GeoPlatform WG,  
GIS Cmtee, UAF team, Climate.gov Portal  
team, OGC Interest Group, Open-Source  
GIS group, LO-specific groups, etc.

# EDMC Procedural Directives

## Data Management Planning PD

*Plan, in advance, how you will preserve, document and distribute your data.*

### Archive Procedure

*What to archive, how to submit to archive.*

### Data Documentation

*How to apply ISO 19115 metadata for discovery, use & understanding.*

### Data Access & Discovery

*Provide on-line services so your data can be found and retrieved.*

### Data Sharing by NOAA Grantees

*State how you will share data, and share within 2 years.*

### Data Citation

*Use unique identifiers to allow data to be referenced and tracked.*

*In preparation*

# EDMC Representatives

Office	Representative
NESDIS	Scott Hausman, Ingrid Guch
NMFS	Brion Cook, Tina Chang
NOS	Tony Lavoie, Kim Jenkins
NWS	Harry Tabak, La'Tanya Burton
OAR	Darien Davis
OMAO	Cecile Daniels, Nicole Manning
PPI	Thanh Vo Dinh, Shanna Pitter
Enterprise Arch/OCIO	David Layton



# NOAA EDM

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# NOAA Environmental Data Management Wiki

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## Welcome to the NOAA Environmental Data Management Wiki!

This wiki contains guidelines, best practices and information on [policies](#), [standards](#) and [tools](#) being considered, used or developed across NOAA and in the broader environmental data management community. It is intended to help you find resources and connect to others in order to improve the access, interoperability, and usability of environmental information.

The wiki uses "Categories" to help organize and manage content (see Wikipedia [Categories Page](#) for information about using categories). The Categories link in the navigation menu on the left links to the [Categories List](#) from any page in the wiki. See [using the NOAA Environmental Data Management Wiki page](#) for additional tips on using the wiki.

Please [contact Jeff de La Beaujardière](#), [Ted Habermann](#) or [Lewis McCulloch](#) if you have questions, suggestions, or contributions for this wiki. (See also the [List of recent contributors](#).)

## Top Categories

- [NOAA Procedural Directives](#)
- [ISO 19115 Metadata Standard](#)
- [Open Geospatial Consortium Standards](#)
- [Multidimensional Grids](#)
- [ISO Object Ordering](#)

## Projects

- [Unified Access Framework Project](#)
- [NOAA Office of Climate Observations](#)
- [Integrated Ocean Observing System](#)

## Latest News

- [A Data Management Plan repository has been established to share data management plans produced or contributed in response to the new procedural directive on data management planning.](#)

# NOAA is not alone -- collaborate and interoperate with others



Met/Ocean DWG  
Hydrology DWG  
Standards WGs



TC211



L1



GEOSS



OPULS

OPeNDAP



OOI-CI, EarthCube



WMO/WIS  
WMO/GTS



CWIC



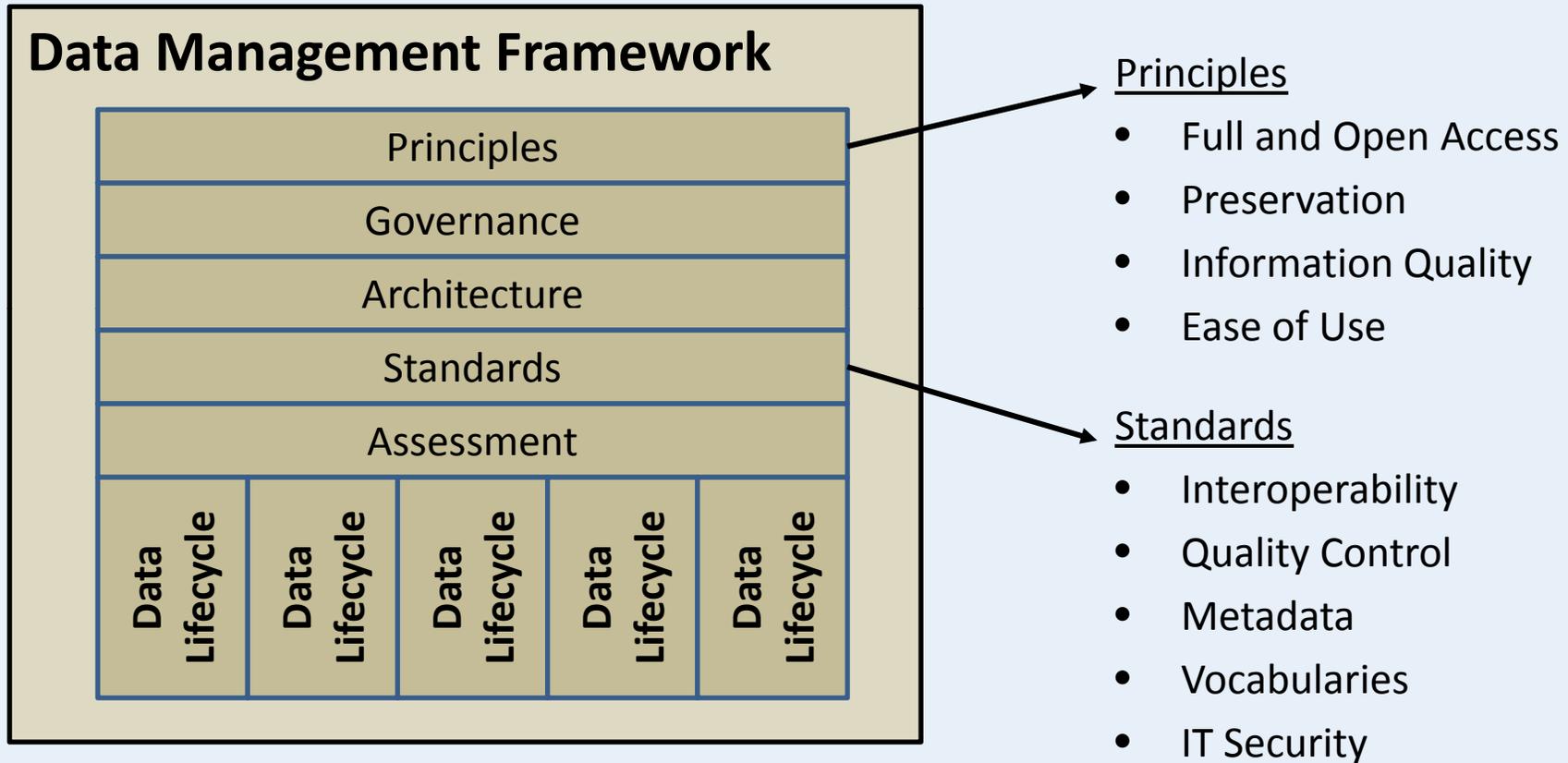
NSTC/IWGDD  
NSTC/NEO TF



The Federation of Earth Science Information Partners  
Fostering connections to make data matter



# Data Management Framework



*from NSTC/CENRS National Earth Observations (NEO) Strategy (2012), Data Management Chapter*

# Data Lifecycle

*Planning and  
Production  
Activities*

Requirements Definition  
Planning  
Development  
Deployment  
Operations

*Data  
Management  
Activities*

**Collection**  
**Processing**  
**Quality Control**  
**Documentation**  
**Cataloging**  
**Dissemination**  
**Preservation**  
**Stewardship**  
**Usage Tracking**  
**Final Disposition**

*Usage  
Activities*

Discovery  
Reception  
Understanding  
Analysis  
Product Generation  
User Feedback  
Citation  
Integration  
Gap Assessment

# Data Lifecycle Activities

from NEO Strategy - DM Chapter  
(2012)

# Data Lifecycle

*Planning and Production Activities*

Requirements Definition  
Planning  
Development  
Deployment  
Operations

*Data Management Activities*

**Collection**  
**Processing**  
**Quality Control**  
**Documentation**  
**Cataloging**  
**Dissemination**  
**Preservation**  
**Stewardship**  
**Usage Tracking**  
**Final Disposition**

*Usage Activities*

Discovery  
Reception  
Understanding  
Analysis  
Product Generation  
User Feedback  
Citation  
Integration  
Gap Assessment

## Applicability of EDMC Directives

**DM Planning**

**Data Documentation**

*Data Access & Discovery*

**Data Sharing by Grantees**

**Appraisal & Archive**

*Data Citation*

# Data Lifecycle

*Planning and Production Activities*

Requirements Definition  
Planning  
Development  
Deployment  
Operations

*Data Management Activities*

**Collection**  
**Processing**  
**Quality Control**  
**Documentation**  
**Cataloging**  
**Dissemination**  
**Preservation**  
**Stewardship**  
**Usage Tracking**  
**Final Disposition**

*Usage Activities*

Discovery  
Reception  
Understanding  
Analysis  
Product Generation  
User Feedback  
Citation  
Integration  
Gap Assessment

EDM Conference breakout sessions

Wednesday PM

Wednesday PM

Thursday AM

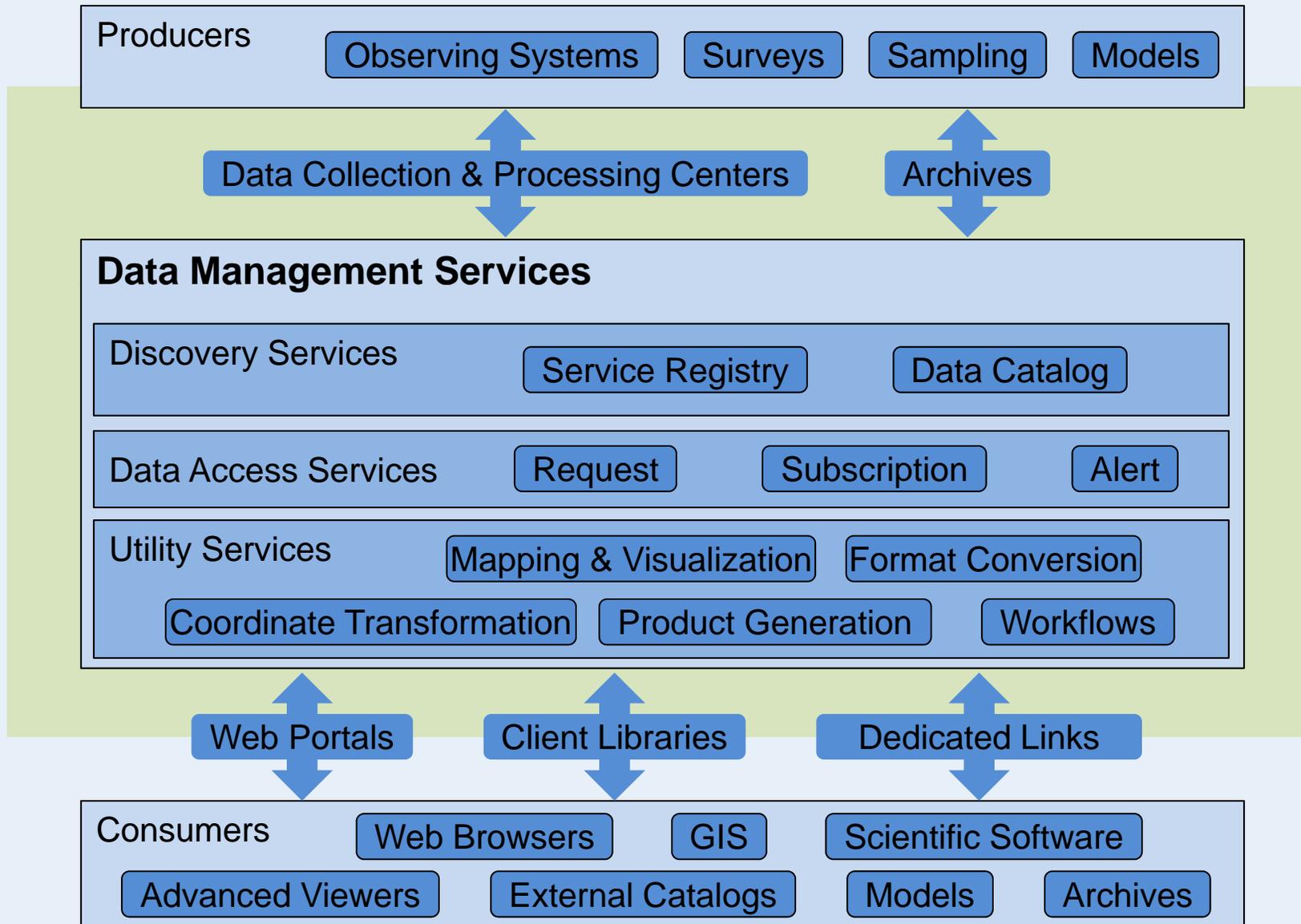
Wednesday AM & PM

Tuesday PM,  
Wednesday AM

Tuesday PM

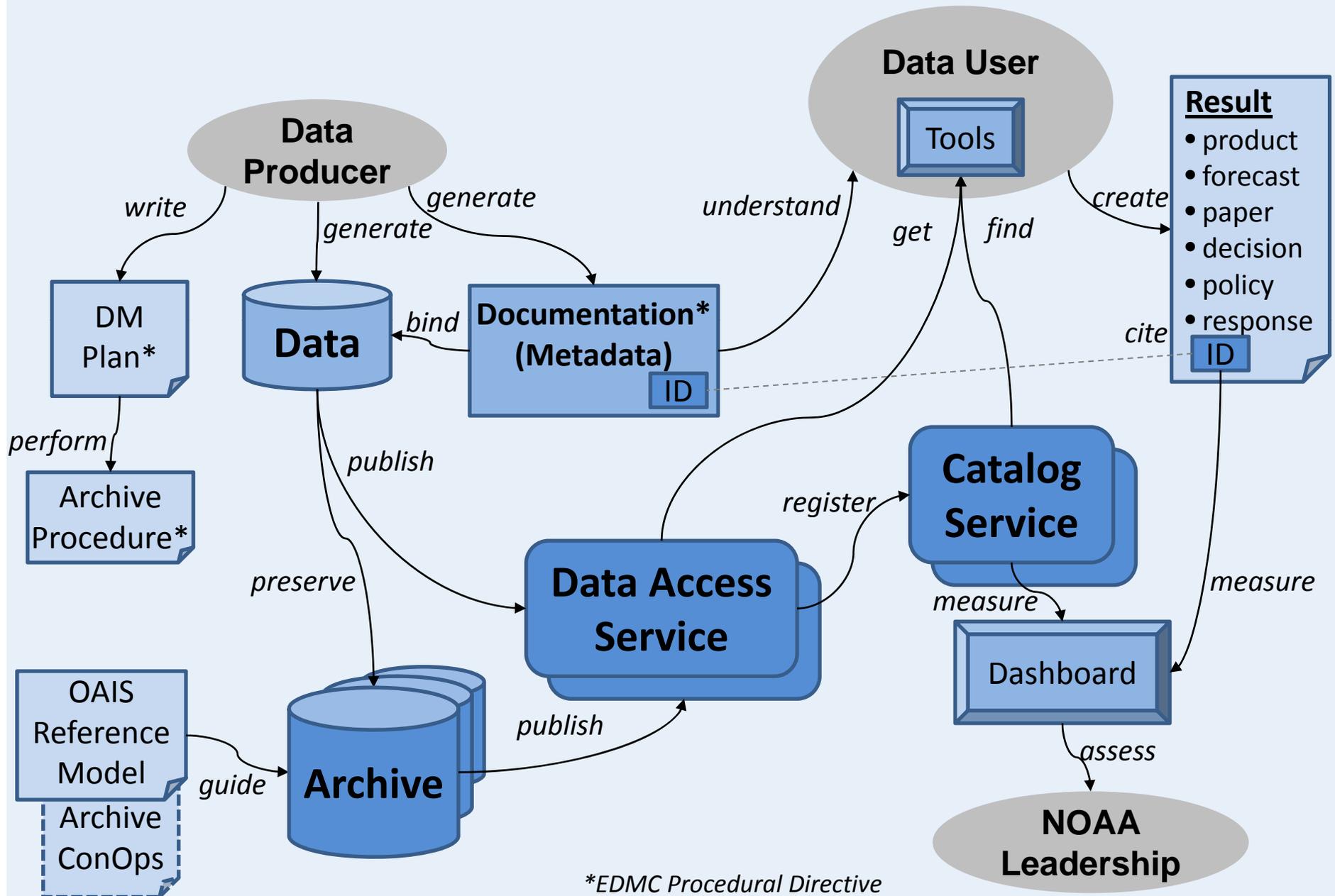
Wednesday AM

# Data Management Architecture - Services Viewpoint



# Data Management Concept of Operations

(Not all activities illustrated)

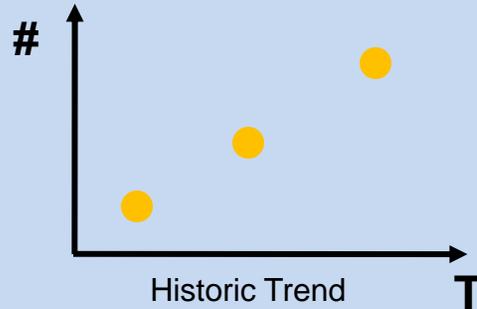


# Mockup: DM Dashboard

Last Update: yyyy-mm-dd

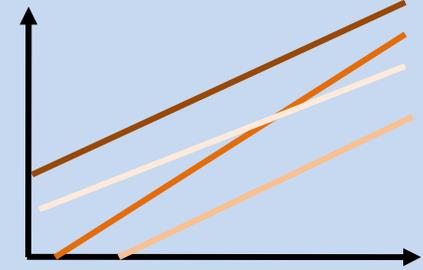
Quantity

# of Catalogs



# of Records

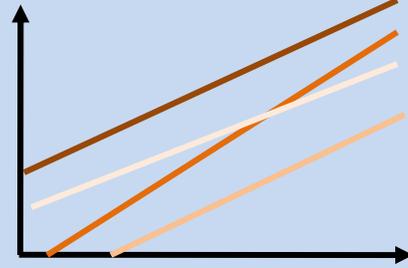
<b>NOAA</b>	<b>25000</b>
Catalog 1	10000
Catalog 2	5000
Catalog 3	10000



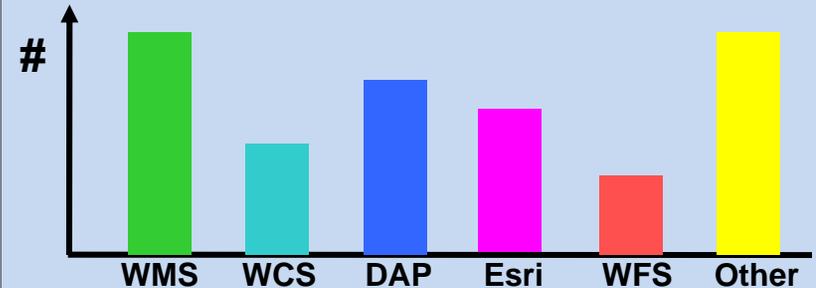
Accessibility

% Records with Online Service Link

<b>NOAA</b>	<b>46%</b>
Catalog 1	25%
Catalog 2	80%
Catalog 3	50%

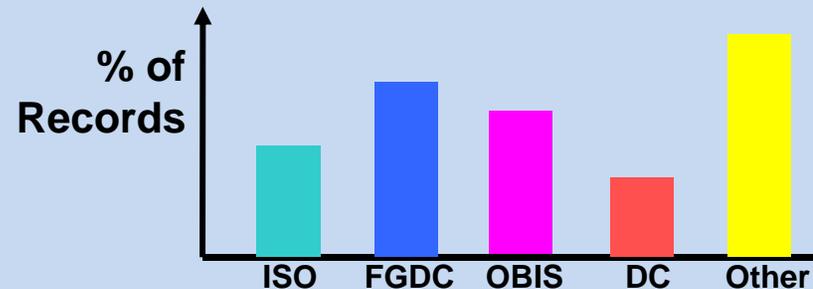


Service Types Offered



Documentation

Metadata Dialects Used



Metadata Completeness Scores

	Mean	$\sigma$	Min	Max
<b>NOAA</b>				
Catalog 1				
Catalog 2				

# Charge to Conference Participants

Consider questions such as:

- What should NOAA be doing more or better?
- What common problems, data sources, customers & functionality do we need or share?
- What solutions or guidelines have others found that we can adopt?
- What are we doing that is duplicative or incompatible?
- What do we need from NOAA leadership in a tight budget environment?
- How can we measure progress in this area?
- Are EDMC Procedural Directives adequate or needed?