

# living planet symposium

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TAKING THE PULSE  
OF OUR PLANET FROM SPACE



# REFRESHING THE USER PERSPECTIVE

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- i. Who we are: Context and Goals**
- ii. Refreshing the user perspective**
- iii. Lessons Learnt**
- iv. Key “take-aways”**
- v. Q & A**

- ✓ Preparing future EO missions, EO systems and the overall European EO system architecture and ensuring coordination and collaboration with national missions and commercial/New Space.
- ✓ Continuing the delivery of Common Services in the domains of data archival, reprocessing, preservation, discovery and access for Earth Explorers, Copernicus Contributing Missions, Third Party Missions and Heritage Missions.
- ✓ Establishing timely, easy, seamless and integrated delivery of EO data, information and derived knowledge to society and expanding the uptake of EO data by a wider user community.
- ✓ Long term data preservation ensuring regular and sustained data set management and related operations.

# Who We Are – Common Services - Goals



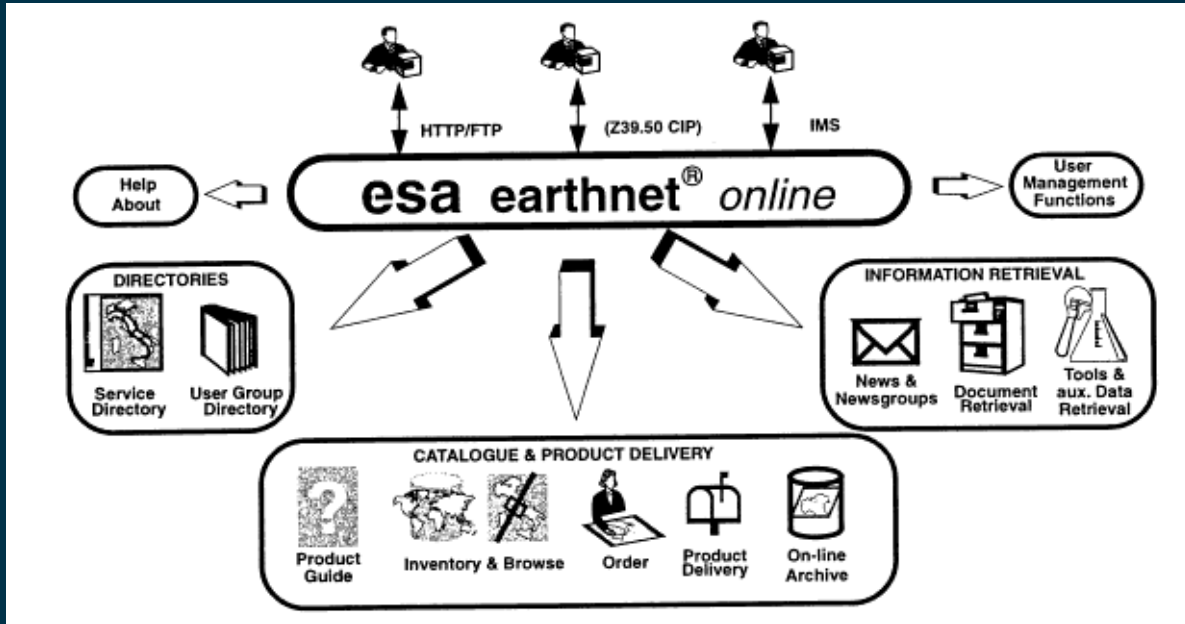
- ✓ Support achievement of programmatic and mission objectives through deployment of common solutions of data archival, re-processing, preservation, discovery and access.
- ✓ Expand user data uptake and increase user satisfaction.
- ✓ Avoid duplication of project and service delivery teams, standardise processes and reduce management and procurement overhead.
- ✓ Take ownership of service objectives and accountability for service performance through defined indicators.
- ✓ Apply service innovation, evolution, scaling and risk mitigation for all supported programmes.

**EOP-GES**

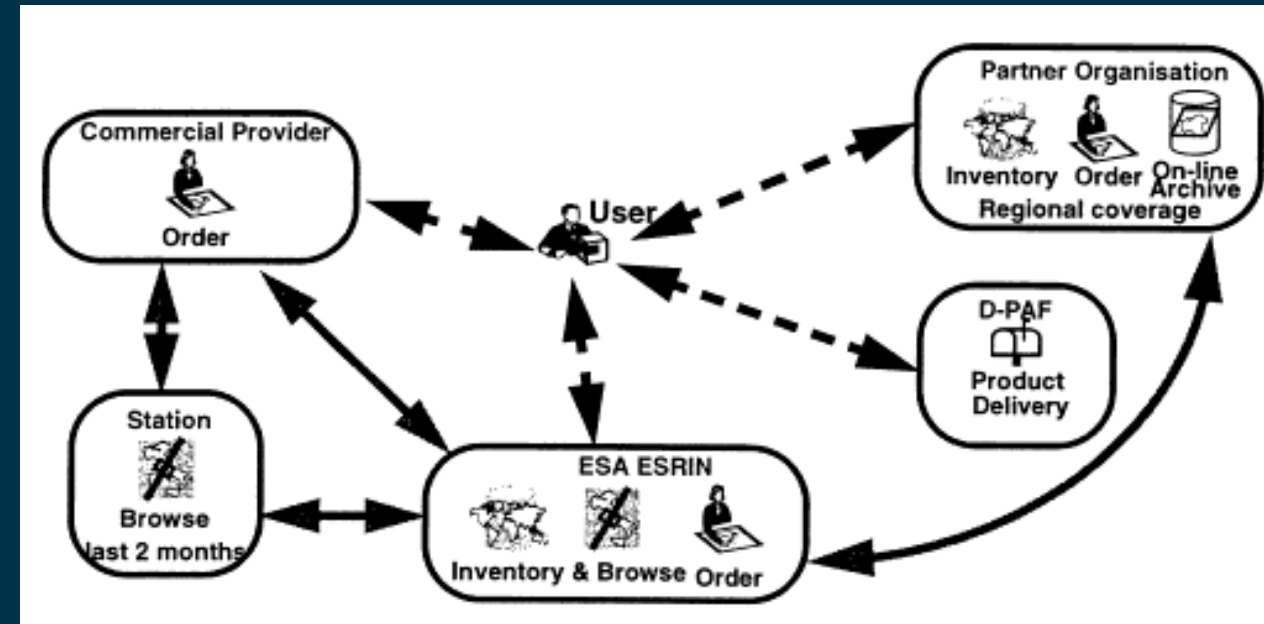
PDGS Common Services



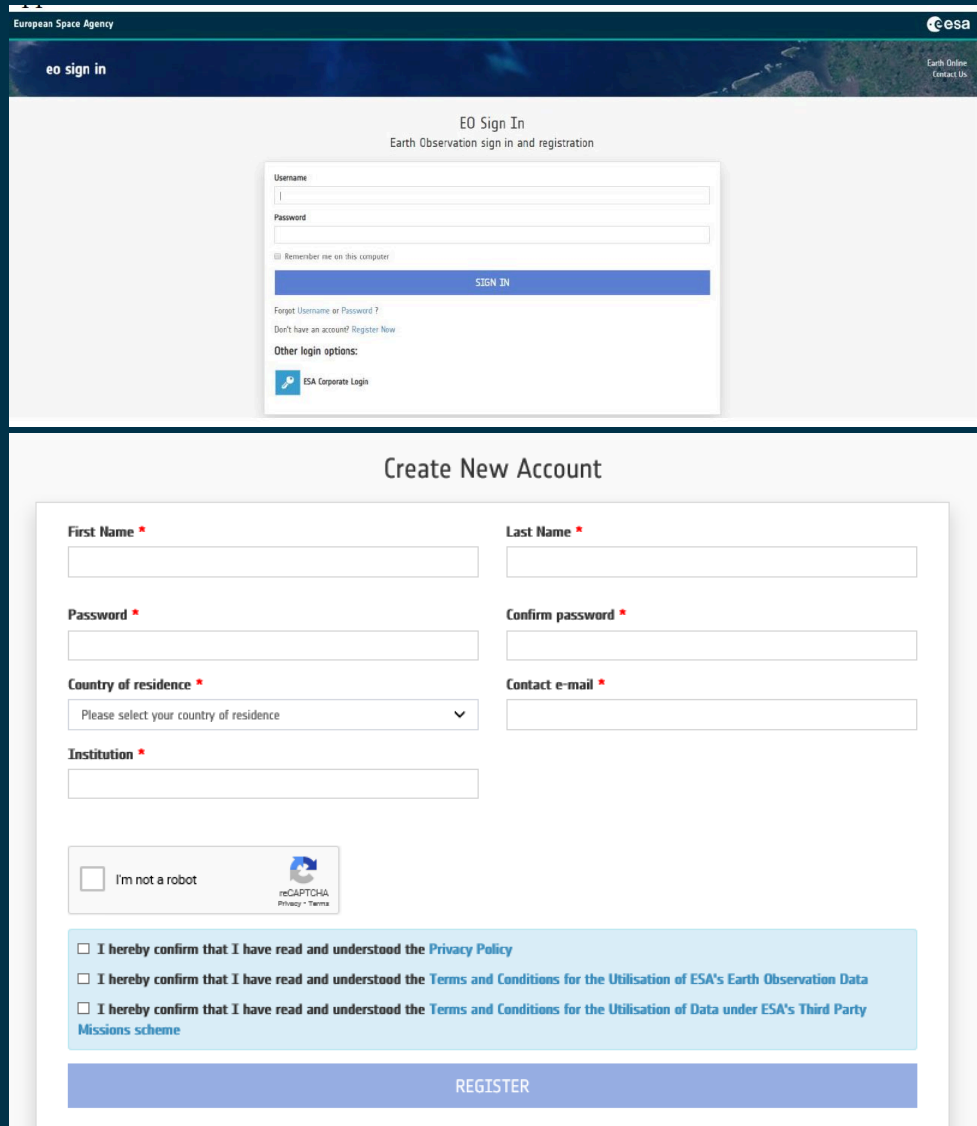
# Refreshing the User Perspective - The Way We Were



## THE ESA EARTH OBSERVATION MULTI-MISSION USER INFORMATION SERVICES 1997



# Refreshing the User Perspective - EO Sign In



The image shows two screenshots of the ESA Earth Observation sign-in and registration interface. The top screenshot is the 'EO Sign In' page, which includes a header with the ESA logo and 'eo sign in' text. The main content area is titled 'EO Sign In' and 'Earth Observation sign in and registration'. It features a login form with fields for 'Username' and 'Password', a 'Remember me on this computer' checkbox, and a 'SIGN IN' button. Below the login form are links for 'Forgot Username or Password?' and 'Don't have an account? Register Now', and an 'Other login options:' section with an 'ESA Corporate Login' button. The bottom screenshot is the 'Create New Account' page, which has a title 'Create New Account'. It contains several required fields: 'First Name \*', 'Last Name \*', 'Password \*', 'Confirm password \*', 'Country of residence \*' (a dropdown menu), 'Contact e-mail \*', and 'Institution \*'. There is also a reCAPTCHA 'I'm not a robot' checkbox. At the bottom, there are three checkboxes for terms and conditions: 'I hereby confirm that I have read and understood the Privacy Policy', 'I hereby confirm that I have read and understood the Terms and Conditions for the Utilisation of ESA's Earth Observation Data', and 'I hereby confirm that I have read and understood the Terms and Conditions for the Utilisation of Data under ESA's Third Party Missions scheme'. A 'REGISTER' button is located at the bottom of the form.

- Launched December 2020
- Main challenges:
  - User migration – database clean-up
  - Service provider integration
  - Federation with other identity management solutions
- Main achievements:
  - Improving the user experience when accessing data and related services
  - Compliant with personal data protection polices
  - Allowing implementation of federations and offering potential for extension and interoperability

# Refreshing the User Perspective – ESA TellUS



European Space Agency

Home > Simple Request

Submit a generic simple request.

\* Email Address

\* Confirm Email Address

\* Subject

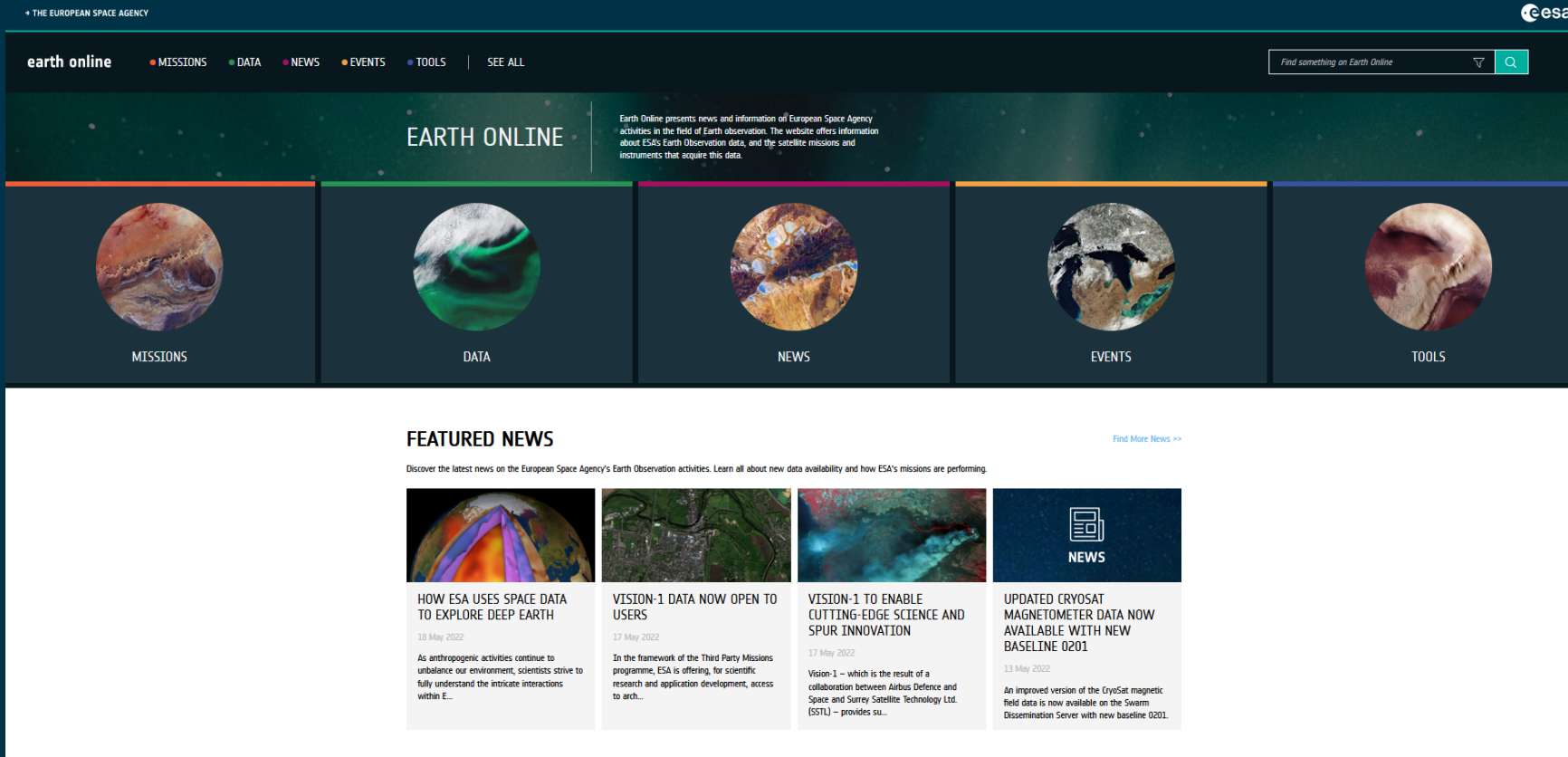
- Opened September 2015
- Main challenges:
  - Replacing several in-house developed portals
  - Establishing common processes along the integrated service chain
  - Establishing a single source of service records
- Main achievements:
  - In-house managed solution preserving knowledge over service transition
  - Established single point of contact for all service users and stakeholders
  - Continuous expansion and evolution of covered services

The screenshot shows the TellUS user interface. At the top, there's a navigation bar with 'European Space Agency' on the left and 'ED Data Access', 'Service Catalog', 'My TellUS', and the ESA logo on the right. Below this is a search bar with the text 'TellUS' and a search icon. The main content area is divided into several sections: 'Get Help' (with a thumbs up icon and the text 'Cannot find what you need?'), 'FAQ' (with a question mark icon and the text 'Navigate the Knowledge Base'), and 'Report an Issue' (with a warning icon and the text 'Get things fixed'). There are also three columns of content: 'Select Topics' (listing FAQ, DATA ACCESS, SOFTWARE & TOOLS, USER REGISTRATION, Known Errors, News, and TellUS), 'TOP Rated' (listing articles like 'How do I access the Third Party Mission (TPM) data?' and 'How do I access the ALDS data services?'), and 'Most Viewed Articles' (listing articles like 'How to access ESA and Third Party Missions data available requiring a project proposal?' and 'How to access Earth Observation data distributed by ESA?').





# Refreshing the User Perspective - Earth Online



- Launched: April 2020
- Main challenges:
  - Wide variation in mission requirements
  - Large amount of content
  - Many stakeholders
- Main achievements:
  - Improved user experience
  - Increased web traffic
  - Easily discoverable content
  - Mobile support
  - SEO, GDPR, WCAG, ESA Graphics compliant
  - Clear processes for content preparation & publication



# Refreshing the User Perspective – Open Data Discovery

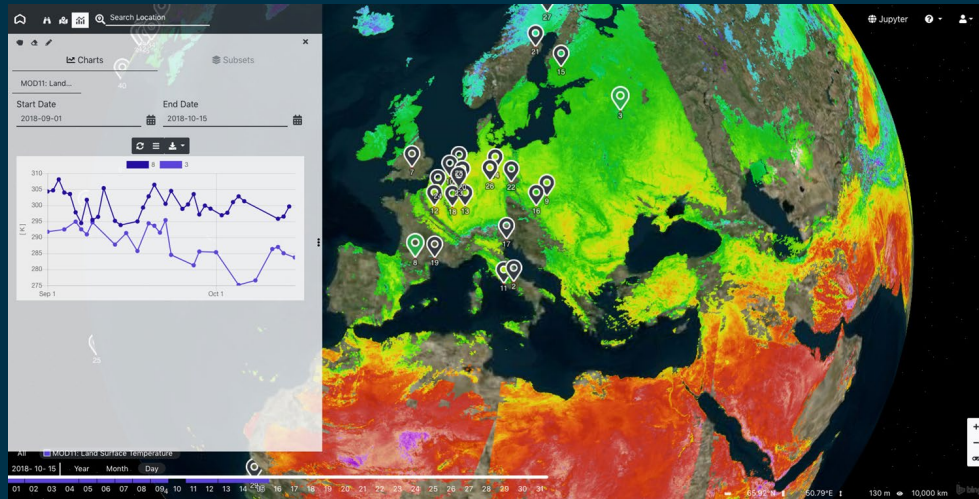
The screenshot displays the ESA Earth Explorer Data Discovery web application. It features a search interface with filters for keywords, acquisition dates, and area of interest. A map shows the selected area, and a table lists the discovered products.

Product Type	Start	Stop	Mission	Instrument	Instrument Mode	Orbit	Track
SIR_GOPNB	2018-05-31T06:35:56Z	2018-05-31T06:37:24Z					
SIR_GOPNB	2018-05-31T07:50:55Z	2018-05-31T07:51:01Z					
SIR_GOPNB	2018-05-31T03:27:13Z	2018-05-31T03:27:13Z					
SIR_GOPNB	2018-05-31T08:30:58Z	2018-05-31T08:33:01Z					
SIR_GOPNB	2018-05-31T09:35:26Z	2018-05-31T09:36:38Z					
SIR_GOPNB	2018-05-31T12:29:33Z	2018-05-31T13:29:33Z					
SIR_GOPNB	2018-05-31T13:53:55Z	2018-05-31T13:55:46Z					
SIR_GOPNB	2018-05-31T14:34:43Z	2018-05-31T15:08:50Z					
SIR_GOPNB	2018-05-31T15:10:47Z	2018-05-31T15:11:12Z					
OCM2_LA_2B	2018-09-10T11:15:31Z	2018-09-10T11:19:01Z	OceanSat	OCM-2	LAC	47477	4
OCM2_LA_1B	2018-09-11T10:27:47Z	2018-09-11T10:31:16Z	OceanSat	OCM-2	LAC	47481	5
OCM2_LA_1B	2018-09-11T10:25:53Z	2018-09-11T10:29:22Z	OceanSat	OCM-2	LAC	47491	5
OCM2_LA_2C	2018-09-11T10:27:47Z	2018-09-11T10:31:16Z	OceanSat	OCM-2	LAC	47491	5
OCM2_LA_1B	2018-09-12T11:17:56Z	2018-09-12T11:21:25Z	OceanSat	OCM-2	LAC	47506	4
OCM2_LA_2C	2018-09-12T11:15:33Z	2018-09-12T11:19:02Z	OceanSat	OCM-2	LAC	47506	4
OCM2_LA_2C	2018-09-13T10:27:48Z	2018-09-13T10:31:18Z	OceanSat	OCM-2	LAC	47520	5
OCM2_LA_2B	2018-09-14T11:17:57Z	2018-09-14T11:21:27Z	OceanSat	OCM-2	LAC	47535	4
OCM2_LA_2B	2018-09-15T10:27:49Z	2018-09-15T10:31:19Z	OceanSat	OCM-2	LAC	47549	5

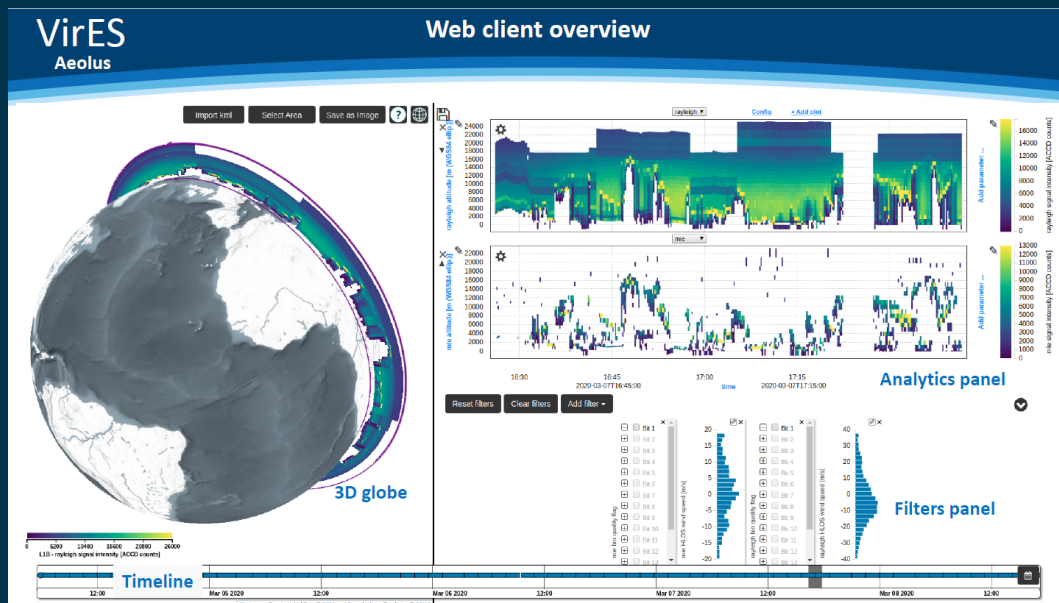
- Launched: December 2019
- Main challenges:
  - Centralized catalogue for EO Data from different sources
  - Decoupling data visualisation from metadata repository
- Main achievements:
  - User friendly access to search and retrieval
  - Modular and scalable architecture
  - Based on standard opensource interface

- 176 Discoverable Data Collection and ~20 Millions products:
  - ESA Earth Explorer Missions
  - Third Party Missions
  - Heritage data
- >170 Instruments:
  - SAR, Optical, Interferometry, Altimeter, ...

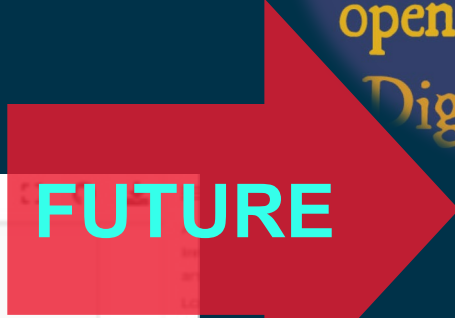
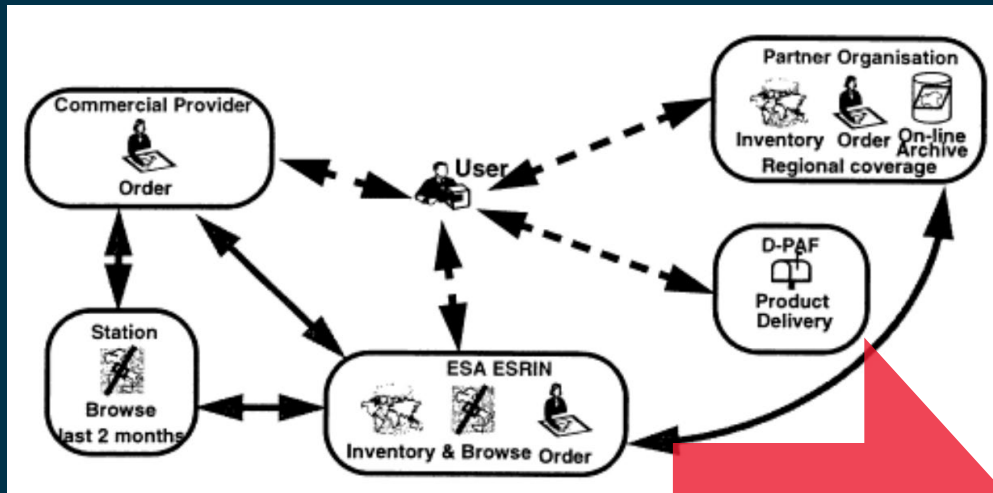
# Refreshing the User Perspective - EO Access Platforms



- Opened:
  - September 2020 (EO Datacube)
  - Early 2022 (VRE)
- Main challenges:
  - Keep satisfactory performance in accessing data in original format
  - Security
  - Coexistence of services for product download, pixel based access and algorithm validation against single copy of data
- Main achievements:
  - Access to data from different sensors
  - Upload and sharing of algorithm (Jupyter)
  - Fusion of data
  - Reduced transfer of data
  - Time series at pixel level



# Lessons Learnt – Understanding the User perspective





## emerging

Things that are *emerging* are just being born — or they're reaching an adult state. The important thing is they're growing and developing.



# Lessons Learnt – Match the two



- Users do not need to be aware of internal processes
- Emerging technologies are by definition not mature yet
- Work in a project context – remain agile



Any other feedback?

Please help us by visiting our survey:  
[Earth Observation Data Access and User Services: User Satisfaction Survey 2022](https://terrasigna.io)  
([terrasigna.io](https://terrasigna.io))