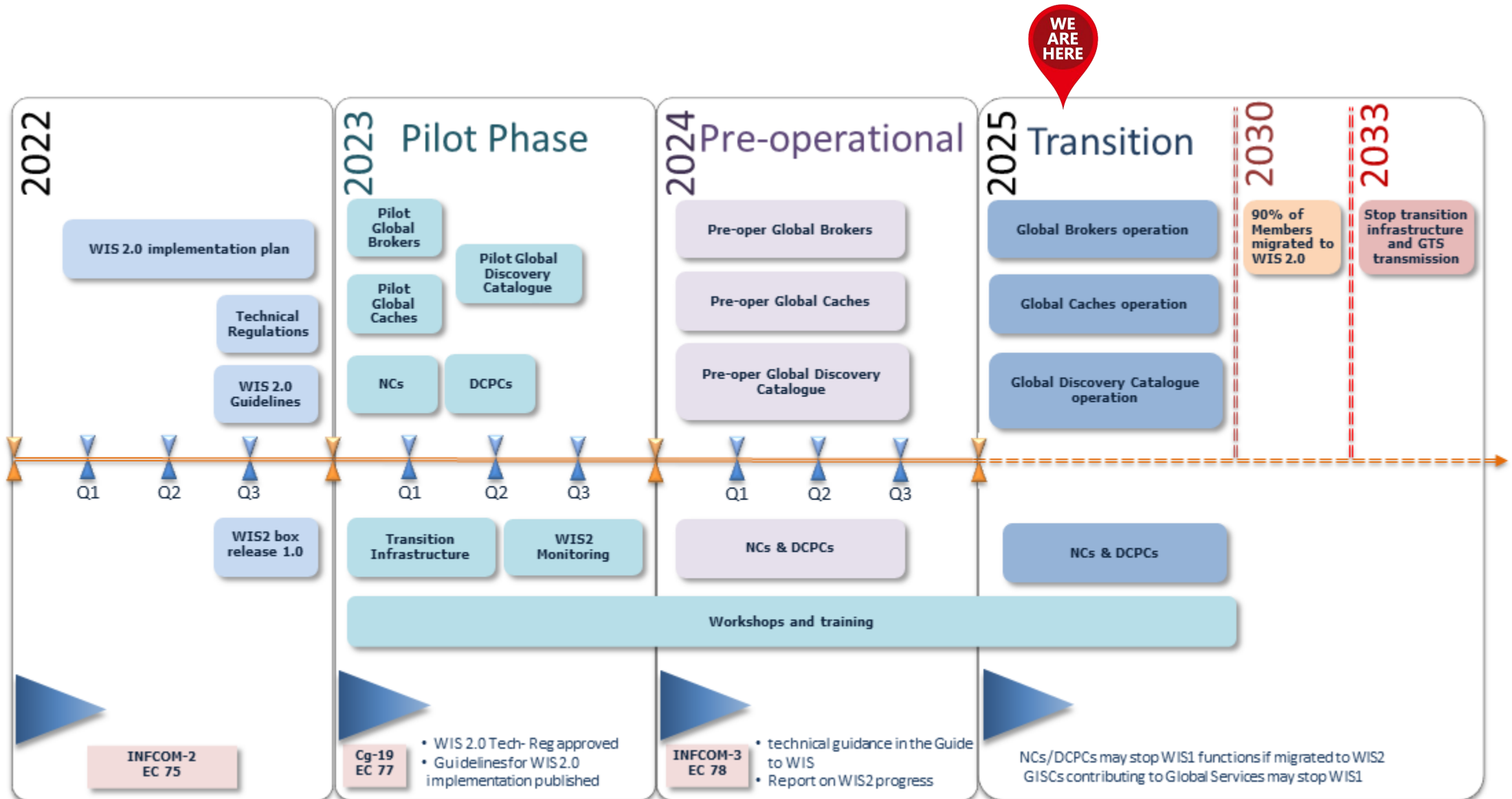


Implementation Plan and Provisions for the transition from WIS1/GTS to WIS 2.0

Hassan Haddouch
WIS 2.0 Manager

WIS Section, Infrastructure Department

1. WIS2 implementation timeline



2. Transition Principles

Principle 1: Each National Meteorological and Hydrological Service (NMHS) will be able to make the migration during the agreed period **2025–2030**:

- NMHSs will migrate between 2025 and 2030 at a time convenient for them. There will not be a simultaneous migration of all the WIS centres from WIS1 to WIS2.

Note: WIS centres are Global Information System Centres (GISCs), Data Collection or Production Centres (DCPCs) and National Centres (NCs).

2. Transition Principles (cont'd)

Principle 2: No GTS data loss during the transition:

- During the pre-operational phase, and in coordination with the regional associations and Global Information System Centres (GISCs), WIS2 infrastructure will be established, in order to avoid data loss during the transition. The aim of this infrastructure is to ensure that data sent on the GTS can be received by a site having migrated to WIS2, and the data, previously sent on the GTS, sent on WIS2, can be received by a site still on the GTS.

2. Transition Principles (cont'd)

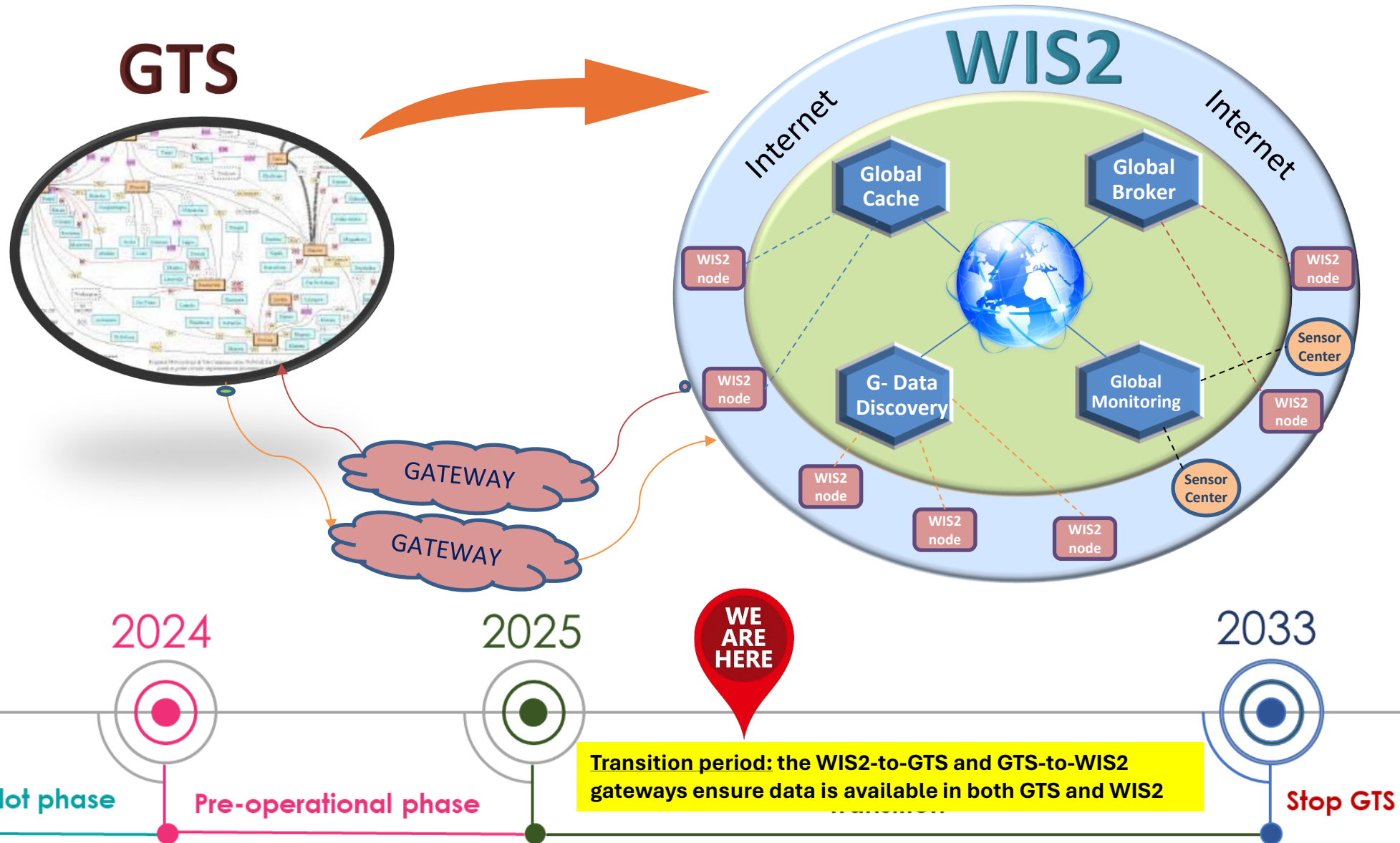
Principle 3: Each WIS centre will decide **when to decommission WIS1 and GTS:**

- Decommissioning WIS1 and GTS services will be the decision of each National Centre (NC), Data Collection and Production Centre (DCPC) or GISC, when they have considered that the migration is complete for them and their users;
- After migration to WIS2, there is **no requirement to run a Message Switching System (MSS)** to receive or send data from centres that have not made the transition. The centre will decide when and if it wishes to stop its MSS. It can also stop data dissemination to GTS.

2. Transition Principles (cont'd)

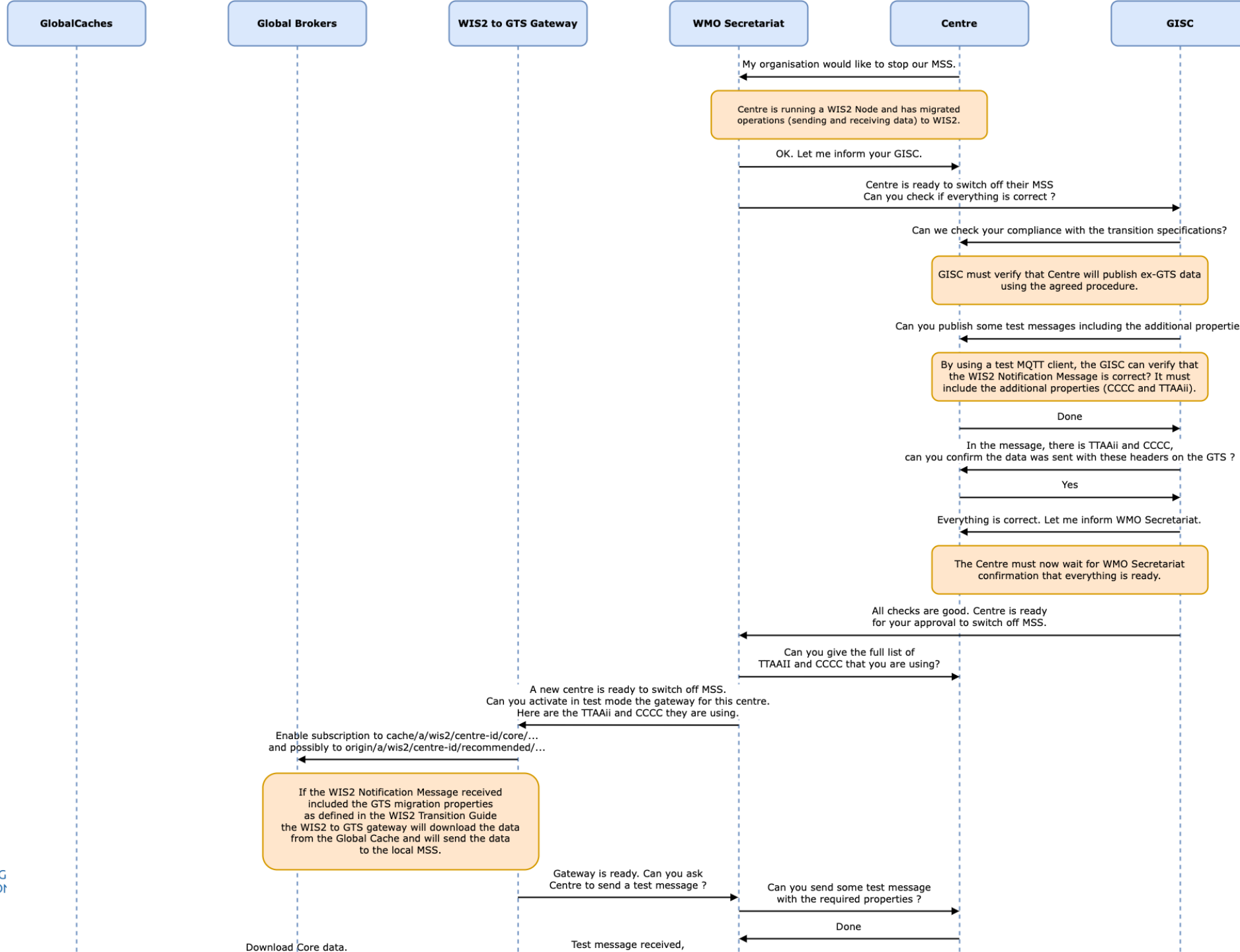
- **Principle 4:** **New data** (such as from the Global Basic Observing Network (GBON), or related to climate, hydrology and the cryosphere) will be exchanged **solely on WIS2**:
- WIS2 is designed to enable Resolution 1 (Cg-Ext(2021)) – WMO Unified Policy for the International Exchange of Earth System Data (*World Meteorological Congress: Abridged Final Report of the Extraordinary Session* (WMO-No. 1281)) and to support the WMO Global Basic Observing Network. The new data will be available on WIS2. A centre not having made the migration to WIS2 will not receive the new data. This data **will not have GTS TTAAii headers** and **will not be exchanged over the GTS**.

3. Data exchange between the two systems



4. MSS decommissioning procedure

- **Initiation and Notification:** The Centre notifies the WMO Secretariat of its intention to stop MSS. The Centre, running a WIS2 node and having completed configuration, informs GISC about its readiness.
- **Compliance Check by GISC:** GISC checks if the Centre can publish via - GTS data using the specified procedure and verifies if test messages include required additional properties (TTAI and CCCC) with a test client.
- **WMO Secretariat Notification and Go - Ahead:** After GISC confirms everything is correct, the Centre notifies the WMO Secretariat. The WMO Secretariat gives the go - ahead after all checks.
- **Gateway and Message Testing:** The Centre provides TTAI and CCCC to the WIS2 to GTS Gateway. The Gateway checks message sending, and the Centre sends test messages. The WIS2 to GTS Gateway notifies the Centre about gateway enablement for publishing on the GTS.
- **Gateway Configuration and Data Sending Adjustment:** Properties are added to messages for GTS data. Sending data on the GTS stops at a specified time, and the gateway for the Centre is enabled at another specified time for data sending via the WIS2 to GTS Gateway.
- **Gateway Enablement and Verification:** The gateway function for data from the Centre is enabled. After stopping sending data on the GTS, it's verified by the GISC that data is still received on the GTS. The migration is complete, and the center can switch off MSS.



5. Management of WIS1 and GTS

- Maintenance and operation of MSS (cont'd)

- ***Regional Telecommunication Hubs***
 - Regional Telecommunication Hubs (RTHs) shall keep their MSS operational and continue to publish data collecting the bulletins from their associated NMCs and transmitting them in the appropriate form on the MTN, either directly or through the appropriate WMC/RTH in GTS until all Members in their area of responsibility migrate from GTS to WIS2.
 - When RTHs have migrated to WIS2 and all Members in their area of responsibility have migrated to WIS2, RTHs may decide to turn off their MSS. In this case, they should contact the WMO Secretariat to switch off their MSS in a coordinated manner.

5. Management of WIS1 and GTS

- Maintenance and operation of MSS (cont'd)

- ***National Meteorological Centres***
 - National Meteorological Centres (NMCs) shall operate a WIS2 Node to share their data and discovery metadata in WIS2.
 - NMCs that have implemented a WIS2 Node and published all the data transmitted on the GTS on WIS2 may, if they wish, turn off their MSS, and stop transmitting data on the GTS. When NMCs decide to decommission and turn off their GTS MSS and stop transmitting their data on GTS, they shall include the GTS properties in the WIS2 Notification Message as described in the WIS2 to GTS gateway technical requirements (section 3.2.3).

5. Management of WIS1 and GTS

- Maintenance and operation of WIS1 Catalogue and Cache by GISCs

- Each Global Information System Centres (GISC) shall maintain their WIS1 Catalogue and Cache as long as WIS users are using their services for operations. GISCs are invited to help users migrate to WIS2. When a GISC has successfully migrated its users to WIS2, the GISC may stop its WIS1 Cache and Catalogue service and shall inform the WMO Secretariat.
- GISC Seoul and GISC Offenbach will continue to provide **WIS1 discovery metadata** and the WIS1 Catalogue until the transition from GTS and WIS1 to WIS2 is completed or deemed unnecessary when all WIS1 users have migrated to WIS2.
- **Neither new discovery metadata nor changes to existing metadata will be allowed in the WIS1 Catalogue from 2025 onwards.** For WIS2, new metadata will only be added as WMO Core Metadata Profile version 2 (WCMP2) to the Global Discovery Catalogue.

5. Management of GTS abbreviated headings

- The GTS abbreviated headings are described in the *Manual on the Global Telecommunication System* (WMO-No. 386) (*Manual on GTS*). The data designators T1T2A1A2ii are defined in Attachment II.5 of the *Manual on GTS*. **The GTS abbreviated headings are not required in WIS2**, and their use is limited to the exchange of data on the GTS. Once WIS2 becomes operational, any further evolution of the GTS, including the transmission of new data, will not be permitted. Therefore, **the *Manual on GTS* will no longer be updated from 31 December 2024**. The publication *Weather Reporting* (WMO-No. 9), Volume C1, contains the list of meteorological bulletins exchanged on the GTS. Members are required to update Volume C1 every time a change in the bulletins takes place, however only a few Members are doing so with regularity. The list is therefore incomplete and is not consistent with the bulletins effectively exchanged on GTS. With the start of the WIS2 operational phase, there will not be any change in the list of meteorological bulletins transmitted on GTS, therefore **Volume C1 will not be updated any longer from 31 December 2024**.

6. Management of WIS Centers

- National Centres (NCs) can start migrating to WIS2 from January 2025 when WIS2 will be operational. **It is recommended to start planning and preparation in advance and in a way that the migration will be completed preferably by 2030 and not later than 2033.** The migration to WIS2 by a National Centre can be considered complete when at least one WIS2 Node for the NC is operational and all the datasets transmitted on GTS are also shared on WIS2 in compliance with the technical requirements described in the *Manual on WIS*, Volume II and the *Guide to WIS*, Volume II. A National Centre that has fully migrated to WIS2 shall communicate to the WMO Secretariat that its migration is complete and shall keep the WIS1 and GTS operational in parallel with the WIS2 systems until reception of a communication from the WMO Secretariat allowing the switch from the WIS1 and GTS systems.

6. Management of WIS Centers (cont'd)

- **Data Collection and Production Centres (DCPCs)** can start migrating to WIS2 from January 2025 when WIS2 will be operational. It is recommended to start planning and preparation in advance and in a way that the migration will be completed preferably by 2030 and not later than 2033. The migration to WIS2 by a DCPC can be considered complete when at least one WIS2 Node for the DCPC is operational and all the datasets transmitted on GTS are also shared on WIS2 in compliance with the technical requirements described in the *Manual on WIS*, Volume II and the *Guide to WIS*, Volume II. A DCPC that has fully migrated to WIS2 shall communicate to the WMO Secretariat that its migration is complete and shall keep the WIS1 and GTS operational in parallel with the WIS2 systems until reception of a communication from the WMO Secretariat allowing the switch from the WIS1 and GTS systems.

6. Management of WIS Centers (cont'd)

- A GISC shall support Members in its area of responsibility in the migration and operation of WIS2.

Thank you
Merci
Gracias
شكرا
谢谢
Спасибо