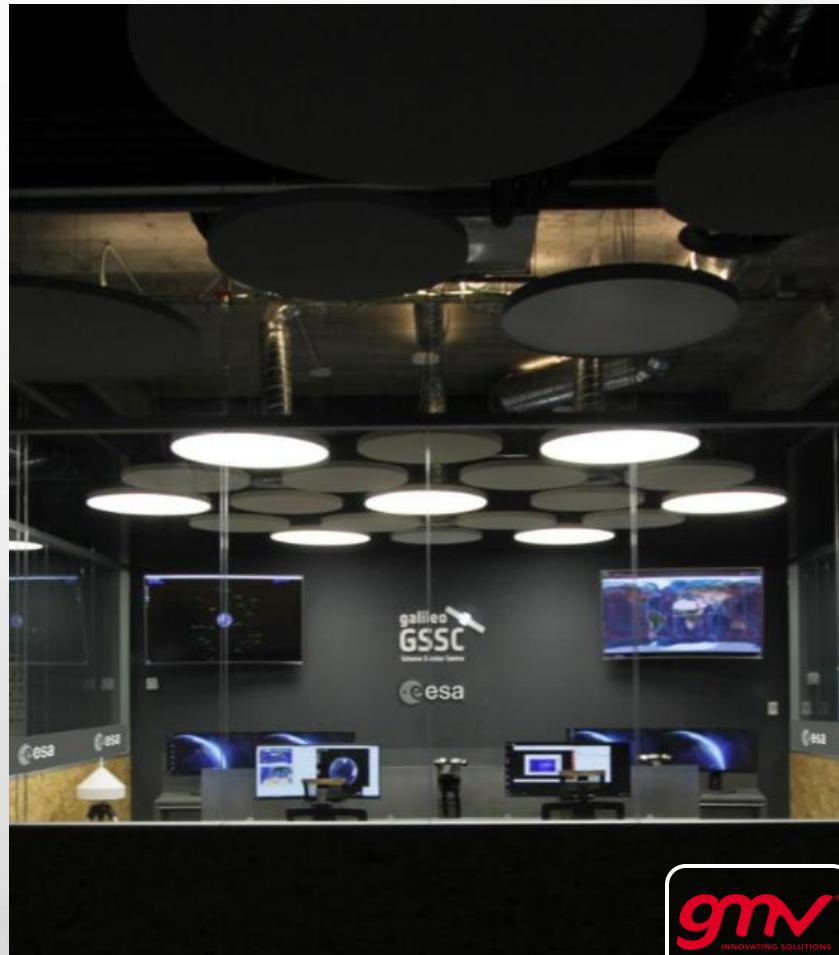


# GSSC - GNSS SCIENCE SUPPORT CENTRE

- **BIG DATA FROM SPACE 2025**
- **02/10/2025**
- **RIGA - LATVIA**
- **PRESENTED BY PABLO GARCÍA**



# GSSC NOW: AN OPEN DOOR TO GNSS SCIENCE

- POWERFULL METADATA-DRIVEN SEARCH ENGINE
- RESTFULL API
- BROWSER BASED EXECUTION TOOLS
- FAIR PRINCIPLES
  - FINDABLE
  - ACCESSIBLE
  - INTEROPERABLE
  - REUSABLE



# THE ARCHIVE AND SEARCH ENGINE

## ALMOST 300 MILLIONS OF DATA RESOURCES

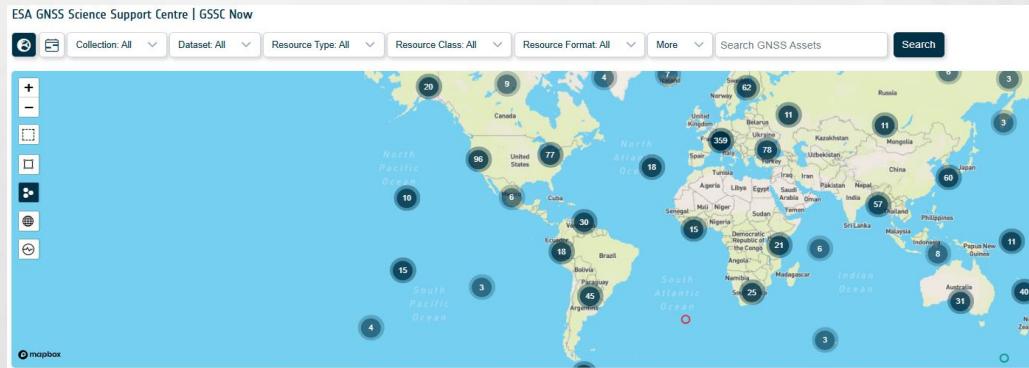
- OBSERVATION DATA
- NAVIGATION DATA
- ATMOSPHERIC PRODUCTS
- SPACE SEGMENT DATA

## COMMUNITY-STANDARD FORMATS

- RINEX 2/3/4
- SP3
- SINEX-BIAS
- IONEX
- AND MORE...

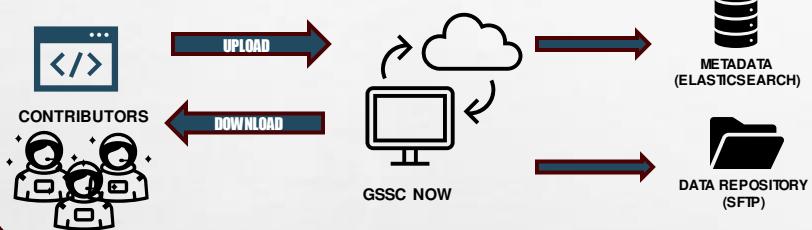
## INTERACTIVE, WEB-BASED SEARCH INTERFACE

- STATION LOCATIONS
- TIME RANGES
- GNSS CONSTELLATIONS
- OBSERVATION PARAMETERS...

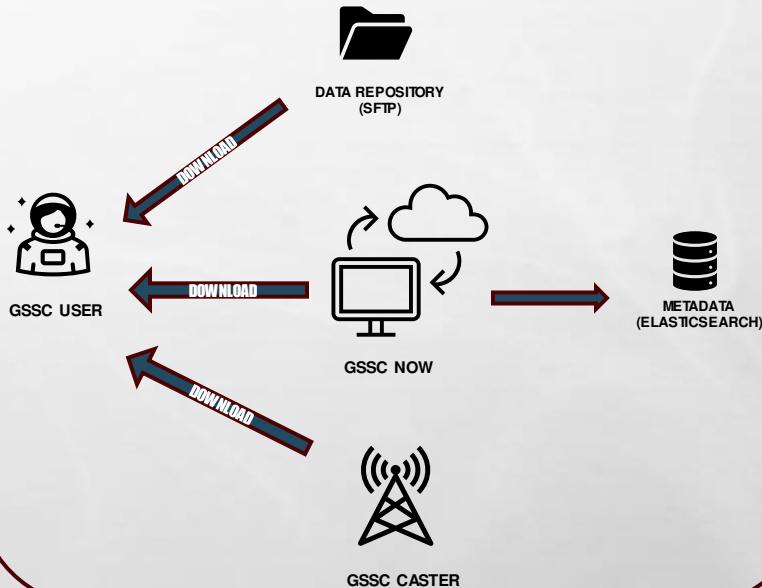


# ARCHITECTURE AND DESIGN

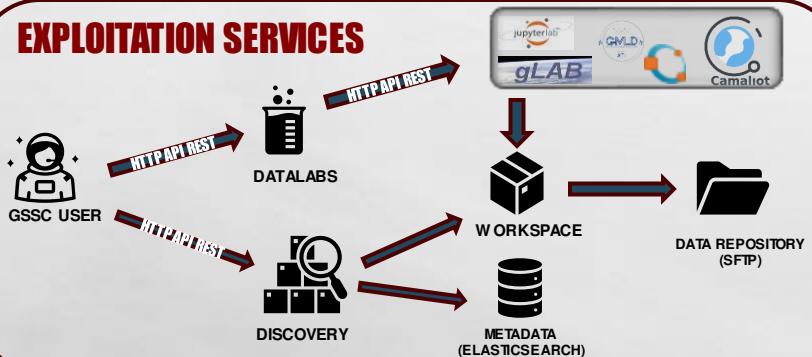
## INGESTION SERVICES



## DISSEMINATION SERVICES



## EXPLOITATION SERVICES



# DATALABS: BROWSER-BASED SCIENTIFIC COMPUTING

- CONTAINERIZED EXECUTION ENVIRONMENTS MANAGED WITHIN ESA CLOUD
- NO INSTALLATION, NO HIGH-PERFORMANCE COMPUTER REQUIREMENTS



- PERSISTENT USER STORAGE
- GPU RESOURCES

# SOME USE CASES: ADVANCED ANALYTICS AND MACHINE LEARNING

- **CAMALIOT INITIATIVE, LARGE SCALE PARTICIPATORY SCIENCE**
- **UBISAP, INTERNET OF THINGS INTEGRATION WITH GSSC WORKFLOWS**



Camalot



## AND NOW, WHAT?

- **CONTINUOUS EVOLVING THE PLATFORM IN TERMS OF PERFORMANCE, SECURITY AND STABILITY**
- **INTEROPERABILITY WITH OTHER SPACE GEODETIC TECHNIQUES DATA PLATFORMS**
- **EXPANDED APIs**
- **EDUCATIONAL CONTENT**



# THANK YOU

My email: [paag@gmv.com](mailto:paag@gmv.com)

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**GSSC Now platform is openly accessible at: <https://gssc.esa.int>**

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**Register form: <https://gssc.esa.int/register/>**

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**Don't forget your invitation code: **BIDS25****