

# Synopsis: last news

Antoine Lasserre-Bigorry, Hugo Vandeputte (Météo-France)

**October 2018**



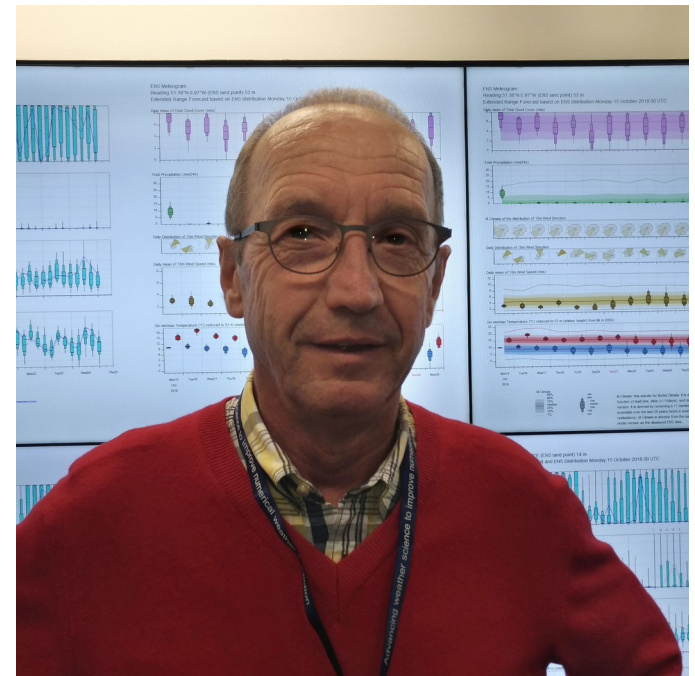
# Synopsis: last news

**Antoine Lasserre-Bigorry**

<antoine.lasserre@meteo.fr>

Météo-France/ Production Department

**Project lead**



# Synopsis: last news



**Hugo Vandeputte**

<hugo.vandeputte@meteo.fr>

Météo-France/ IT department

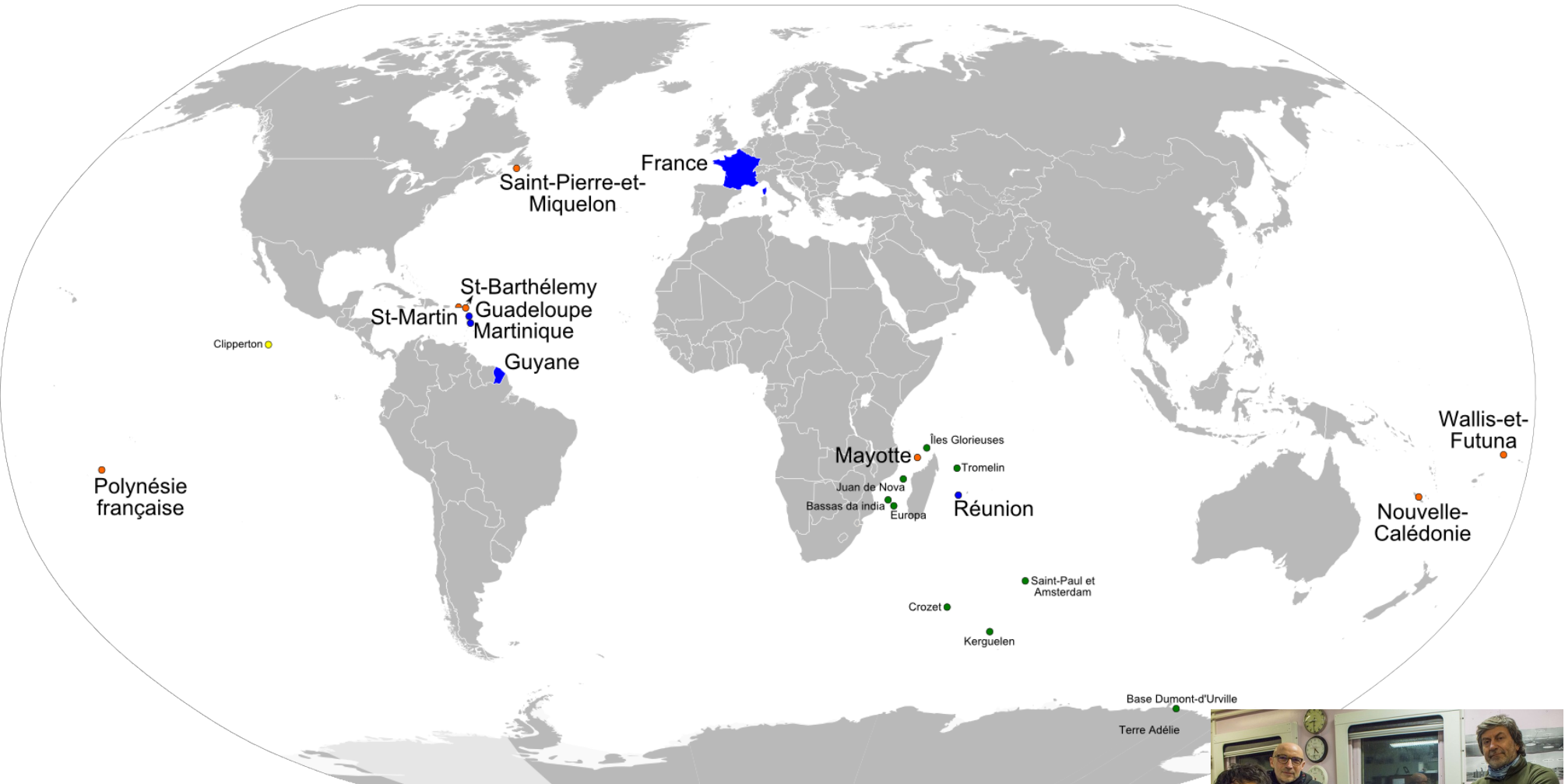
**Technical Lead of the Synopsis Client Software**

The project is not over  
(Q4 2018)

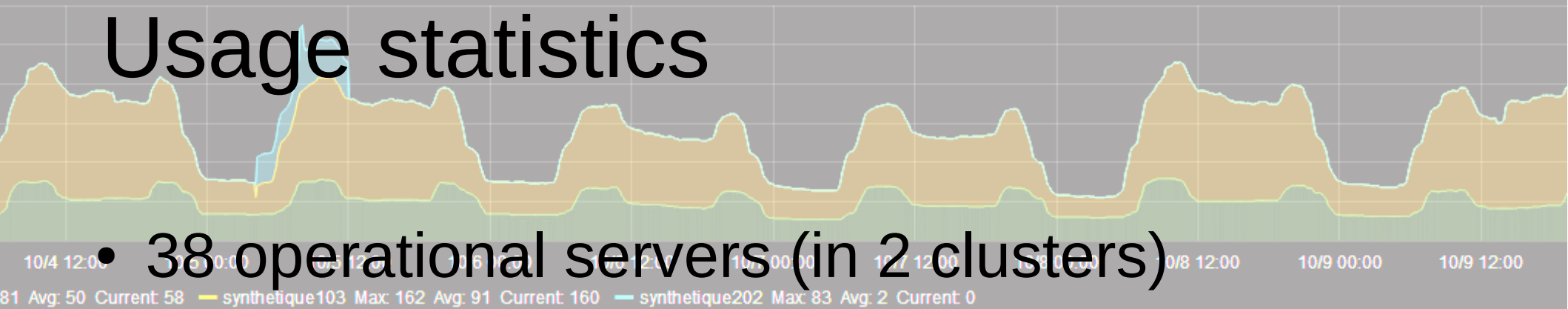


But it is massively used  
in operational mode since 2013

# Overseas territories deployment



# Usage statistics



- 38 operational servers (in 2 clusters)

- 1200 distinct product types

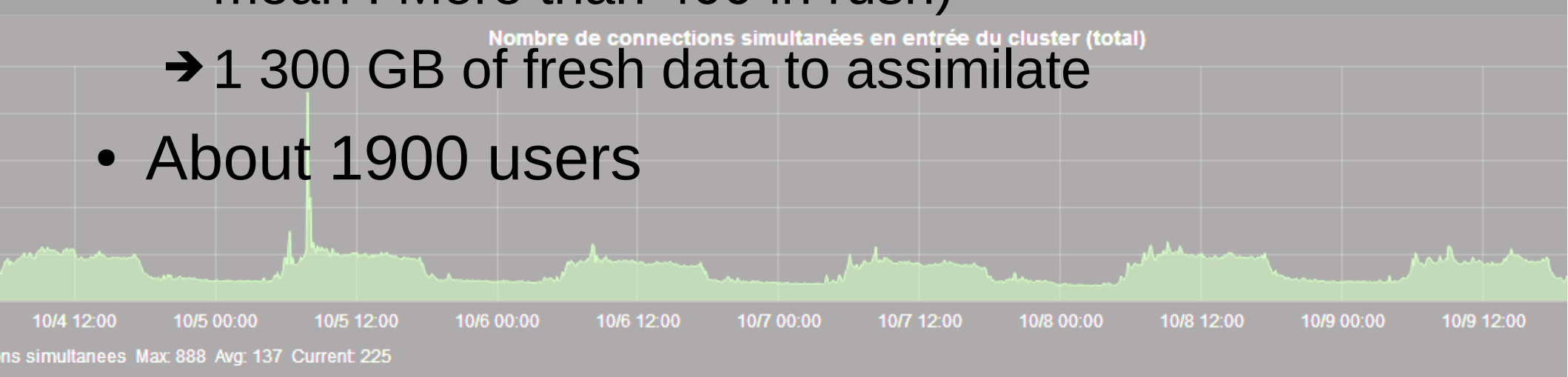
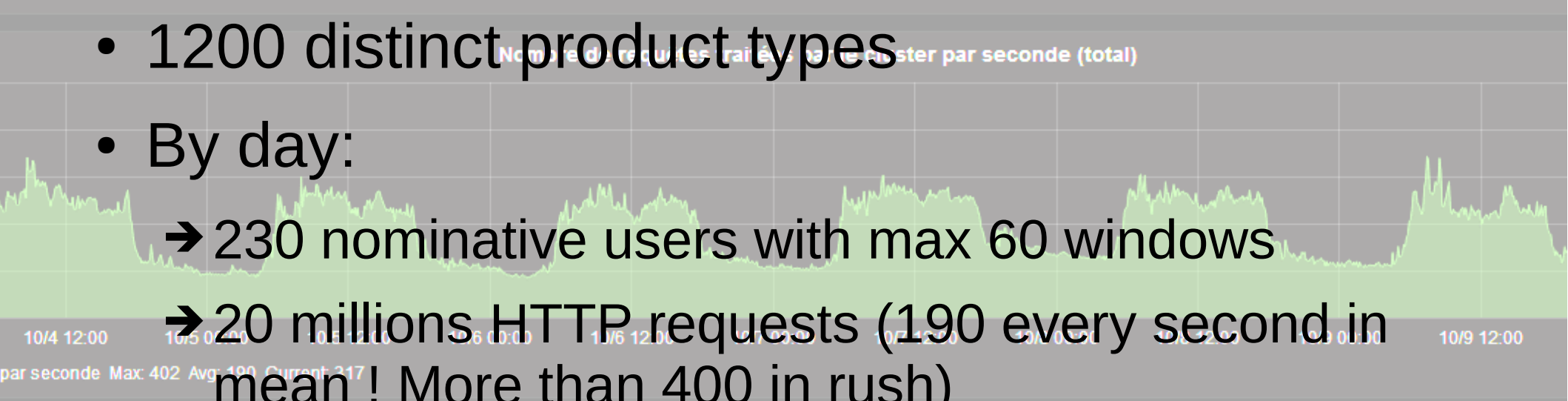
- By day:

→ 230 nominative users with max 60 windows

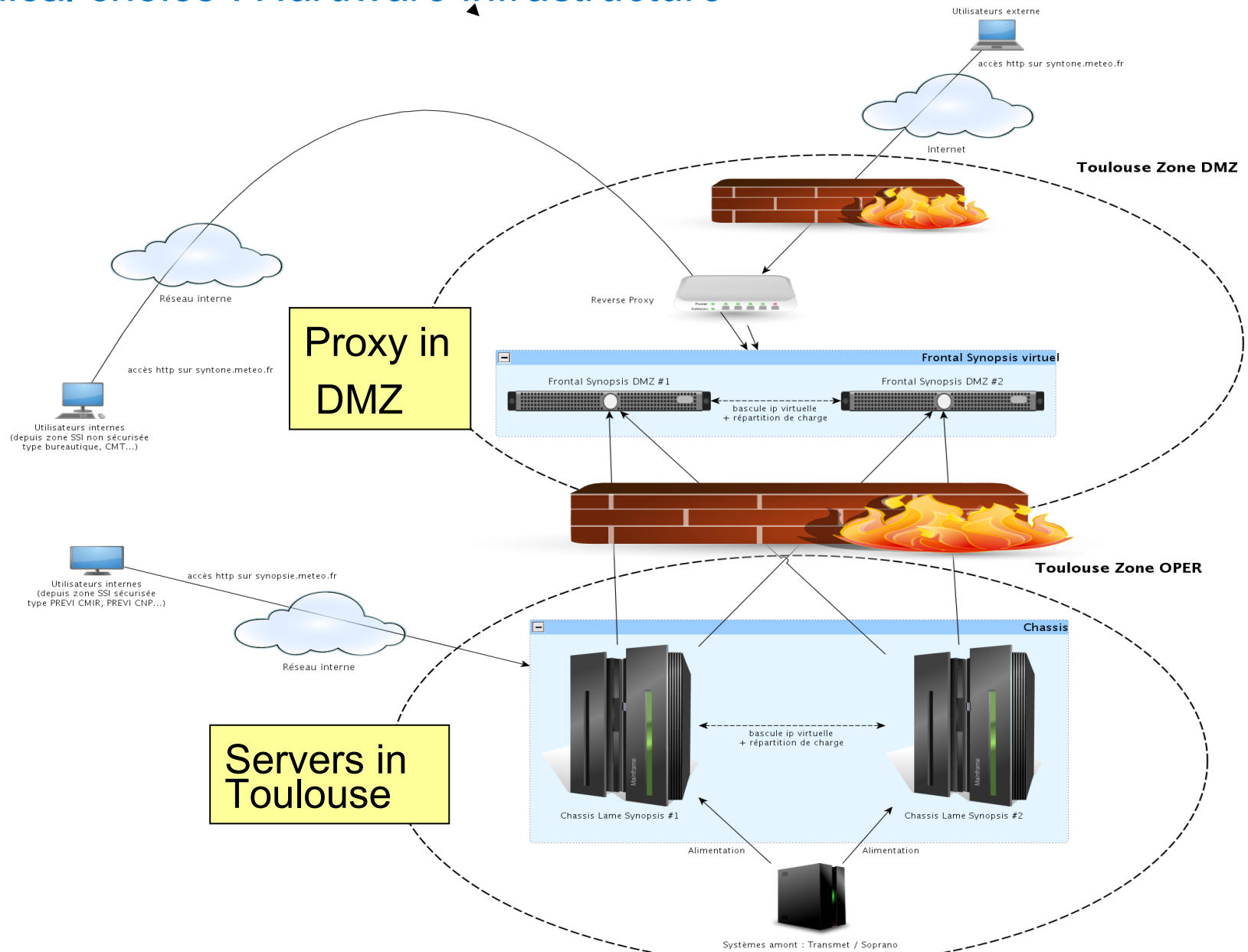
→ 20 millions HTTP requests (190 every second in mean ! More than 400 in rush)

→ 1 300 GB of fresh data to assimilate

- About 1900 users



# Technical choice : *Hardware infrastructure*



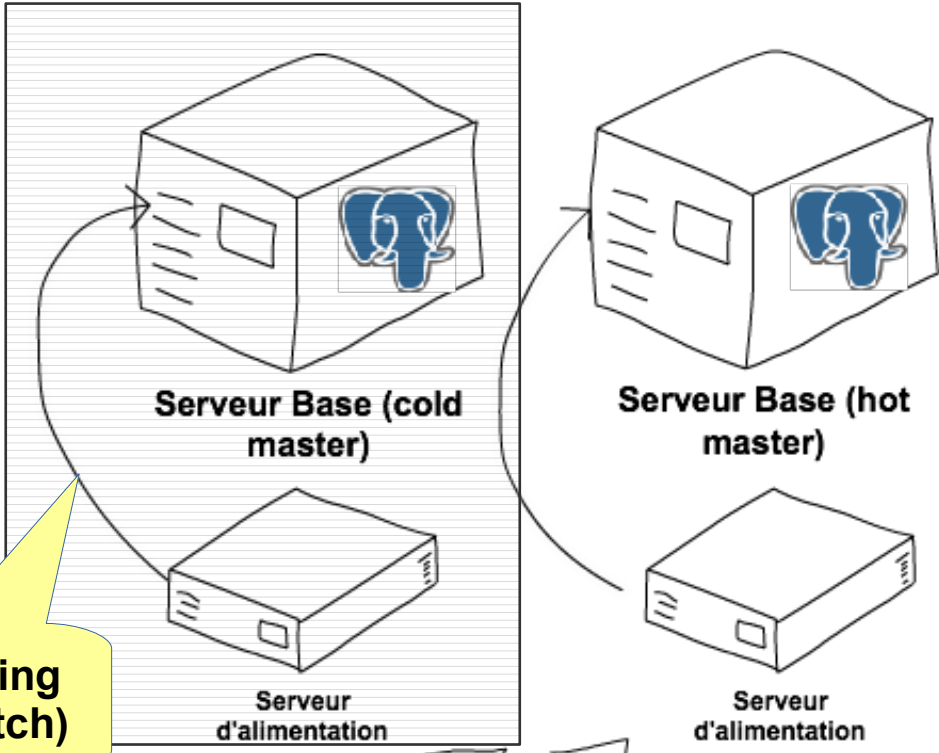
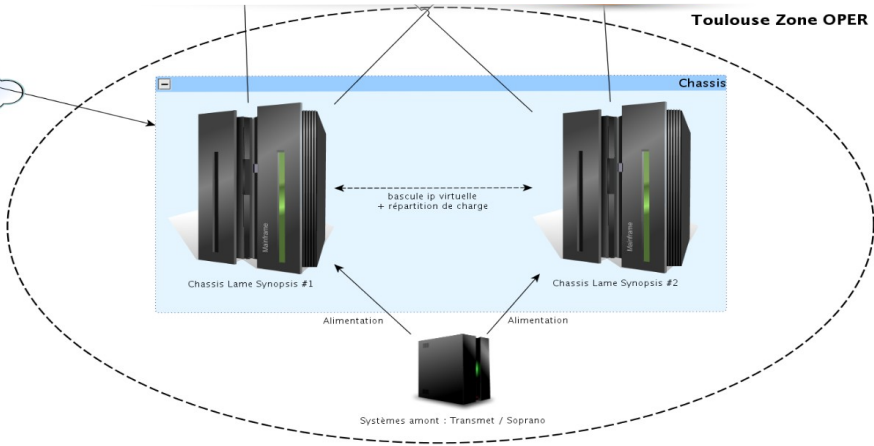
A space shuttle is shown in orbit above the Earth's horizon. The Earth's blue and white atmosphere is visible on the right side of the frame. The moon's cratered surface is visible in the background, extending from the top right towards the center. The shuttle is on the left, moving away from the viewer.

Houston we Have a problem !

Too much job for a single database



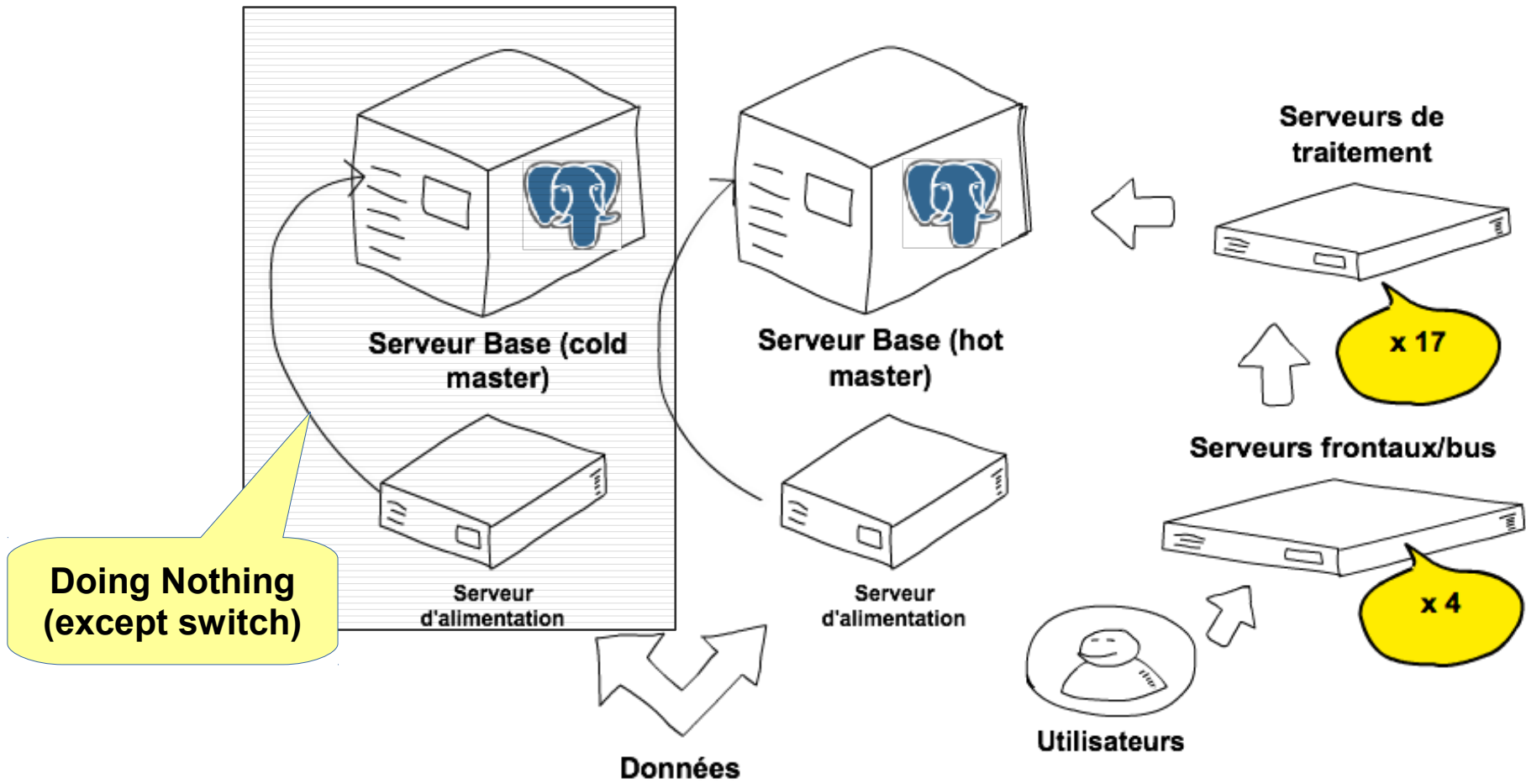
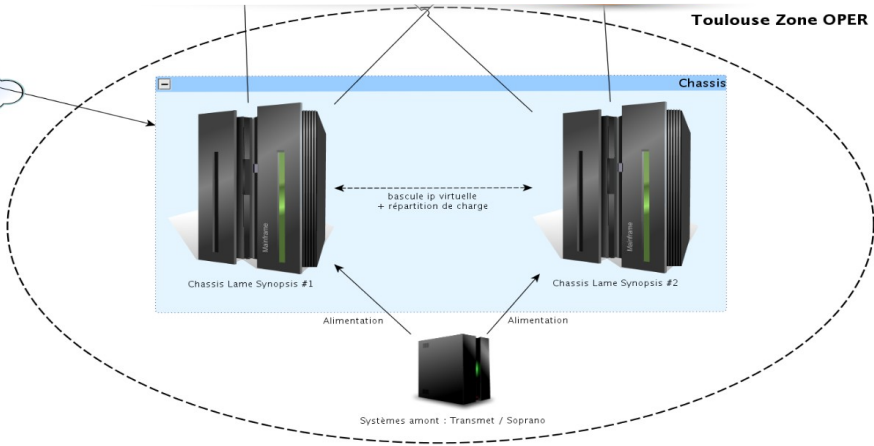
Toulouse Zone OPER



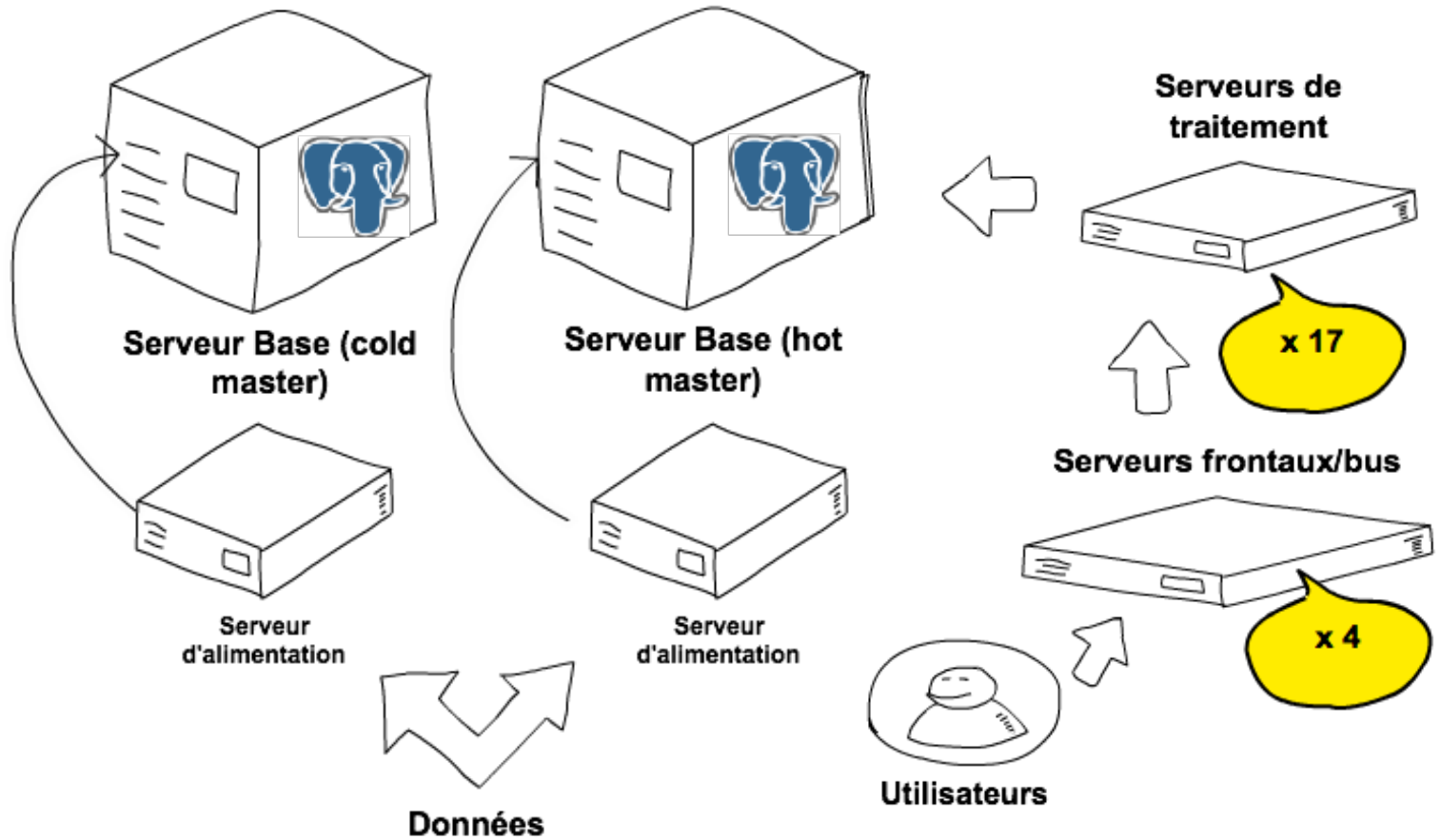
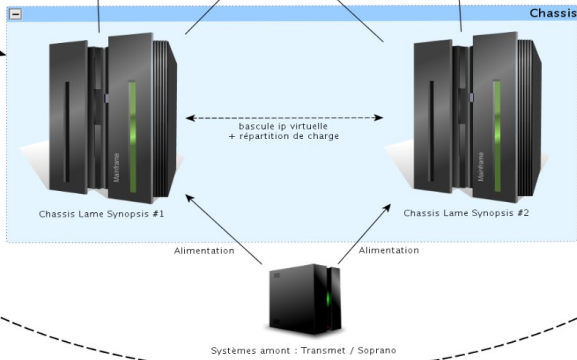
**Doing Nothing  
(except switch)**

**Données**

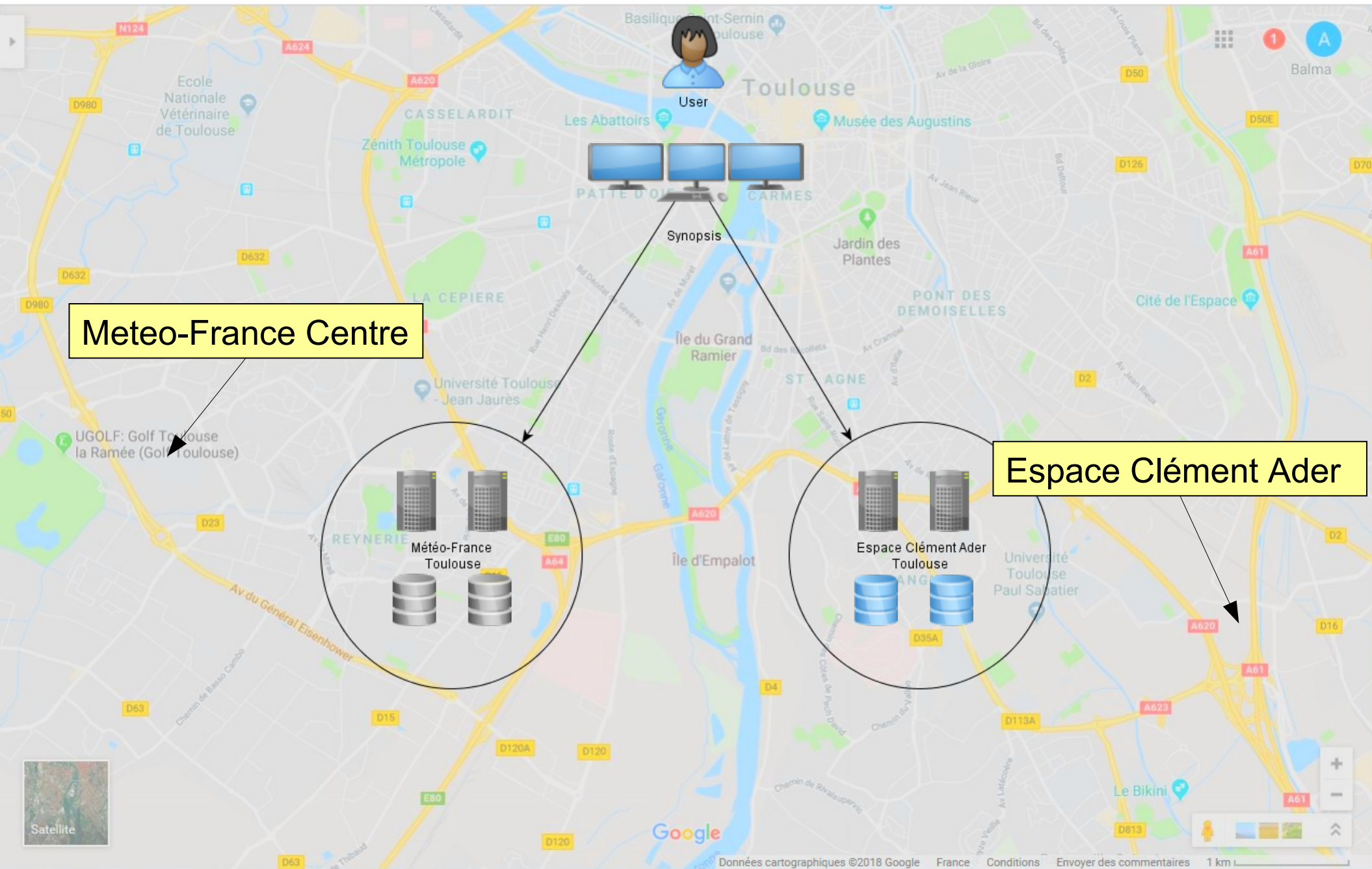
Toulouse Zone OPER



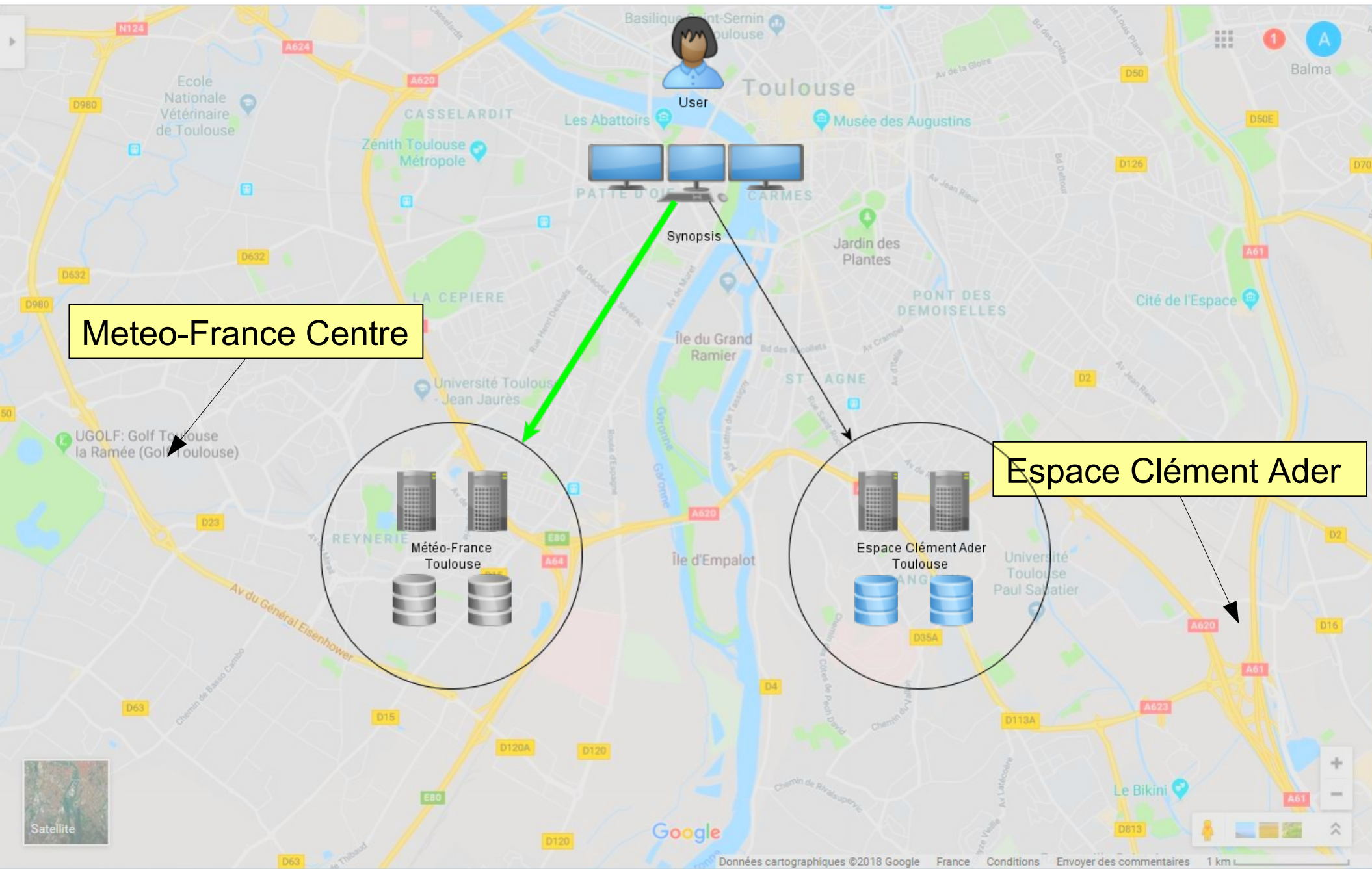
Toulouse Zone OPER



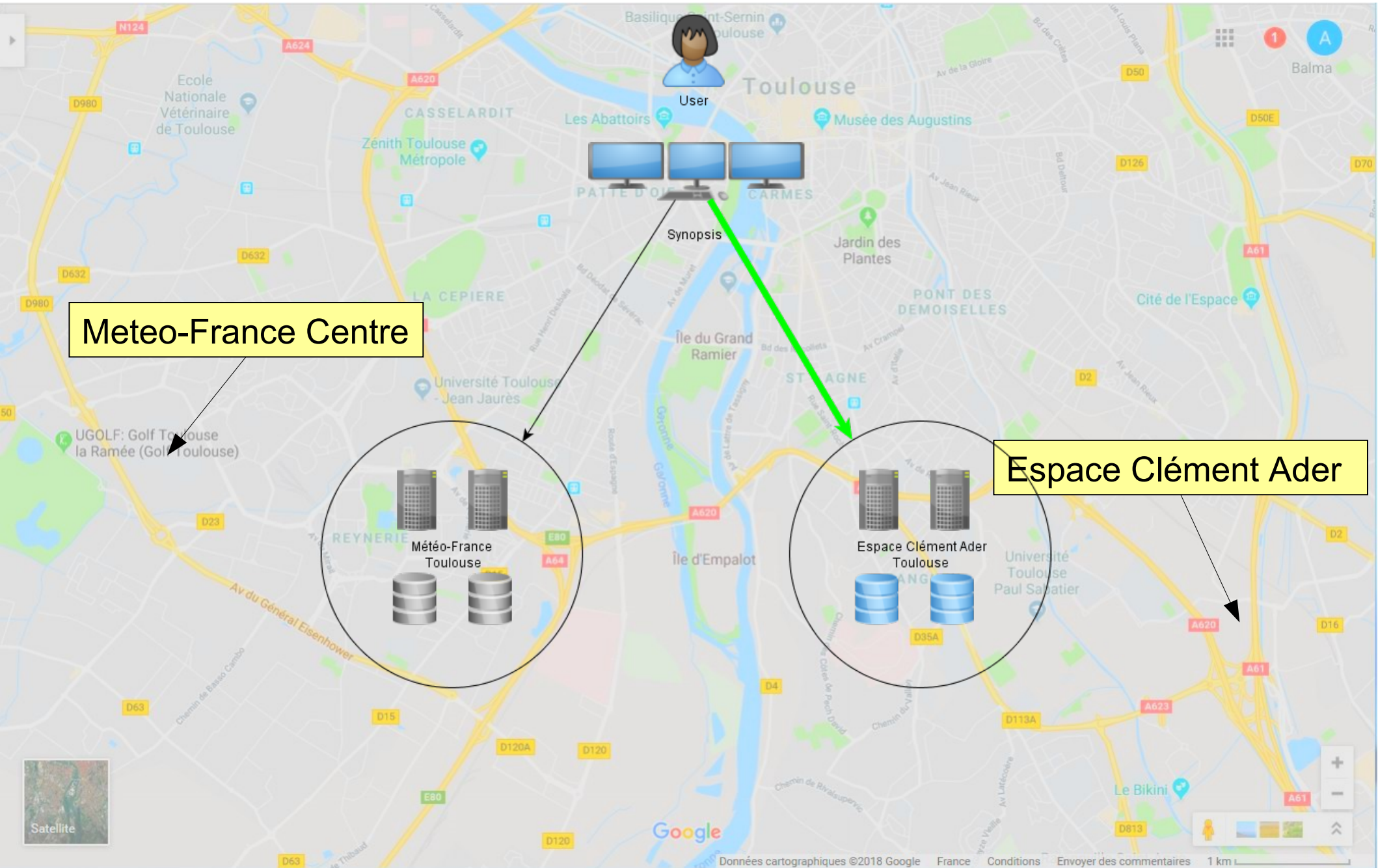
# Two data centres in Toulouse



# Two data centres in Toulouse



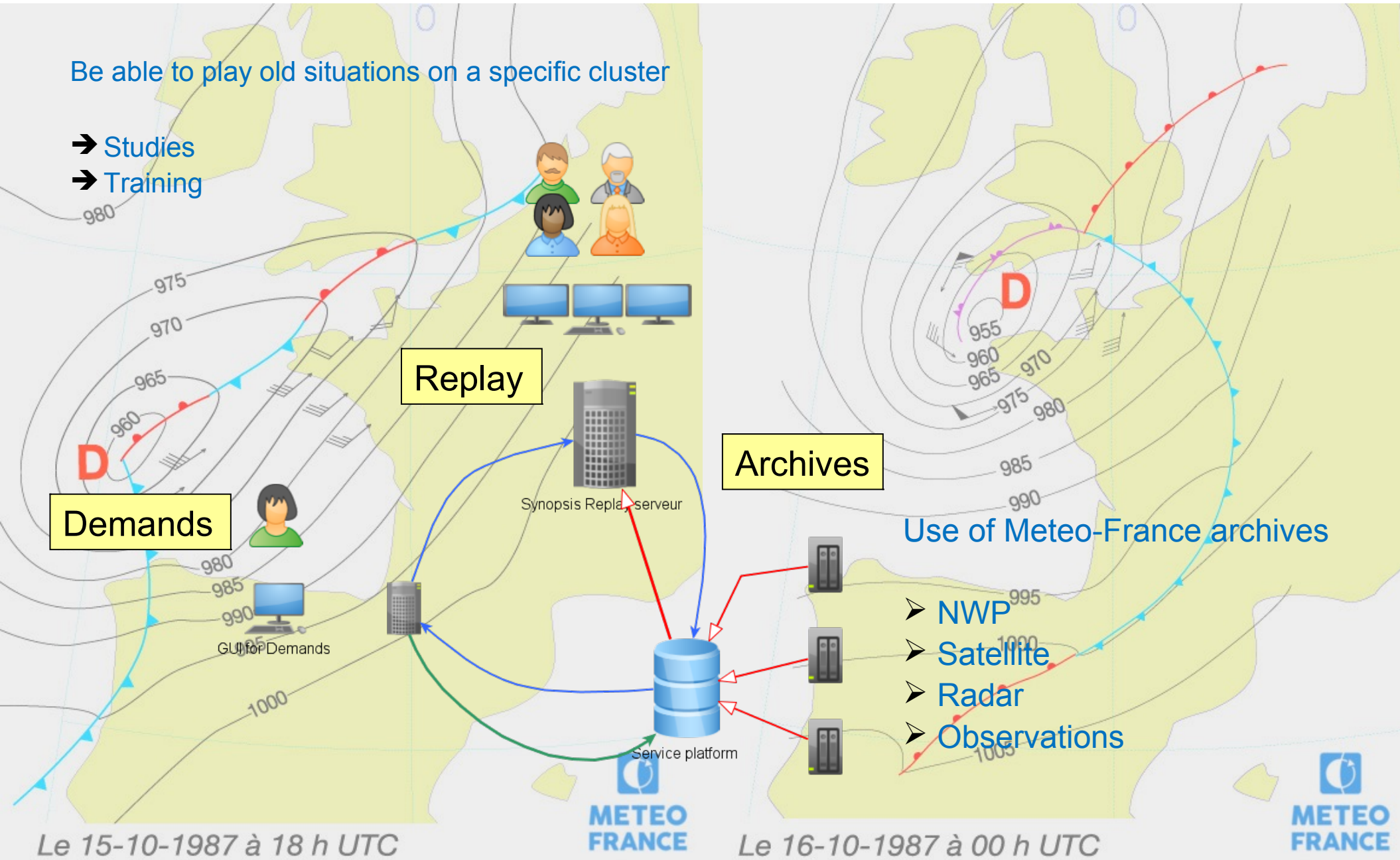
# Two data centres in Toulouse



# Replay with Synopsis

Be able to play old situations on a specific cluster

- ➔ Studies
- ➔ Training

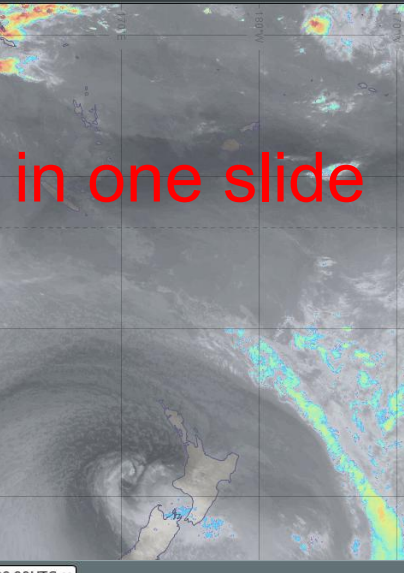
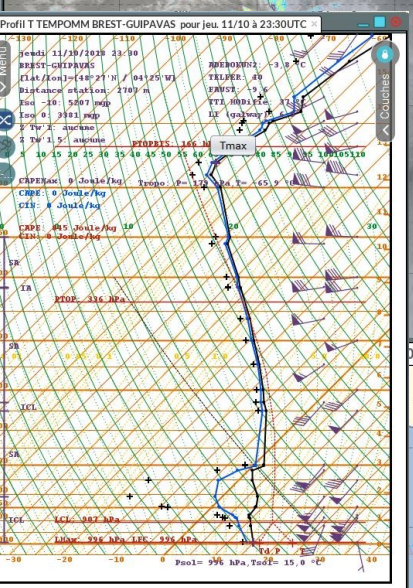


A meteorological map of Europe and the North Atlantic region. The map displays isobars (lines of equal atmospheric pressure) in red, with values ranging from 700 to 1180. Wind vectors are shown as red arrows, indicating wind direction and speed. A prominent low-pressure system is visible over the North Atlantic, with a blue shaded area highlighting a specific region. The map includes a grid of latitude and longitude lines, with labels such as 10°W, 00°E, 10°E, 20°E, and 30°E. The text "Now let's talk about the functional part" is overlaid in the center of the map.

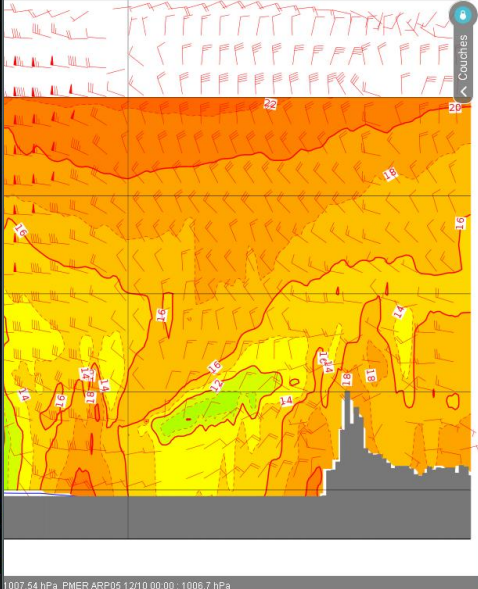
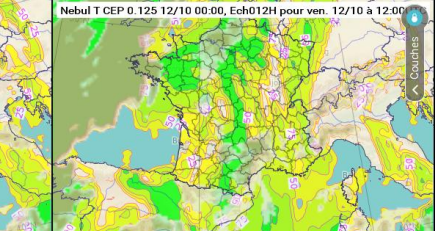
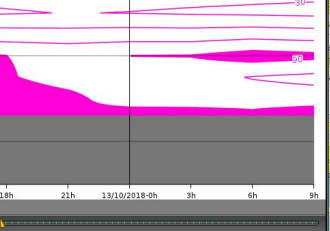
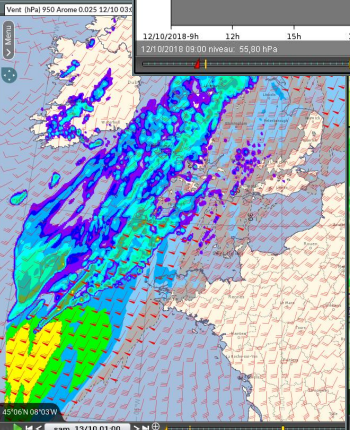
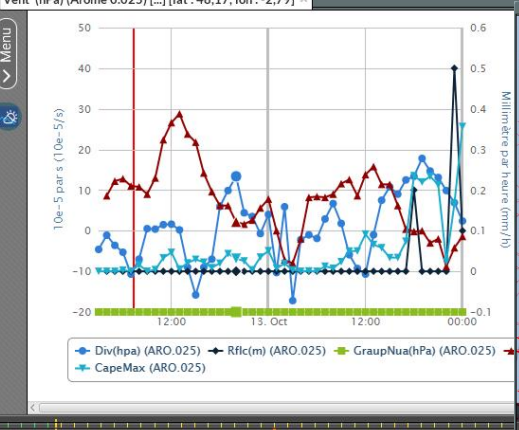
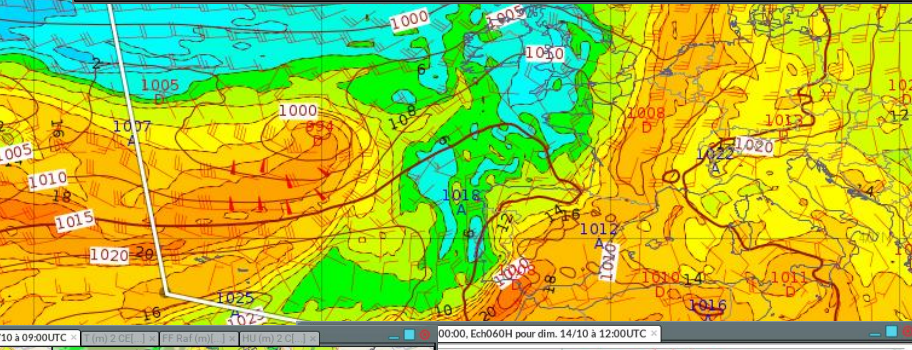
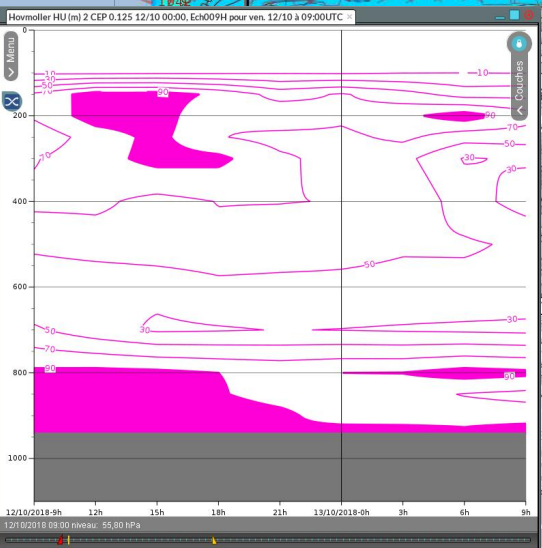
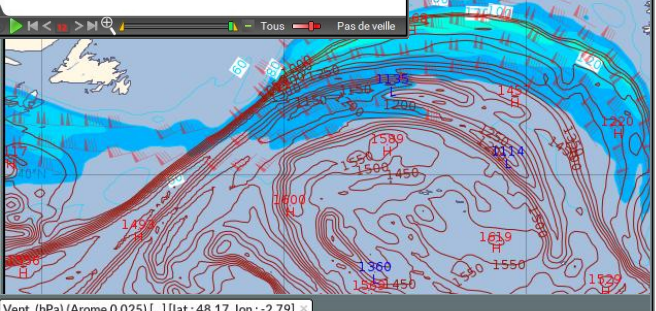
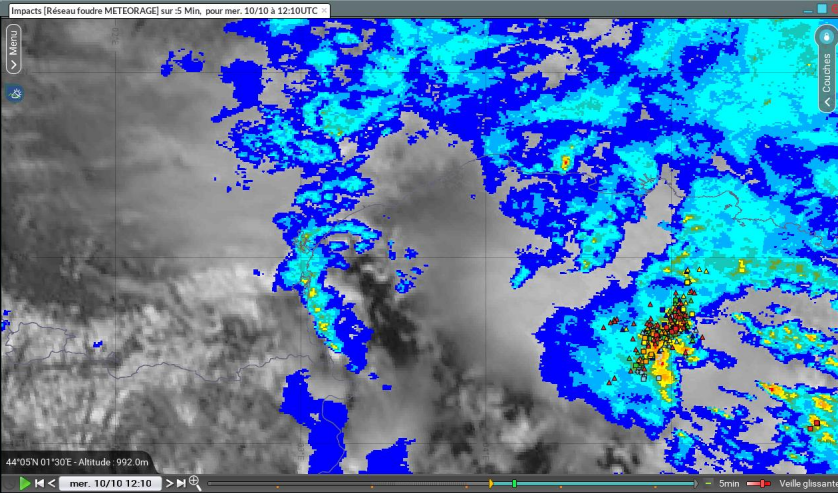
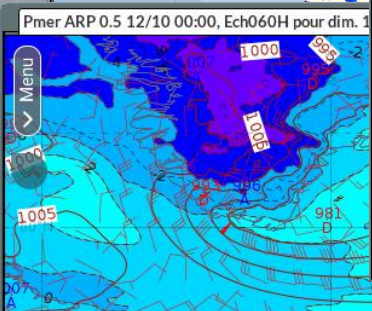
Now let's talk about  
the functional part

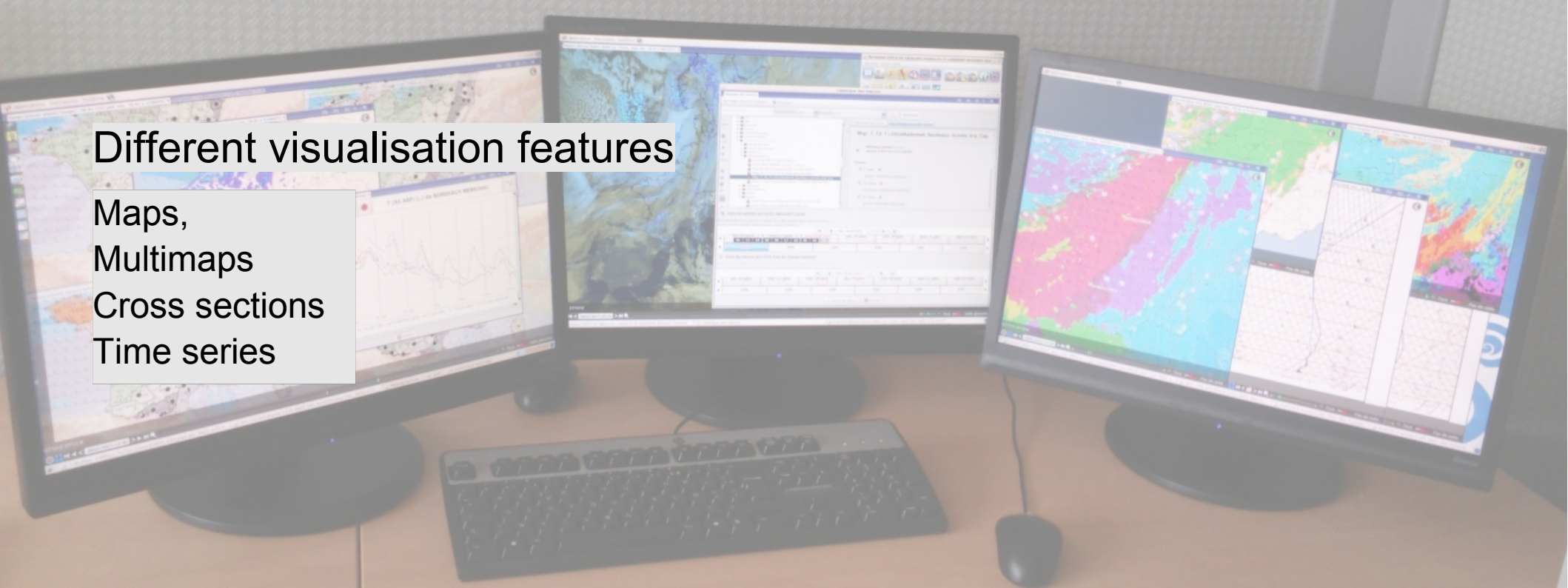


# Synopsis in one slide



Synopsis Outils



A computer workstation with three monitors. The left monitor shows a map with a time series graph overlaid. The middle monitor shows a map with a data table and a legend. The right monitor shows a map with a grid overlay and a data table. A keyboard and mouse are in front of the monitors.

## Different visualisation features

Maps,  
Multimaps  
Cross sections  
Time series

## Many various expertized data entry

Situation analysis (analysis, anasyg)

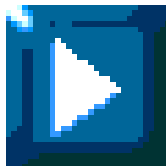
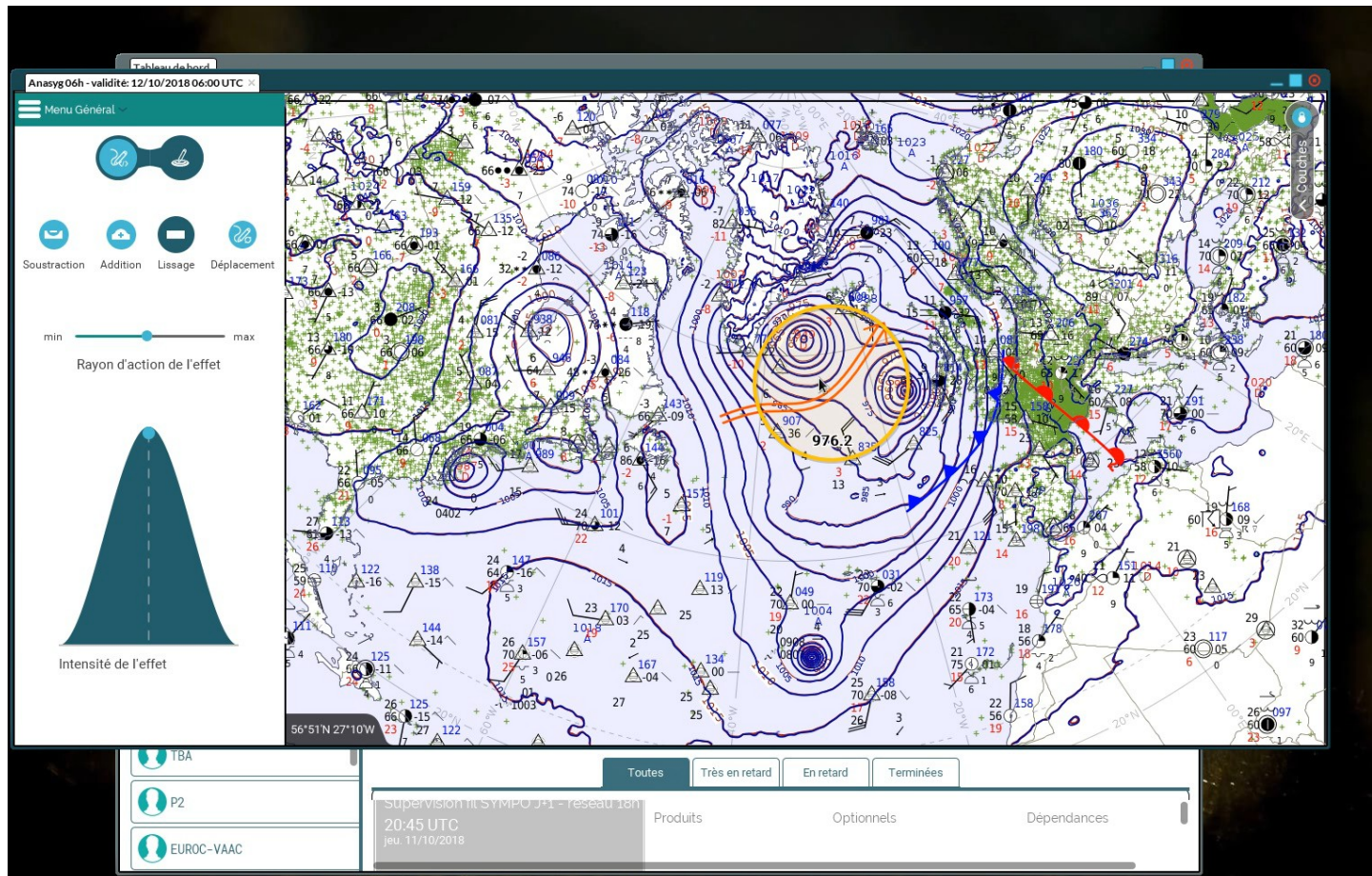
Forecast analysis (presyg)

Volcanic Ash Activity (VAAC)

Sigmets

Special maps : for broadcasting media or specifics customers

# Analysis module



# SIGMET

**SIGMET ICING - validité: 12/10/20**

**Menu Général**

Sigmat

Zone

Type

Se congelant

Elévation

Sommet: 350  
Base: 120

Evolution

Vitesse: 12

**Paramétrage du SIGMET**

LFRR LFBB LFFF

Transmettre ce SIGMET Options avancées

**SIGMET**

LFRR SIGMET XX VALID 121000/121400 LFPW-  
LFRR BREST FIR/UIR SEV ICE (FZRA) FCST WI N4345 W00245 - N4415 W00500 - N4830 W00630 - N4815 W00015 - N4630 W00015 - N4630 W00130 - N4445 W00145 - N4345 W00245 FL120/350 INTSF FCST AT 1400Z NE OF LINE N4530 W00145 - N4630 W00245 AND SE OF LINE N4630 W00245 - N4800 W00015

Période de validité

10:00 14:00

[ 12/10 09:10 12/10 17:10 ]

Propager la modification aux autres SIGMETs

Localisation

Mode de description  Simplifiée  Polygone

Echéance

OBS  A: 12/10 09:10

09:10 12:10

Prévision

A: 12/10 14:00

12:10 14:00

CRNA

OUEST  
LFRR LFBB LFFF

SUD-OUEST  
LFBB LFFF

NORD  
LFFF LFBB

EST  
LFFF

Annuler OK

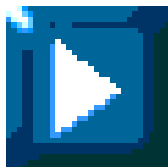
Map: 05°E 10°E 15°E, 40°N 45°N



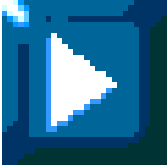
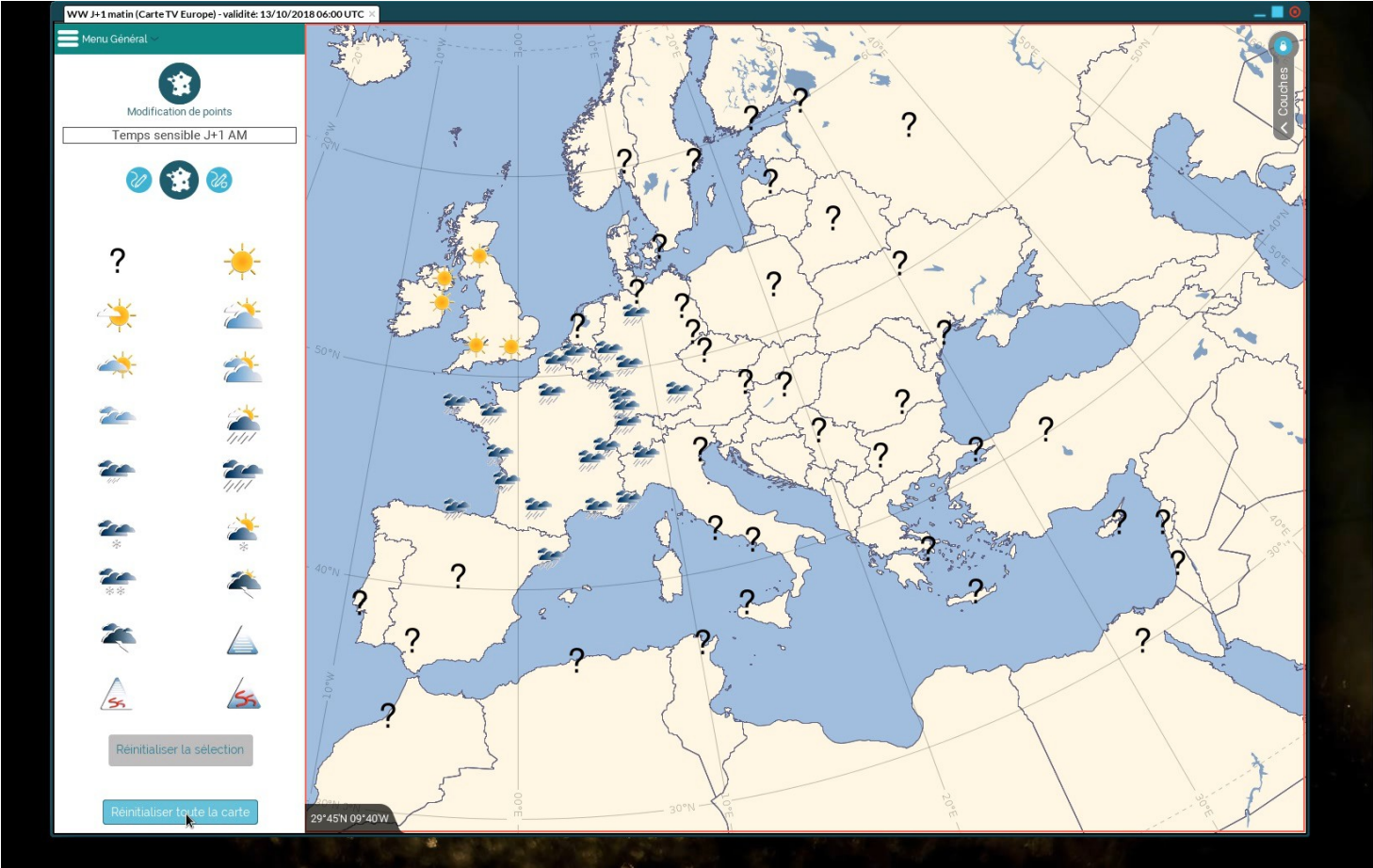
# Volcanic ashes

The image displays a web-based interface for volcanic ash advisories. The central part is a map of Europe and North Africa, showing a volcanic ash plume originating from a volcano in the Mediterranean region. The plume is depicted with a purple-to-green gradient and is labeled with '120 080', '250 120', and '120'. A satellite icon is labeled 'VA NOT IDENTIFIABLE FM SATEL'. The interface includes a left sidebar with navigation options like 'Edition d'objets' and 'Contours nuages de cendre'. On the right, a 'VA Advisory' form contains the following fields:

- VAAC \***: TOULOUSE
- Information source \* (max 32 car.)**: champs ghiuehgi
- Aviation color code**: YELLOW
- Eruption at**: ven. 12/10/2018 9 : 19
- Other eruption details (complement) \* (max 38 car.)**: rgs
- VA Observed/estimated**: EST
- OBS VA DTG**: sam. 13/10/2018 14 : 0
- Remarque**: NIL
- Next Advisory**: NO LATER THAN ven. 12/10/2018 16 : 0



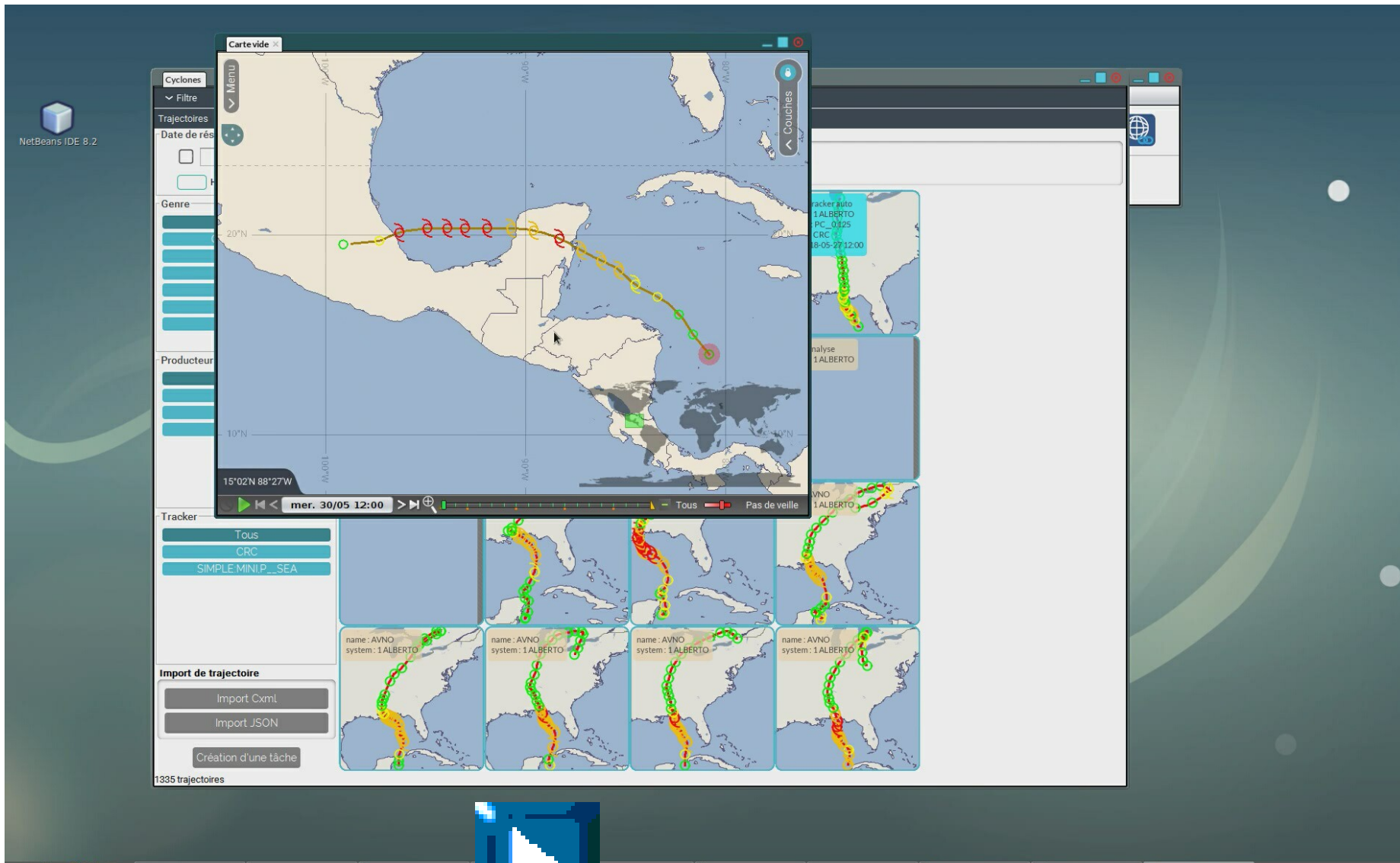
# Broadcast media images



# Mathematical calculation

The screenshot displays a software interface for managing and visualizing macros. The main window is titled "Catalogue des macros" and shows a list of macros on the left and a selected macro on the right. The selected macro is "Carte diff T(hPa)850-T(hPa)500" with an animation duration of 36H and a step of 0.0015. The map shows a color-coded overlay of the difference between T(hPa)850 and T(hPa)500 over Europe. The control panel on the right includes a "Couches" section with various layers like "dépts [Fr-lim-dépt]", "Graticules", "Continents et Frontières", "MATH 14/10 09:00", "Dgri-Spag PEARO.025 14/10 09:00", and "T(hPa)850 ARO.025 14/10 09:00". The bottom of the screen shows a taskbar with several open applications, including "Menu", "Terminal", "MusiqueClassique", "Courrier entrant...", "Bienvenue sur le...", "Synopsis (B\_2018...", "Catalogue des m...", "diff <html>T(hPa)500", and "layerResultTitle A...".

# Cyclones





To conclude :

- Synopsis is a great success
- Last operational version : June 2018
- Bugfix version October and November 2018
- Replace Synergie at Meteo-France and in oversea territories

What next ?

- Shift to post project
- Specific team for maintenance and evolution
- Synopsis as a unique platform for visualisation/production tools : new projects based on

Thank you for your attention  
**See you on the demo  
this afternoon**

**Questions ?**

Contacts :

[hugo.vandeputte@meteo.fr](mailto:hugo.vandeputte@meteo.fr)

[Antoine.lasserre@meteo.fr](mailto:Antoine.lasserre@meteo.fr)