

Stories from Data Providers:



Best practices and challenges in managing world's largest archive of meteorological data

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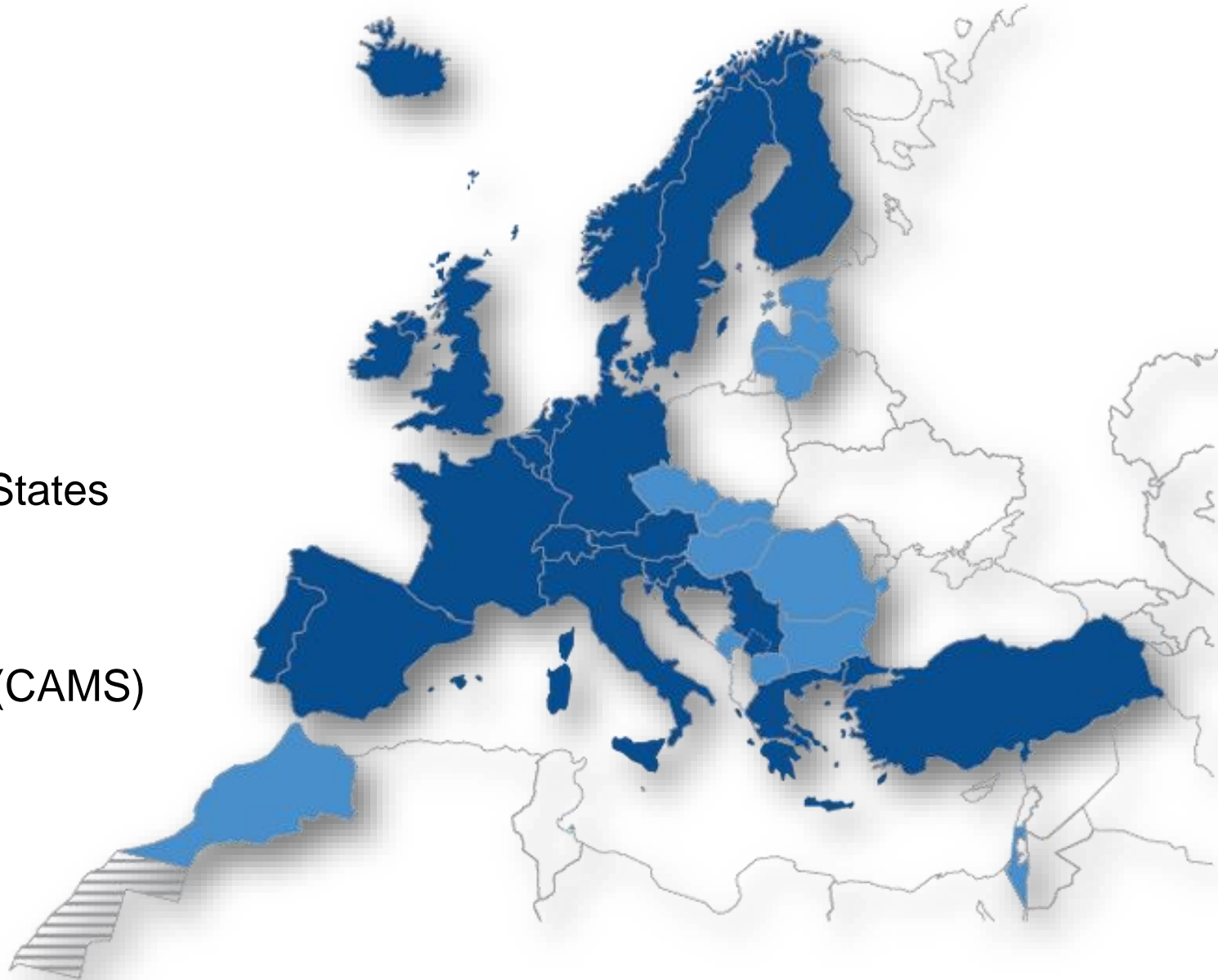
GEO Data Provider Workshop | Florence, Italy

21 April 2017

About ECMWF

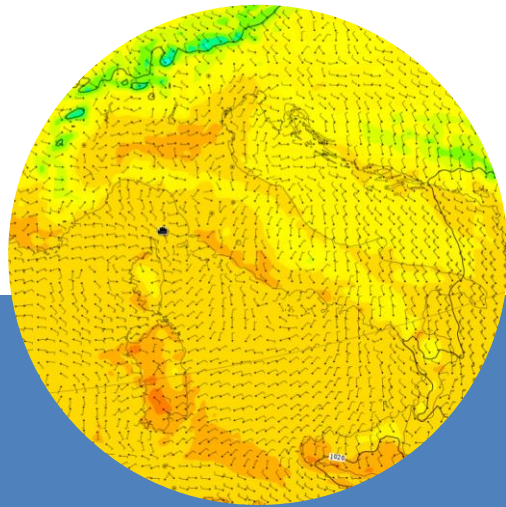
European Centre for Medium-Range Weather Forecasts

- 24/7 operational service
- Research institution
- 22 member states | 12 Cooperation States
- Two Copernicus Services
 - Climate Change Service (C3S)
 - Atmosphere Monitoring Service (CAMS)
- 300 + staff



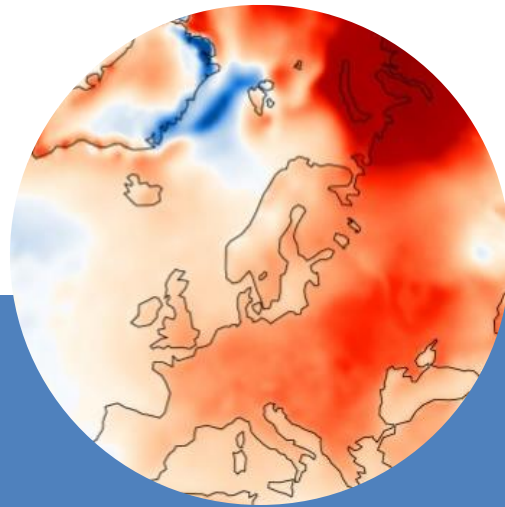
ECMWF data and data licenses

ECMWF Forecasts



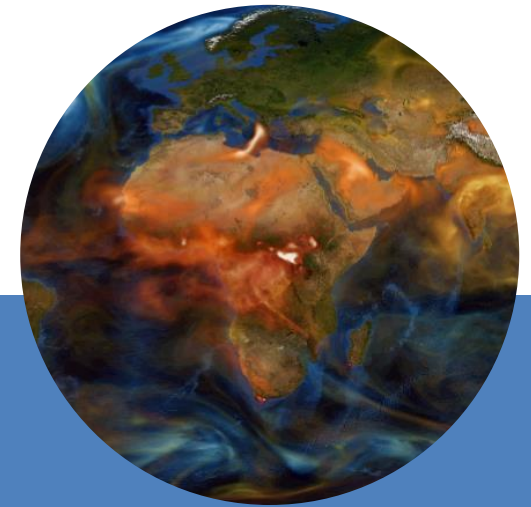
- Operational global forecasts from medium-range (3-15 days), to monthly and seasonal, and up to a year ahead
- Twice-daily numerical forecast outputs

ECMWF Public data




- Climate Reanalysis data (e.g. ERA-interim)
- Specific projects (for research and education only):
 - S2S (sub-seasonal to seasonal)
 - TIGGE (Ensemble forecast data)

Copernicus (CAMS, C3S)



- **Climate Change service**
 - ERA-5 reanalysis (~ 5 PB)
 - Multi-model seasonal forecasts
- **Atmosphere Monitoring service**
 - Daily analysis and forecast data of e.g. aerosols, greenhouse gases, fire emissions

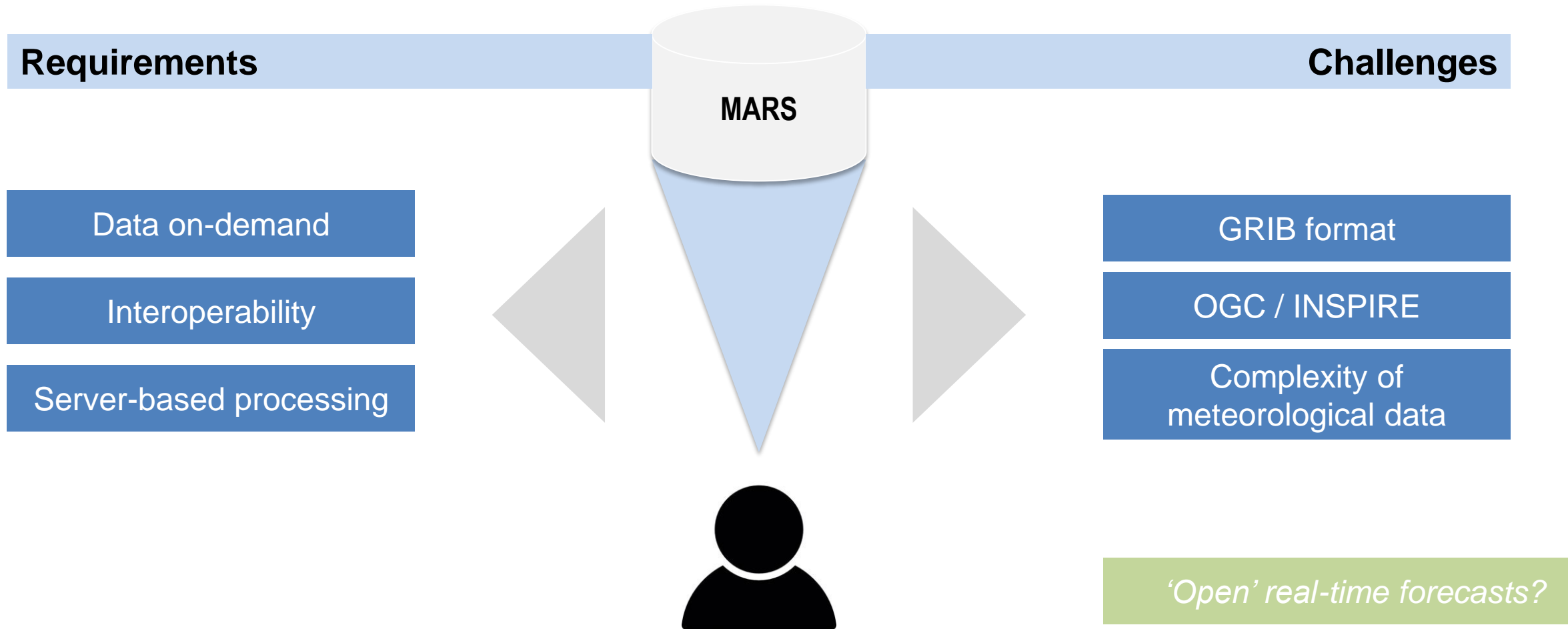


ECMWF's Meteorological Archive and Retrieval System (MARS)

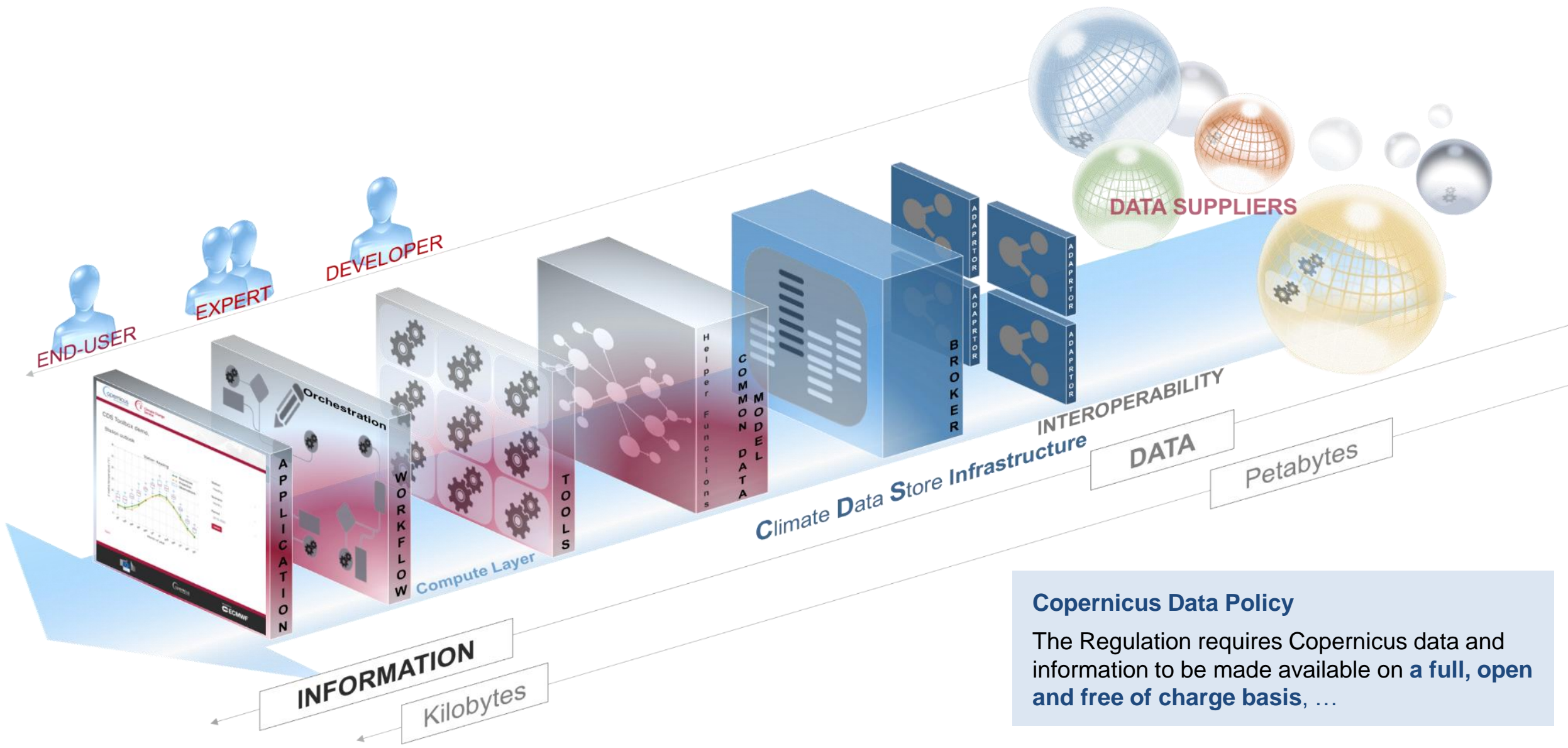
- ✓ World's **largest archive of meteorological data**
- ✓ **170 PB archived** (continues to grow by additional 5 PB per month)
- ✓ Around **180 TB are added every day**
- ✓ Total amount of data is **doubled every 18 month**

Current Challenges – Data Management and Data Provision

From a system for 'expert users' to a system for 'users'



Towards the future – Copernicus Climate Data Store (CDS)



Copernicus Data Policy

The Regulation requires Copernicus data and information to be made available on a **full, open and free of charge** basis, ...