

WIS2 Node Implementation EUMETSAT and special requirements

Simon Elliott
EUMETSAT

*WIS 2 Training Workshop
8 October 2026*



Trusted in Space.
Essential on Earth.

- **Description** (see below)
- **De-duplication**: Unique data IDs in managed list
- **Recommended**: Needed for some radiosondes et c. (see below)
- **Drop/Reconnect**: Call-back stuck after bounce. Regular reconnection
- **GTS stop**: ended August 2026

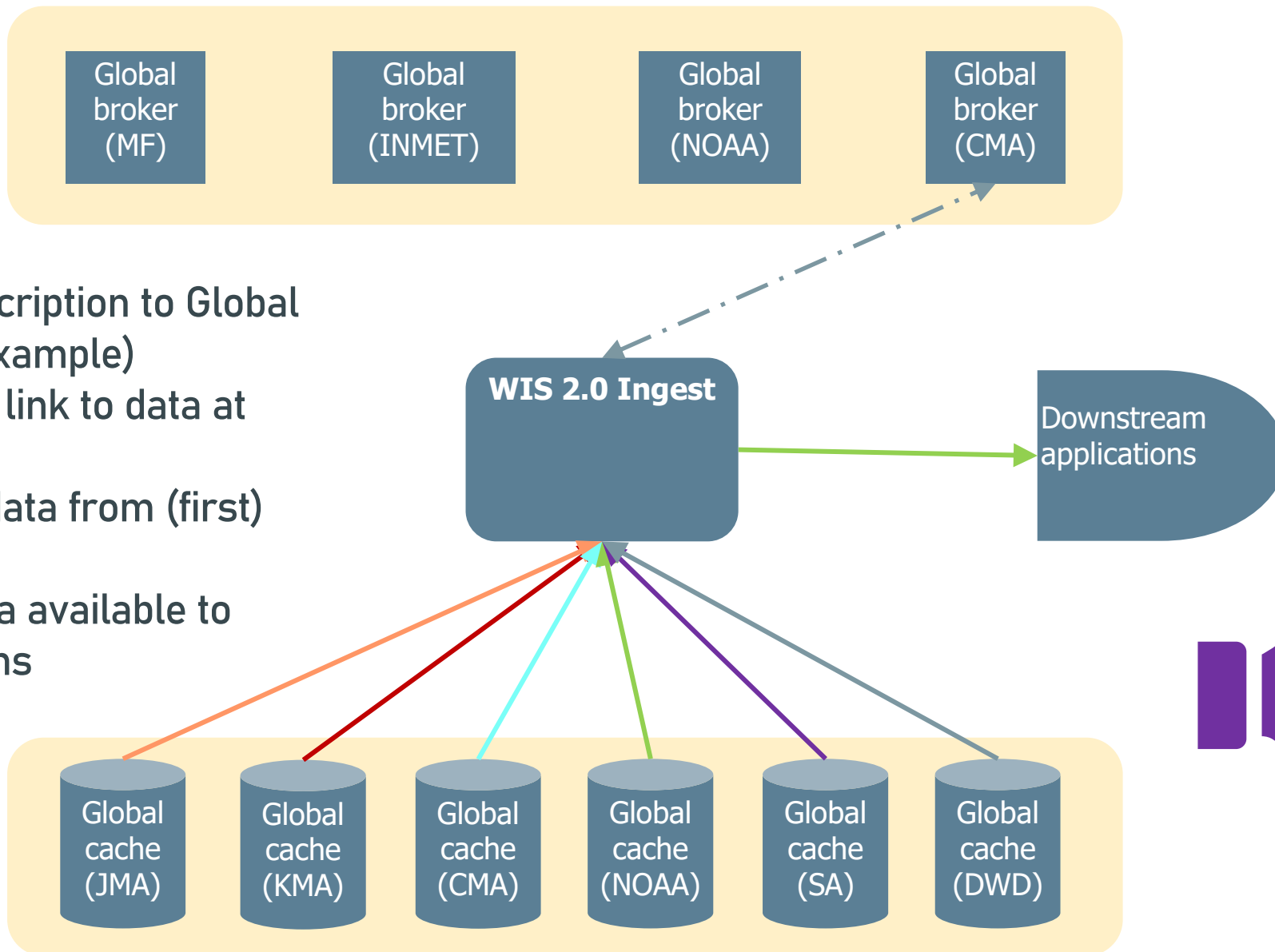
Food for thought ... alert messages

How to subscribe

How to respond

Automation

- Example showing subscription to Global Broker (here CMA as example)
- Global Broker provides link to data at multiple Global Caches
- Ingest client retrieves data from (first) one of these
- Ingest client makes data available to downstream applications





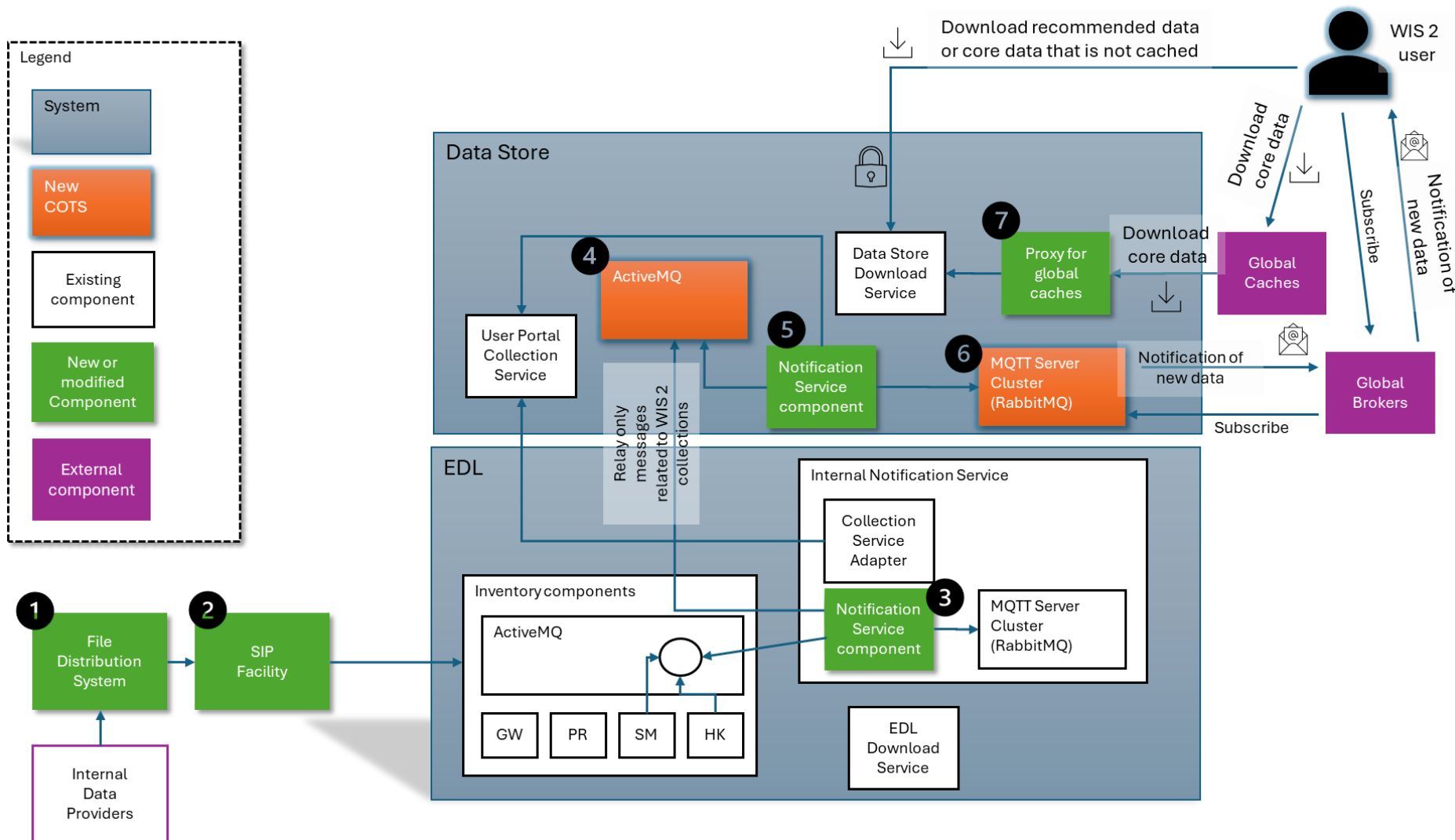
Incoming GTS data stopped 27/08/2026

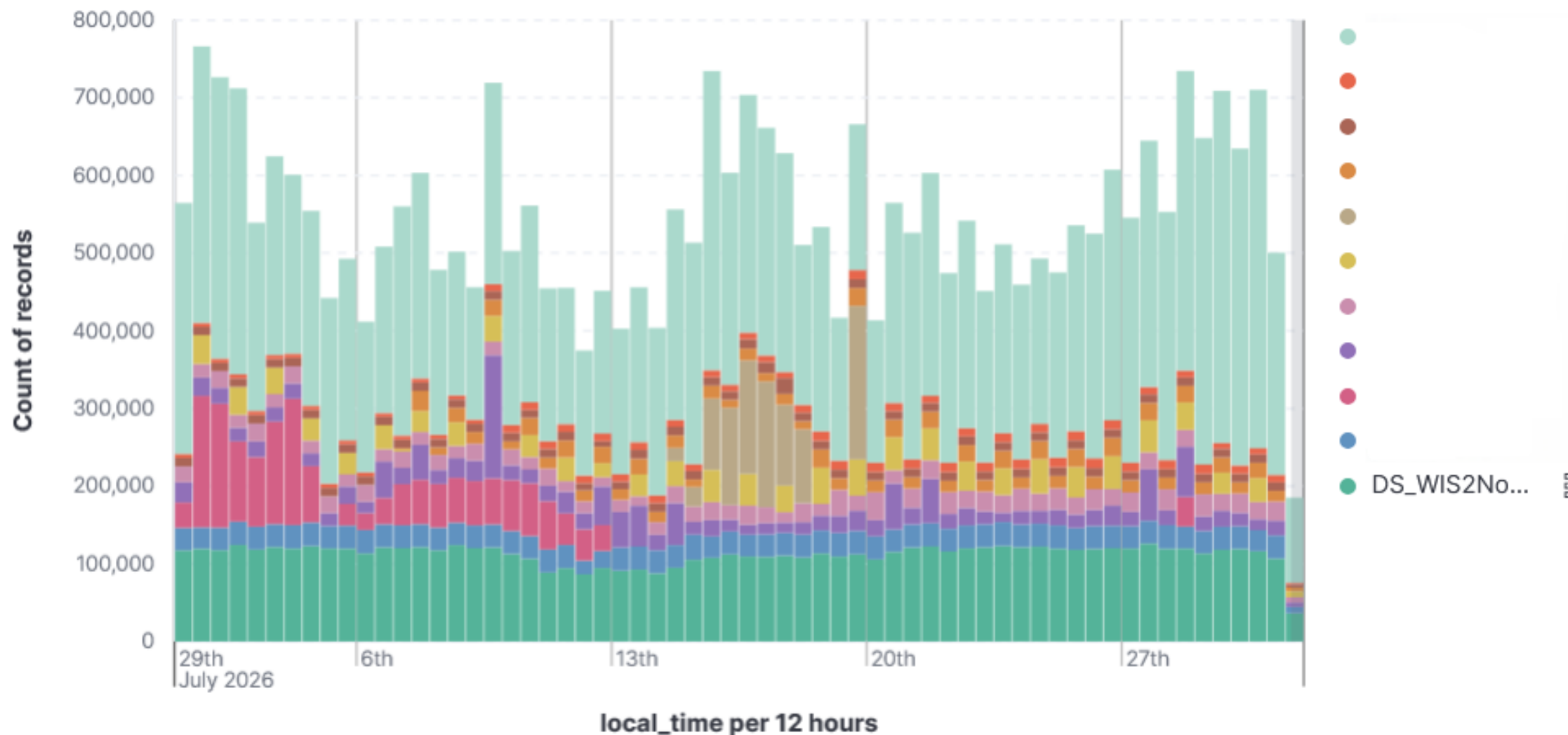
The following data are now arriving routinely via WIS 2.0 rather than via GTS:

- Radiosonde ascents (a.k.a TEMPs)
- Space based radio occultation data
- Single level aircraft reports (a.k.a AMDARs)

Much of the data are not yet directly put on WS 2.0 but the supplier, but are taken from the GTS-to-WIS2 gateway provided by DWD

- **Description:** using existing and modified data service infrastructure (see below)
- **Metadata management:**
 - creating WCMP2 style from main metadata
 - setting “topic” property from main metadata
 - Setting “metadata_id” property from main metadata
- **Outgoing alerts:**
 - planned versus unplanned outages
 - interface with existing system







Data designation by EUMETSAT and WMO

www.eumetsat.int

EUMETSAT Data Policy , Article 4

Recommended Data are subject to licensing by EUMETSAT and, in specific cases, a fee

Core Data and Products available to all users world-wide on a Free and Unrestricted basis under a CC-BY-4.0 licence, regardless of when and how these are made available to the user

Ex. g. ASCAT L1

Access via EUMETSAT data store

Ex. g. GOME-2 L1

Access via EUMETSAT data store

Ex. g. FCI L1 non-hourly

Access via global caches unless j) asked not to or ij) chooses not to

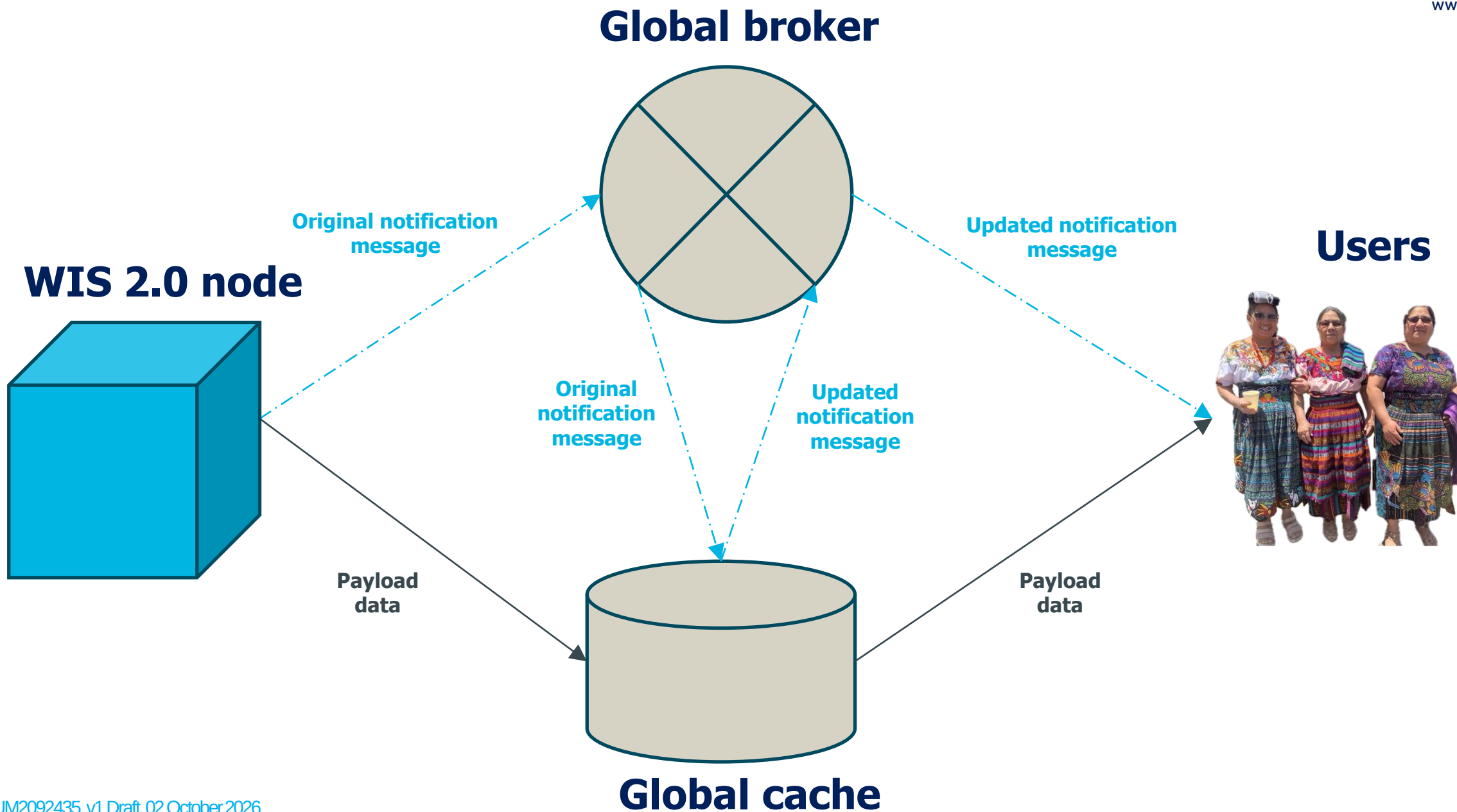
Ex. g. AMSU-A L1

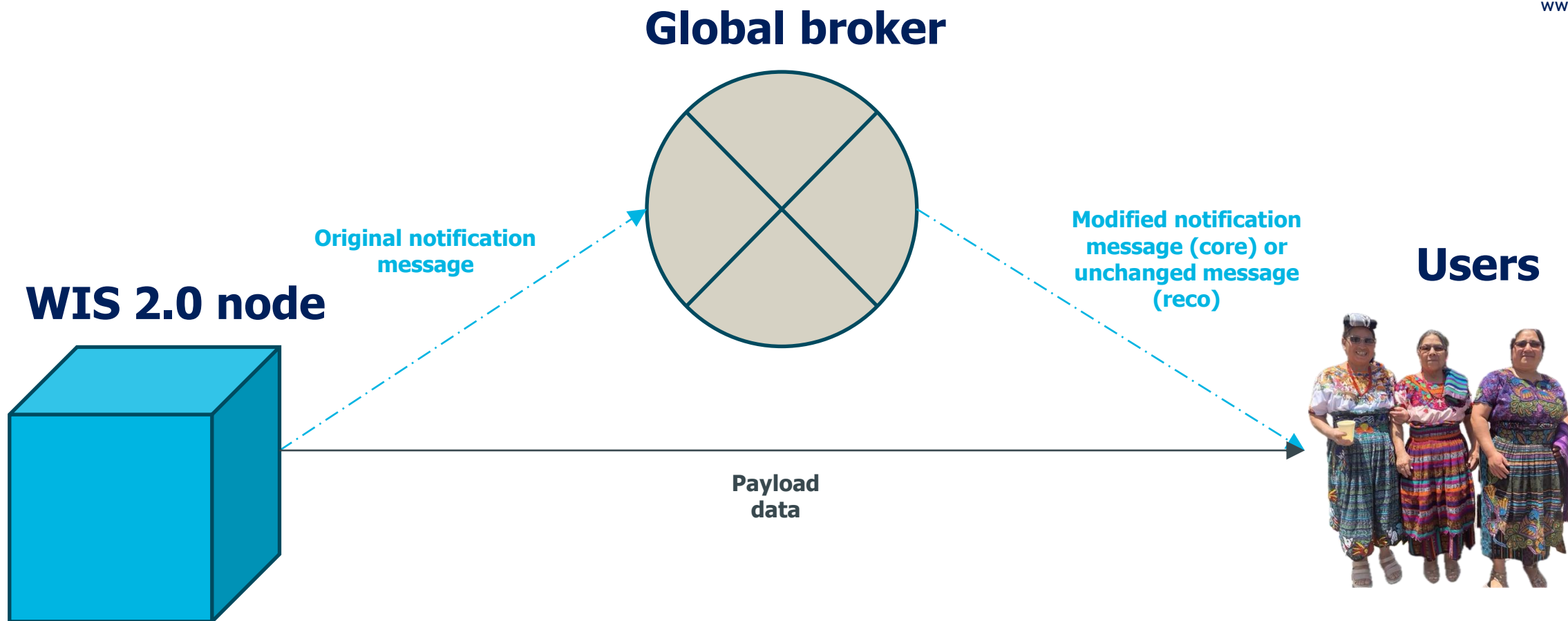
Access via global caches unless j) asked not to or ij) chooses not to

Recommended data are all data which are not "core"

Core data free and unrestricted basis

WMO Manual on WIGOS, Attachment 42., Table 3





WIS 2.0 node can request Global Caches not to cache core data by setting "cache": false in notification message properties

DCPs

Data Collection Platforms transmitting from data logger at remote site via satellite transponder. Data shared freely on GTS and now WIS 2.0

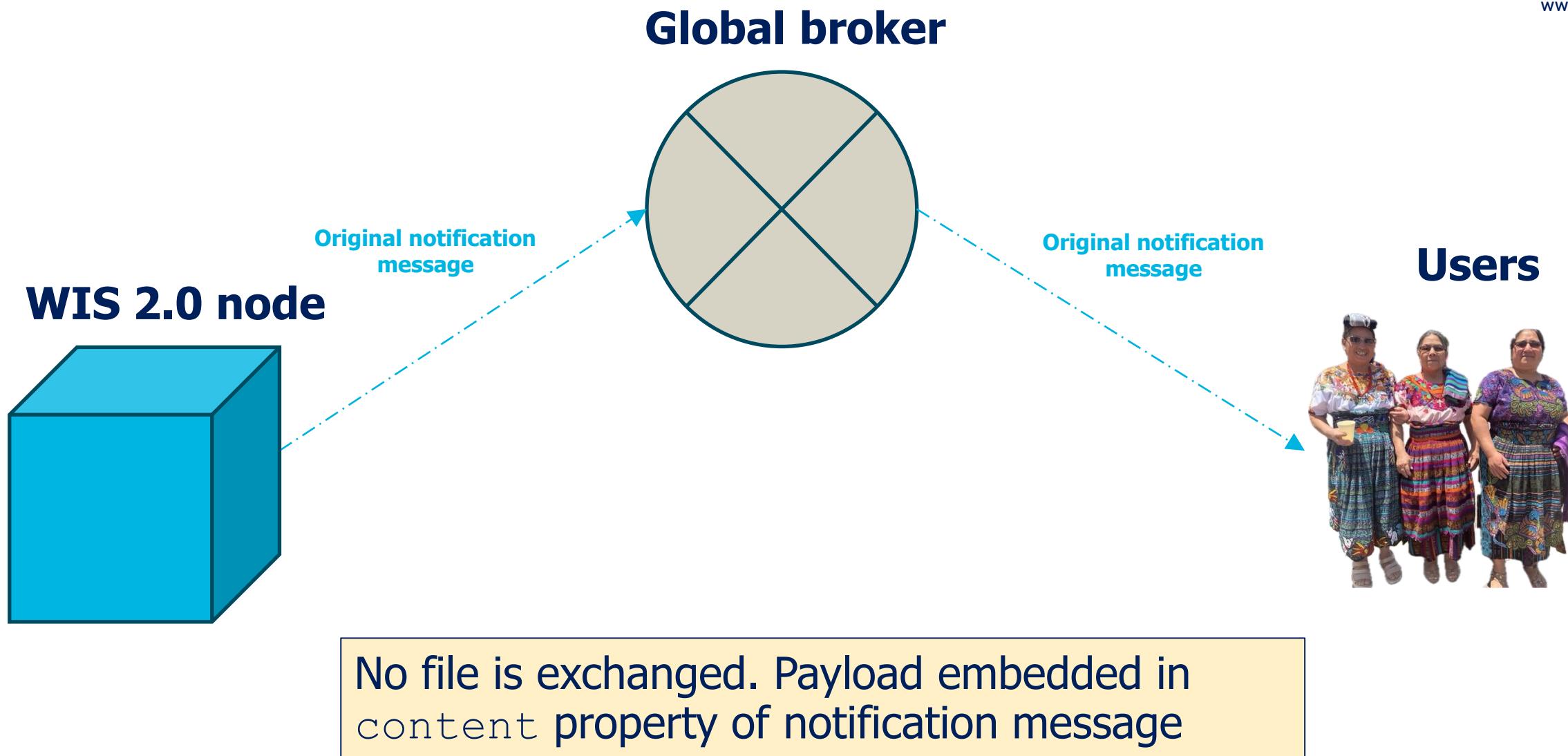
Current way of working

As payload is small it is embedded in notification message (live demo'). No file is exchanged (see below). Data are treated as “recommended”, with no access restrictions applied. Novel approach for WIS 2.0 but standard practice in wider MQTT community

Future approach

Payload stored in file at EUMETSAT and referred to via canonical link in notification message. Standard approach for WIS 2.0

- **GTS stop:** 14/01/2027. All data already on WIS 2.0 plus other sources



- Establishment of a **pilot local MQTT broker** for demonstrating EUMETSAT's initial capability to be a WIS 2.0 node (*activated in September 2023, terminated December 2025*)
- Distribution of all **outgoing GTS satellite products to WIS 2.0** (*December 2025*)
- Provision of an **initial flow of core data not having been on the GTS** [*Sentinel-1C/D*] (*May 2026*)
- **Migration of incoming traffic from GTS** to a corresponding WIS 2.0 data flow (*August 2026*)
- Provision of an **initial flow of recommended data** [*Metop ASCAT L1 global data*] (*August 2026*)
- **Delivery of embedded DCP data** via WIS 2.0 node (*September 2026*)



Thank you!
Questions are welcome.

The end of WMO's GTS and advent of WIS 2.0

The GTS has served the world for years

U - U - U - U - U - U -

But sure enough its glory days are done.

U - U - U - U - U - U -

And as the end of store and forward nears;

U - U - U - U - U - U -

Bulletin headers will set with the sun.

U - U - U - U - U - U -

WIS2 will let the world collaborate

U - U - U - U - U - U -

And share their data unreservedly.

U - U - U - U - U - U -

The GTS will slowly hibernate

U - U - U - U - U - U -

And close for good in twenty thirty-three.

U - U - U - U - U - U -