CEOS Water Portal Project

Session Program

1. Overview and Status Update (Satoko) : 10min
2. Demonstration (Yoshi) : 20min
3. New Architecture (Yoshi): 15min
4. Q&A , Discussion (All) : 15min

CEOS Water Portal Overview and Status Update

WGISS-37
Cocoa Beach, U.S.A

JAXA/Mission Operations System Office

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1. Overview (just a reminder...)
2. Updates
   a. New Data Partners
   b. New GUI
   c. New Architecture Prototyping
   d. Demonstration Video
3. Future Plan
4. Request

1. Overview

1.1 Concept

- CEOS Water Portal is ;
  - A distributed data system component of DIAS (Data Integrated Analysis System)-Program
  - To provide "Easy to Access" service to users
  - To provide access to a whole variety of hydrological data and water relevant data scattered over the world
  - To connect the existing components like data centers, scientists and wide users.
- Multiple types of data are available such as;
  - In-situ data
  - Satellite data
  - Model output data

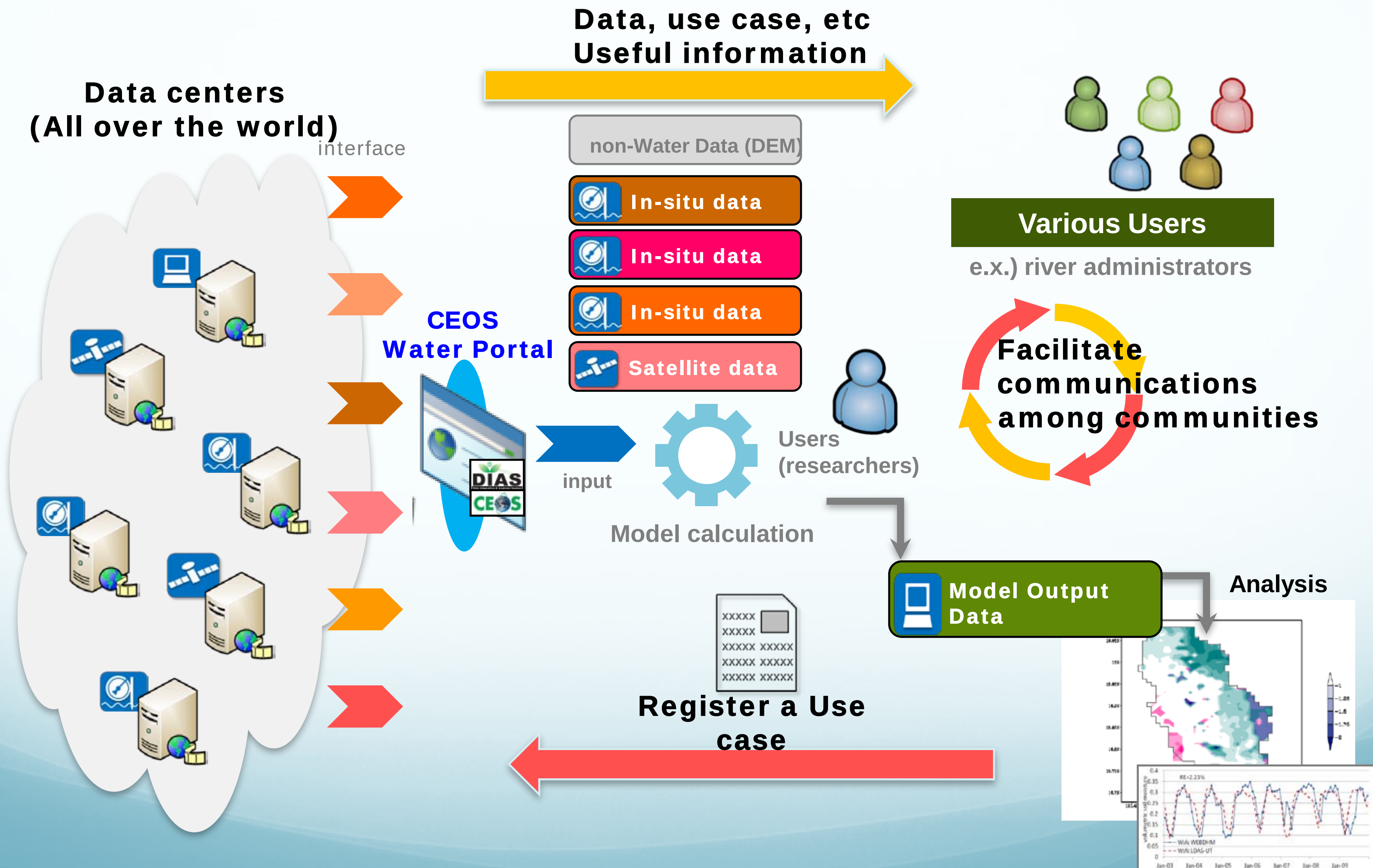
1. Overview

1.1 Services

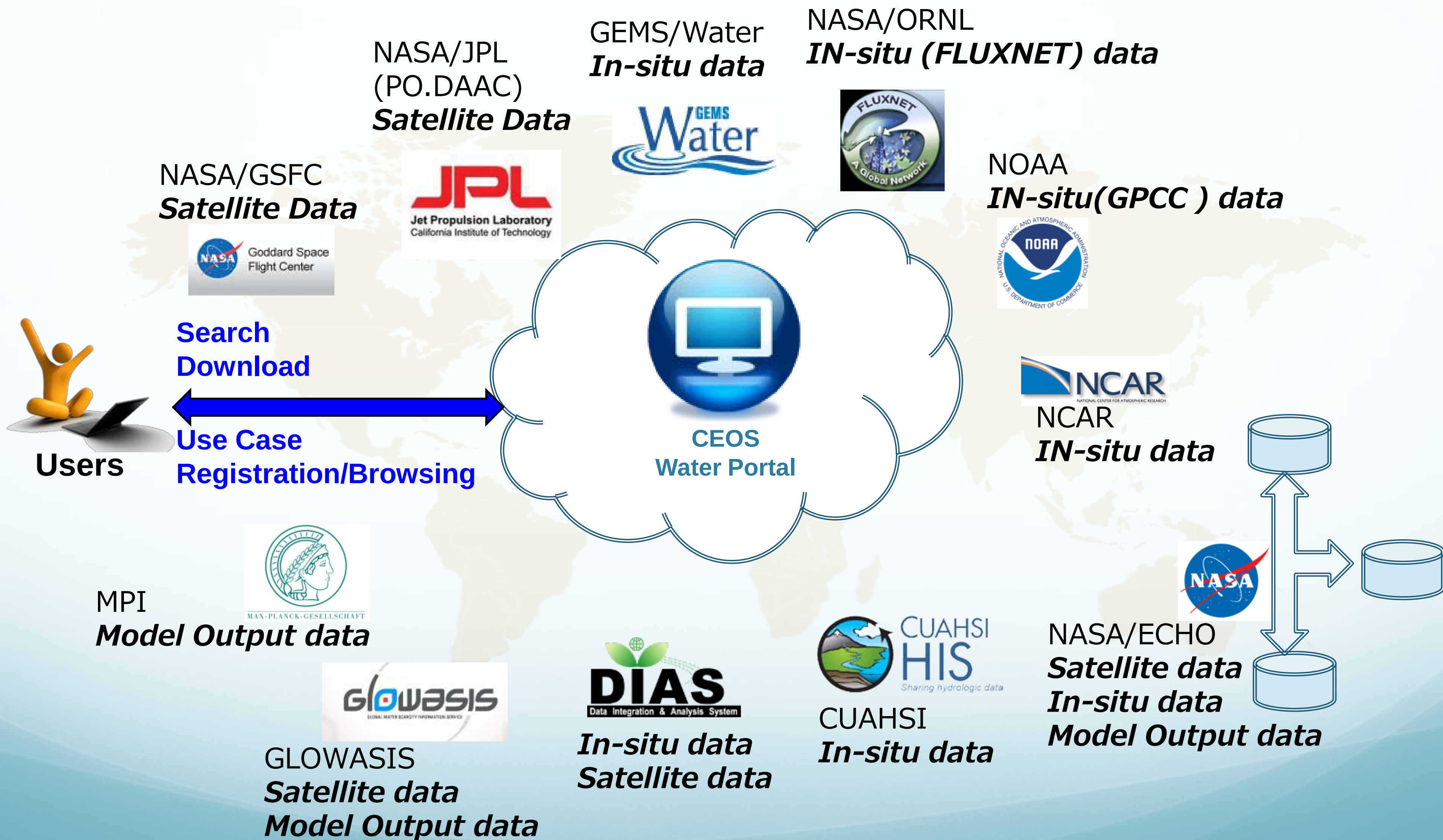
1. Dataset Search
   - Category Search/Map Search
   - Connecting to 11 data centers
2. Dataset Access
   - Data Subset (time, variables)
   - Data Visualization (GIF image)
   - Data Download/Format conversion (NetCDF, ascii, GRIB (MOLTS only))
3. Sharing Use Case
   - Use Case registration/browsing

1. Overview

1.3 Goal



1. Overview
1.4 Data Partners



1. Overview
1.5 Available Data List (1/2)

Data Partners	Data Types	Variables	Server type	Server Locations
CEOP	Satellite	PR, TMI, AMSR, AMSR-E, MODIS,GLI, SSMI, VISSR	Hyrax	University of Tokyo (Japan)
	Model (MOLTS)	surface pressure, skin temperature, precipitation amount in hour, brightness temperature surface, specific humidity, u-component of wind, v-component of wind, etc	THREDDS	MPI (Germany)
	Model(Gridded)	Air pressure, surface air pressure, air temperature, precipitation rate, snowfall amount, etc	Jblob	MPI (Germany)
	In-situ	Surface Meteorological and Radiation Data Set Flux Data Set Soil Temperature and Soil Moisture Data Set Meteorological Tower Data Set	http link	NCAR (USA)
AWCI	Model(MOLTS)	surface pressure, skin temperature, precipitation amount in hour, brightness temperature surface, specific humidity, u-component of wind, v-component of wind, etc	THREDDS	MPI (Germany)
	In-situ	Precipitation amount, River discharge, River water level, etc	Hyrax	University of Tokyo (Japan)

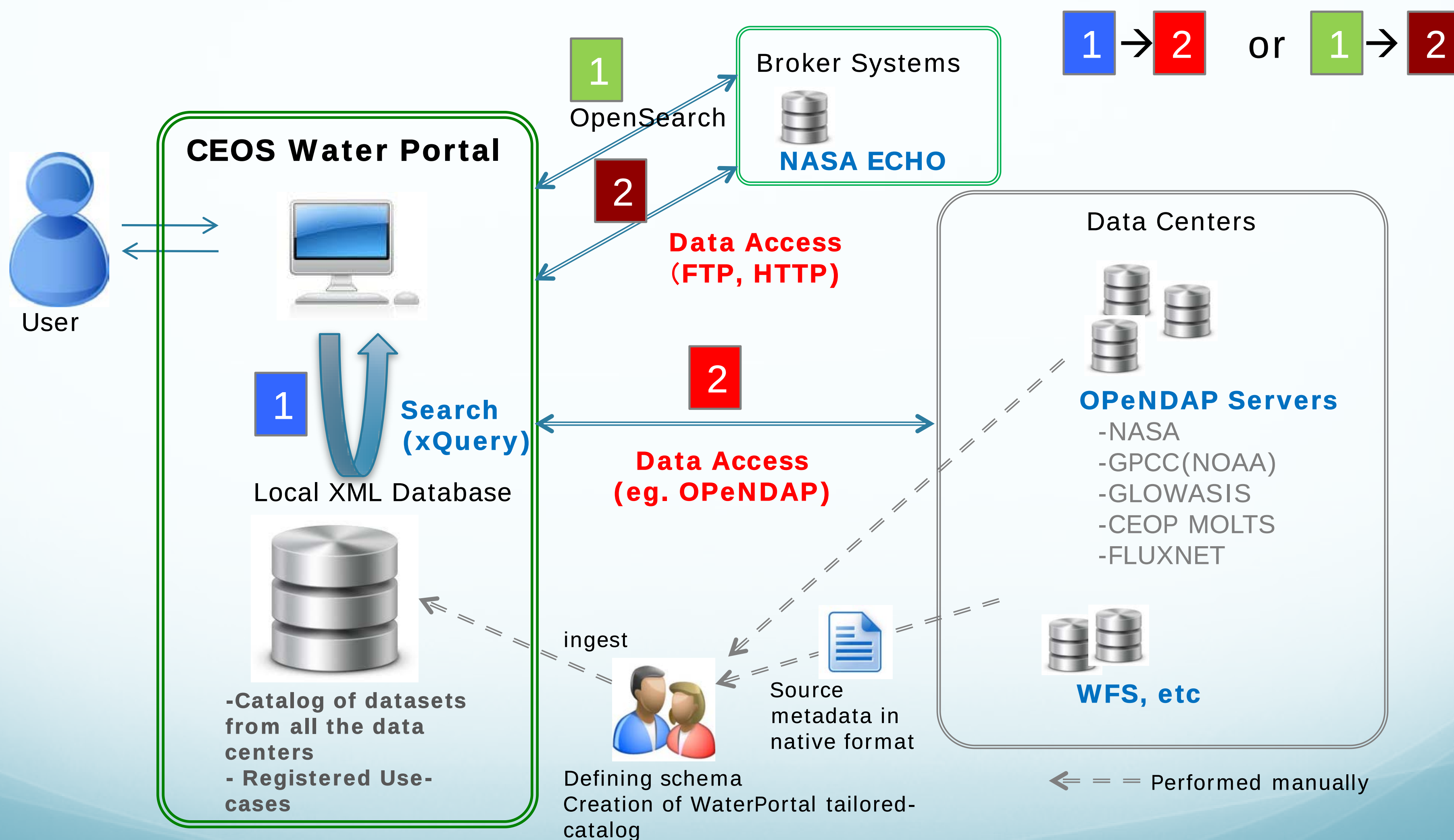
1. Overview

1.5 Available Data List (2/2)

Data Partners	Data Types	Variables	Server type	Server Locations
NASA	Satellite	Airs level 3 data	Hyrax	NASA (GSFC)
NOAA (GPCC)	In-situ	Precipitation data	THREDDS	NOAA (USA)
NASA	Satellite	GRACE Level 3 data	THREDDS	NASA/JPL(PO .DACC)
FLUXNET	In-situ	FLUX data Fluxes of carbon dioxide, water vapor, and energy exchange, etc	THREDDS	NASA (ORNL DAAC)
GEMS/Water	In-situ	Instantaneous Discharge , Dissolved Oxygen , Temperature, etc	WFS	GEMS/Water (CANADA)
GLOWASIS	Satellite Model(Gridded)	Precipitation, Air temperature	THREDDS	Deltares (Netherland)
ECHO Broker Service	In-situ Satellite Model	Various types of data via ECHO broker	http link	NASA (GSFC)
CUAHSI	In-situ	precipitation, humidity, discharge, oxygen, etc	REST/WaterML2, WaterOneFlow/ WaterML1	CUAHSI (USA)

1. Overview

1.6 Current Architecture



2. Updates

a. New Data Partners

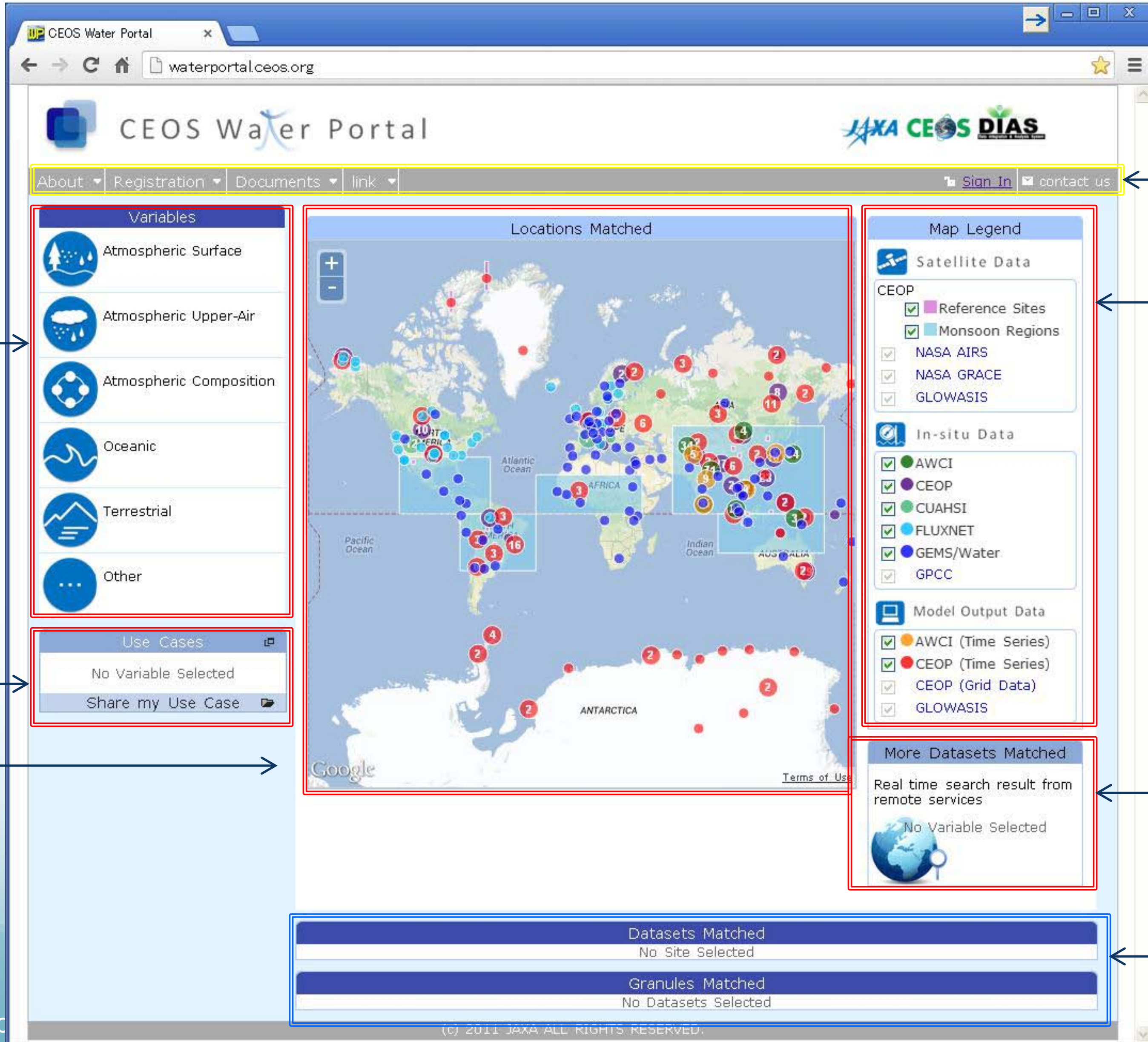
- CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Inc.)
  a. In-situ data, mainly in North America
  b. Two interfaces; “WaterOneFlow+WaterML1” and “REST+WaterML2”
  c. “WaterOneFlow+WaterML1” is still main interface (=more data available)
  d. “REST+WaterML2” will be main interface in the future (= currently less data available)

2. Updates
b. New GUI

(1) Search Options by Variable Category

(5) Use Cases

(3) Observation Sites matched by Selected Options (1)



Menu

(2) Dataset List for Selected Search Options (1)

(4) Search Other Portal systems (ECHO, etc)

(5) Details of Selected data by (2) & (3)

2. Updates
c. New Architecture Prototyping

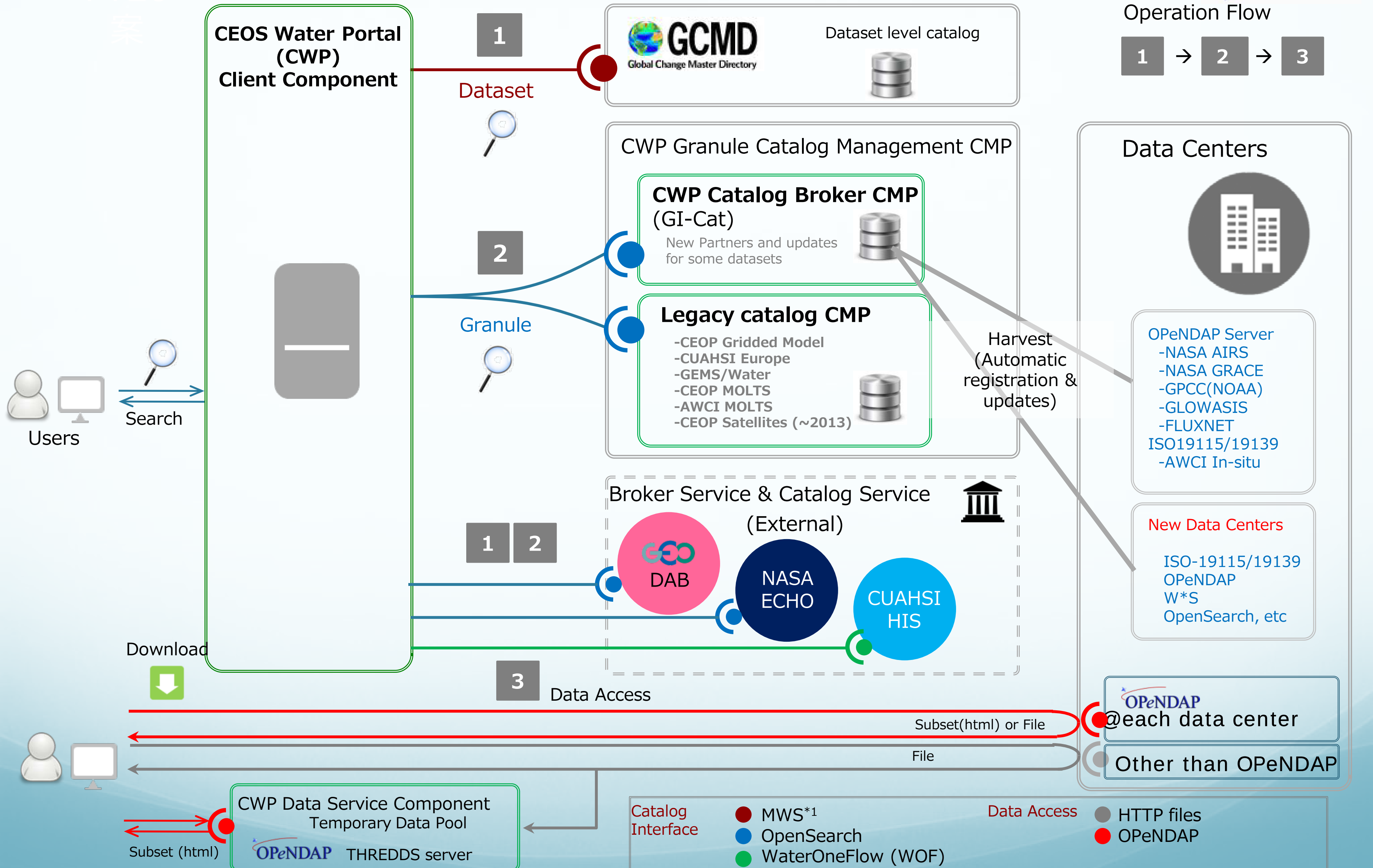
- Purposes

a. Less time and labors on adding data partners

b. Integrated operation flow (search -> download)

c. Easier operation

New System Architecture

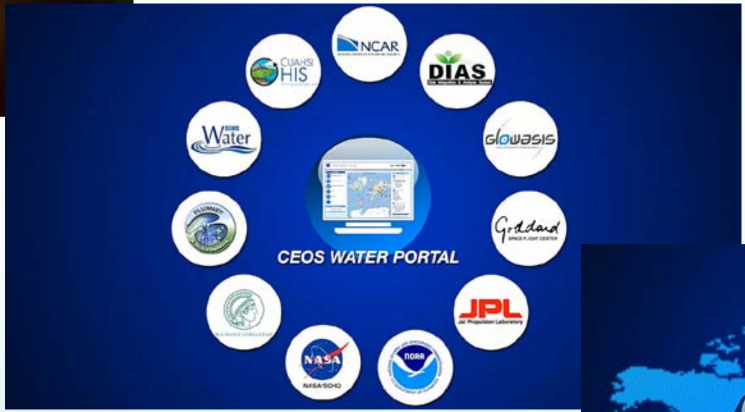


*1 MWS: Metadata Web Service, GCMD unique web service for metadata search (responses are DIS files).

2. Updates

d. Demonstration Video

- 3 min demonstration video was prepared for GEO-X and Ministerial Summit in Jan., 2014.



3. Future Plan

a. Transfer to the new architecture (JFY 2014)
   - A request is shown in the next slide

b. New data partners (JFY 2014)
   - NOAA/NCDC (coordination is on-going)
   - GEO DAB (a prototype was already connected to the GEO DAB in 2013)

c. Synergy with other domestic systems (JFY 2014~2015)
   - DIAS (Data Integration Analysis System)
   - Some issues

- *JFY 2014 = Apr.2014 ~ Mar. 2015*
- *JFY 2015 = Apr.2015 ~ Mar. 2016*

3. Future Plan / Issues

a. Synergy with other component of DIAS
   - How ?

b. User Authentication Function
   - SSO among DIAS

Discussion has just started.

4. Request

- A request to IDN group
  - We would like to continue using IDN/GCMD to enable 2 step-search (except for datasets from 2step-search enabled servers).
  - We would like to keep DIFs for the entire water portal datasets “not visible” to public.
- Is it acceptable ??