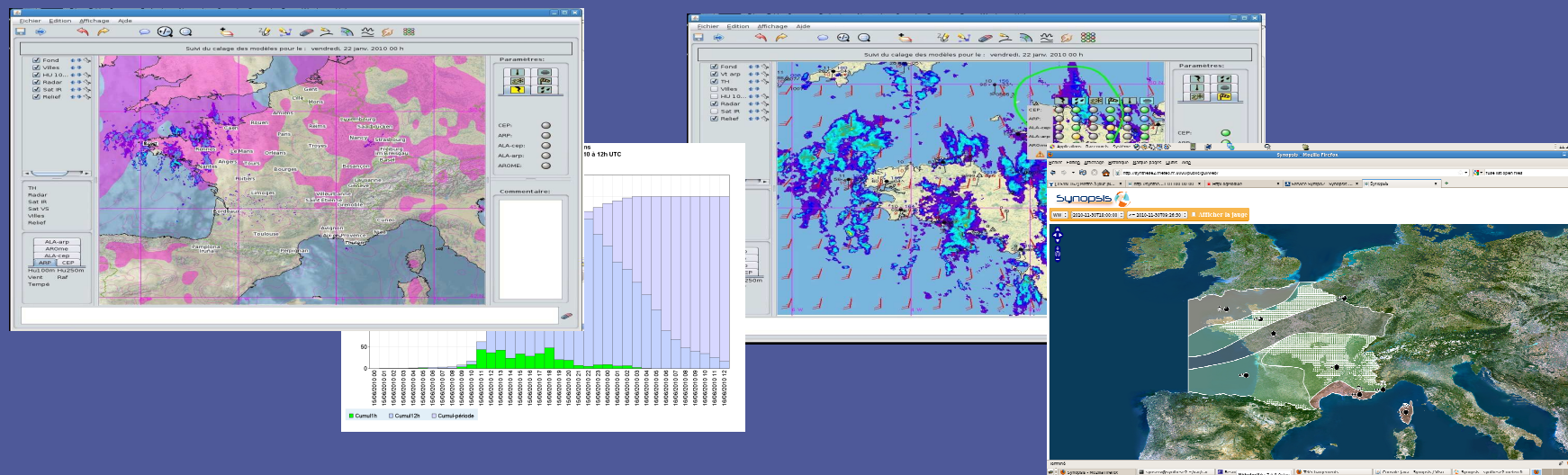


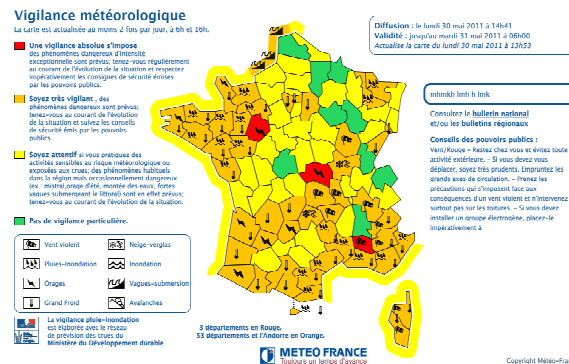
# Welcome to Meteo-France and EGOWS 2011



**Matteo dell'Acqua**  
*Deputy Director Information Systems*

# Who needs visualisation?

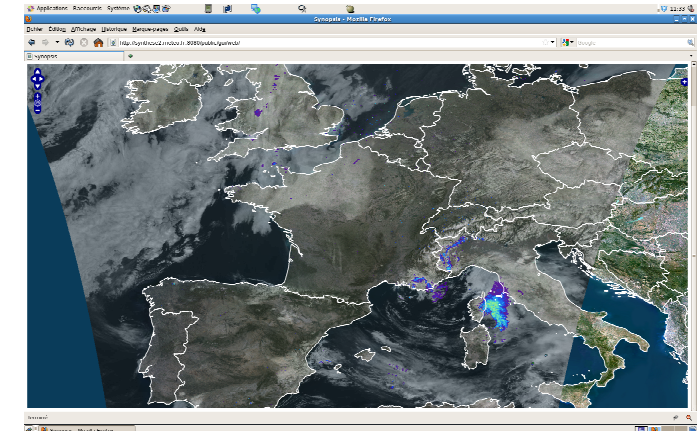
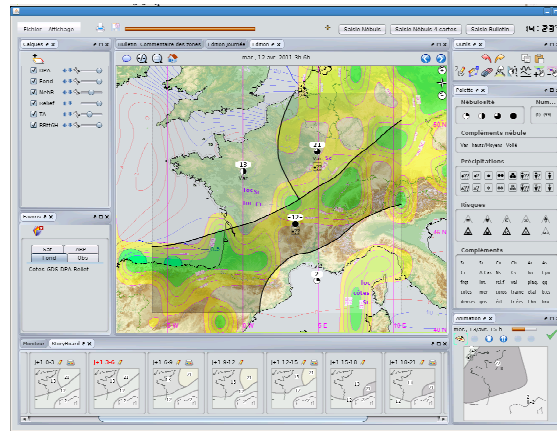
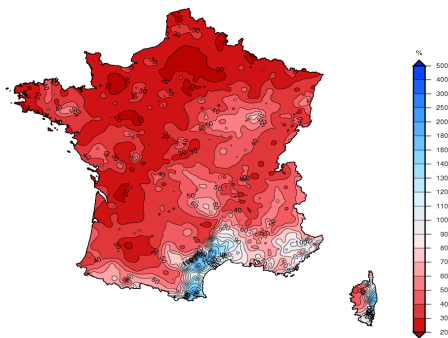
- Forecasters in their daily work using workstations
- Forecasters and the general public via the web
- Developers of new products
- Researchers
  - model and observations
- Decision makers



# Forecasters' visualisation requirements

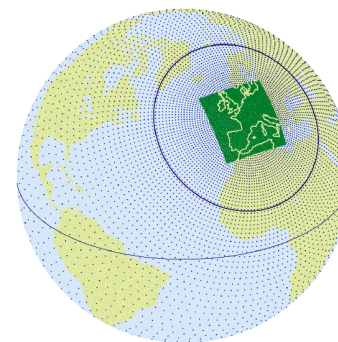
- Our Forecasters require visualisation of
  - different model outputs
  - Observation (satellite, radar, ..)
  - climatological information
  - Extreme events
  - Information provided by other agencies ( hydrology, energy, tourism, health, agriculture, transport, ...)
  - Geographical information

Rapport à la moyenne saisonnière de référence 1971-2000 des Cumul des précipitations  
Printemps 2011 - France



# Operational forecasting system

- High resolution deterministic forecast: ARPEGE 4 time per day
  - 10 km over France, 60 km over New-Zeland, 70-level, to 4 days ahead
- Limited Area Model: AROME 8 time per day
  - 2,5 km, 60-level, to 2 days ahead
- Additional LAM outside Europe (overseas French territories)
- Ensemble forecast (EPS):PEARP twice daily
  - 35 members, 16 km over France, 65-level, to 4 days ahead
- Ocean waves: 4 time per day
  - Global: 4 days ahead at 50 km with atmospheric forcing from IFS
  - Global: 4 days ahead at 50 km with atmospheric forcing from ARPEGE
  - European seas: 3 days ahead at 10 km
- Seasonal forecast: once a month
  - 41-members, 312 km 91 levels, to 7 months ahead
- Air pollution transport forecast: MOCAGE
  - 10 km over France to 4 days ahead

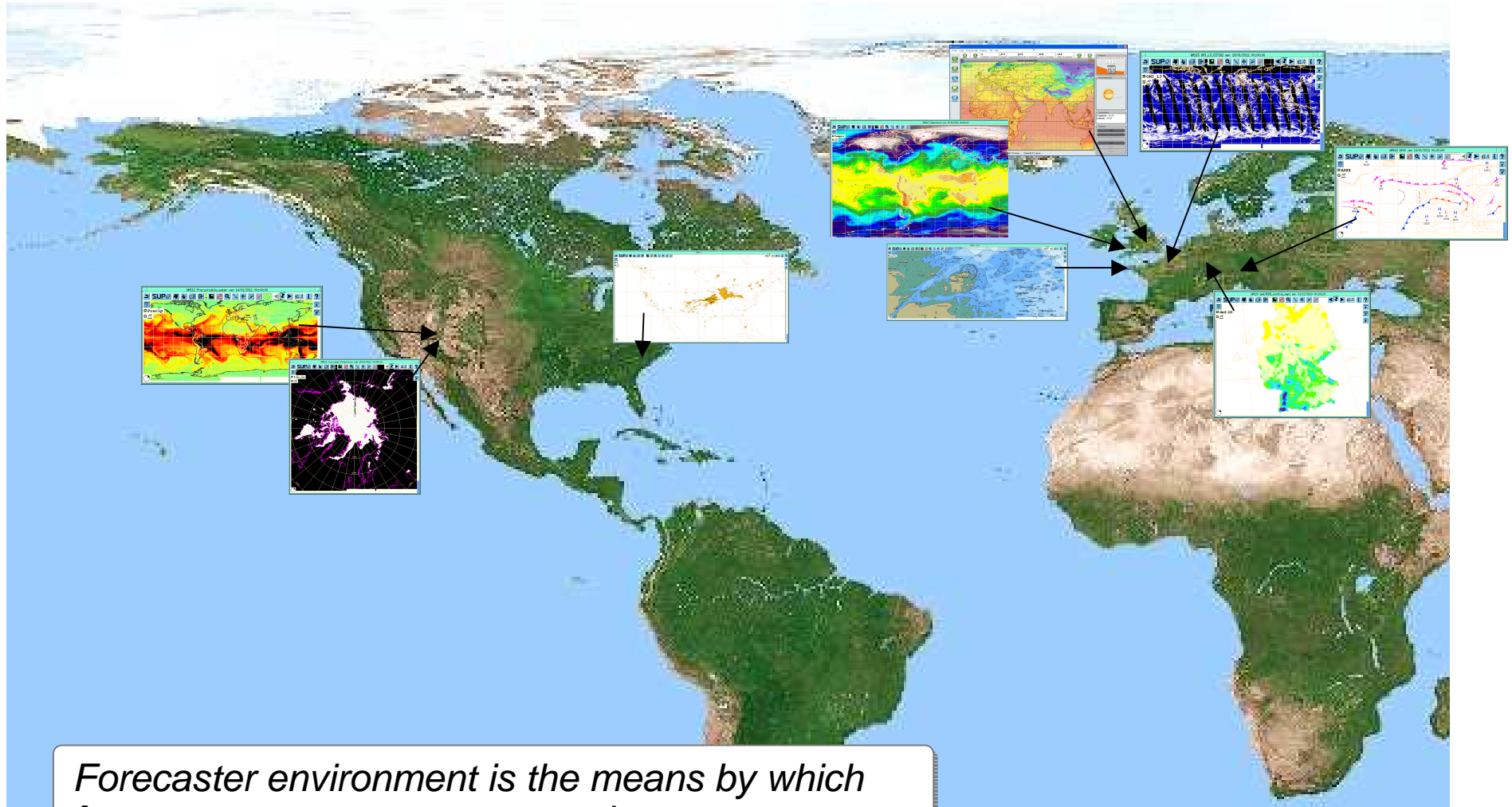




# Challenges

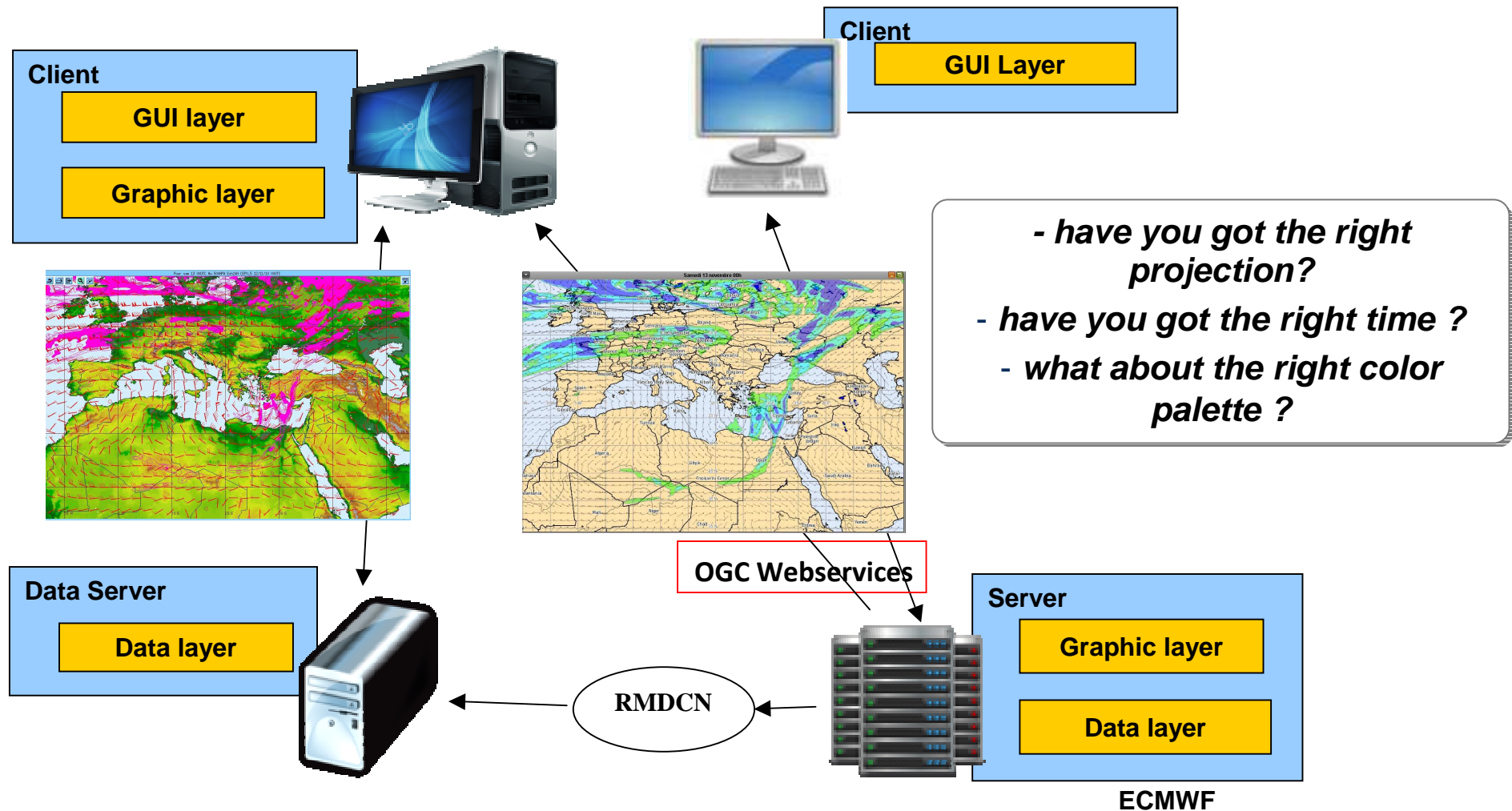
- Data volumes are increasing
  - Model resolution (spatial and temporal)
  - More observation types (radar X, lidar, LEO satellites, ...) ...
  - Available more frequently ....
- Easy integration of new data and products in our systems
- Network bandwidth to push data to the end users
  - From a system based on push toward a system using push and pull
  - Request information for non standard situation
- Operating with new developments, such as OGC standards

New Challenge - visualize geo-data from other centres

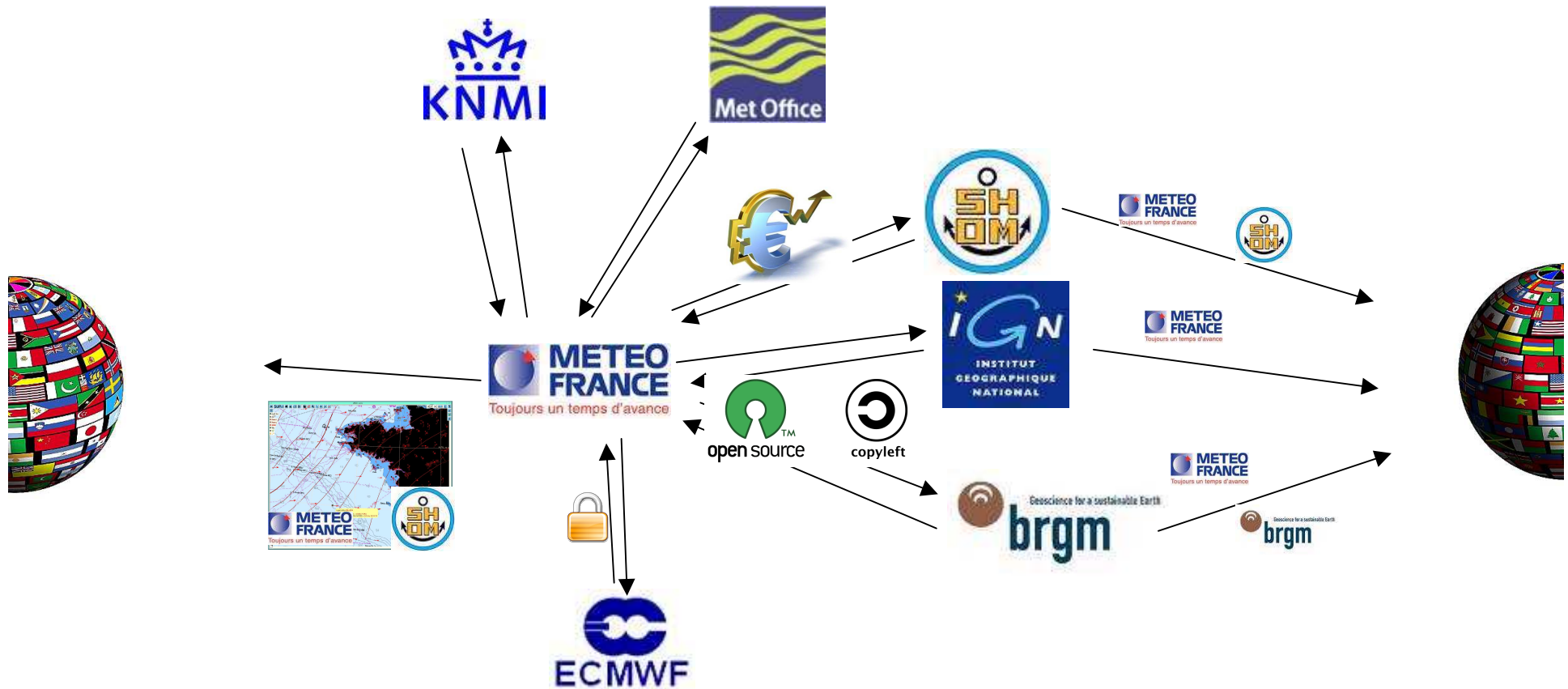


*Forecaster environment is the means by which forecasters want to access products*

# Are you sure that you get what you expected

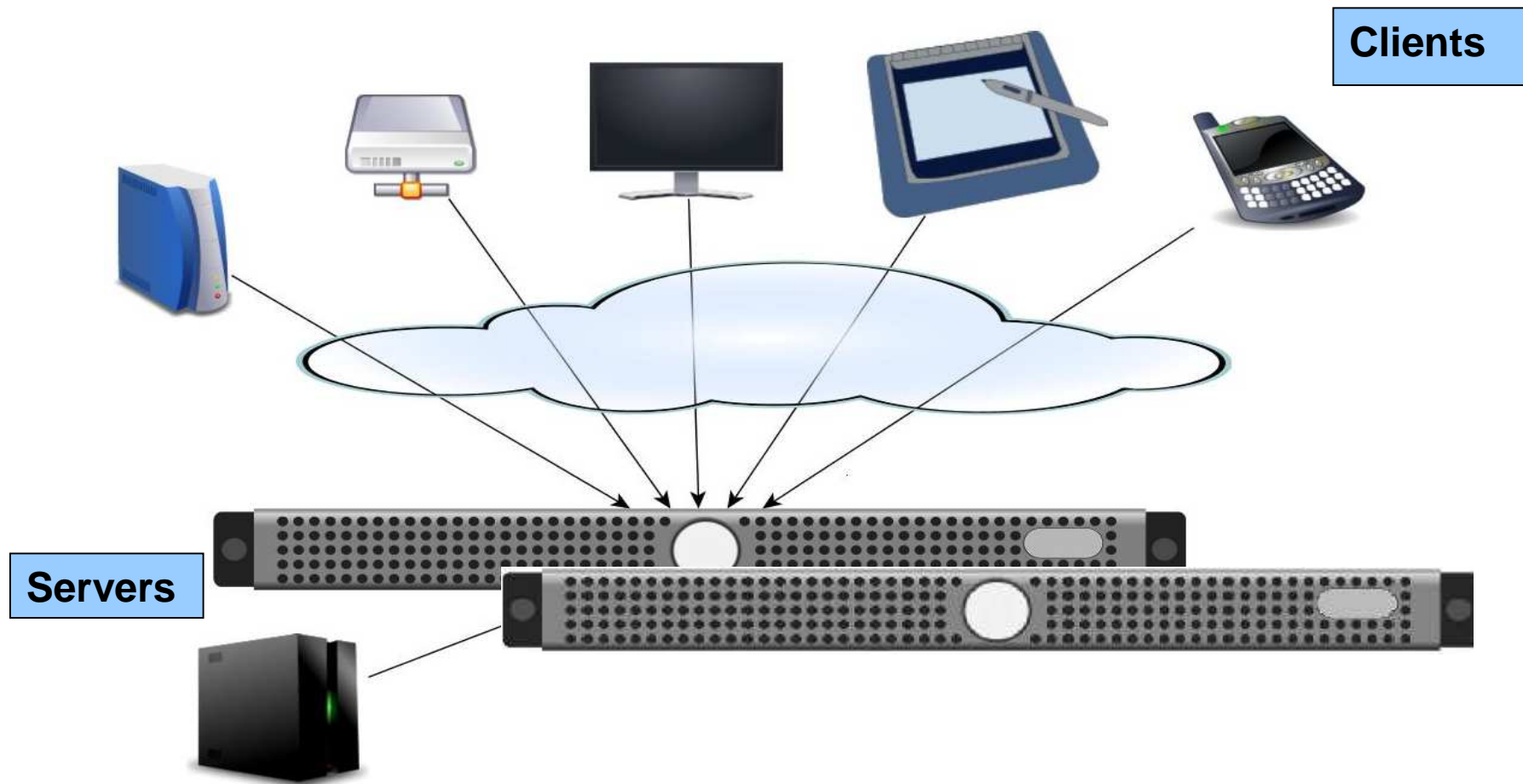


# New challenge - handling data policy





# New challenge - mobility



# Synopsis: a different way of working ?

## SYNERGIE

National and regional  
forecasting  
(metropolitan and  
overseas)

## New technologies

SOA,  
Web services, OGC

## SYNERGIE-Next

National, regional  
(metropolitan and  
overseas) and local  
forecasting

## SYNOPSISYS

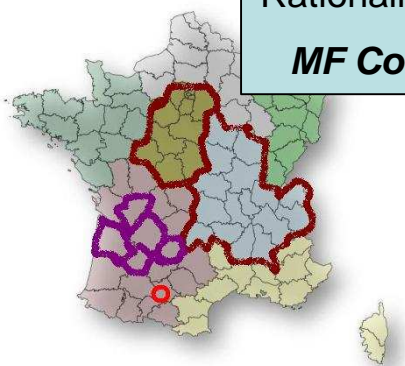
## OPPIDUM

Local departmental  
forecasting

MF Reorganisation  
Rationalisation  
**MF Constraints**

More interoperability  
More data  
**User requirements**

INSPIRE  
**New Regulations**



**METEO FRANCE**  
Toujours un temps d'avance

**Thanks for your attention ...**



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