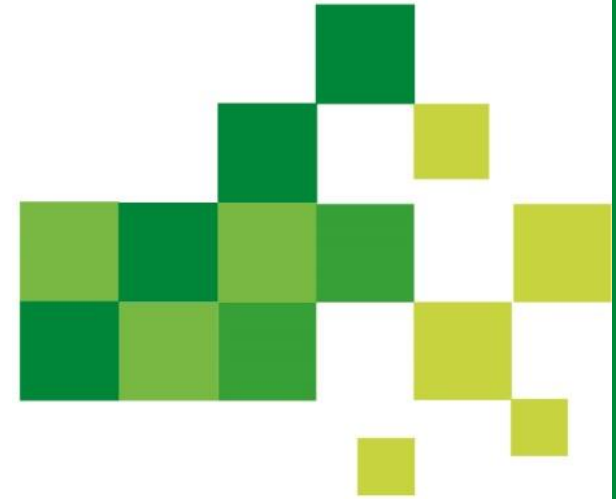




European e-Infrastructure
for Extreme Data Analytics
in Sustainable Development



EUXDAT

The e-Infrastructure for large data analytics in agriculture

F. Javier Nieto – ATOS Spain



www.EUXDAT.eu

Helsinki, 22nd October 2019

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 777549



Objectives & Context



- ❑ “...EUXDAT will build up a **Large Data Analytics-as-a-Service e-Infrastructure** with several software layers supporting sustainable and productive agriculture...”
 - Manage data storage and movement + Support heterogeneous data sources + configurable policies
 - Adapt data processing tools for **HPC** + Users’ Portal with advanced features + Hybrid HPC&Cloud resources management
 - Provide access to EUXDAT services + Pilots implementation
 - Facilitate long-term sustainability + Collaboration (i.e. PRACE, EOSC)



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EUXDAT – Processing Heterogeneous Data



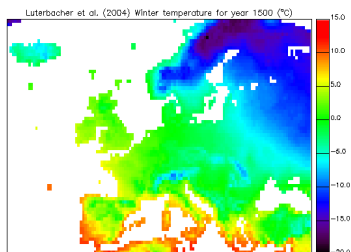
IoT Stations



Satellite



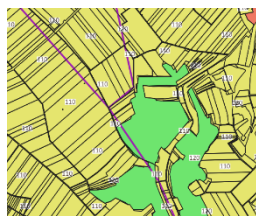
UAVs



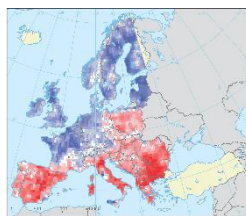
Meteo/Climatic



Machinery



Land Use / LPIS



Hydrology+Maps



Land Monitoring and Sustainable Mgt



Energy Efficiency



3D Farming

- Open Land Use Map Improvement



- Monitoring of Crop Status



- Delimiting Agro-Climatic Zones



- Looking for Climatic Patterns Changes



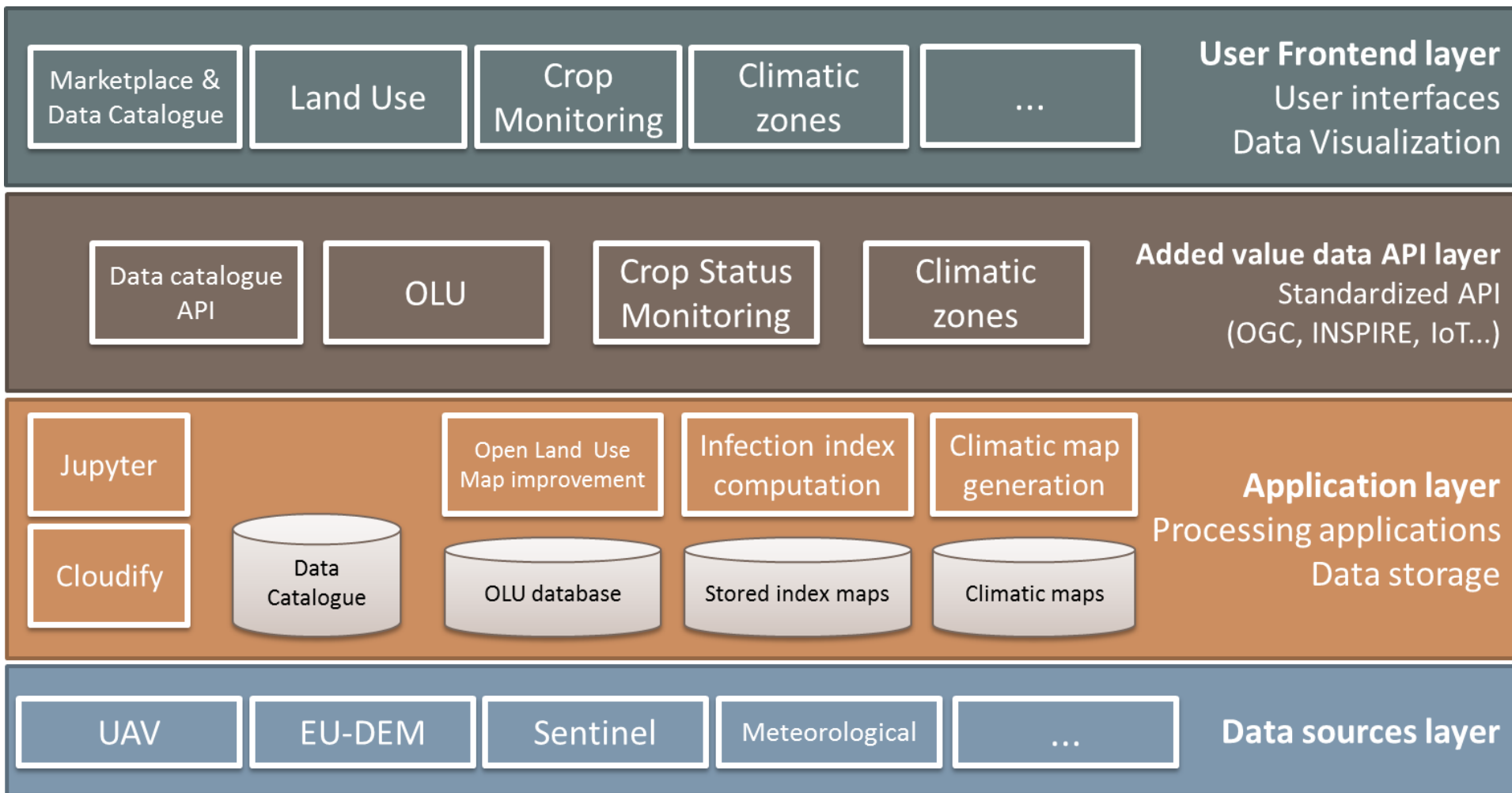
- Information Support for Field Use Recommendations



- Effective Utilization of Natural Resources



Global Picture



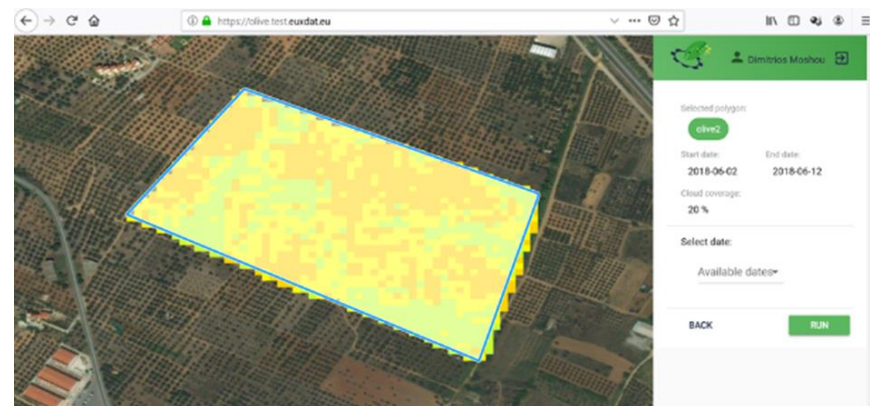
What Can EUXDAT Offer?



- ❑ Management and analysis of large data
 - Create your own application and prototypes (notebooks)
 - Use specific libraries for data analysis in Agriculture
 - Connect to different data sources and move large datasets easily
 - Visualization features and custom frontends

- ❑ Easy usage of HPC + Cloud resources
 - Do not care about complex access mechanisms for storage and computation
 - Optimize HPC+Cloud combination for the user

- ❑ Default set of applications
 - 6 re-usable scenarios
 - 3 re-usable pilots
 - Standardized APIs





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Thank you for your attention

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