WIS and WIGOS

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Chief Data Representation, Metadata and Monitoring Division

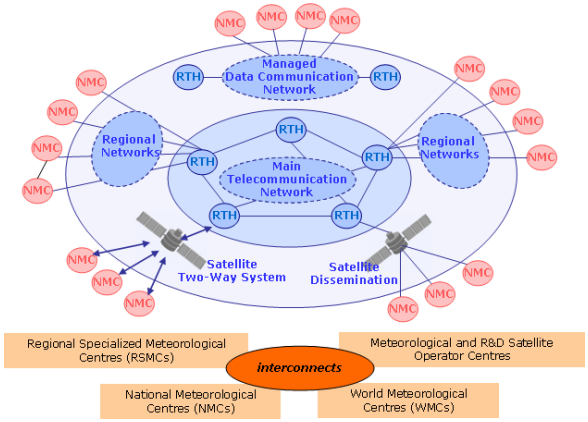
WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

WMO OMM

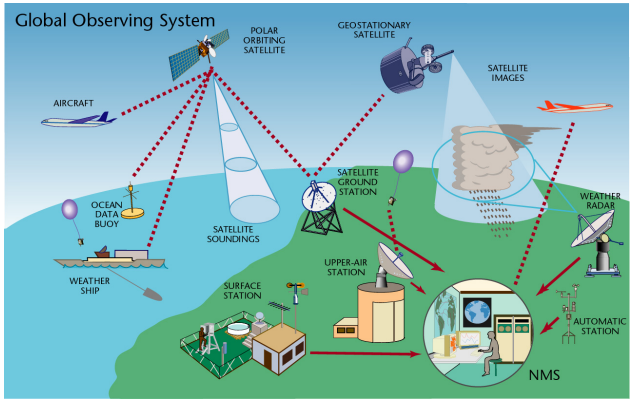
World Meteorological Organization
Organisation météorologique mondiale

World Weather Watch

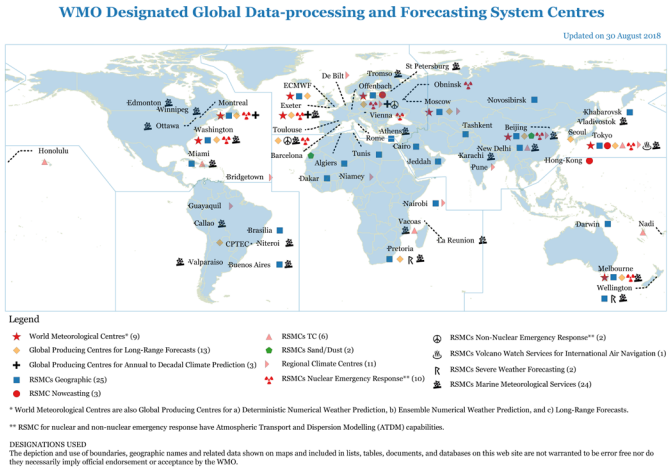
Global Telecommunication System



Global Observing System



Global Data Processing and Forecasting System



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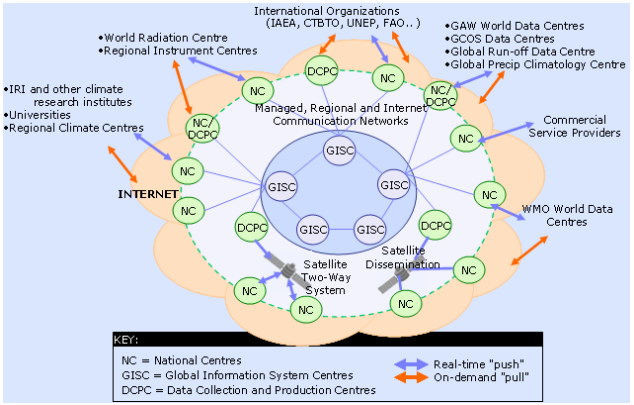
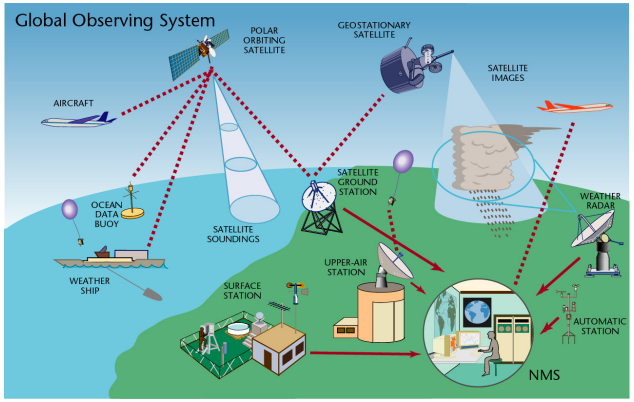
World Weather Watch

WMO Information System



Global Observing System



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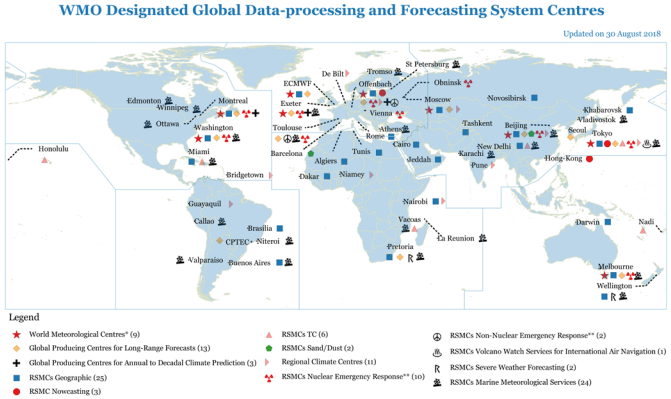

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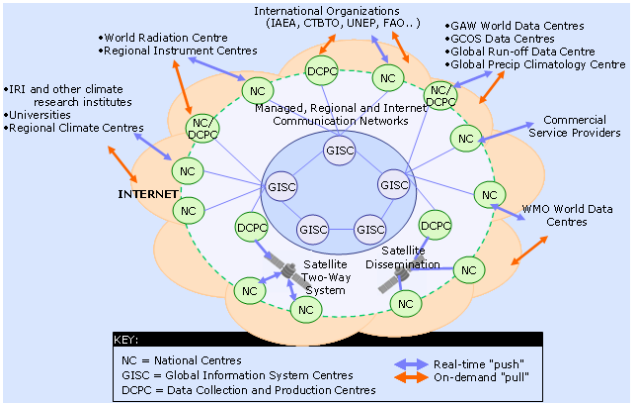
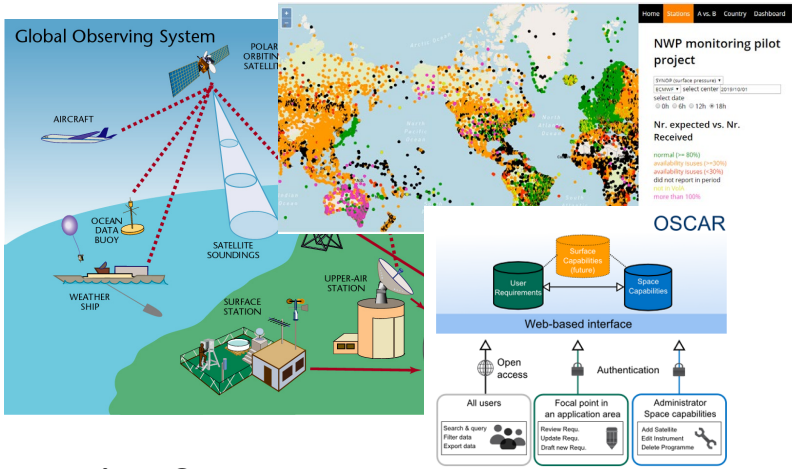
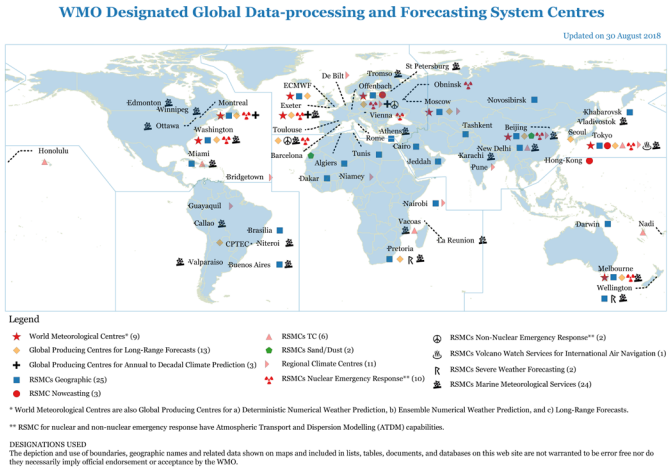
WMO Information System



WMO Integrated Global Observing System



Global Data Processing and Forecasting System



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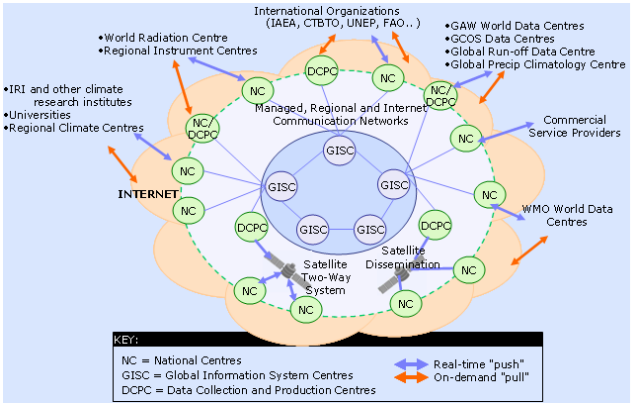
World Weather Watch

WMO Information System



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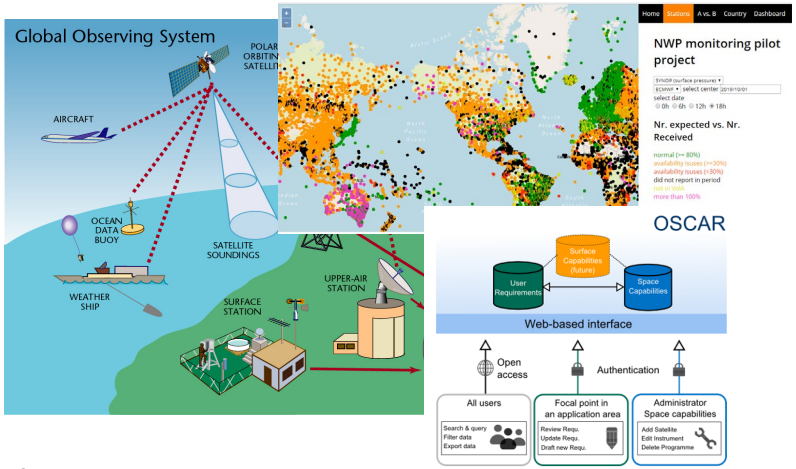
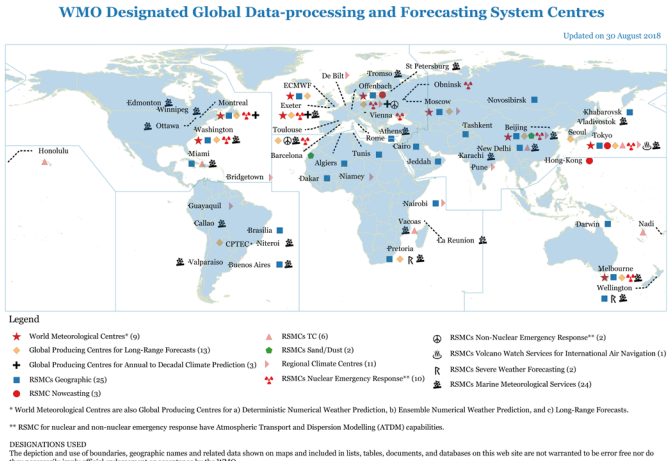


Seamless Global Data Processing and Forecasting System



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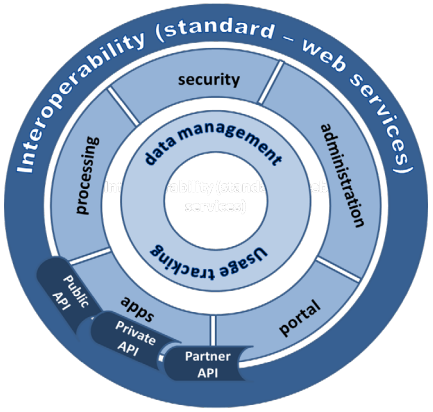
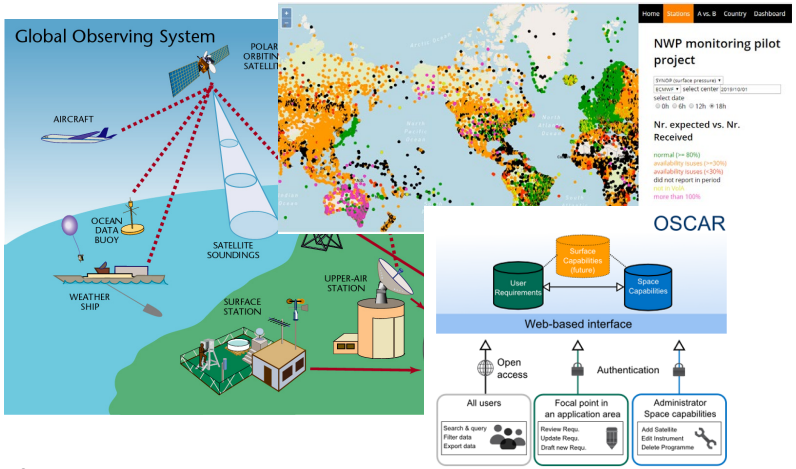
World Weather Watch

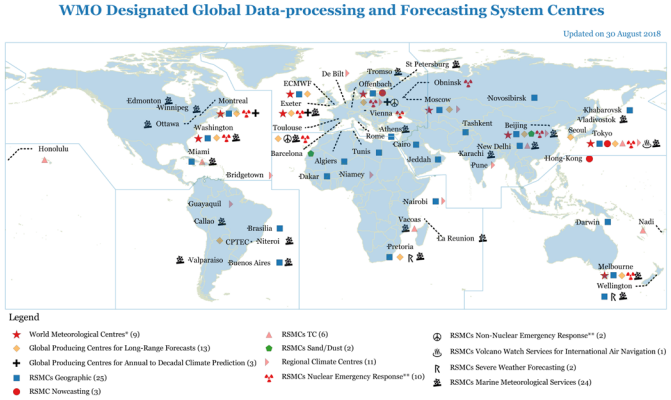
WMO Information System 2.0



WMO Integrated Global Observing System



Seamless Global Data Processing and Forecasting System



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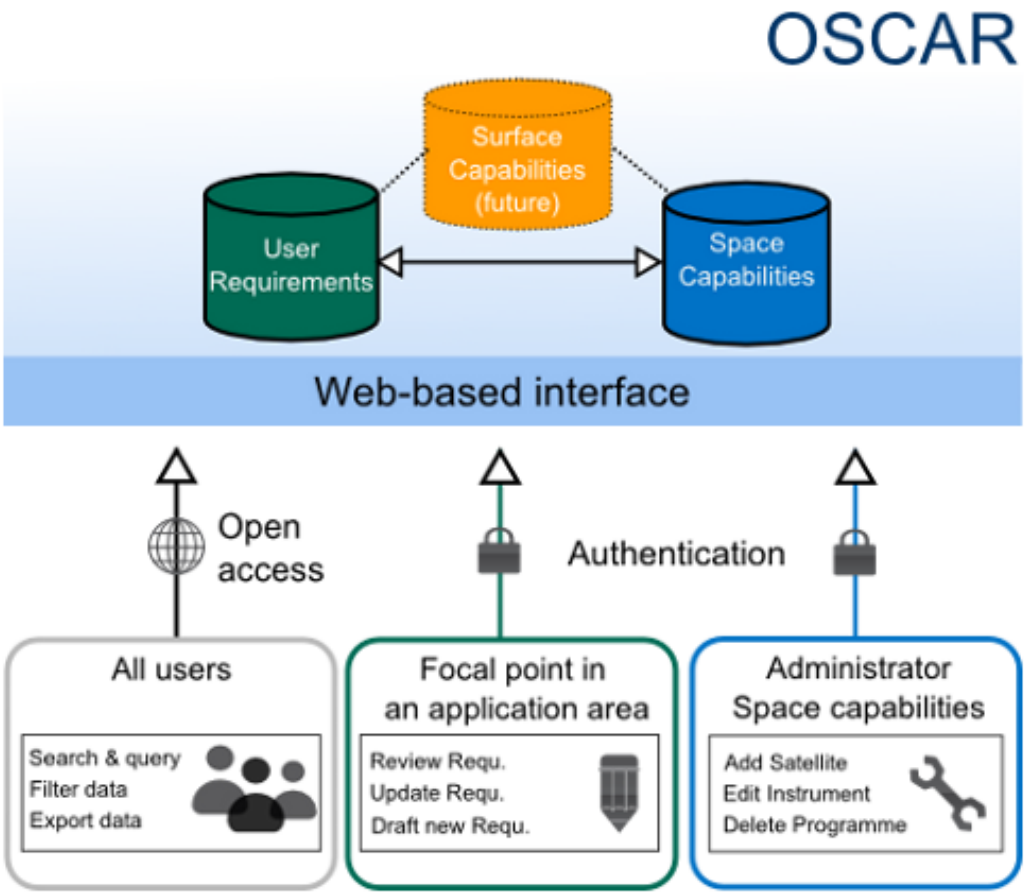
WIGOS Tools

Observing **S**ystem **C**apability **A**nalysis and **R**eview



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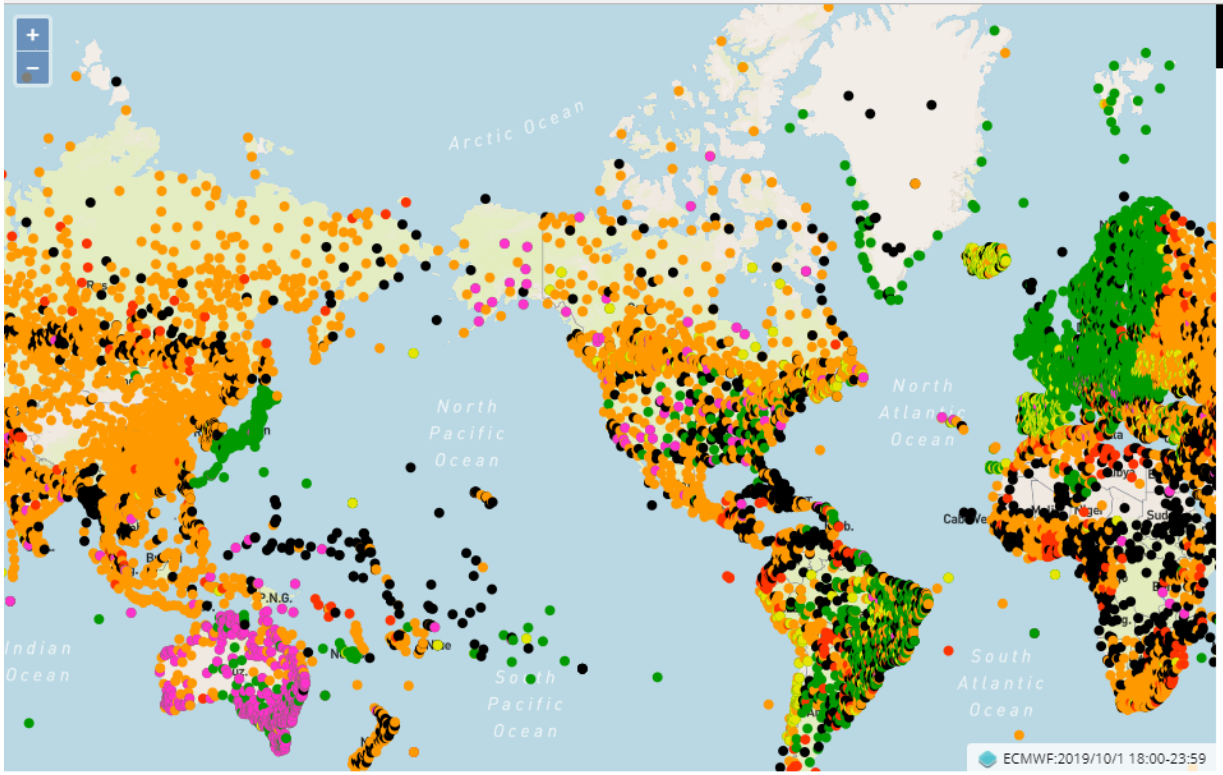
WIGOS Tools

WIGOS Data Quality Monitoring System



Home | Stations | A vs. B | Country | Dashboard

NWP monitoring pilot project

SYNOP (surface pressure)
ECMWF select center 2019/10/01
select date
0h 6h 12h 18h

Nr. expected vs. Nr. Received

normal (>= 80%)
availability isuses (>=30%)
availability isuses (<30%)
did not report in period
not in VolA
more than 100%

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WIGOS components

- GOS
- GAW
- WHOS
- GCW

Co-sponsored

- GOOS
- GCOS
- GTOS

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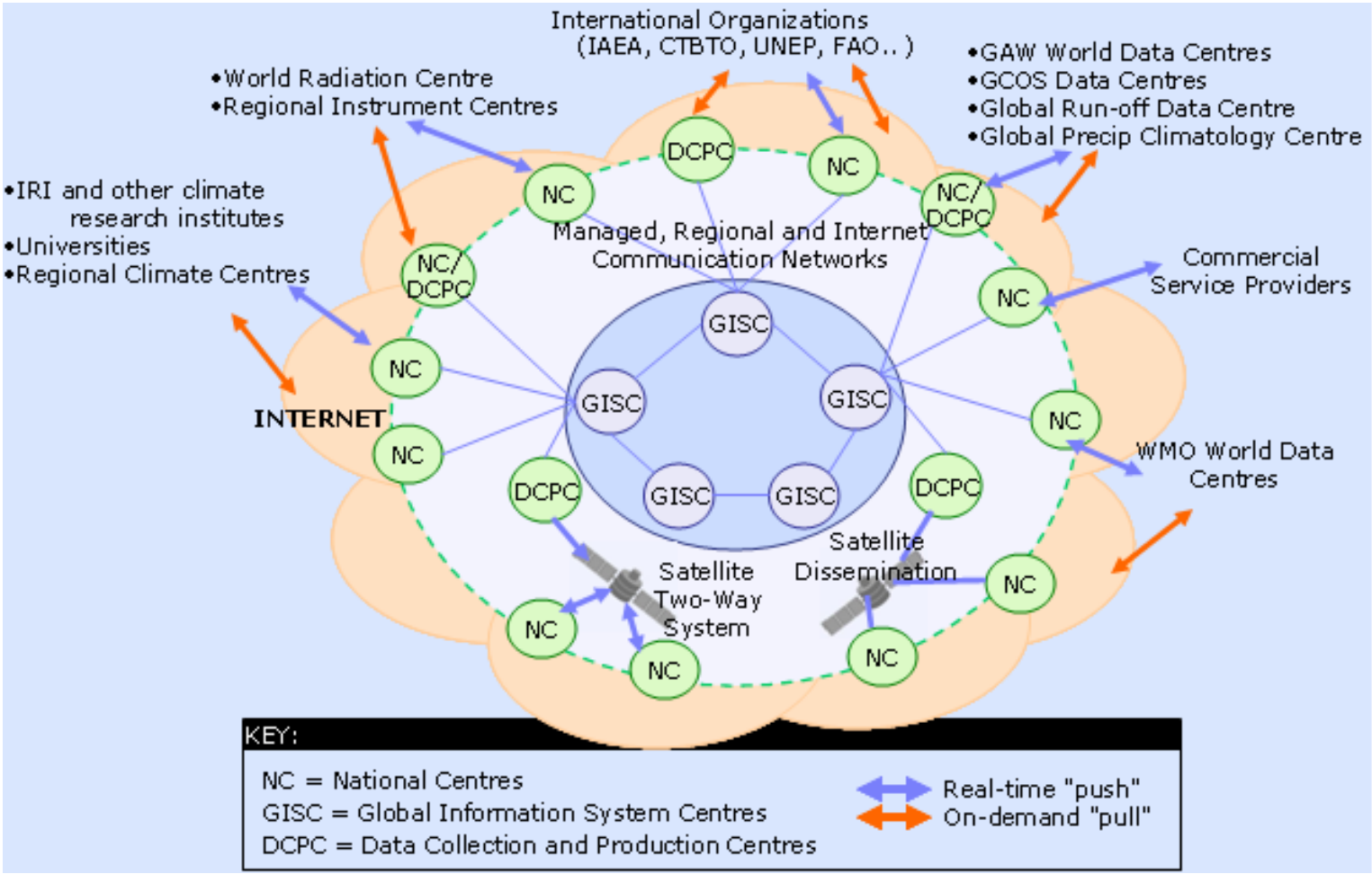
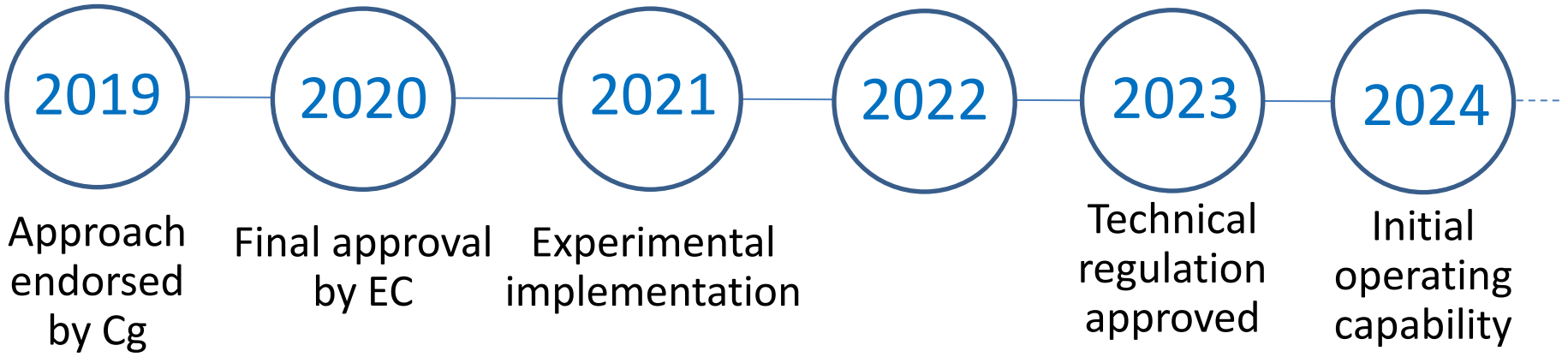
WIS core components



WIS 2.0 vision:

> *“WIS 2.0 is a collaborative system of systems using Web-architecture and open standards to provide simple, timely and seamless sharing of trusted weather, water and climate data and information through services.”*

WIS 2.0 Implementation



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WIS 2.0 Implementation approach

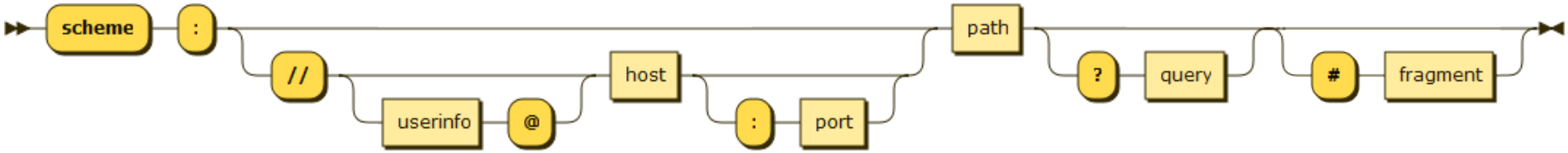
- 11 Principles providing a technical framework
- Recognition that WIS 2.0 is heavily dependent on industry.
- Workshop on Future Technology (19-20 March) to align the framework with the industry plans.

WIS 2.0 Principles

1. WIS 2.0: **adopts Web technologies and leverages industry best practices and open standards**

WIS 2.0 Principles

2. WIS 2.0: **uses Uniform Resource Locators (URL) to identify resources**.



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WIS 2.0 Principles

3. WIS 2.0: **prioritizes use of public telecommunications networks (i.e. Internet) when publishing digital resources .**

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WIS 2.0 Principles

4. WIS 2.0: **requires provision of Web services / APIs to access or interact with digital resources published using WIS**.

WIS 2.0 Principles

5. WIS 2.0: **encourages NCs and DCPCs to provide 'data reduction' services via WIS that process 'big data' to create results or products that are small enough to be conveniently downloaded and used by those with minimal technical infrastructure.**

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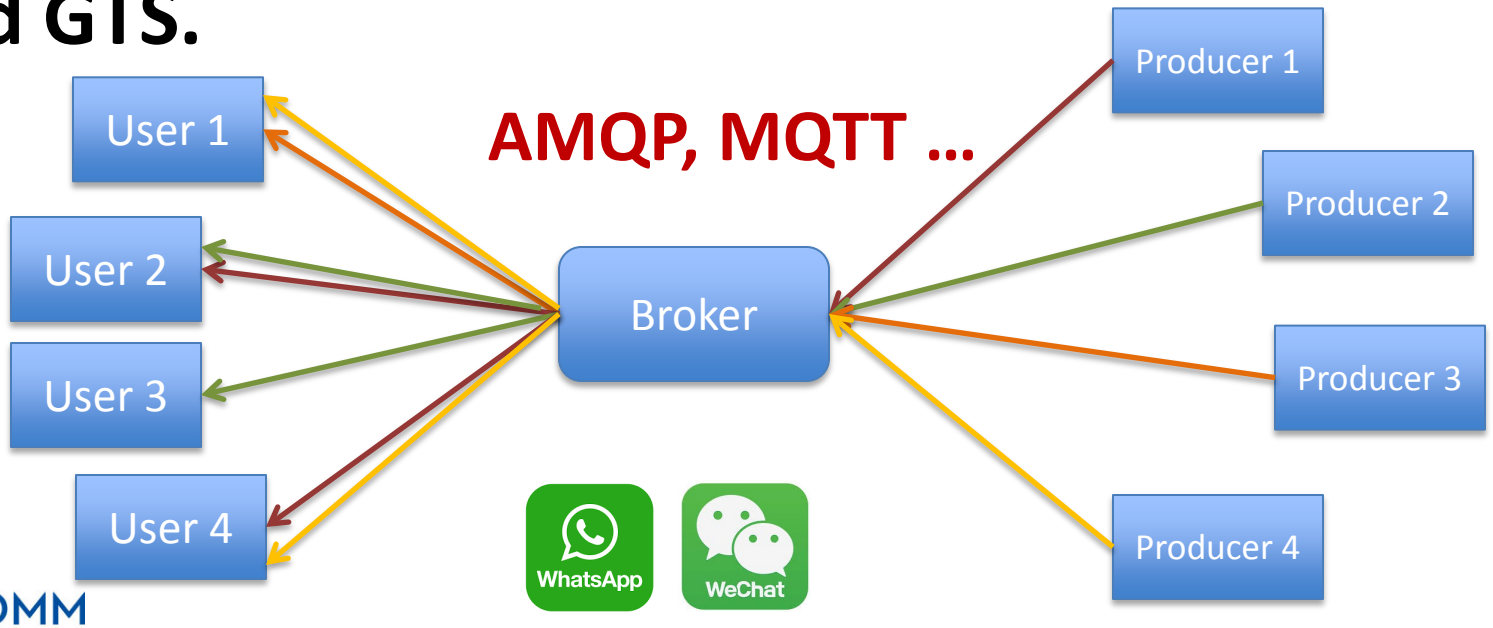
WIS 2.0 Principles

6. WIS 2.0: **will add open standard messaging protocols that use the publish-subscribe message pattern to the list of data exchange mechanisms approved for use within WIS and GTS.**



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WIS 2.0 Principles

7. WIS 2.0: **will require all services that provide real-time distribution of messages (containing data or notifications about data availability) to cache/store the messages for a minimum of 24-hours, and allow users to request cached messages for download.**
8. WIS 2.0: **will adopt direct data-exchange between provider and consumer.**

WIS 2.0 Principles

9. WIS 2.0: **will phase out use of routeing tables and bulletin headers.**

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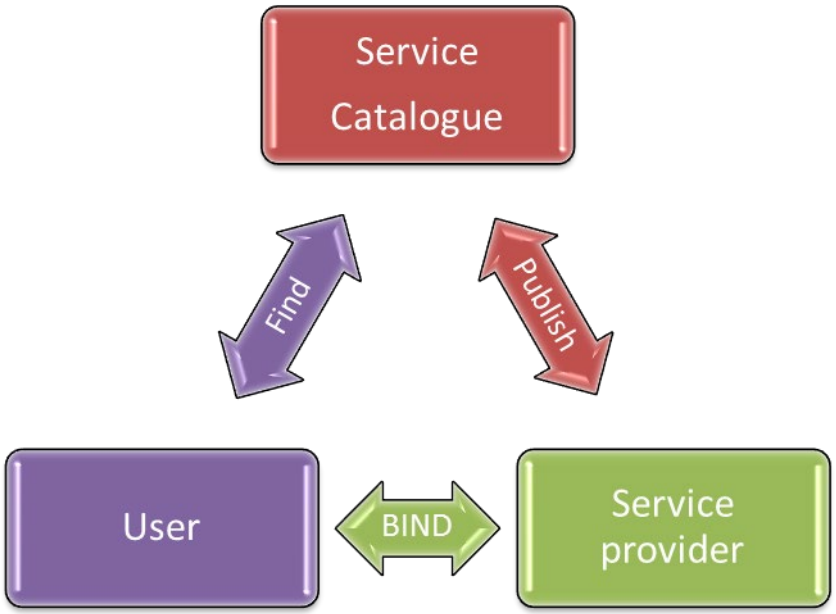
WIS 2.0 Principles

10. WIS 2.0: **will provide a Catalogue containing metadata that describes both data and the service(s) provided to access that data.**



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Thank you
Merci

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