

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



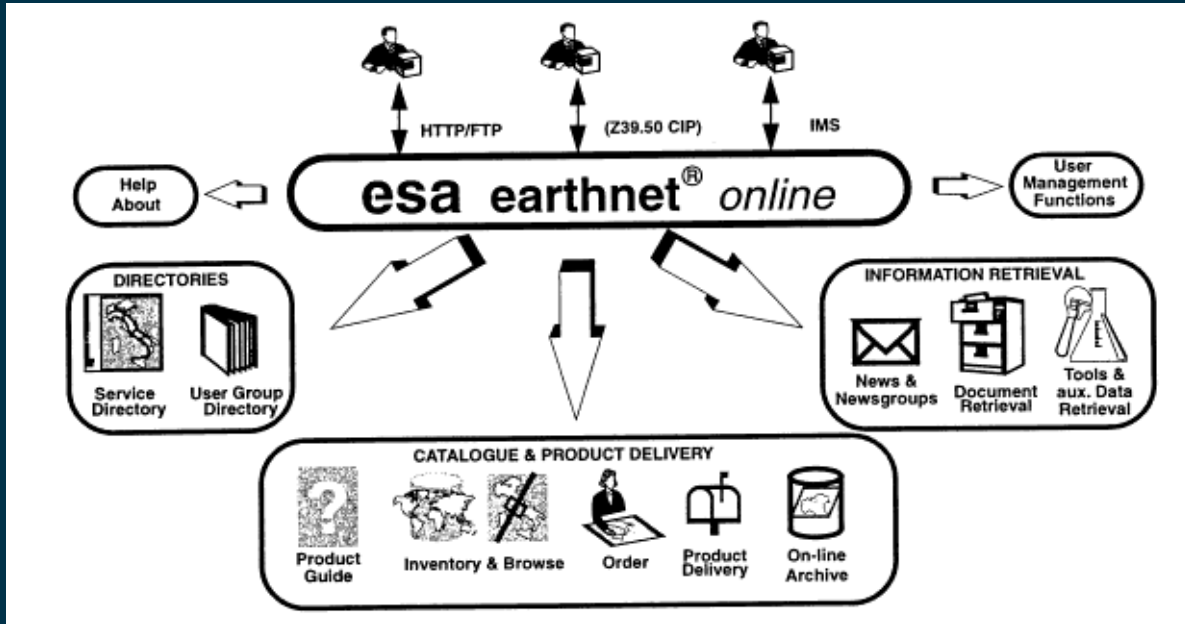
- ✓ Support achievement of programmatic and mission objectives through deployment of common solutions of data archival, re-processing, preservation, discovery and access.
- ✓ Expand user data uptake and increase user satisfaction.
- ✓ Avoid duplication of project and service delivery teams, standardise 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

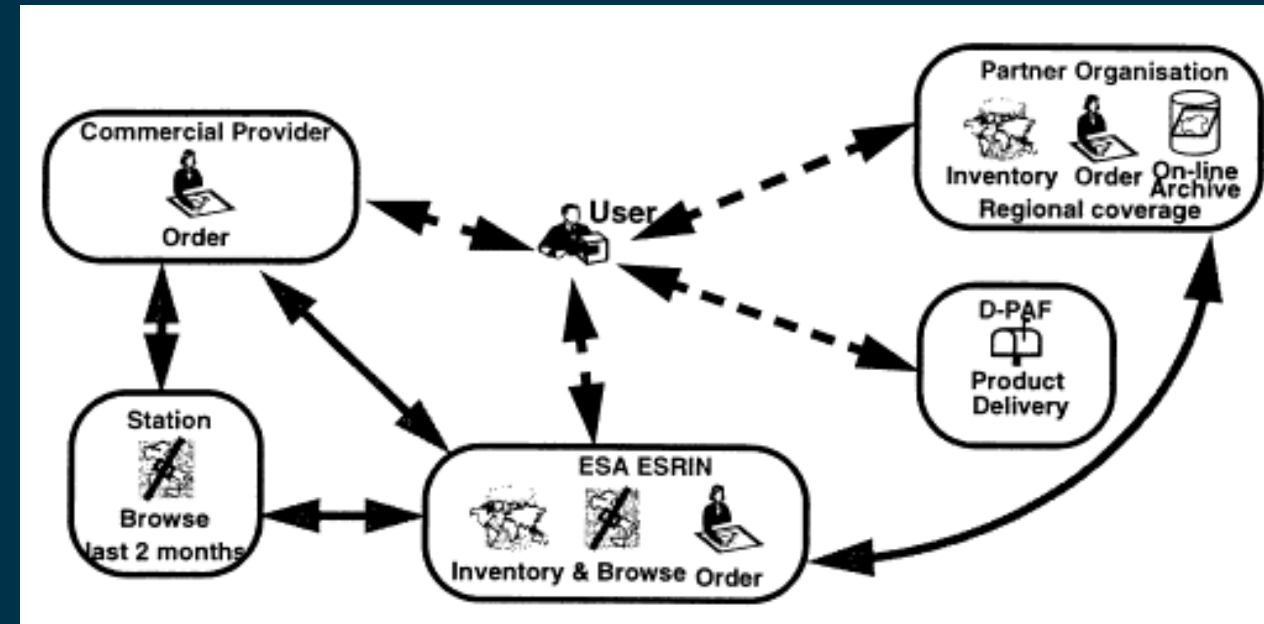
PDGS Common Services



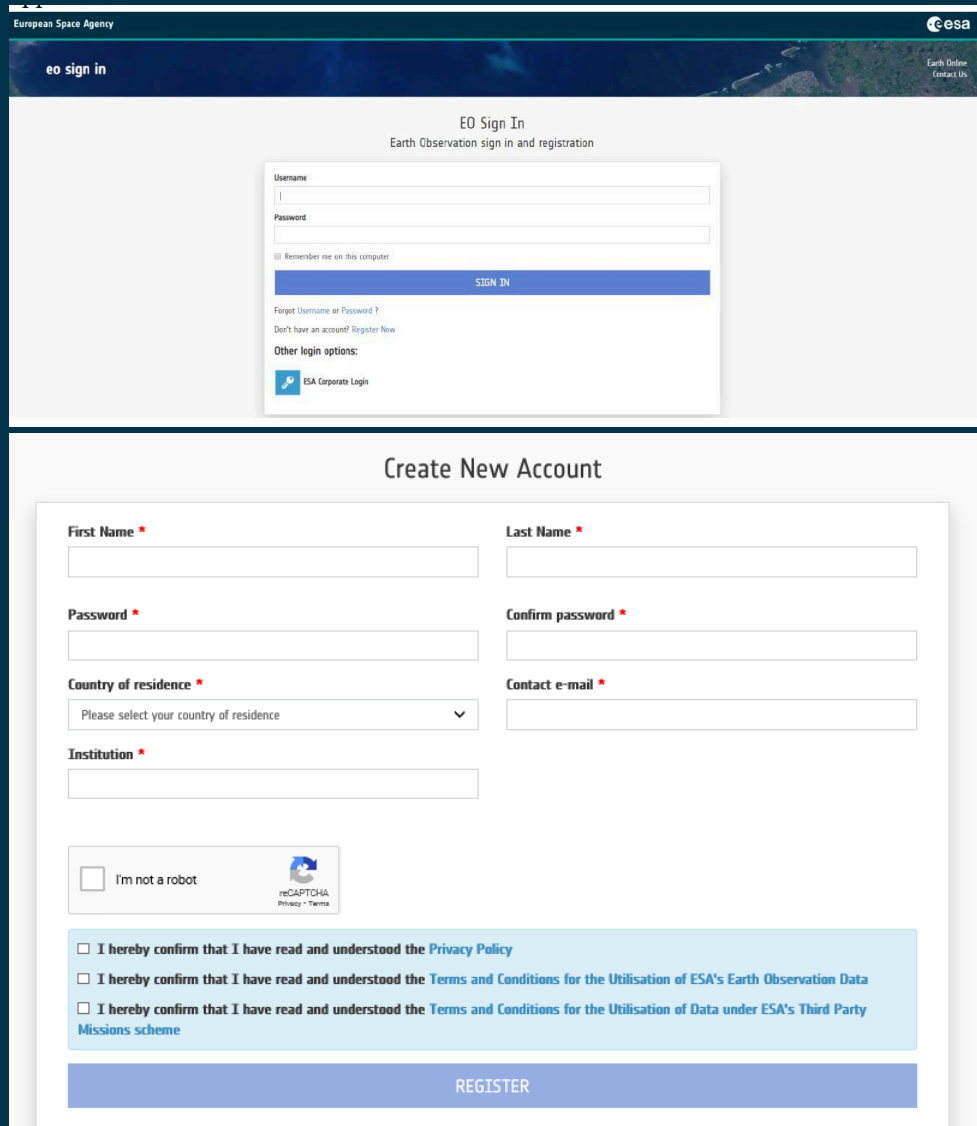
Refreshing the User Perspective - The Way We Were



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 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 a registration form with fields for 'First Name *', 'Last Name *', 'Password *', 'Confirm password *', 'Country of residence *' (a dropdown menu), 'Contact e-mail *', and 'Institution *'. There is also a reCAPTCHA widget with the text 'I'm not a robot' and a 'REGISTER' button at the bottom. Below the form, 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'.

- 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



Refreshing the User Perspective - Earth Online



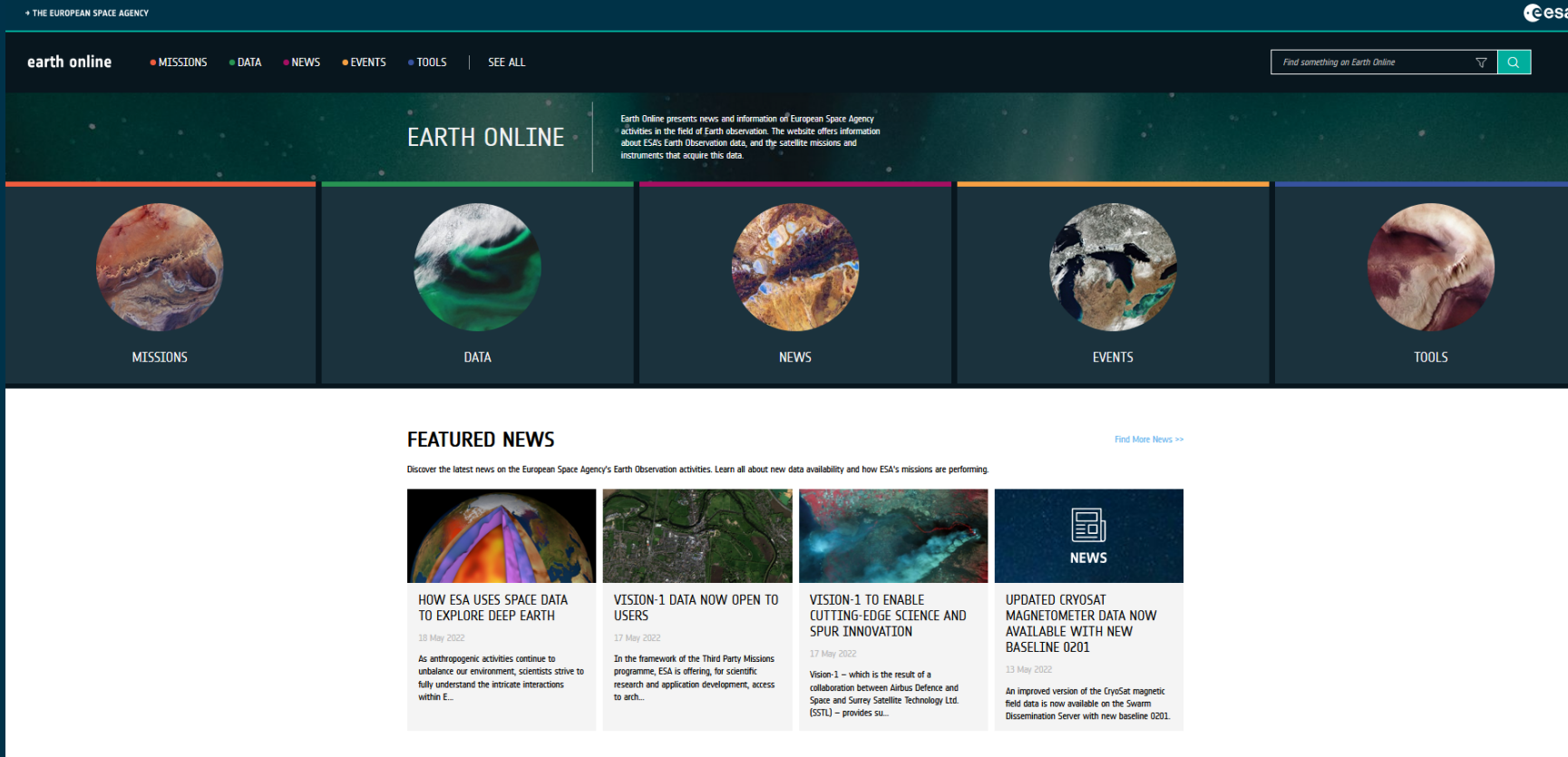
- Launched: April 2020

- 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.

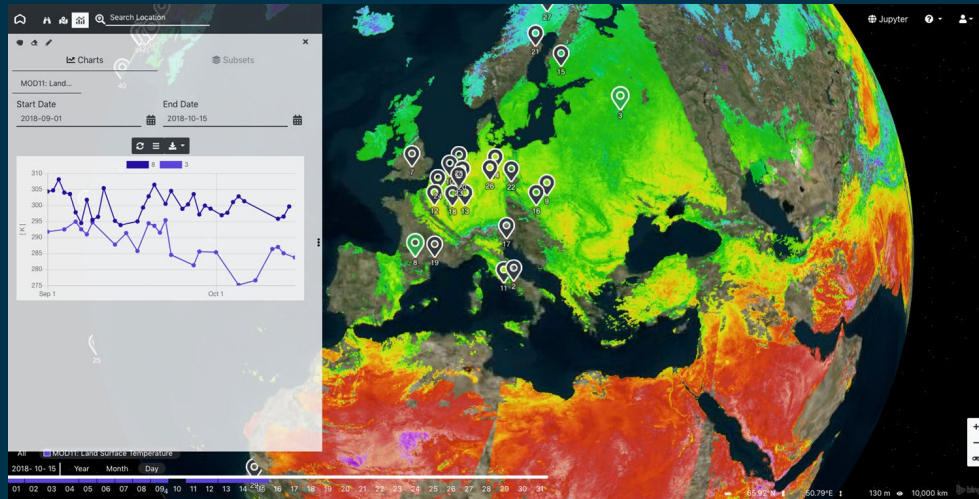
Product Type	Start	Stop	Mission	Instrument	Instrument Mode	Orbit	Track
SIR_GOPNIB	2018-05-31T06:35:56Z	2018-05-31T06:37:24Z	OceanSat	OCM-2	LAC	47477	4
SIR_GOPNIB	2018-05-31T07:50:55Z	2018-05-31T07:51:01Z	OceanSat	OCM-2	LAC	47481	5
SIR_GOPRIB	2018-05-31T03:27:13Z	2018-05-31T03:34:32Z	OceanSat	OCM-2	LAC	47491	5
SIR_GOPRIB	2018-05-31T08:30:58Z	2018-05-31T08:33:01Z	OceanSat	OCM-2	LAC	47491	5
SIR_GOPMIB	2018-05-31T09:35:26Z	2018-05-31T09:36:38Z	OceanSat	OCM-2	LAC	47506	4
SIR_GOPMIB	2018-05-31T12:29:33Z	2018-05-31T13:29:33Z	OceanSat	OCM-2	LAC	47520	5
SIR_GOPMIB	2018-05-31T13:53:55Z	2018-05-31T13:55:46Z	OceanSat	OCM-2	LAC	47535	4
SIR_GOPMIB	2018-05-31T14:34:43Z	2018-05-31T15:08:50Z	OceanSat	OCM-2	LAC	47566	4
SIR_GOPMIB	2018-05-31T15:10:47Z	2018-05-31T15:11:12Z	OceanSat	OCM-2	LAC	47549	5
SIR_GOPMIB	2018-05-31T15:10:47Z	2018-05-31T15:11:12Z	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

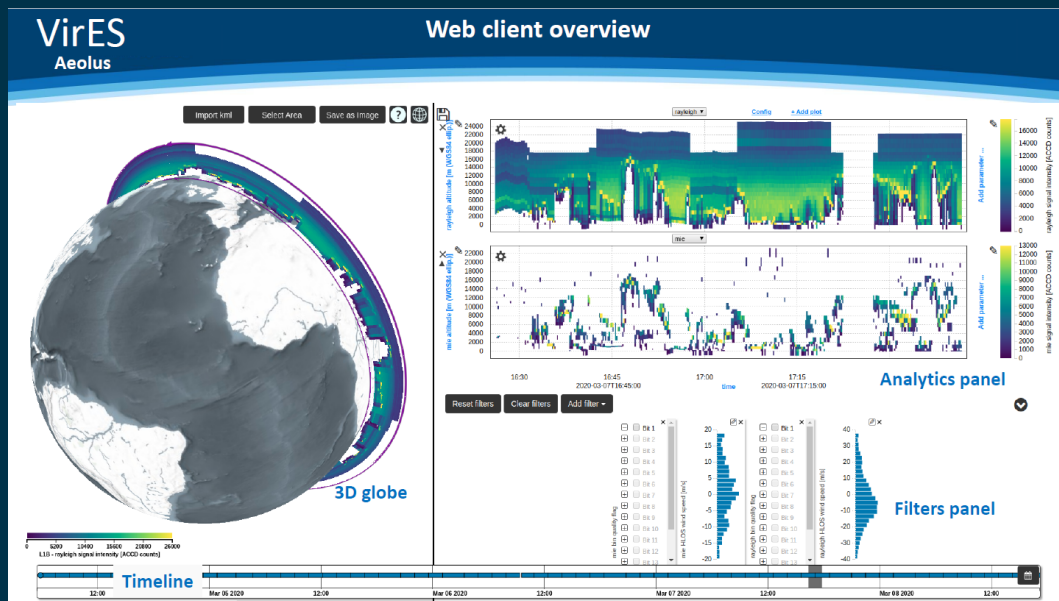
- 176 Discoverable Data Collection and ~20 Millions products:
 - ESA Earth Explorer Missions
 - Third Party Missions
 - Heritage data
- >170 Instruments:
 - SAR, Optical, Interferometry, Altimeter, ...



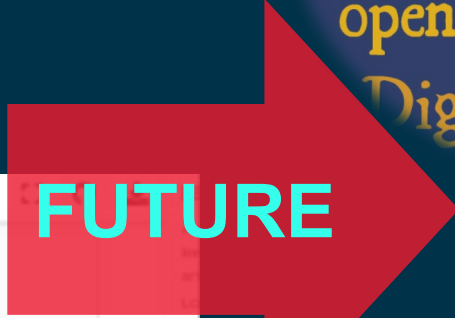
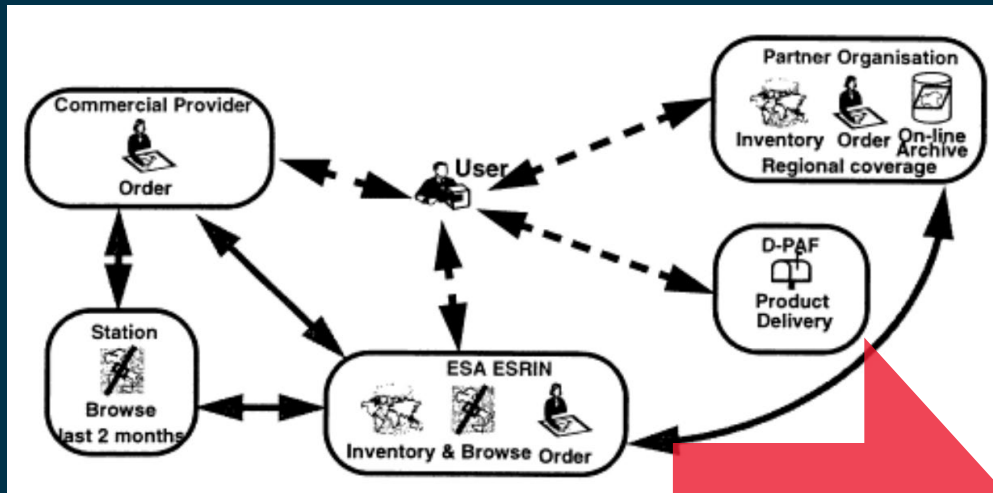
Refreshing the User Perspective - EO Access Platforms



- 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)