Frist Face-to-Face Workshop for National Data Providers

Monday 22 May, Ljubljana, Slovenia

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REPUBLIC OF SLOVENIA
MINISTRY OF PUBLIC ADMINISTRATION
MINISTRY OF DIGITAL TRANSFORMATION

European Parliament Office in Slovenia

Welcoming Keynote

Dr. Emilija Stojmenova Duh, Minister of Digital Transformation of Slovenia

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Agenda and set-up of the day

	Agenda	*Moderator*
9:30-9:45	Welcoming and objectives of the session	*Dr. Emilija Stojmenova Duh, Minister of Digital Transformation to Slovenia*
9:45-10:45	data.europa.eu: what's in it for you?	*Els Breedstraet, Publications Office of the EU*
10:45-11:00	*Coffee Break*	
11:00-12:30	Update on the data policy landscape in Europe: Data Governance Act and Implementing Act on High-Value Datasets	*Jiri Pilar, DG CNECT, European Commission* *Leonard Mack, Fraunhofer FOKUS* *Nadiia Konashchuk, USAID/UK aid Transparency and Accountability in Public Administration and Services / TAPAS Project* *Mykhailo Kornieiev, Ministry of Digital transformation of Ukraine*
12:30-13:30	*Lunch*	
13:30-14:30	An interactive workshop on the progress of High-Value Datasets implementation across Member States (Part 1)	*Elena Simperl, King's College London* *Lucia Sanchez Gonzalez, Universidad Politécnica de Madrid*
15:15-15:30	*Coffee Break*	
14:45-15:45	An interactive workshop on the progress of High-Value Datasets implementation across Member States (Part 2)	*Elena Simperl, King's College London* *Lucia Sanchez Gonzalez, Universidad Politécnica de Madrid*
15:45-16:15	Closing keynote: Sentinel Hub – A success story of the EU Copernicus programme and the open Earth observation data re-use	*Aleš Veršič, Slovenian Open Data Team* *Miha Kadunc, Sinergise LTD*
Side activities	Guided Tour of Ljubljana Networking event at the Ljubljana City Hall	

data.europa.eu: what's in it for you?

data.europa.eu: what's in it for you?

Els Breedstraet, Head of Sector, C.1.001, Open data reuse and innovation, EU Publications Office

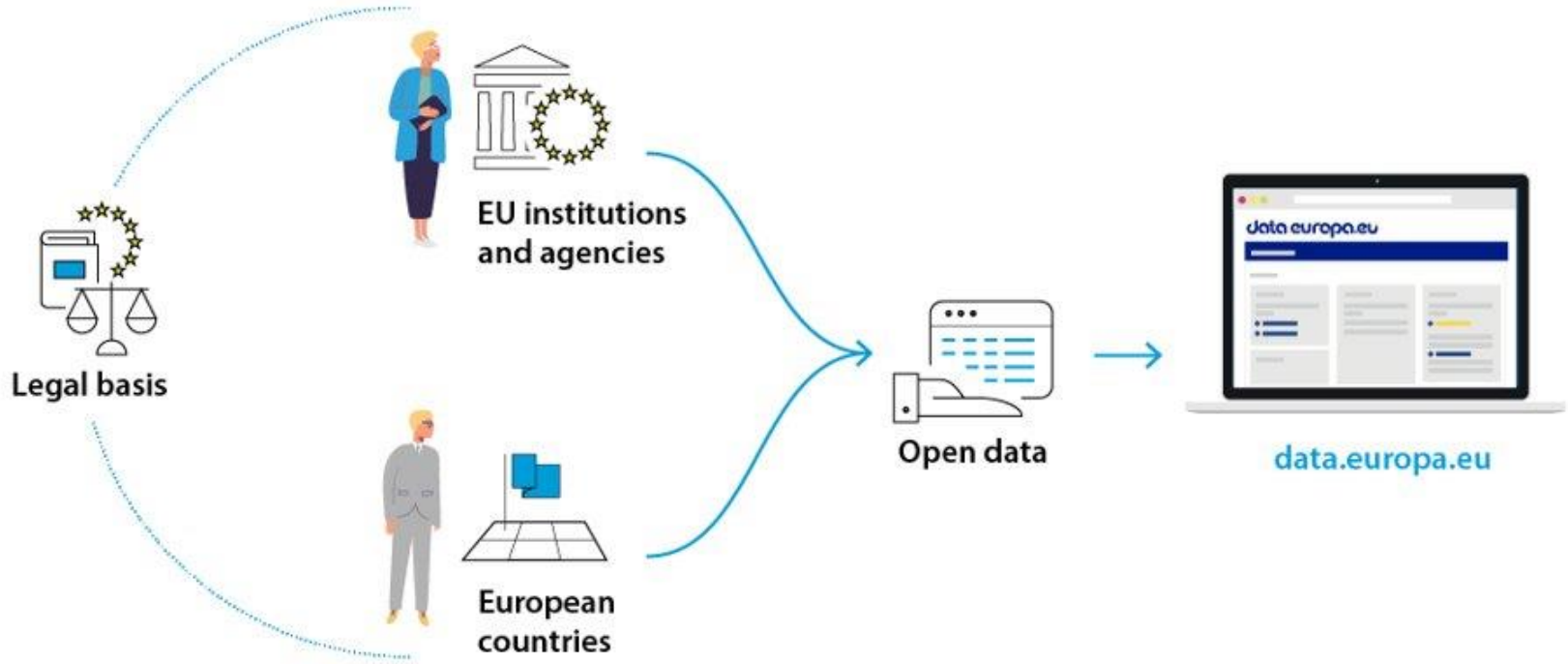
22 May 2023

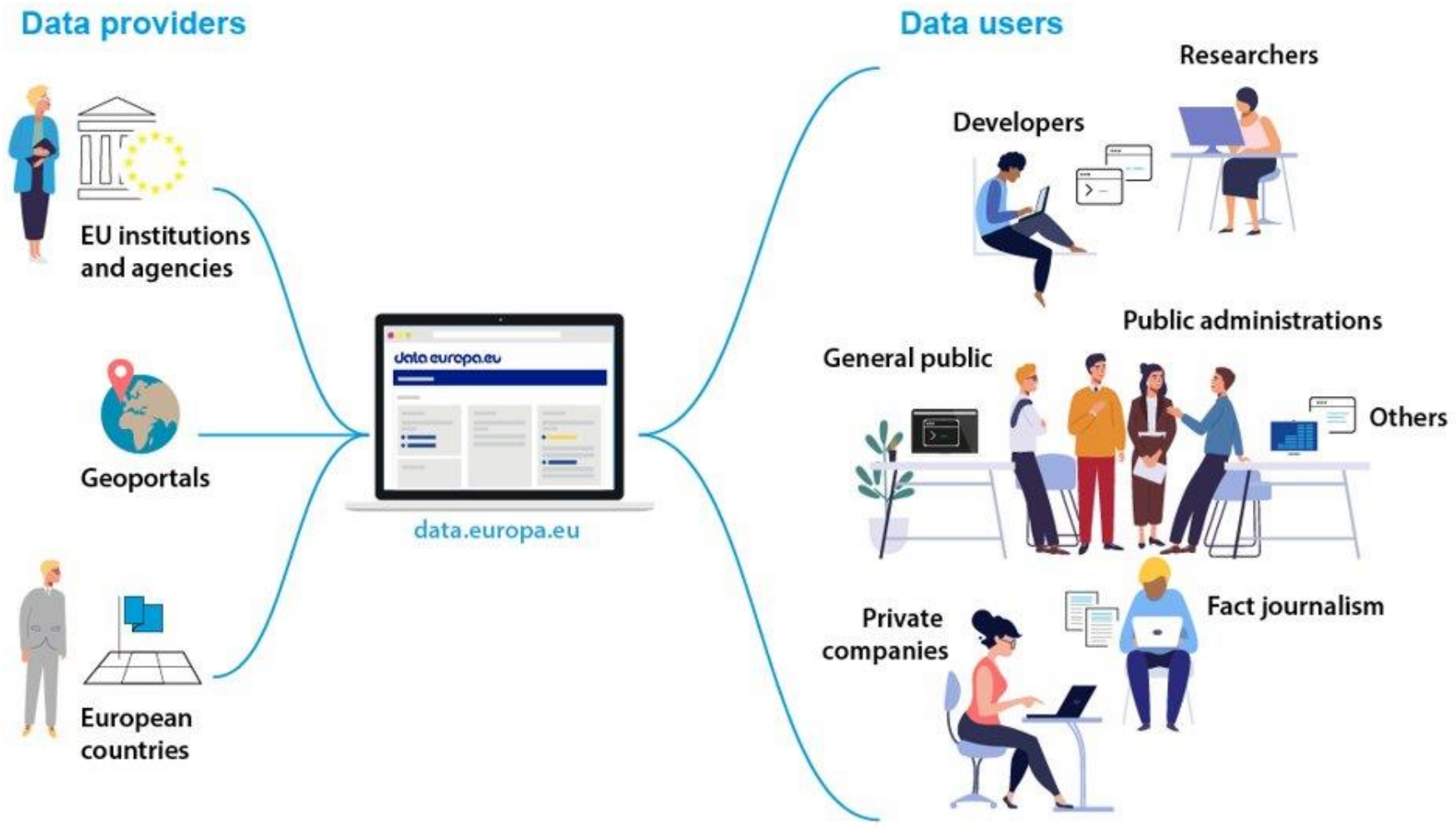
data.europa.eu The official portal for European data

Agenda

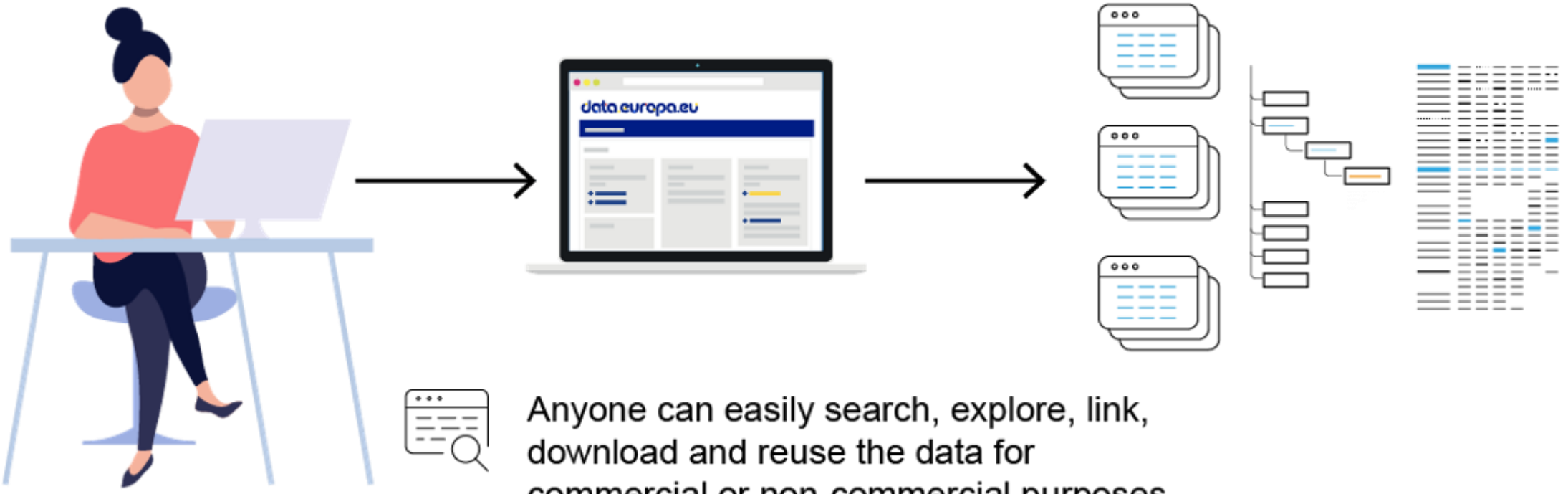
- Introduction and data.europa.eu
- Data.europa.eu as data hub
- Data.europa.eu as information hub
- Data.europa.eu as knowledge hub
- Looking forward and backward

data.europa.eu has been set up by the European Commission to implement EU open data and reuse policies under the legal acts adopted by the EU institutions and EU Member States.



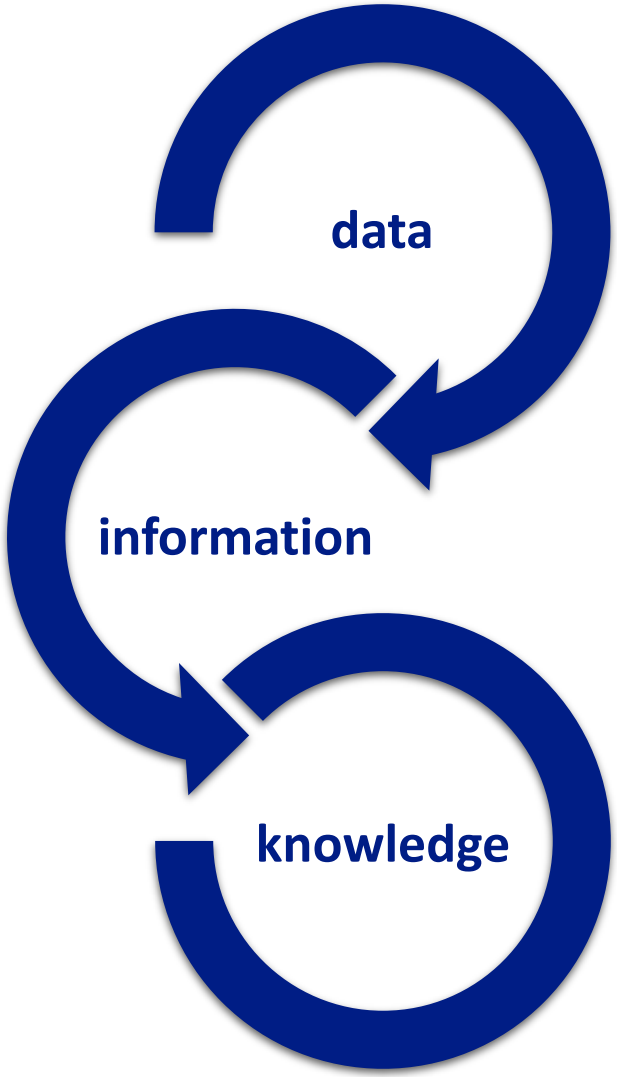

Data providers
EU institutions and agencies
Geoportals
European countries
data europa.eu
data.europa.eu
Data users
Researchers
Developers
Public administrations
General public
Others
Private companies
Fact journalism

data.europa.eu is a **catalogue of metadata** providing a single point of access to open data from European countries and EU institutions for reuse.



Anyone can easily search, explore, link, download and reuse the data for commercial or non-commercial purposes.

data.europa.eu connects:

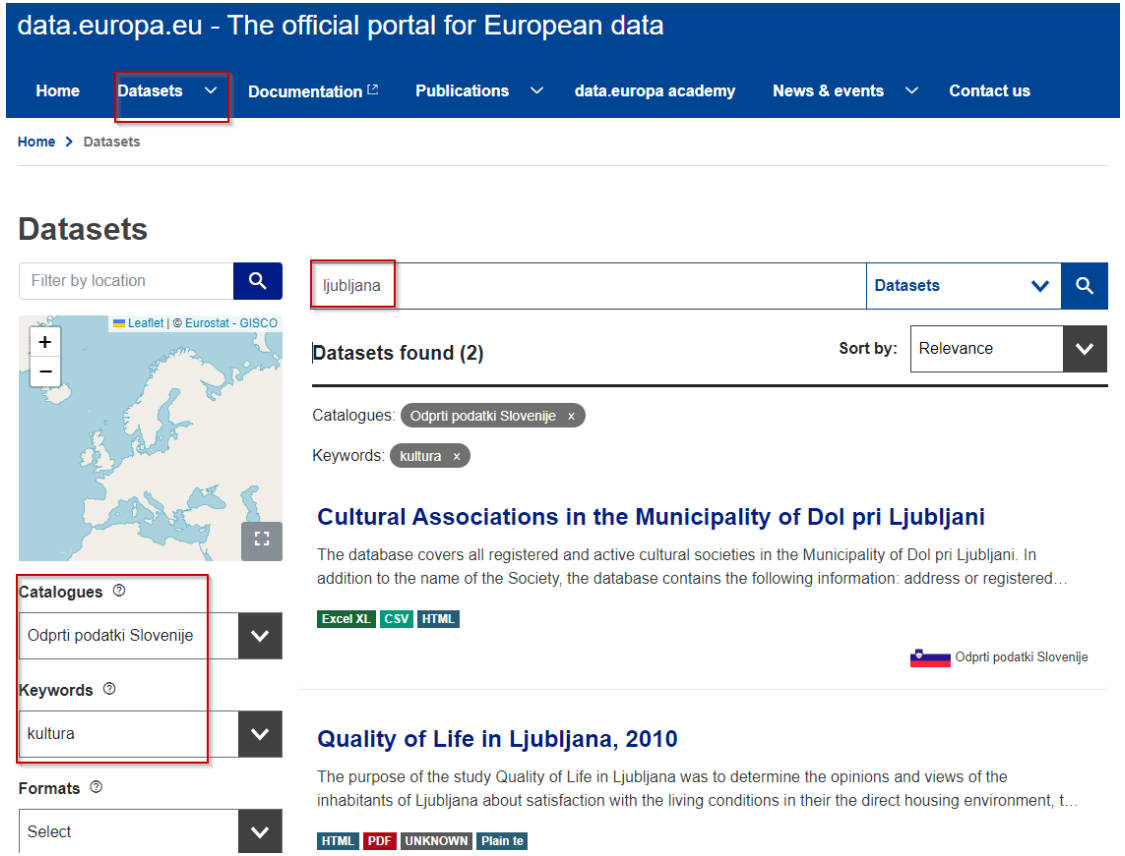


Data.europa.eu as **data hub**

data.europa.eu The official portal for European data

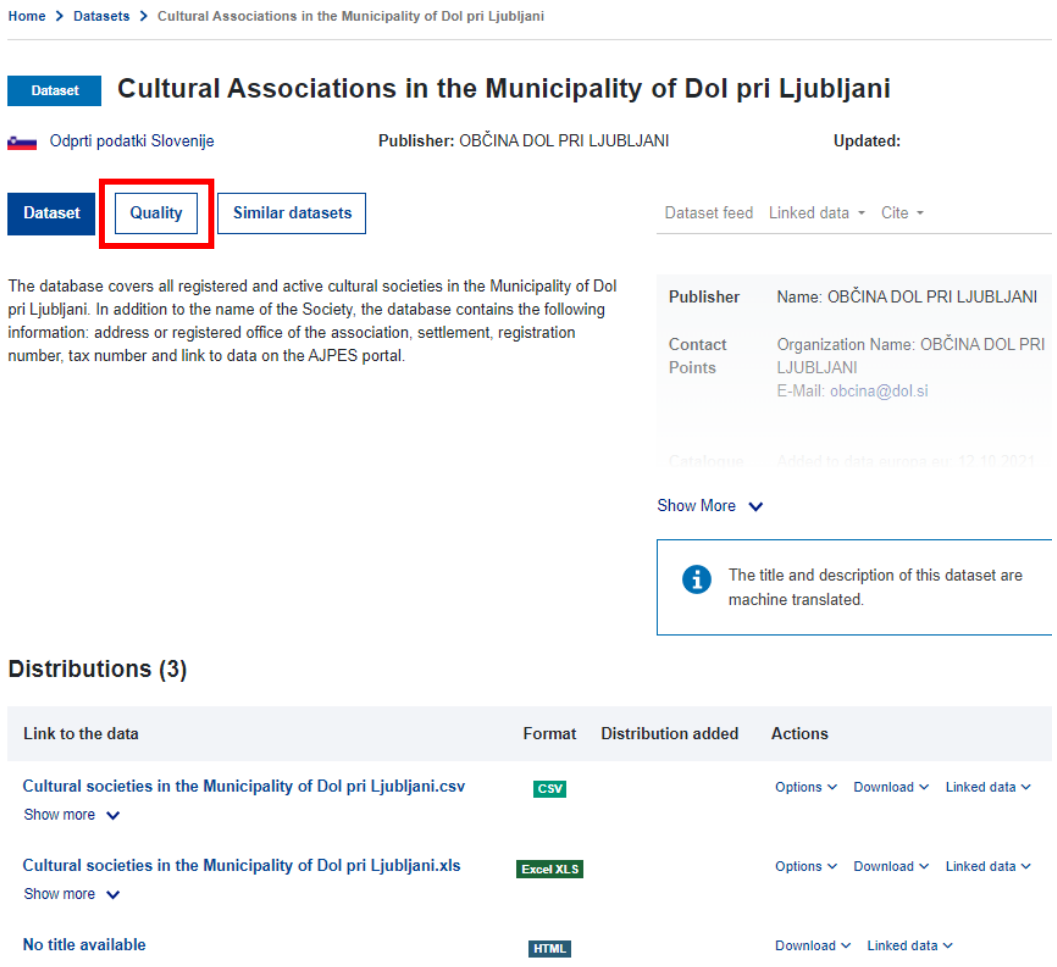
Data.europa.eu as data hub

- **More than 1.6 million datasets**, grouped in 176 data catalogues
- **Navigate or search to get to the data** or catalogue you are looking for
- Benefit from **many filters**



Data.europa.eu as data hub

- **Metadata translations** in all EU languages, machine translations for other text
- **Download and transform CSV files** automatically in many different formats
- Get **quick visualisations** for geo datasets
- Get **feedback for the metadata quality** on how to improve it



Metadata quality dashboard

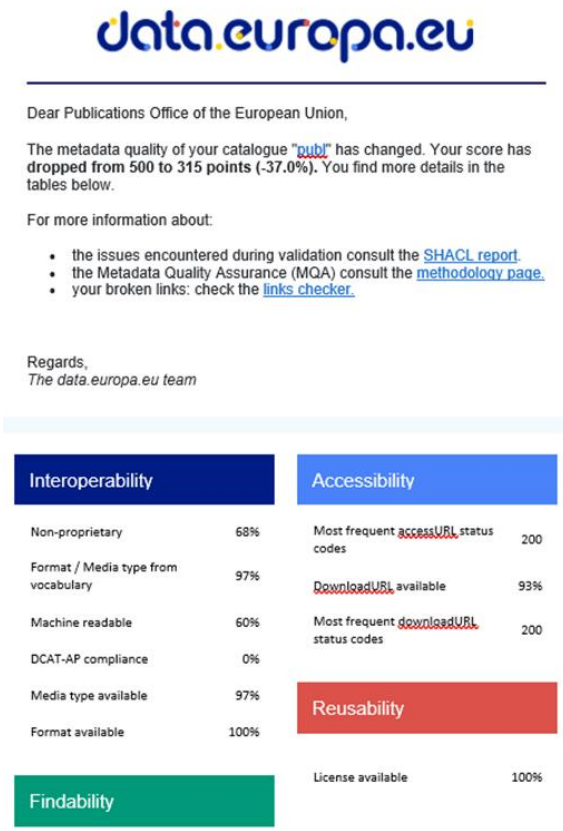
Access: Metadata quality dashboard

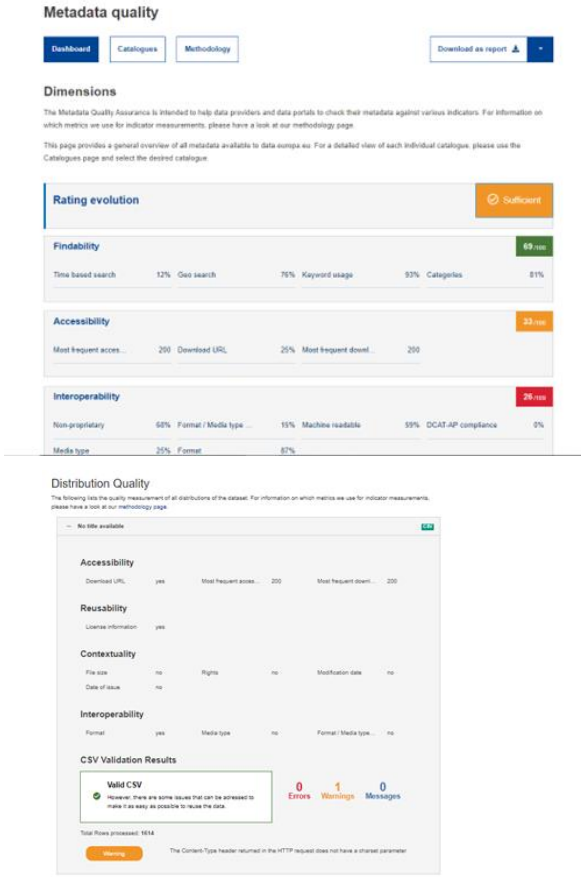
Benefits:

- **Immediate feedback** on how to improve the description of your datasets

What's new?

- **Data quality feature** added for **validating CSV files**
- **Metadata quality assessment** notifying system to data providers when the metadata quality assurance (MQA) score of your catalogue changes.



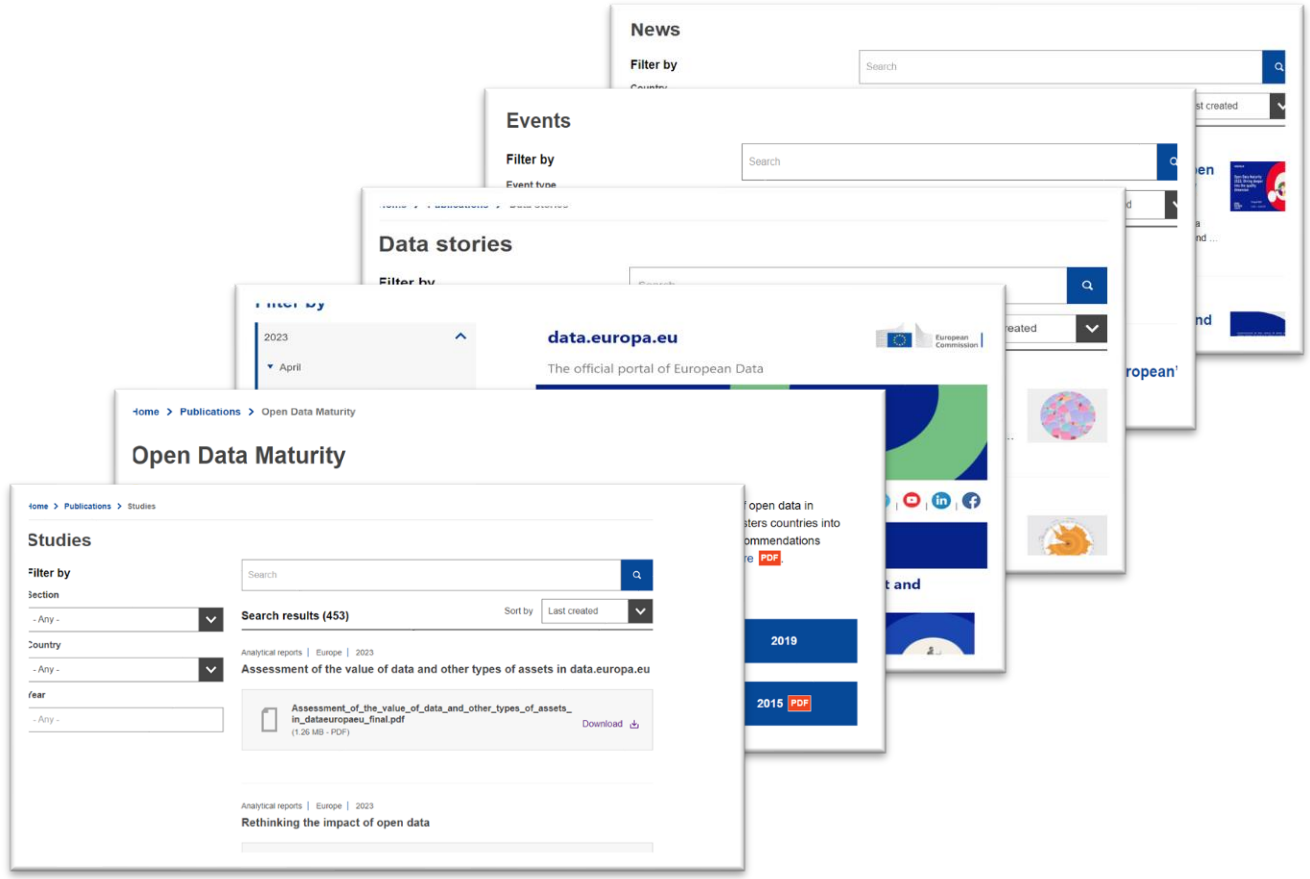


Data.europa.eu as information hub

data.europa.eu The official portal for European data

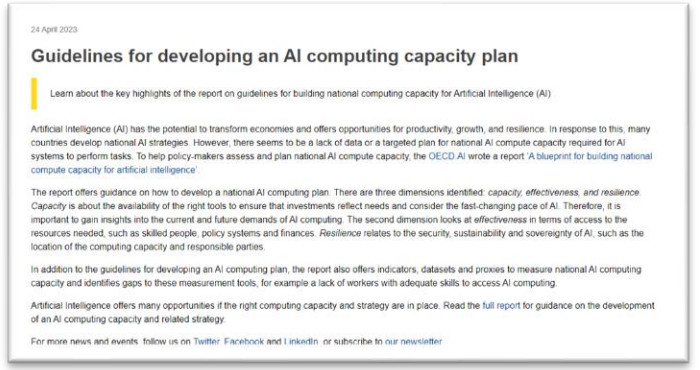
Information around open data

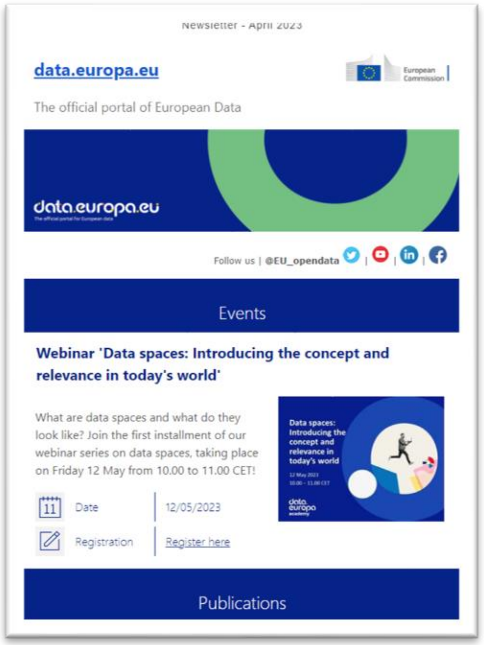
- News
- Newsletter
- Events
- Data stories
- Studies
- Reports



News, events & newsletter

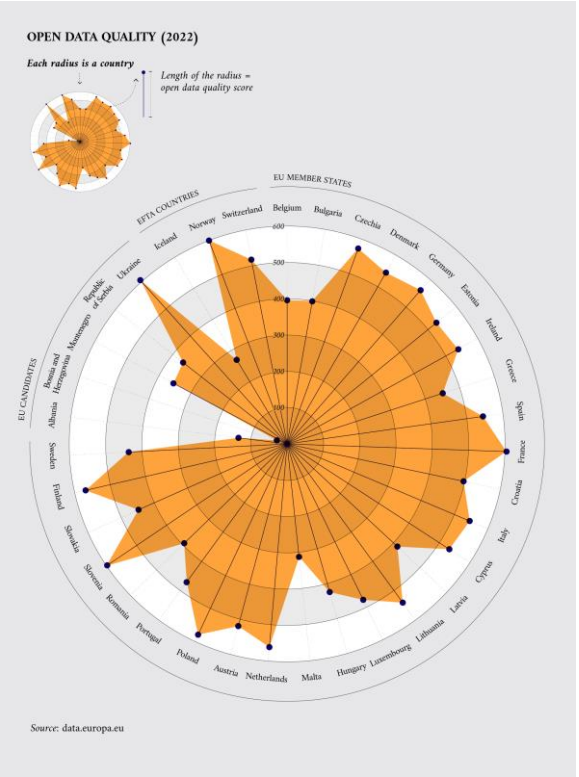
- **News pieces** e.g. on legal or technical developments related to open data
- **Events** calendar on open data
- **Newsletter** that includes all the latest events, publications and news





Data stories on data.europa.eu

- **Data stories** and **interviews** with data providers
- Stories on **high-value datasets** and **linked open data**
- Involving a dataviz expert to create **targeted meaningful visualisations**



Studies and reports on data.europa.eu

- **Geospatial trends**
- Upcoming publication on **data demand from the public sector**
- **Sharing data (anti-)competitively** - Will European data holders need to change their ways under the proposed new data legislation?
- **‘The use case observatory’:** 3-year study of 30 reuse cases.
  - Aim: understand the economic, governmental, social, and environmental impact of open data. Yearly publication of report: 2022, 2024 and 2025.

Open Data Maturity assessment

What

- 8th consecutive assessment of the state of open data in Europe, with 35 participating countries

Why

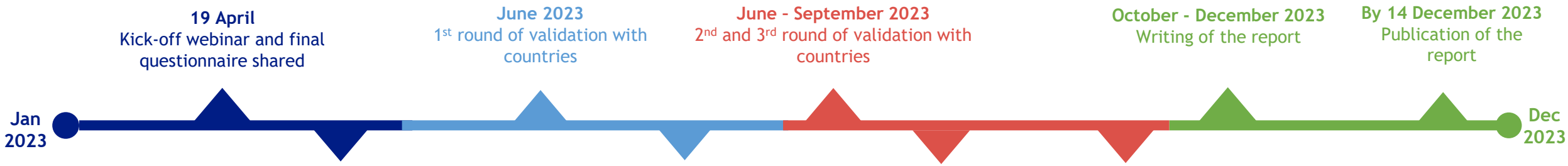
- Gain insights in the state of open data and challenge countries to improve

How

- Self-assessment: national open data teams fill out a questionnaire on 4 dimension of maturity

Timeline Open Data Maturity 2023

Phase 1 Preparation & Launch	Phase 2 Data collection	Phase 3 Data review & Validation	Phase 4 Writing & Publication



17 May	23 June 2023	22 September 2023	6 October 2023
Deadline to send back the questionnaire	Deadline to complete answers	Deadline to complete answers	Workshop on results

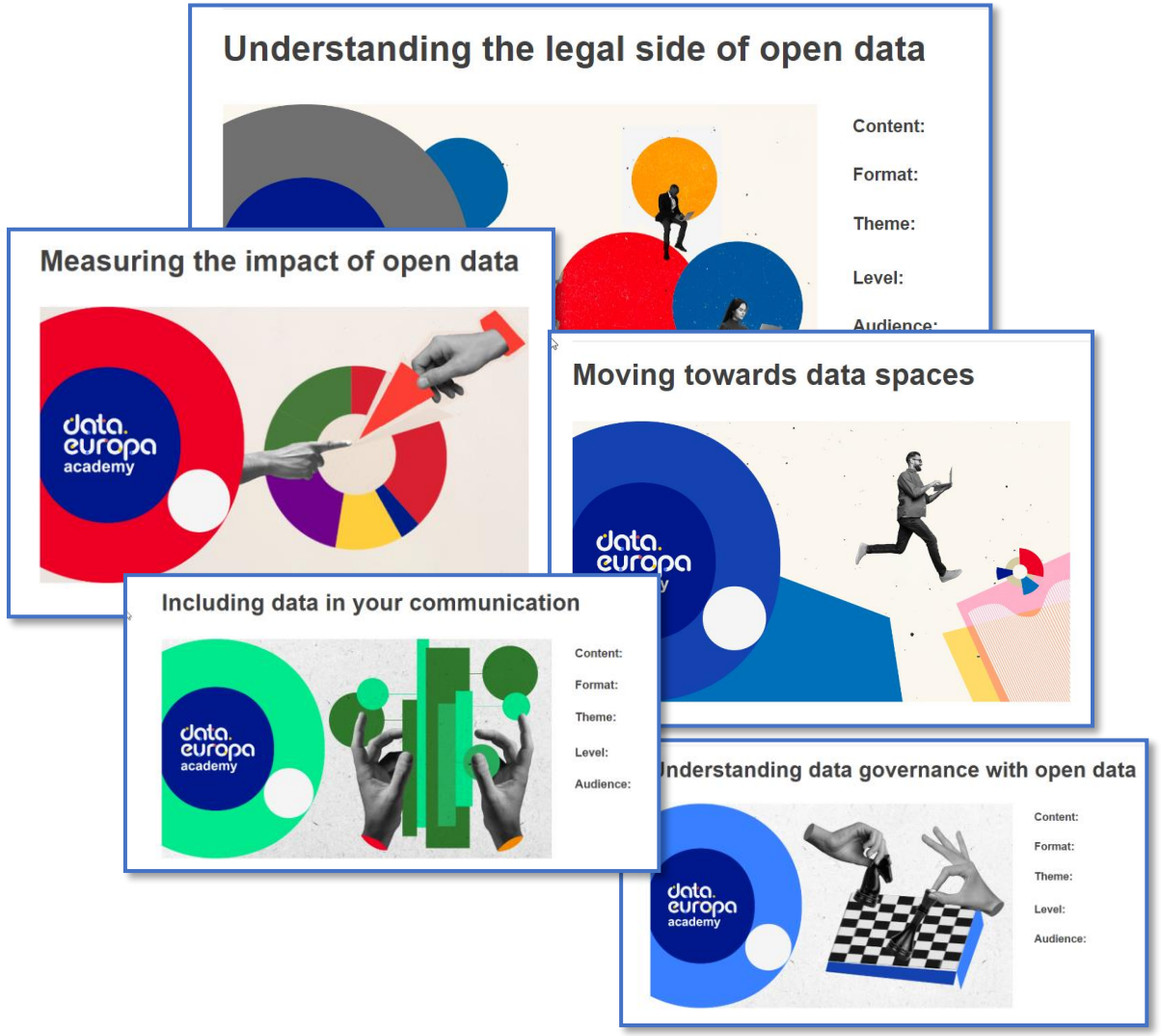
Relevant deadlines for participating countries

Data.europa.eu as knowledge hub

data.europa.eu The official portal for European data

Data.europa academy
your open data knowledge centre

- **Aim:** improve **data literacy**
- Content:
  - Grouped in 11 thematic courses (legal, technical, business, data visualisation, …)
  - Articles, videos, slide shows, reports, …
  - Designed according to **users' needs**
- Constantly **updated and improved**



Collaboration Channel

A way to **informally reach out** to other open data providers to ask questions, share best practices and discuss common topics of interest

Currently hosted on Microsoft Teams (soon to be integrated in data.europa.eu)

Data.europa.eu
Looking forward & ... backward

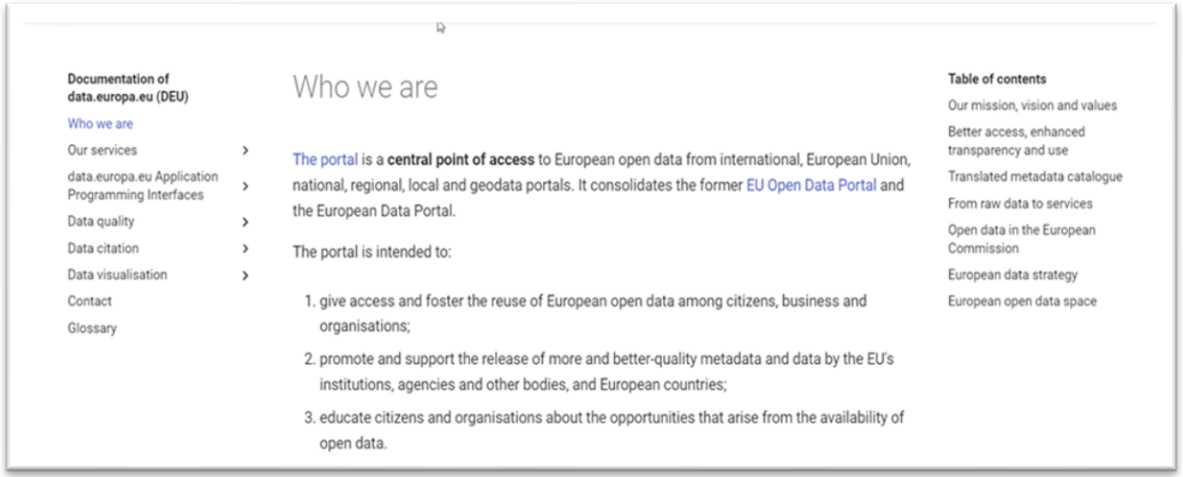
data.europa.eu The official portal for European data

Soon to come

- **New data providers interface** to upload datasets
- **New dashboards and feedback reports** for data providers
- **Visualisations for high-value datasets**
- **European single access points**: searchable electronic register of data available in the national single information points (context: Data Governance Act)
- **Personal corner** – my data portal: like datasets, comment on datasets, create lists for datasets, save searches, get notifications for updates, …
- **Personalised** data.europa academy with certificates
- **Webinars for specific groups**, e.g. academics and students
- **Competition platform** to host competitions

Documentation of data.europa.eu

- **For data providers**
  - DCAT-AP metadata model, API calls, harvesting options and more
  - Recommendations on (meta)data quality and data citation
- **For data users and reusers**
  - How to use the search function
- **Other services:**
  - Data storage
  - Licensing assistant
  - Data analytics



Documentation section content to be updated soon

Stay in touch

Contact us via e-mail at: info@data.europa.eu

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Follow us on social media:

- EU_opendata
- Publications Office of the European Union
- data.europa.eu

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Q&A

Coffee Break

10:45 – 11:00

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MINISTRY OF DIGITAL TRANSFORMATION

European Parliament Office in Slovenia

Update on the data policy landscape in Europe

Common European data spaces
High Value Datasets
Data Governance Act

Workshop for Data Providers

22 May 2023, Ljubljana

Jiri PILAR, European Commission
DG for Communications Networks, Content and Technology, unit G1

Deploying the European Strategy for Data through 4 Pillars

A cross-sectoral governance framework for data access and use

European data governance; cross-sectoral measures as part of the Data Act

Enablers

Investments in data spaces and federated cloud infrastructures

Competences

Empowering individuals, investing in digital skills & data literacy and in dedicated capacity building for SMEs.

Rollout of common European data spaces

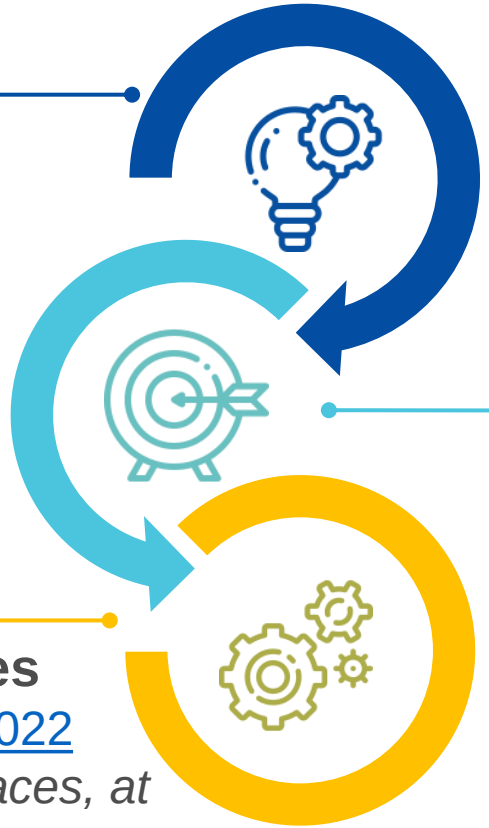
in crucial economic sectors and domains of public interest, looking at data governance and practical arrangements.

International Aspects

Creating a single European market for data

European Data Strategy

- Published Feb 2020
- *Genuine* internal data market
- Built on EU values and rules



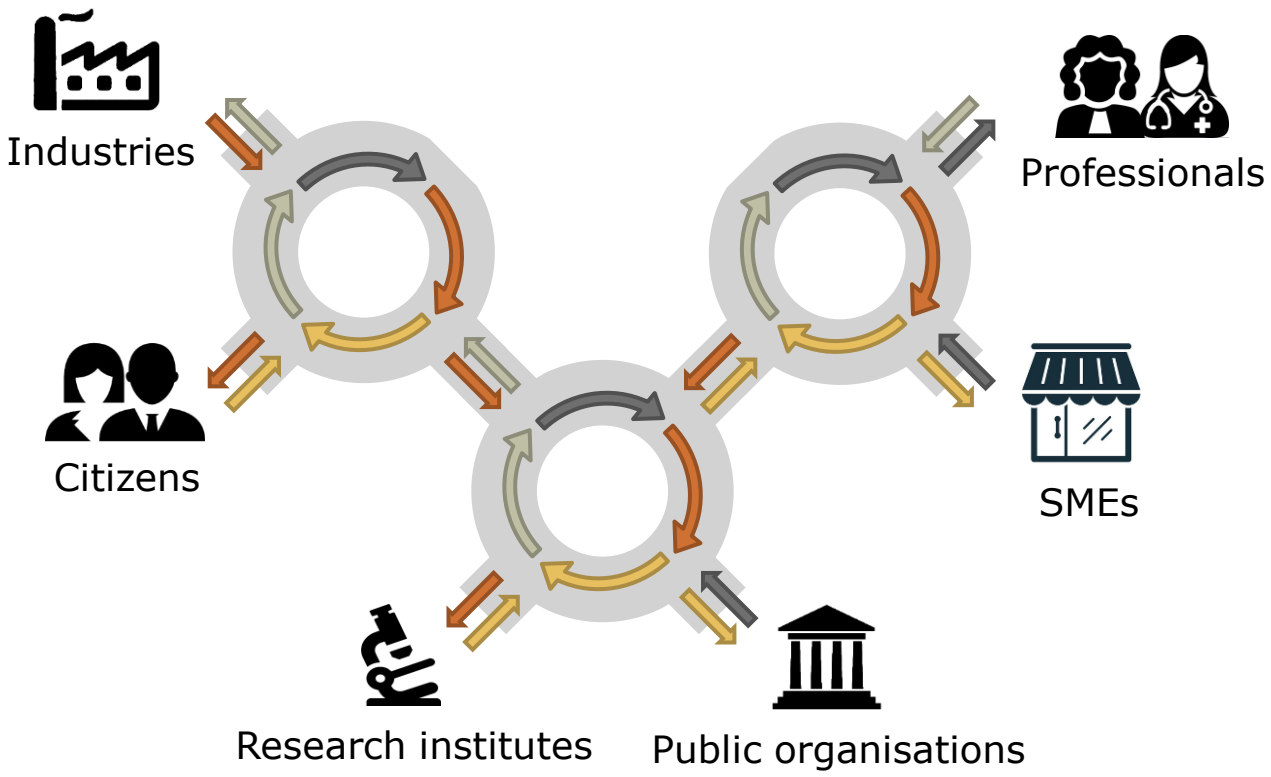
A cross-sectoral legislative framework

- Data Governance Act – July 2022
- Data Act – Proposal Feb 2022
- Implementing Act on High-value datasets (Open Data Directive) – December 2022

Common European data spaces

- Staff Working Document – Feb 2022
  Overview development data spaces, at request European Council
  - ✓ Horizontal aspects (concept, legislation, EU programmes/funding)
  - ✓ Sectoral/domain-specific initiatives

Data Spaces



It can be defined as a federated data ecosystem based on shared policies and rules. The participants of such data spaces are enabled to access data in a secure, transparent, trusted, easy and unified fashion.

Data holders are in control of who can have access to their data, for which purpose and under which conditions it can be used.

From a technical perspective, a data space can be seen as a data integration concept which does not require common database schemas and physical data integration, but is rather based on distributed data stores and integration on an “as needed” basis.

Data Spaces in DIGITAL

- Green Deal
- Smart communities
- Agriculture
- Mobility
- Health - Genomics
- Health Cancer Images
- Skills
- Manufacturing
- Public Procurements
- Security data space for innovation
- Financial
- Tourism
- Language
- Cultural Heritage
- Media

European Commission

Common European data spaces


Health


Industrial & Manufacturing


Agriculture


Finance


Mobility


Green Deal


Energy


Public Administration


Skills

High Value Datasets from public sector

- Driven by stakeholders
- Rich pool of data of varying degree of openness
- Sectoral data governance (contracts, licenses, access rights, usage rights)
- Technical tools for data pooling and sharing

Data Spaces Support Centre

- Coordinating the development of data spaces
- Assuring common standards and interoperability

Technical infrastructure for data spaces

Edge & cloud Services

Smart Middleware solutions

Marketplace

High-Performance Computing

AI on demand platform

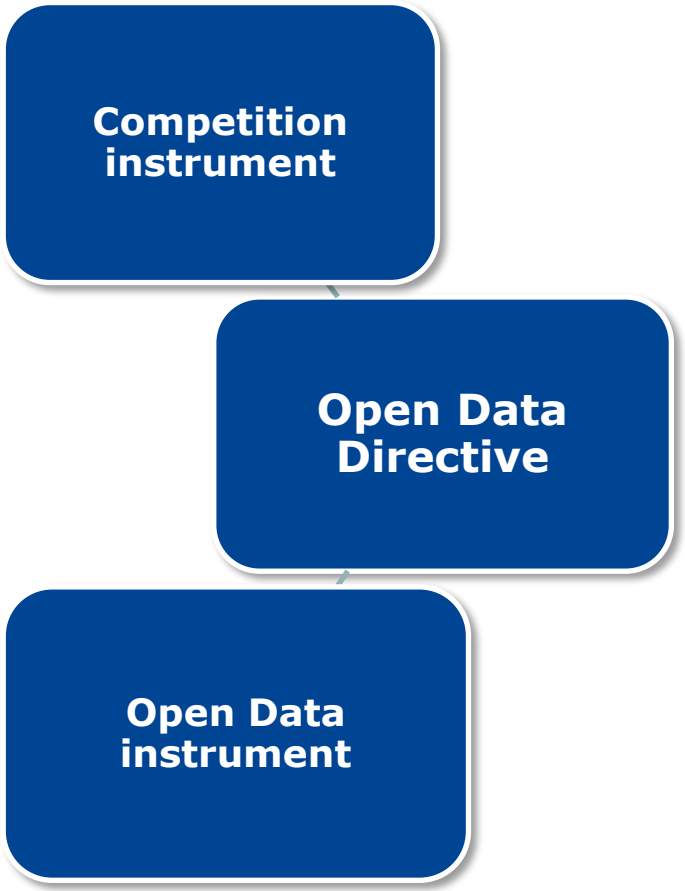
AI Testing and Experimentation Facilities

European data space actors

- Data Spaces Support Centre (DSSC)
  - coordination of all relevant actions on sectoral data spaces in Europe
  - blueprint, best practices, common standards, support activities and knowledge transfer
  - funded by the DIGITAL Europe Programme
- Coordination and Support Actions (CSAs)
  - for sectoral/domain-specific data spaces
  - community of practice, priority datasets, stakeholder engagement, governance/business models, roadmap
  - funded by the DIGITAL Europe Programme
- European Data Innovation Board (EDIB)
  - Consultative and advisory body established by the Data Governance Act, to be set up in September 2023
  - guidelines for interoperability of common European data spaces

European Commission

Open Data Directive – basic facts



- Introduces a minimal set of rules to make more data from the public sector easier and cheaper to use for innovation
- The Directive only applies to *data publicly accessible** under national access to information regimes
- Application of the Directive must fully respect the Union and the national data protection rules
- **Latest revision in 2019:** entitled '**Directive on Open Data and the re-use of public sector information**'

**Access rules are set by the MS. The Open Data Directive regulates the re-use of already accessible information held by public sector bodies and public undertakings, including documents to which Directive 2007/2/EC applies.*

Open Data directive (2019/1024 of 20/6/2019) => Commission Implementing Regulation (EU) 2023/138 List of high value datasets

- ***Geospatial***
- ***Earth observation and environment***
- ***Meteorological***
- ***Statistics***
- ***Companies and company ownership***
- ***Mobility***

- Datasets listed in the implementing act to be made available:
  - for free
  - in machine-readable formats
  - via APIs and (where relevant) as bulk downloads

- Adoption: 21 December 2022
- Official publication: 20 January 2023
- https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32023R0138

European Commission

Main Act

- Subject matter
- Definitions
- Arrangements for publication (e.g. details on APIs)
- Arrangements for reuse (e.g. charging exception, time series, licences, personal data issues)
- Reporting by Member States
- Applicability: 16 months after entry into force, i.e. **9 June 2024**

Annex

- Datasets or their description and arrangements for the publication and re-use for individual categories

Geospatial – Annex to the Implementing Regulation

Datasets	Administrative units	Geographical Names	Addresses	Buildings	Cadastral parcels	Reference and Agricultural parcels
Granularity	All levels of generalisation available with a granularity up to the scale of 1:5000. From municipalities to countries; maritime units.	N/A	N/A	All levels of generalisation available with a granularity up to the scale of 1:5000.	All levels of generalisation available with a granularity up to the scale of 1:5000.	A level of accuracy that is at least equivalent to that of cartography at a scale of 1:10 000 and, as from 2016, at a scale of 1:5 000, as referred to in Article 70(1) of Regulation (EU) 1306/2013.
Geographical coverage	Single or multiple datasets that shall cover the entire Member State when combined.					
Key attributes	Unique identifier; Unit type (administrative or maritime unit); Geometry; Boundary status; National identification code; Identification code of the upper administrative level; Official name; Country code; Name in multiple languages (only for countries with more than one official language) including a language with Latin characters, when feasible.	Unique identifier; Geometry; Name in multiple languages (only for countries with more than one official language) including a language with Latin characters, when feasible; Type.	Unique identifier; Geometry; Address locator (e.g. house number); Thoroughfare (street); name; Administrative units (e.g. municipality, province, country; Postal descriptor (e.g. post code); Date of last update.	Unique identifier; Geometry (footprint of the building); Number of floors; Type of use.	Unique identifier; Geometry (boundary of cadastral parcels or basic property units); Parcel or basic property unit code; A reference to the administrative unit of lowest administrative level to which this parcel or basic property unit belongs.	<u>Reference parcels</u> Unique identifier; Geometry (boundary and area); Land cover; organic; Stable landscape elements (“EFA-layer”); areas with natural/specific constraints. <u>Agricultural parcels</u> Unique identifier; Geometry (boundary and area of each agricultural parcel); Land uses (crops or crop groups); Organic; Individual landscape element; Permanent grassland.

Arrangements for the publication and re-use

a) The datasets shall be made available for re-use:

- under the conditions of the Creative Commons BY 4.0 licence or any equivalent or less restrictive open licence;
- in a publicly documented, Union or internationally recognised open, machine-readable format;
- through application programming interfaces (‘APIs’) and bulk download;
- in their most up-to-date version.

b) The metadata describing the datasets within the scope of the INSPIRE data themes shall contain at least the metadata elements set out in Commission Regulation (EC) No 1205/2008.

c) For the implementation of the Reference parcels and Agricultural parcels datasets, Member States shall take into consideration the ongoing implementation of Directive 2007/2/EC as well as the obligation foreseen by Article 67(3) and 67(5) of Regulation (EU) 2021/2116.

Data Governance Act (Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022)

Leveraging the potential of data for the economy and society

Pillar 1:
Re-use of **sensitive data** held by **public sector bodies**

Pillar 2:
Framework for new **data intermediaries** in the Single Market: Data broker

Pillar3:
Corporate and Individual **data altruism** for purposes of general interest

Pillar4:
Co-ordination and interoperability: **European Data Innovation Board**

Horizontal framework for the creation of a single market for data

European Commission

Pillar 1 (re-use of sensitive public data) and the GDPR

- Member States will have to ensure that public sector bodies are technically equipped to **ensure the protected nature of data is preserved**.
- Conditions for reuse publicly available must be non-discriminatory, proportionate and objectively justified – Art 5 (2)
- To **grant access for the re-use of data,** the PSB may require:
  - Anonymisation of personal data – Art 5 (3) (a) (i)
  - Access and re-use of data within a secure processing environment – Art 5 (3) (b) and (c)
  - PSD has the right to verify processing (Art 5 (4); re-use conditional on signature of confidentiality agreement (Art 5 (5)
- PSB should **support re-user to seek consent** – Art 5 (6)

Where do we stand now?

- ❑ High Value Datasets Regulation:
  - Adopted 21 December 2022, will apply from 9 June 2024
- ❑ Data Governance Act
  - Adopted on 30/5/2022 (Regulation (EU) 2022/868)
  - The regulation shall apply from 24 September 2023
- ❑ Data Act
  - In co-decision with EP and Council
  - Expected adoption: 2023
- ❑ Data Spaces
  - Preparatory activities launched in Digital Europe Programme calls 1 and 2 / 2022
  - Deployment actions mostly starting in 2023
- ❑ Digital Europe Workprogramme
  - WP 2023-24 was adopted in March 2023
  - First call: Q2 2023

Thank you very much for your attention

For further questions:

email: CNECT-G1@ec.europa.eu
Unit G1 of DG CONNECT

Websites with more information:

https://eur-lex.europa.eu/legal-content/EN/LSU/?uri=celex:32019L1024

https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en

https://digital-strategy.ec.europa.eu/en/policies/open-data

The European Single Access Point: Implementation and harvesting guidelines

Workshop for Data Providers

22 May 2023, Ljubljana

Agenda

- The European Single Access Point according to the DGA
- Implementation of the ESAP on data.europa.eu
- Harvesting guidelines & requirements
- Next steps

The European Single Access Point according to the DGA

Data Governance Act

- Requires Member States to establish **National Single Information Points** (NSIPs).

- The NSIP shall receive requests for the re-use of data held by public sector bodies protected on grounds of:
  - a) commercial confidentiality;
  - b) statistical confidentiality;
  - c) third parties' intellectual property;
  - d) protection of personal data.

- It defines a common framework for accessing such data, which shall be non-discriminatory, proportionate, and allow competition.

- Overall objective is to increase sharing and re-use of non-open public sector data.

DGA - ESAP

- Requires the Commission to establish a European Single Access Point (ESAP).
- The ESAP should offer a searchable register of data available in the National Single Information Points.
- It also should offer further information on how to request data via the National Single Information Points.

Implementation of the ESAP on data.europa.eu

Explainer: metadata

Metadata

- What is it about, e.g.
- Title
- Description
- Publisher
- …

Data

- The actual data

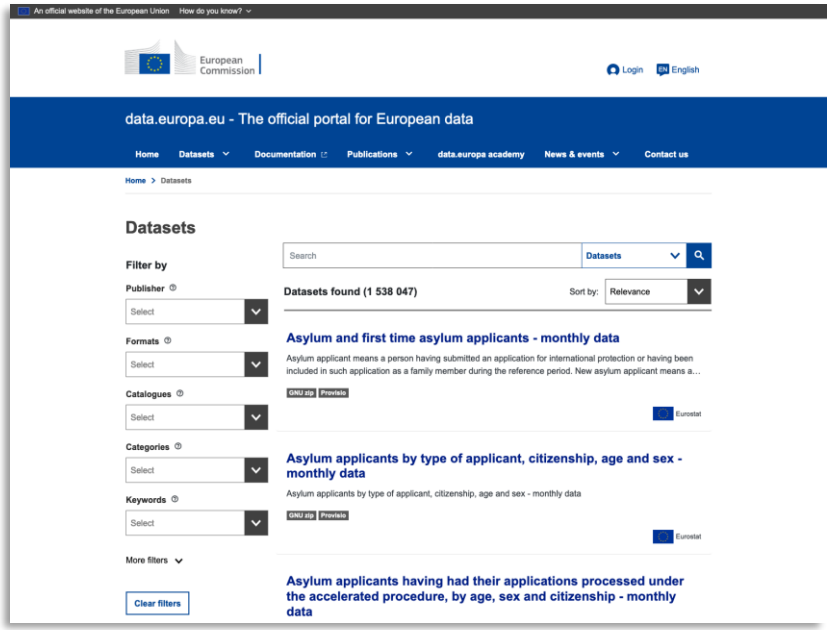
DCAT-AP: https://joinup.ec.europa.eu/collection/semantic-interoperability-community-semic/solution/dcat-application-profile-data-portals-europe

Explainer: datasets, catalogues and distributions

European Single Access Point

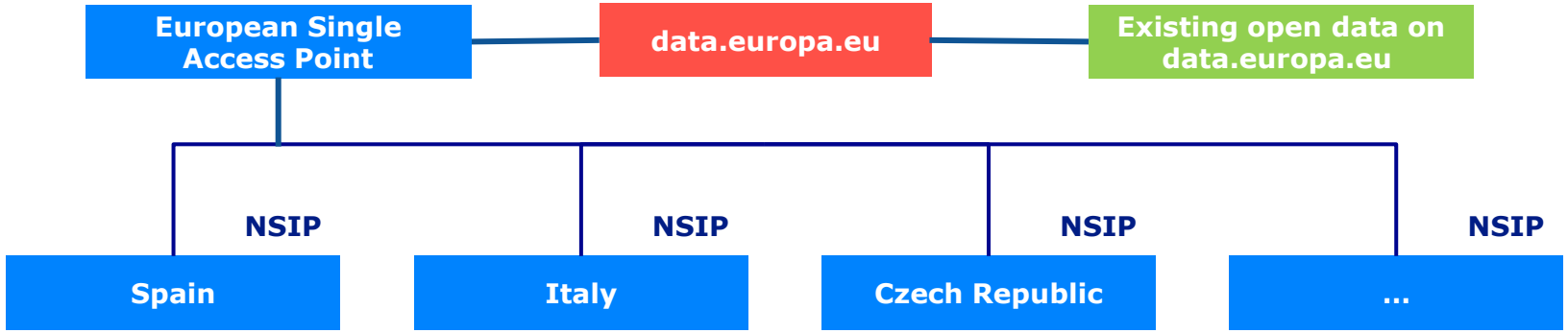
- The **European Single Access Point** (ESAP) will be integrated into data.europa.eu.
- The ESAP will build upon the **existing harvesting infrastructure** and data architecture.
- The ESAP will be implemented based on a minor adaptation of **the DCAT-AP specification**, mapping the required data to DCAT-AP properties.
- Member States have experience with the existing **APIs and workflows**.
- Metadata is **automatically translated** and discoverable via data.europa.eu's **multilingual search**.

Implementation objectives

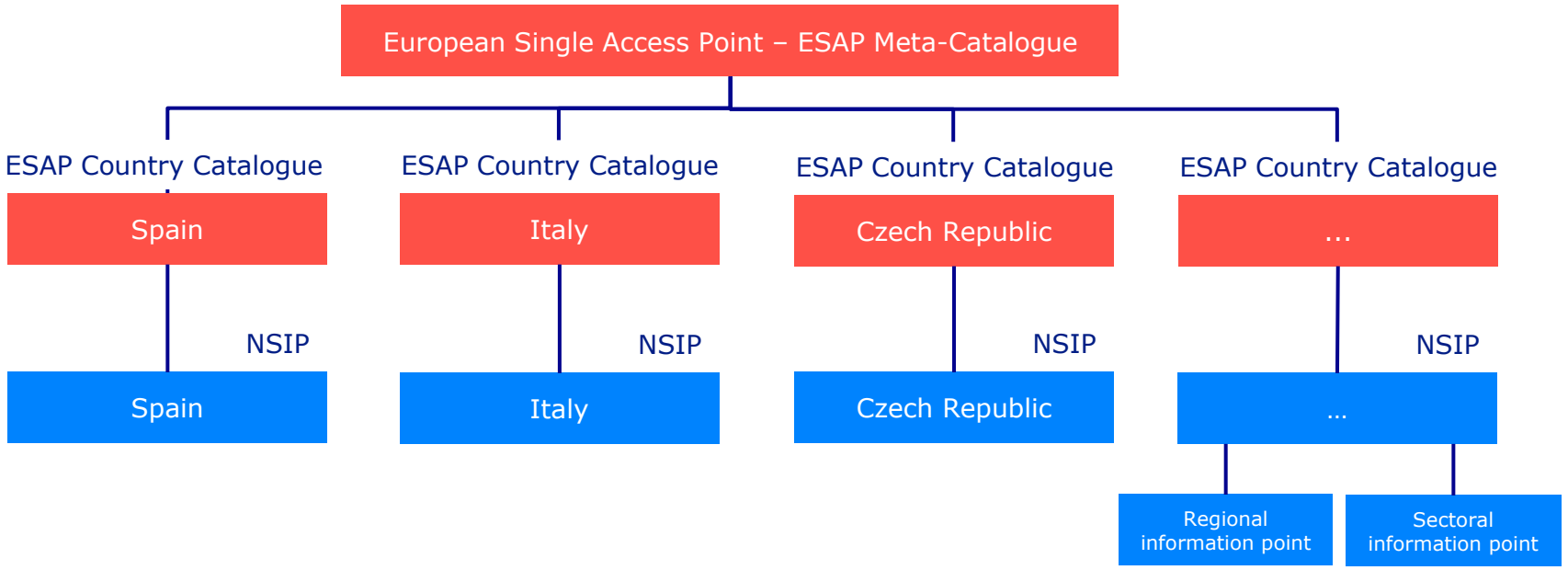


- ESAP and ESAP Country Catalogues as additional facets on data.europa.eu search.
- An implementation of the ESAP that blends with the existing data.europa.eu UI.
- Users can opt to search either in the ESAP or in individual ESAP Country catalogues.
- Users can search both for catalogues and datasets.

ESAP - Structure



Representation of NSIP metadata in the ESAP



Harvesting guidelines & requirements

Endpoint

Members States' National Single Information Points (NSIP) must offer

- A dedicated endpoint exclusively for the harvesting of NSIP data **or**
- A filter mechanism at the endpoint that allows the segregated retrieval of NSIP data OR open data only (if NSIP is integrated in general open data infrastructure)
- The preferred format and protocol are DCAT-AP via the Open Archives Initiative Protocol for Metadata Harvesting **OAI-PMH.**

Flexibility

This approach gives some flexibility to member states in the implementation of their NSIPs. But correct harvesting relies on a solution to differentiate NSIP-data from open data.

Required metadata

- The metadata should meet the requirements of **both the DGA and DCAT-AP**.
- The DGA requires relevant information describing the available data including at least: **format**, **size**, **conditions for its re-use,** and **access procedure**.
- The DCAT-AP specification lists the following mandatory properties for datasets and distributions: **title**, **description**, **publisher**, **access URL**.

Background

Because the DGA requires certain fields, other mandatory properties from the DCAT-AP specification come into play. The requirements for the metadata come both from the DGA and the DCAT-AP specification.

Metadata - Datasets

Property	URI	Range	Usage note
Title (M)	dct:title *	rdfs:Literal	This property contains a name given to the Dataset. This property can be repeated for parallel language versions of the name.
Description (M)	dct:description *	rdfs:Literal	This property contains a free-text account of the Dataset. This property can be repeated for parallel language versions of the description.
Publisher (M)	dct:publisher	foaf:Agent	This property refers to an entity (organisation) responsible for making the Dataset available.
Access rights (M)	dct:accessrights	dct: RightsStatement	This property refers to information that indicates whether the dataset is open data, has access restrictions, or is not public. From the controlled vocabulary of the Publications Office of the EU6, the following codes should be used for NSIP data: “non-public” or “restricted”.

Metadata - Distributions

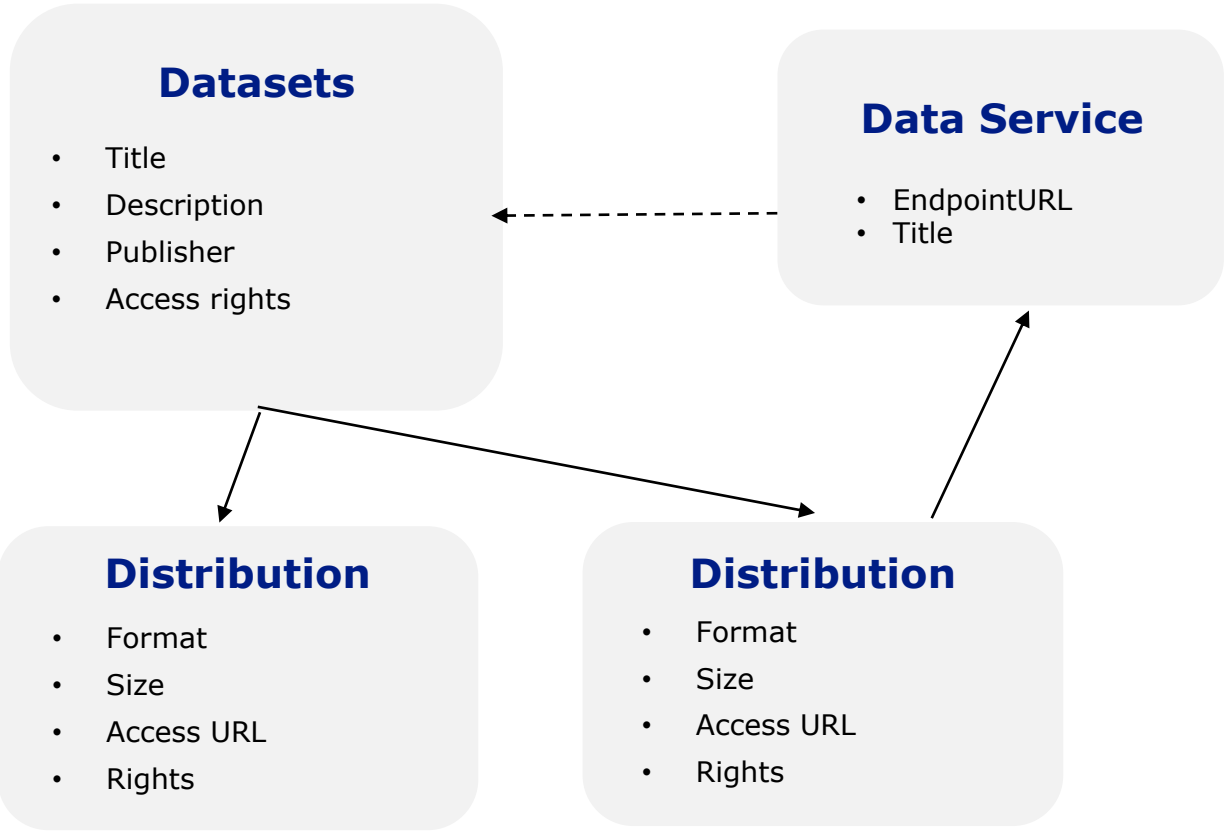
Property	URI	Range	Usage note
Format (M)	dct:format	dct:MediaTypeOrExtent	This property refers to the file format of the Distribution.
Size (M)	dcat:byteSize	rdfs:Literal	The size in bytes can be approximated (as a decimal) if the precise size is not known.
Access procedure (O)	dcat:accessURL*	rdfs:Resource	A URL of a Website that contains information on how to request the data.
Conditions for re-use (Rights) (M)	dct:rights	dct:RightsStatement	This property refers to a statement that specifies rights associated with the Dataset

Metadata - Data Service

Only if data is available via an endpoint that is accessible **without prior registration**:

- We recommend using the **DataService** class to state information on endpointURL and title, ideally also indicating which Dataset this relates to via servesDataset property

Structure


Datasets
Title
Description
Publisher
Access rights
Data Service
EndpointURL
Title
Distribution
Format
Size
Access URL
Rights
Distribution
Format
Size
Access URL
Rights

Getting Started

To get your NSIP harvested you have to take two steps:

- **1st**: Check that your NSIP is suitable for harvesting. Collect all information requested in the checklist.
- **2nd**: Issue a harvesting request via the data.europa.eu contact form.

Checklist pt.1

Requirement	Value
Which country does your NSIP cover?	Free text
Is your NSIP already being harvested by another portal?	Free text
Does your National Single Information Point provide the metadata listed in section 4 of this documentation?	See section 4. Only metadata can be harvested, not the data itself.
If your NSIP is integrated in your existing open data infrastructure **AND** if your NSIP cannot be harvested via a dedicated endpoint: How can NSIP data be filtered from other (i.e. open) data that is part your infrastructure?	Free text. This is essential to correctly distinguish data provided under the DGA from other data.
What is the default language of the datasets from your National Single Information point?	Free text

Checklist pt.2

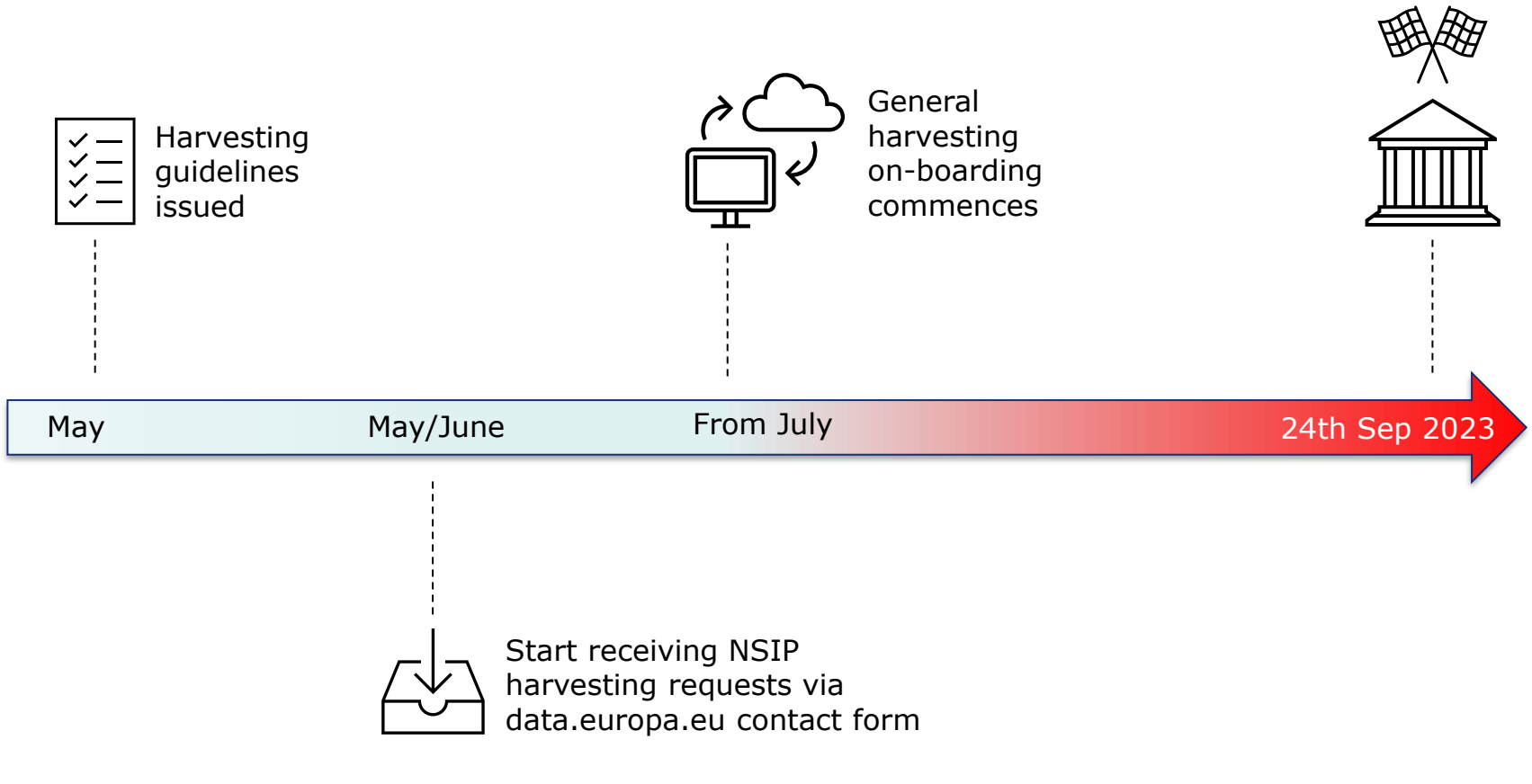
Requirement	Value
Which metadata standard is supported by your NSIP?	DCAT-AP or CKAN (mapped to DCAT-AP)
Which representation of the metadata is used?	XML, JSON, or any RDF representation
Which type of API is used to retrieve the data?	OAI-PMH (Recommended) ; RDF dump file ; CKAN ; SPARQL endpoint
Is authentication required for you to access your API?	yes/no
Does your data include complete vocabulary for categorisation, or other fields that use a defined vocabulary (for example update frequency)?	Free text. Please provide vocabularies with translations, if available.
Does your data use standard date/time formats as specified by the ISO8601?	Yes/no. (Please note: Using the ISO8601 standard is mandatory.)

Checklist pt.3

Requirement	Value
How often can/should the site be harvested?	E.g. daily, weekly, monthly. The default harvesting interval is weekly.
Are there any times when the site should not be harvested (e.g. scheduled maintenance)?	Free text
Who is the publisher of the NSIP (name and email address)?	Free text
What is the URL to the homepage of the NSIP?	URL

Next steps

Next steps


Harvesting guidelines issued
General harvesting on-boarding commences
May
May/June
From July
24th Sep 2023
Start receiving NSIP harvesting requests via data.europa.eu contact form

Q&A regarding harvesting guidelines

Ukrainian implementation of European legislations

Ministry
of Digital Transformation
of Ukraine

Ukrainian approach to the implementation of EU legislation in the open data sphere

Workshop for Data Providers

Ljubljana, 22-23 of May 2023

Important dates (Open data timeline)

April 2015

Amendments to the Law of Ukraine «On access to public information». Start of open data in Ukraine

November 2016

Launch of the data.gov.ua

September 2018

Ukrainian datasets are harvested by data.europa.eu

July 2020

Ukraine joins Open Data Maturity assessment

March 2021

Implementation of the provisions of Directive 2019/1024/EU

February 24, 2022

Start of full-scale russian aggression. Temporary access restriction to data.gov.ua

August 2022

Re-start of open data in Ukraine

Open data in Ukraine in counts

9 million

unique users of data.gov.ua (since 2016)

More than

10 000

data providers

More than

120

services based on open data

More than

7 million

users per month of open data based services

17

case studies on open data impact

More than

70 000

of data sets on data.gov.ua*

*Since the Russian full-scale aggression public access to some data sets is temporary restrict

$1.5 billion

economic impact of open data in Ukraine to 2025*

*The assessment was carried out before the start of full-scale aggression

More than

300 000

of state servants successfully completed training programs on open data

Decree of the CMU dated September 22, 2016
No. 686-r "Some issues of joining the
International Open Data Charter"

Implementation of Directive 2019/1024/EU

Analytical report “On the compliance of Ukrainian legislation with European legislation in the open data sphere”

The report became the basis for bringing Ukrainian legislation into line with Directive 2019/1024/EU

Ukraine adopts all provisions of the Directive in 2021

GDPR, Free flow of non-personal data, Data Governance Act

Analytical Report

«Conformity of Ukrainian legislation with certain provisions of legal regulation of open data in the European Union»

conducted in May 2023

Purpose:

to analyse Ukrainian and European legislation in open data

Principles of study:

- comprehensiveness
- objectivity
- historicism
- the rule of law

Methods:

comparative legal method and the method of alternatives

Scope of the study:

- Regulation (EU) No. 2018/1807 on a framework for the free flow of non-personal data in the European Union
- Regulation (EU)No. 2022/868 (Data Governance Act)
- Ukrainian legislation concerning open data, personal data and data management

Conclusions and recommendations on the implementation of Regulations (EU) 2018/1807 and 2022/868

01 Step-by-step action plan for harmonising national legislation with the requirements of Regulations (EU) 2018/1807 and 2022/868

02 Appoint a state body responsible for formulating data governance and data protection policy, and vest in such a body the authority to ensure the implementation of the steps envisaged by the Roadmap

03 Establish a working group to draft laws aimed at harmonising national legislation with the requirements of EU legislation in the field of data governance and data protection in accordance with the steps set out in the Roadmap

Roadmap for the Harmonisation of Ukrainian Legislation on Non-Personal Data Processing with the Requirements of EU Legislation

Phase 1

Completion of the implementation of Regulations (EU) 2016/679 (General Data Protection Regulation)

Result on Phase 1

Adoption of the Draft Law on Personal Data Protection No. 8153 of 25 October 2022

Phase 2

Analyse the needs of Ukrainian legislation to implement the provisions of Regulation (EU) 2018/1807, Regulation (EU) 2022/868 and other EU regulations

Result on Phase 2

01 Developing a concept for the implementation of the norms and provisions of EU legislation in the field of non-personal data processing into Ukrainian legislation

02 Hold a public discussion and approve the concept of approximation of national open data legislation to EU legislation

03 Conduct an information campaign to explain the concept of approximation of national open data legislation to EU legislation

Roadmap for the Harmonisation of Ukrainian Legislation on Non-Personal Data Processing with the Requirements of EU Legislation

Phase 3

Developing a comprehensive strategy for implementing the provisions of Regulation (EU) 2018/1807, Regulation (EU) No. 2022/868 and other EU regulations

Result on Phase 3

01 Developing a strategy and action plan to define and unify requirements and standards for ensuring the security and confidentiality of non-personal data in accordance with EU legislation

02 Developing a strategy and action plan for the implementation of the following elements of European legislation:

- data intermediation, processing and re-use services;
- cross-border data processing;
- single information point
- data altruism (based on the analysis of the current situation in Ukraine and European experience);
- certification of products based on open data;
- supervision in the field of data intermediation services and registration of data altruism organisations;
- a detailed plan for the development of the draft Law of Ukraine "On Governance and Relations in the Field of Processing and Re-use of Non-Personal Data"

Phase 4

Approval of a comprehensive strategy for implementing EU regulations

Result on Phase 4

01 Conduct a public discussion and approve the strategy for implementing the EU regulations in accordance with the requirements of the Regulation of the Cabinet of Ministers of Ukraine

02 Approval of the strategy for implementing the provisions of EU regulations in accordance with the requirements of the Regulation of the Cabinet of Ministers of Ukraine.

03 Conduct an information campaign on the importance of updating Ukraine's legislation on the processing of non-personal data in line with EU standards and best practices

Data set publication standardisation

01 Legislation of Ukraine contains main requirements for data sets in the form of open data

(Requirements for metadata and data formats)

02 More than 90% of data set published on data.gov.ua are typical

03 Ministry of Digital transformation developed a requirements

(Standards for structure and content of such data sets)

04 In 2020 was developed 80 standards

High-value data sets

The definition of high-value datasets has been included in Ukrainian legislation in 2021

High-value data sets means a data set that contains socially important information, the reuse of which has a significant effect on the development of society, government, economy and protection of the natural environment

Spheres of high-value data sets:

- justice
- judiciary
- health care
- ecology and environmental protection
- transport and infrastructure
- finance and taxes

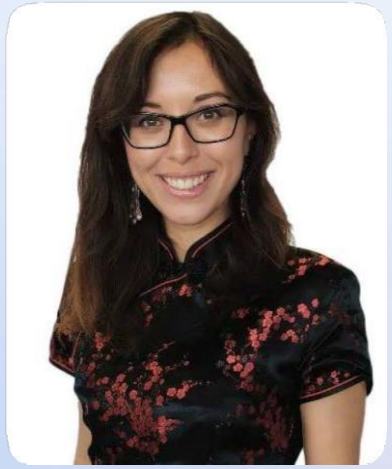
The list of such high-value data sets consist of 80 unique data sets

Ukraine open data team

Mykhailo Kornieiev

Nadiia Konashchuk

Yanina Liubyva



Kateryna Borysenko

Thank you for attention

Slava Ukraini

Lunch Break

12:30 – 13:30

data.europa.eu The official portal for European data

REPUBLIC OF SLOVENIA
MINISTRY OF PUBLIC ADMINISTRATION
MINISTRY OF DIGITAL TRANSFORMATION

European Parliament Office in Slovenia

Interactive workshop on the progress of High-Value Datasets implementation across Member States

Closing Keynote:

Sentinel Hub – A success story of the EU Copernicus programme and the open Earth observation data re-use

Sentinel Hub

from SME instrument to global business built on free and open data

Miha Kadunc,
Sinergise

Ljubljana, 2023-05-22

SINERGISE

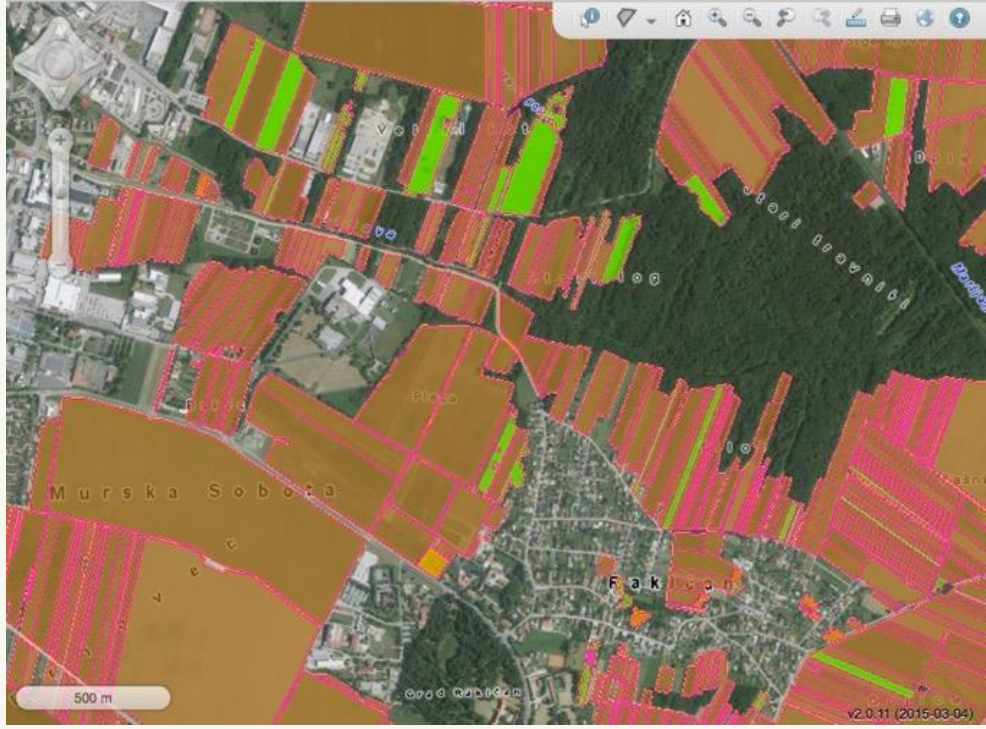
sentinelhub

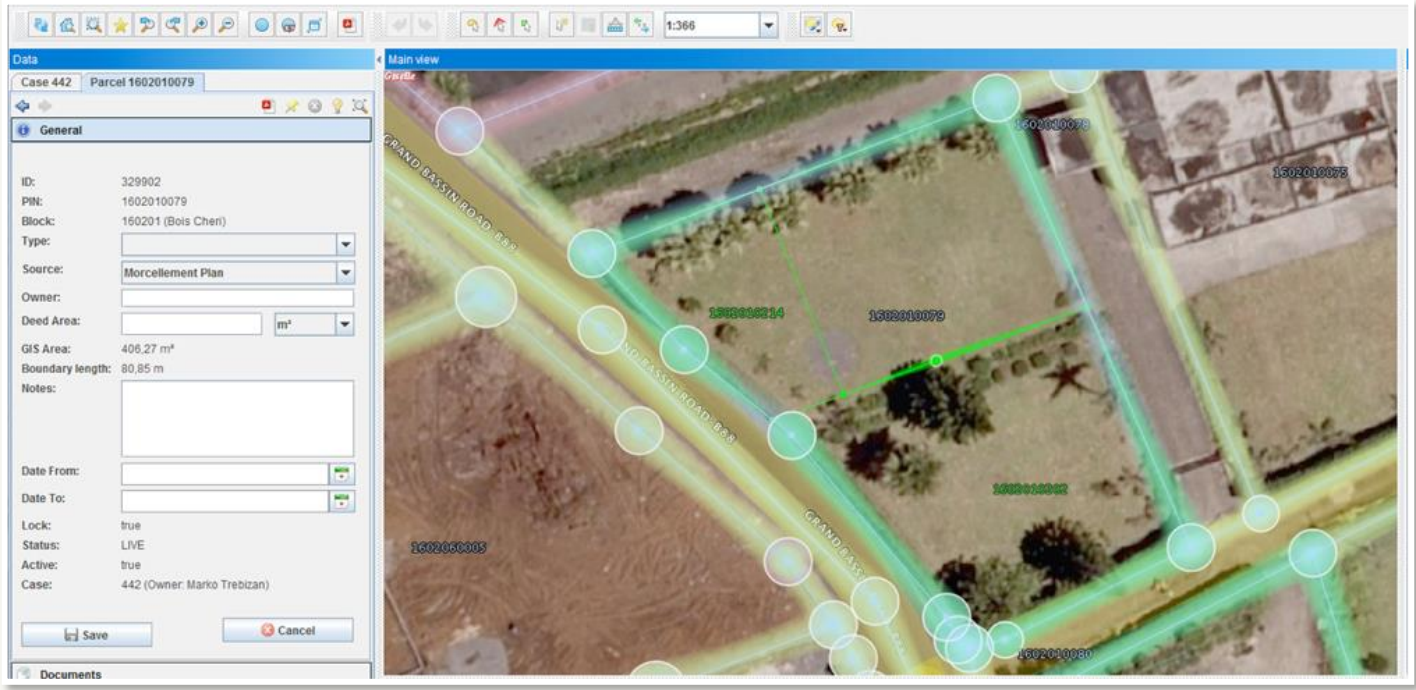
image: Sentinel-2B, March 7th 2023 | European Union, contains modified Copernicus Sentinel data 2023, processed with EO Browser

Sinergise in 2008

Spin-off from Cosylab in 2008

- 15 employees
  - 1 CEO + sales
  - 14 geospatial SW developers
- 2 main business areas
  - Common Agricultural Policy
  - Land Administration
- HQ in Ljubljana, Slovenia





Land Management Projects

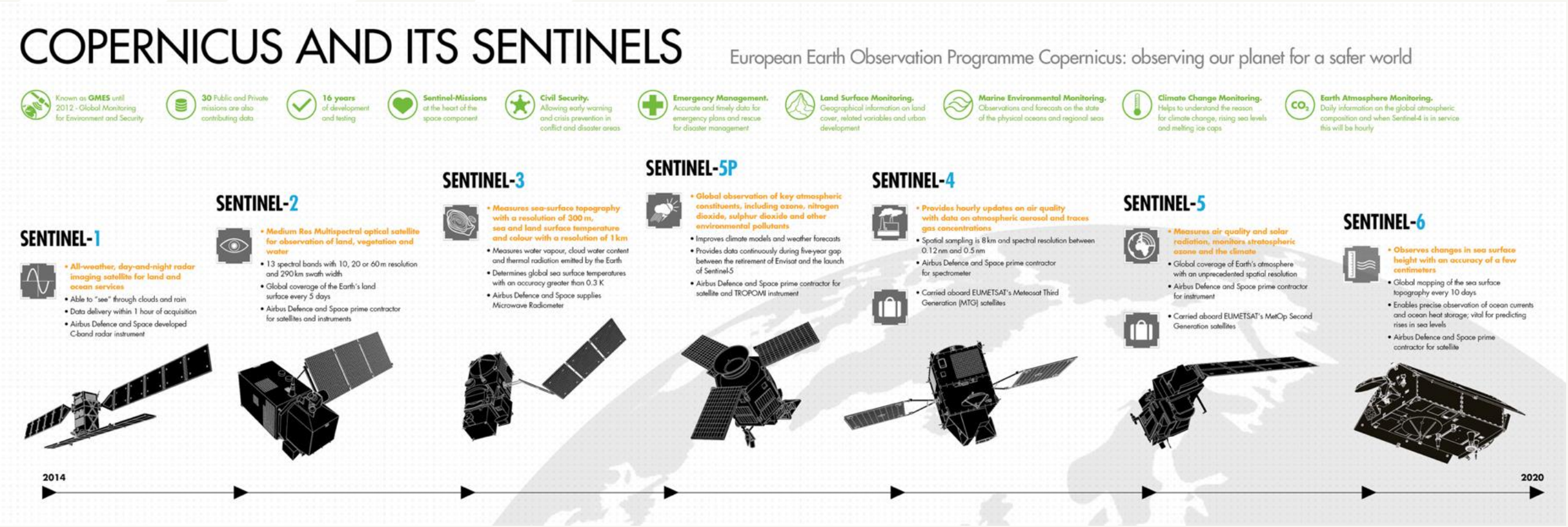
Europe

- Azerbaijan
- Croatia
- Czech Republic
- France
- Macedonia
- Moldova
- Montenegro
- Slovenia
- Turkey
- United Kingdom

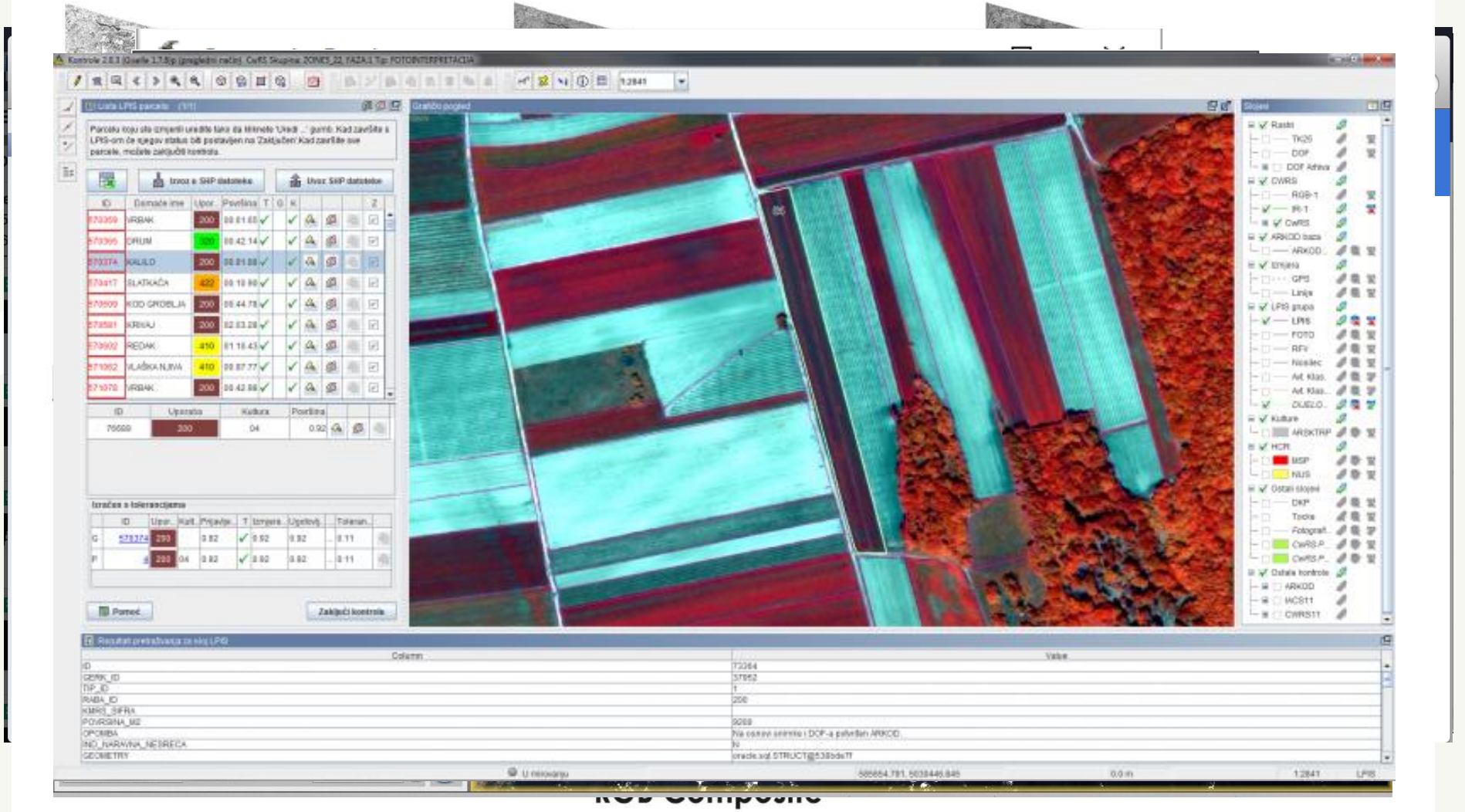
Africa

- Ghana
- Mauritius
- Nigeria
- Tanzania

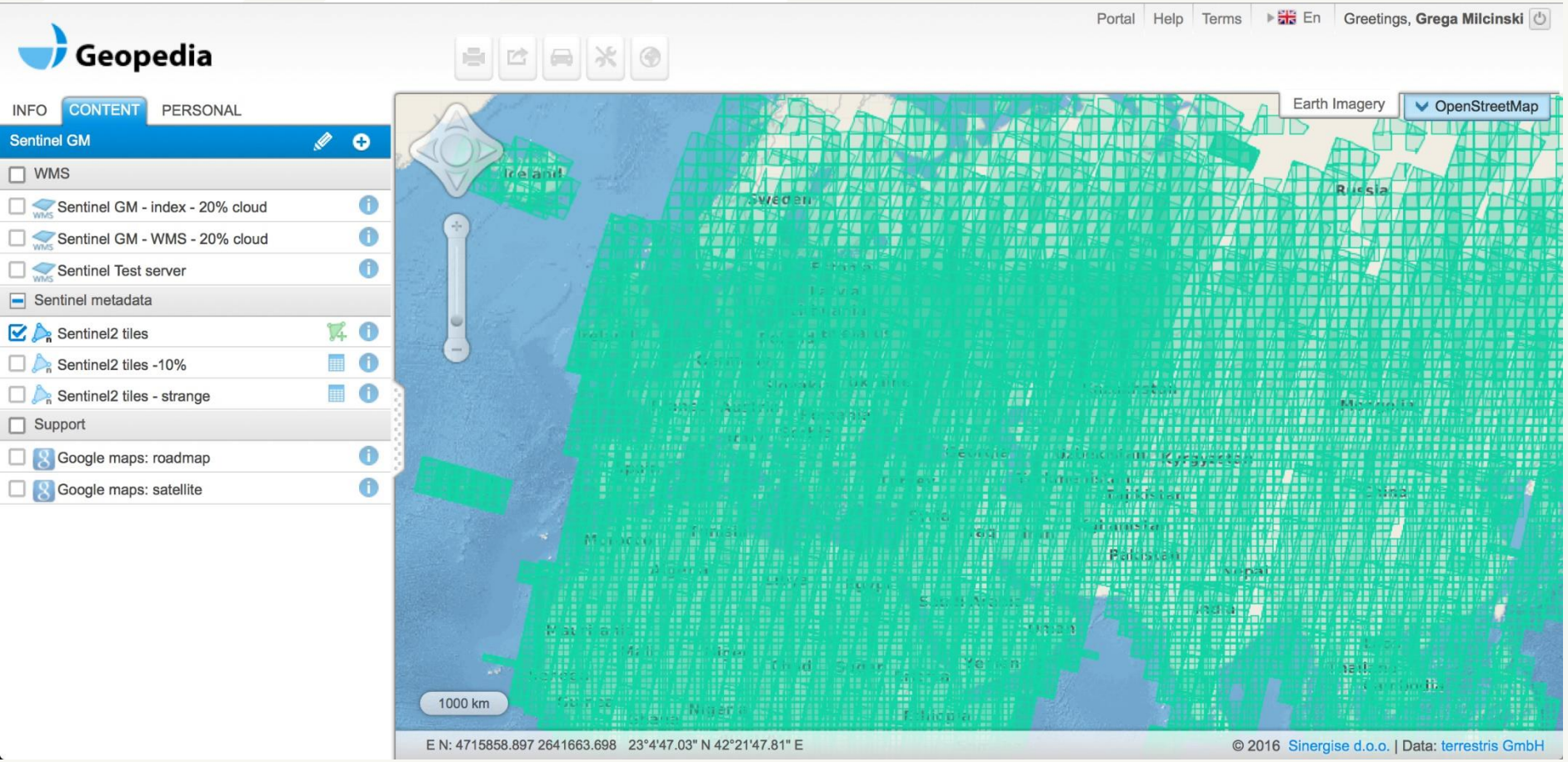
Ghana Land Administration System in 2015



Traditional ways of working with EO data



Traditional ways of working with EO data



Scale of Copernicus Data

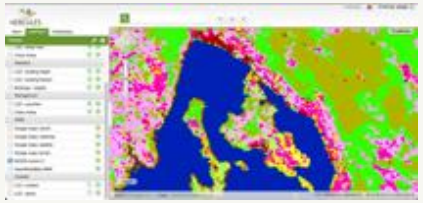
3000 scenes per day

1.5 TB per day and growing

566 650 scenes

(as of 27th of June 2016)

Multi-temporal and Multi-spectral Archive



User interface, configuration

Storage

Automatic corrections

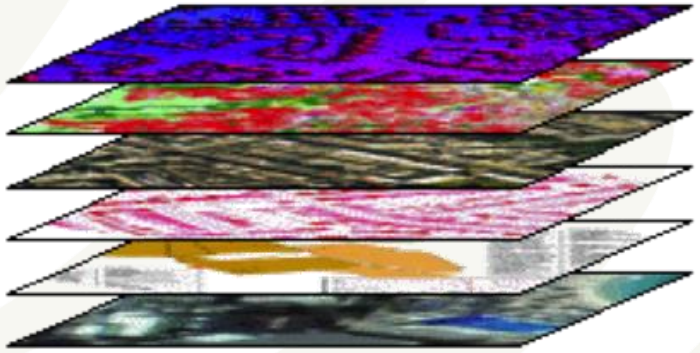
Direct use through CloudGIS

Integration in apps through web-services

EOVAS

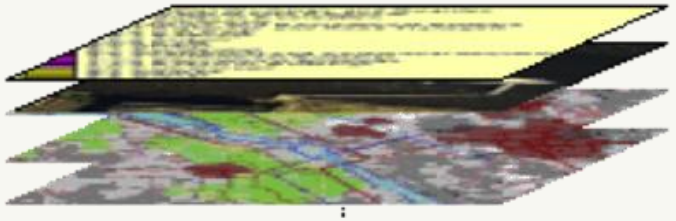
Funded by the Horizon 2020 Framework Programme of the European Union

Open EO data - Sentinel-1, Sentinel-2, Landsat, etc.

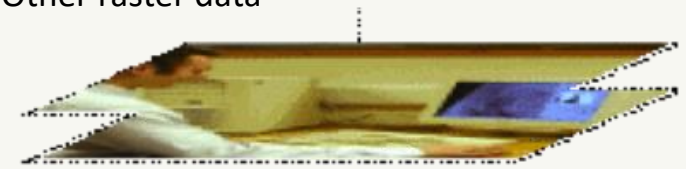


Commercial EO data – WorldWind, GeoEye,...

Aerial imagery (drone, plane)



Other raster data



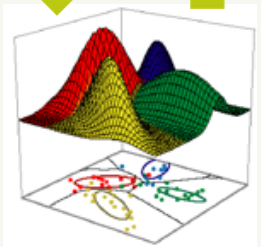
SENTINEL Hub

WMTS

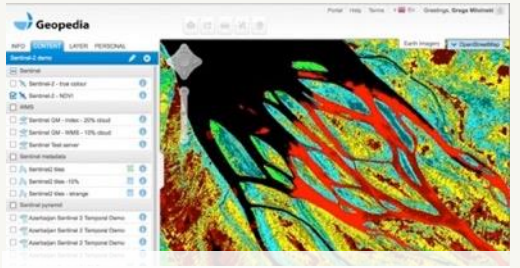
WMS

WCS

API

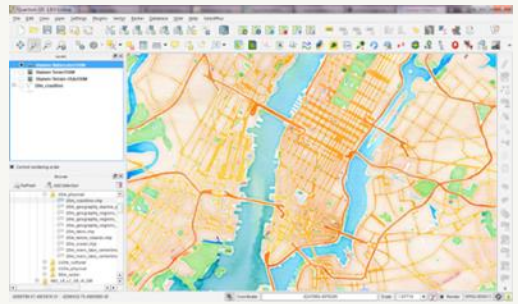


Machine learning

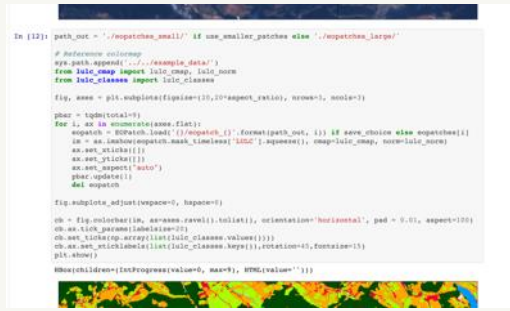


Cloud GIS

Web / Mobile apps

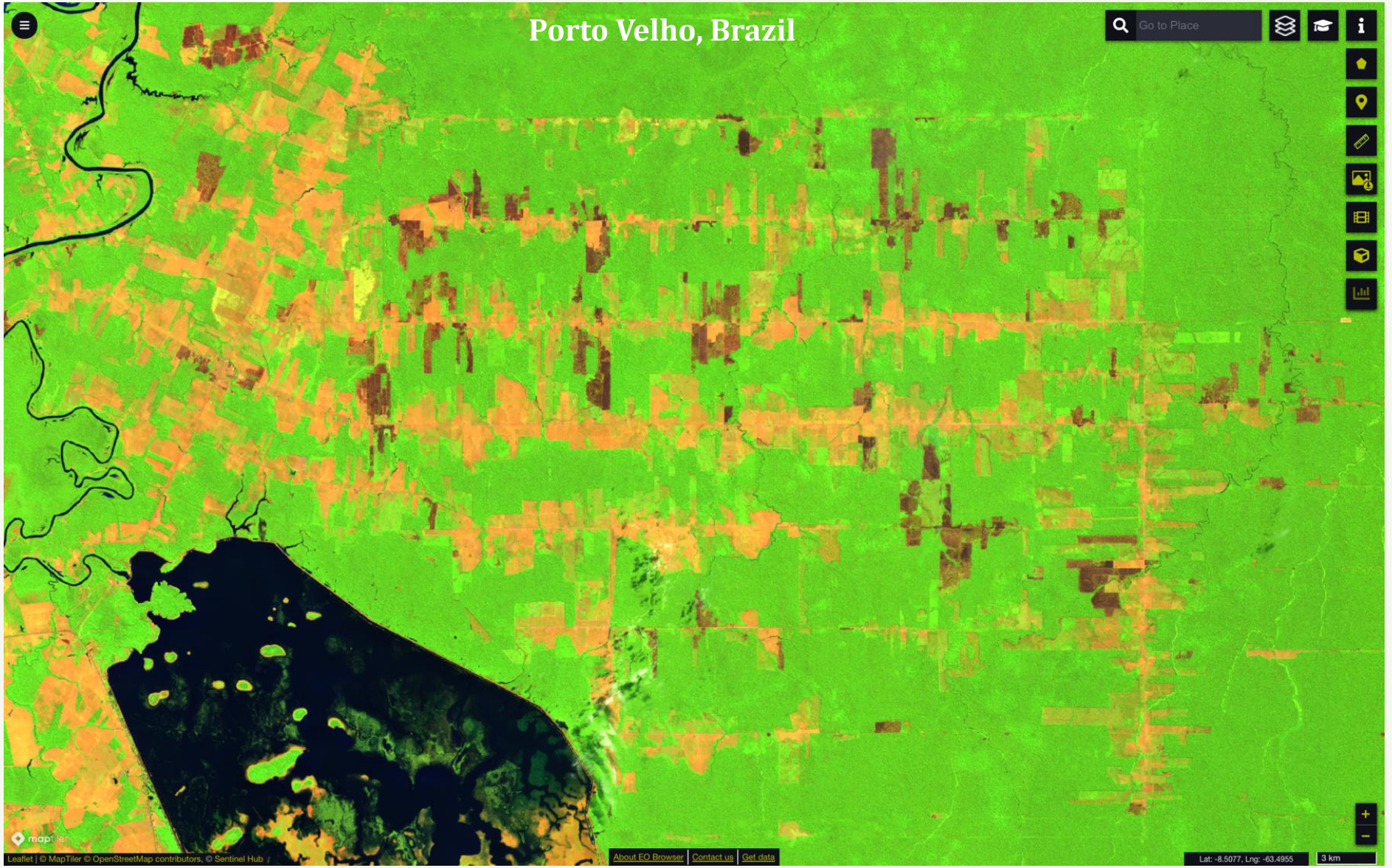


Desktop (QGIS,, ArcGIS…)



Sentinel Playground

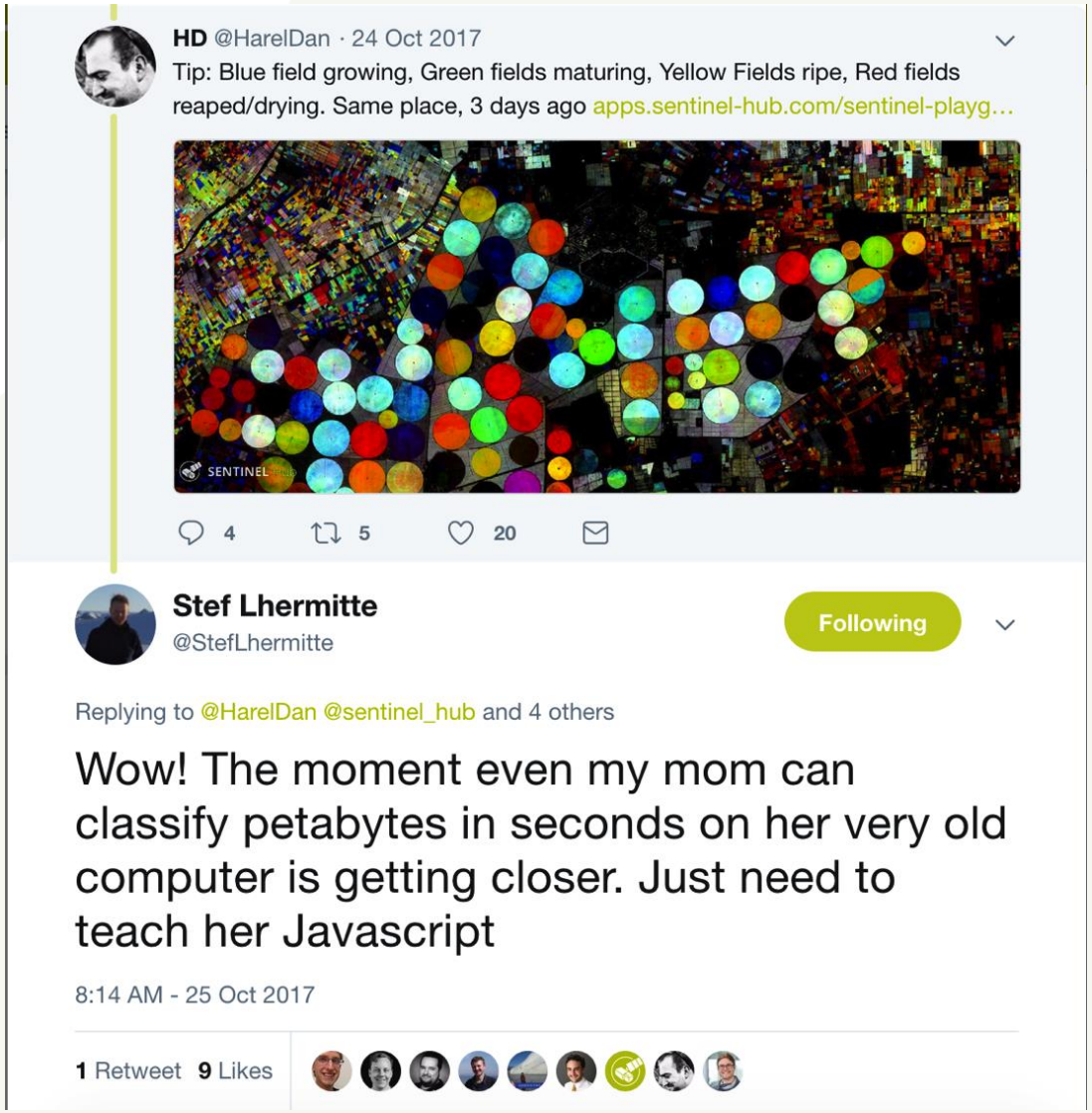
EO Browser


Porto Velho, Brazil
Go to Place
Leaflet | © MapTiler © OpenStreetMap contributors, © Sentinel Hub
About EO Browser
Contact us
Get data
Lat: -8.5077, Lng: -63.4955
3 km

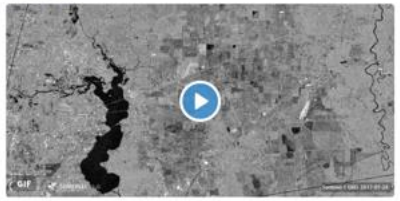
EO Browser


Porto Velho, Brazil
Timelapse
2017-01-01
2021-04-25
filter by months
Select 1 image per:
orbit day week month year
Search
Borders
28 %
Select All
2017-01-06
2017-03-27
2017-05-26
2017-06-30
2017-07-25
2017-08-14
2017-09-23
2017-10-28
2017-12-07
2018-01-21
2018-02-15
2018-03-22
2018-04-26
2018-05-26
1984-08-01
10 km
sentinelhub
Speed:
frames /
1 / 16: 2017-07-25
Download
Index
Custom
Go to Place
About EO Browser
Contact us
Get data
3 km

Starting an EO Revolution



Simon Gascoin @sgascoin · Aug 30
Flooded areas near Highway 90 and Dayton TX (July 24 vs. Aug 29) #Sentinel1 #HarveyFlood



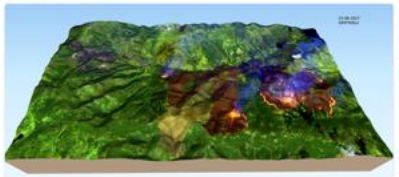
Zack Labe @ZLabe · Sep 7
Break in the satellite imagery for something a bit less intimidating than Hurricane Irma --> phytoplankton! [Barents Sea 9/5/17, Sentinel-2]

You, Copernicus EU, Copernicus Marine and 2 others

4 31 92

Toño Fdez-Cañadas @TFCanadas · Aug 25
Terrorífica e impresionante la imagen 3D del 23-08-2017 del incendio de Losadilla #sentinel2 obtenida de sentinel-hub.com

Translate from Spanish



Denis Oštir @kricac · Aug 22
Great images of #Croatia fires from @CopernicusEMS #Sentinel imagery. Hvar and Obrenovac.

1 9 11

Latest relatively cloud free #sentinel2 L1C NDVI imagery shows extents of Landslides in #Inishowen @sentinel_hub @donegalcouncil

ConorG, Geog & Environ Sci, Copernicus EU and 5 others

1 7 20

Zack Labe @ZLabe · Sep 16
How can you not find Earth science fascinating? Eddies, sediment, sand, etc from Hurricane Irma in the Florida Keys [Sentinel-2, 13 Sep '17]

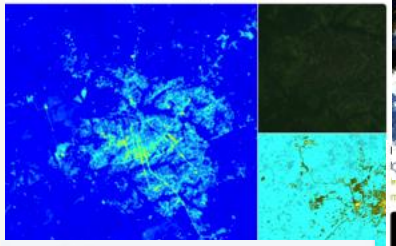
GIS and Beers @GIS_and_Beers · Sep 4
Ataque al corazón!! Heart attack in #Tokio using @sentinel_hub #infrared #copernicus #sentinel

Translate from Spanish

Tim Wallace @wallacetim · Jul 12
This browser for Sentinel and Landsat constellations is kinda incredible. On the fly band combos and math. apps.sentinel-hub.com/eo-browser/#la...

3 14 41

been having a play around with @sentinel_hub playground, and it's brilliant. This is #Kakata, #Liberia, where I'm spending the next 10 wks!

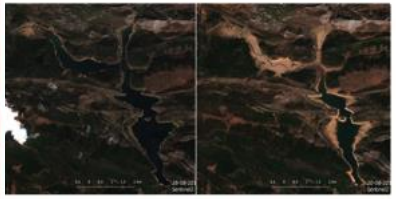


Christopher Darvill @chrisdarvill · 14h
James Ross Island, Antarctic Peninsula Island -63.9182, -58.1166 goo.gl/6TUtm #DailyGlacier @sinergise @sentinel_hub

Simon Gascoin @sgascoin · Sep 12
Flood in #Livorno #Sentinel2 on Sep 04 and Sep 11

Toño Fdez-Cañadas @TFCanadas · Sep 4
Replying to @srvillalba @Divulgameteo @JostoMaffeo
Así se ve el embalse desde #Sentinel2 . A finales de agosto de este año y del año pasado @sentinel_hub

Translate from Spanish



3 8 4

Pierre Markuse @Pierre_Markuse · Sep 18
Greece Turkey 9-months temporal mosaic using @sentinel_hub #EOBrowser and some PS #Sentinel #Copernicus Big flic.kr/p/YBQkS2

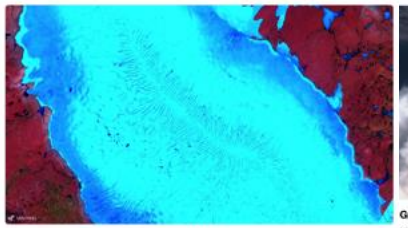
You Retweeted
Christopher Darvill @chrisdarvill · Sep 18
Tasman Glacier, New Zealand -43.6616, 170.1890 goo.gl/5373qb #DailyGlacier #sinergise @sentinel_hub

2 7

#EOBrowser #Sentinel2 #earthobs
mad-science.org/2017/09/11/hea...

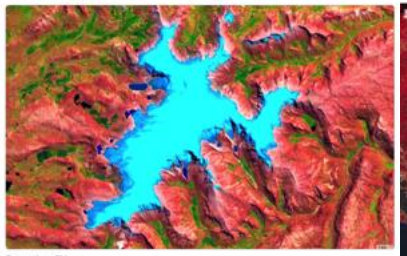
5 13

A better view with NIR-SWIR-Blue



3 4

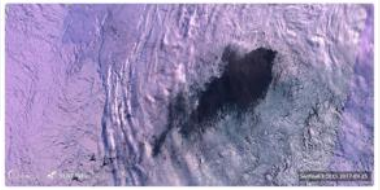
Quelccaya ice cap. Largest glacier in the tropics. Home of white-winged diuca finch, aka the glacier bird #Sentinel2 on Aug 13 @snozone



Copernicus EU

Zack Labe @ZLabe Following

Clear view of the #WeddellPolynya (Antarctic) today by Sentinel-3 satellite. For more information about this feature twitter.com/seaice_de/stat ...



6:20 AM - 26 Sep 2017

18 Retweets 41 Likes

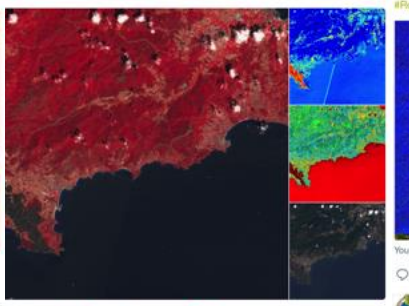
Simon Gascoin @sgascoin Following

#LarsenC : The Movie
Made with 1 year of extra-wide swath single HH Sentinel-1 data available @sentinel_hub @ESA_EO @CopernicusEU

3:20 PM - 25 Sep 2017

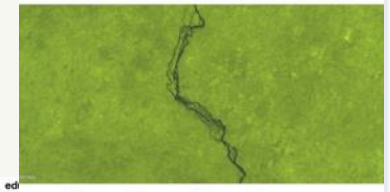
Greenland's rare wildfire is 'biggest-ever'
AT Solutions @D2AT_Solutions · Jul 31
ormes-Les-Mimosas et La Bastide après #incendie vu par le satellite #sentinel2 @CopernicusEU @sinergise (NIR, True, Moisture index, NDVI)

Translate from French



5 9

ely fluvial geomorphology revealed using the @sentinel_hub playground, eck out those braided channels!



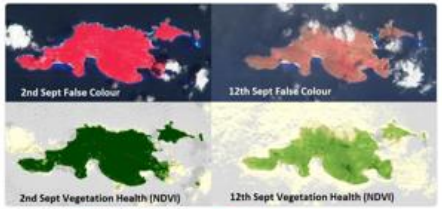
2 7

aimazcara.forestry.es/2017/08/incend...

Translate from Spanish

2 61 49

Amir Farhand @AmirFarhand · Sep 13
Damage to vegetation after #irma on #jostvandyke #BVI Before & After satellite imagery @sentinel_hub @BBCAmos @SCFGallagher @richardbranson



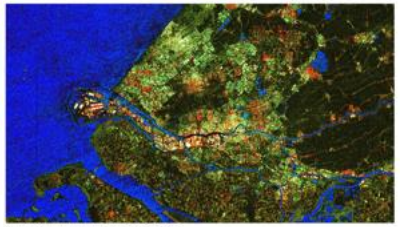
3 9

Pierre Markuse @Pierre_Markuse · Sep 13
Beta coming soon) - Nice so far! Lake Edward DRC Uganda

You, EODetective and Copernicus EU

1 8 13

Pierre Markuse @Pierre_Markuse · Aug 21
Playing with #Sentinel-1 data visualization in the @sinergise #EOBrowser, #Rotterdam and surroundings, Netherlands



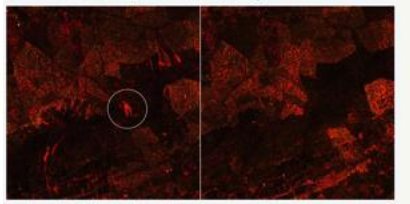
You, EODetective and EO OPEN SCIENCE

1 6 14

Veeteede Amet Like Page
February 13 at 4:35pm

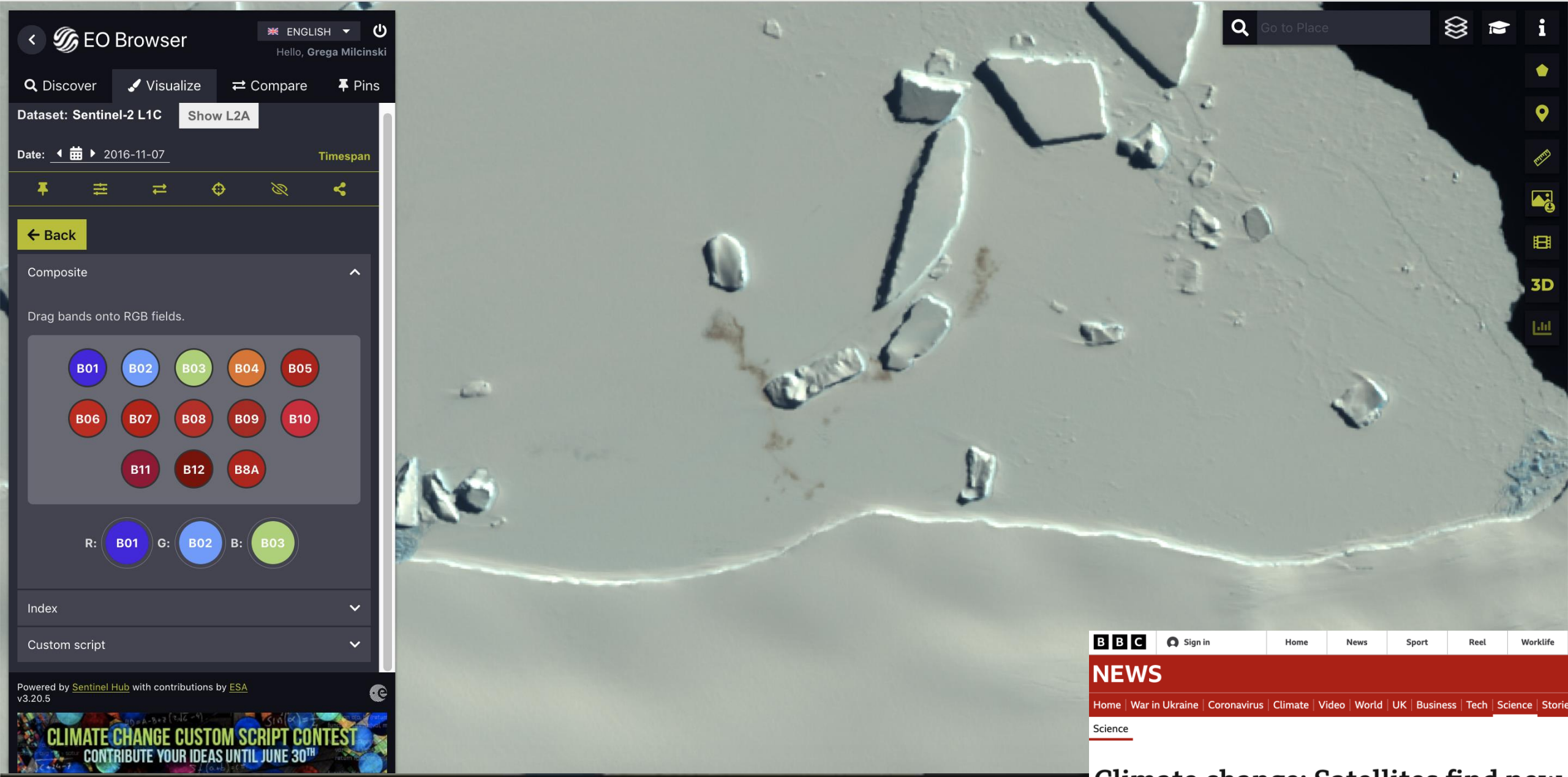
Selline pilt avaneb siis Eesti merealast ja jääoludest 800 km kõrguselt, otse Sentinel-2 pardalt. Siit on ka hästi näha, kus jää juba paksem ja kus see veel õrnem on. Surfa ise ka satelliitpiltidel siit: http://sentinel-pds.s3-website.eu-central-1.amazonaws.com/.../
Aga täna teatas Maanteeamet meile, et nad on alustanud ettevalmistusi jäätee rajamiseks Vormsile. Niisiis otsustasimegi meie peatada seal alates 20. veebruarist laevaliiklus. Laevaliiklus pannakse seega seisma kavan...
See More
See Translation

587 11 Comments 147 Shares



You, DonegalCountyCouncil, OEP and 4 others

1 12 22



BBC Sign in Home News Sport Reel Worklife

NEWS

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Science

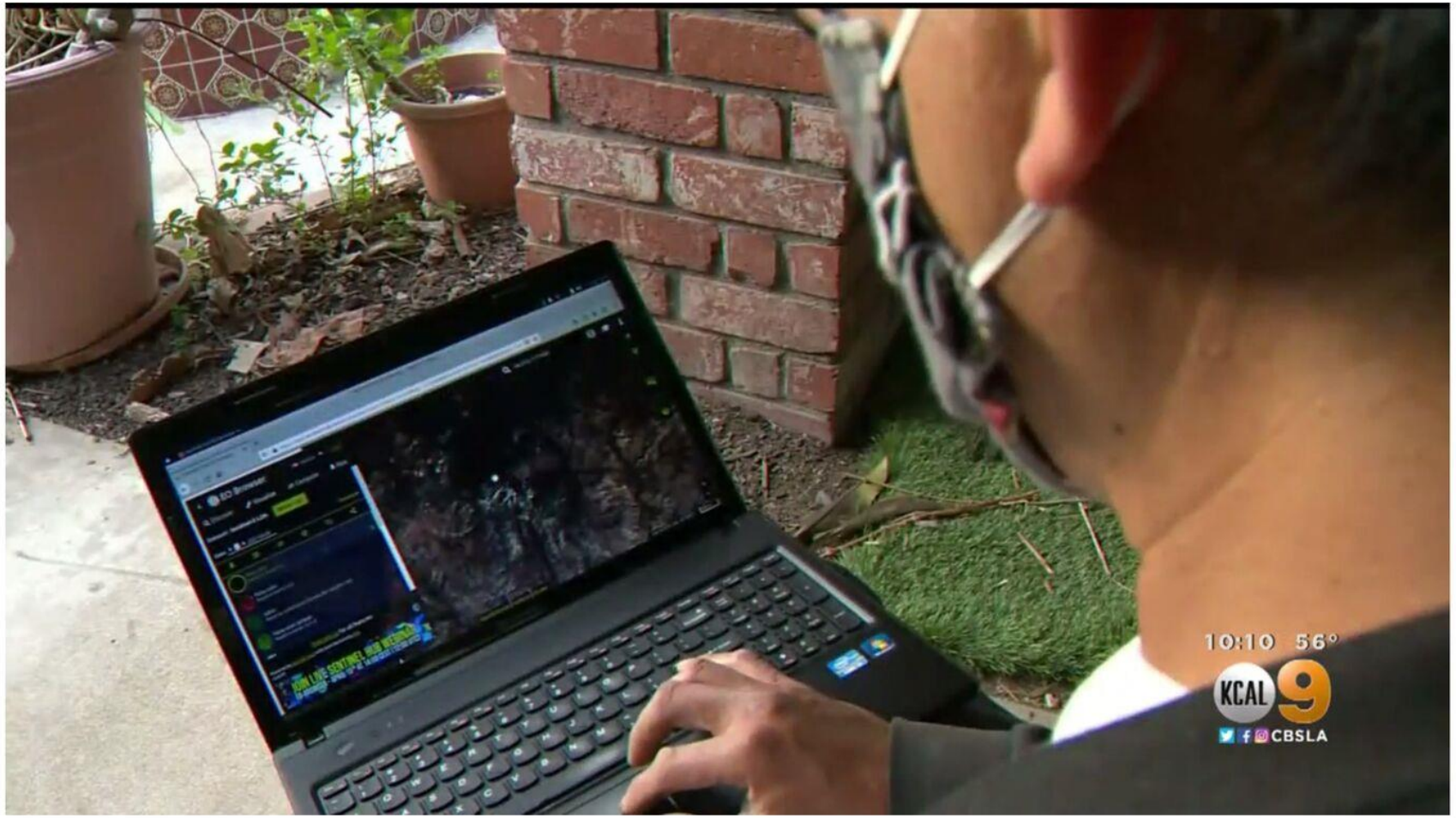
Climate change: Satellites find new colonies of Emperor penguins

By Jonathan Amos
BBC Science Correspondent

5 August 2020

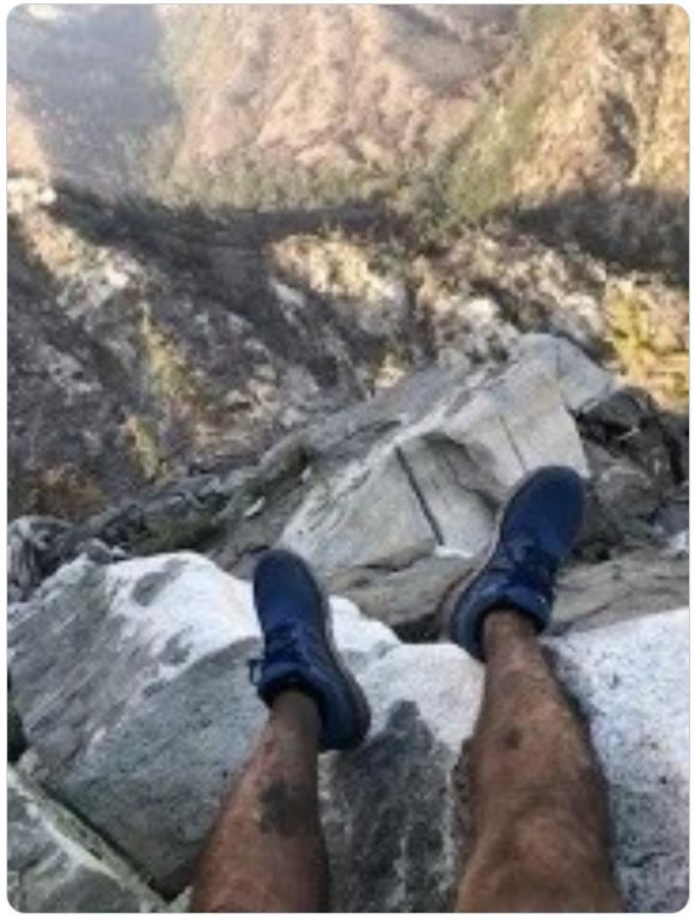
Missing Angeles National Forest Hiker Found Safe With Help Of Map Enthusiast

By CBSLA Staff April 13, 2021 at 11:08 pm **Filed Under:** Angeles National Forest, Missing Hiker



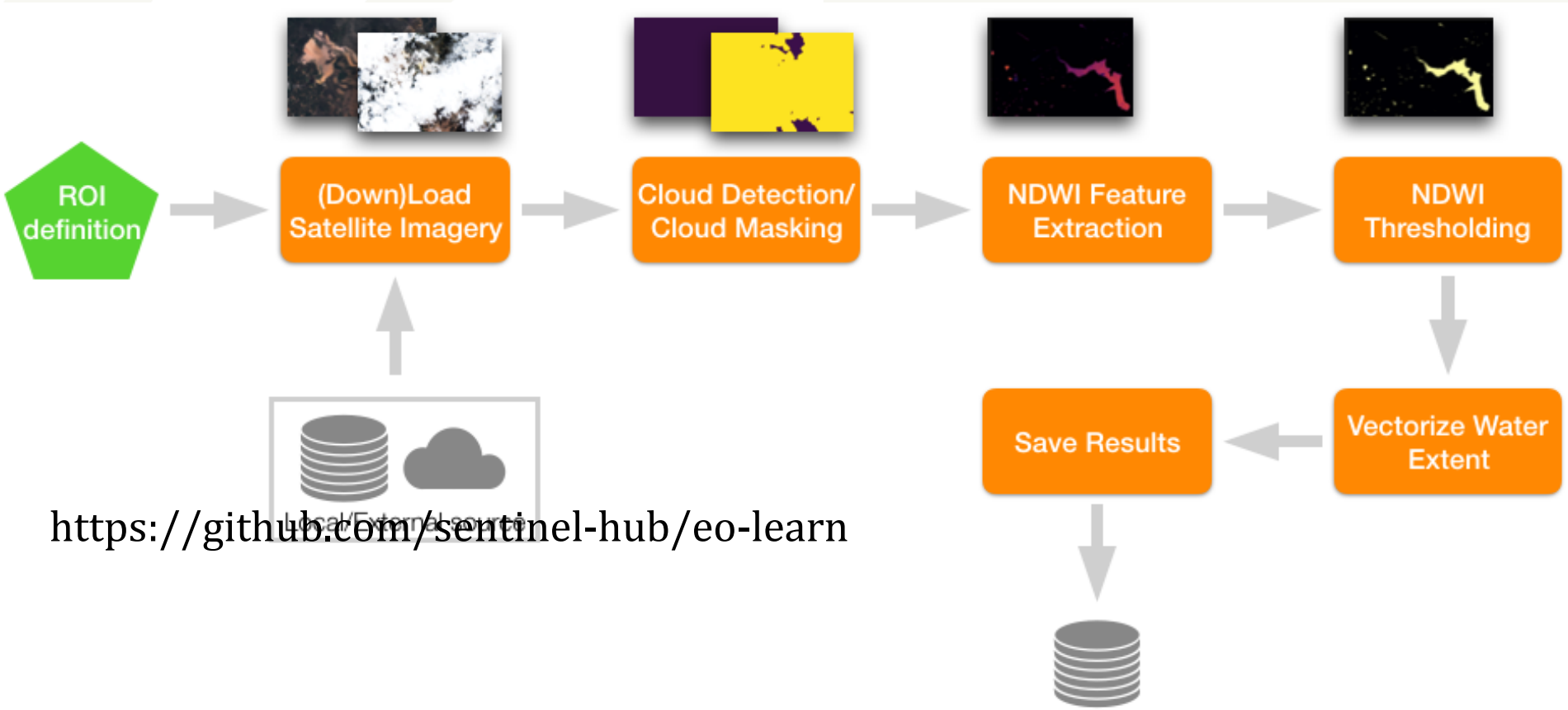
LA County Sheriffs
@LASDHQ

Are You an Avid Hiker in the Mt. Waterman Area? #LASD SAR Teams need help locating a #missing hiker. He sent this picture to a friend. His car was found near Buckhorn Campground/Trailhead. Call us if you recognize the area pictured below 818-248-3464. facebook.com/LosAngelesCoun...



7:10 PM · Apr 13, 2021 · Twitter Web App

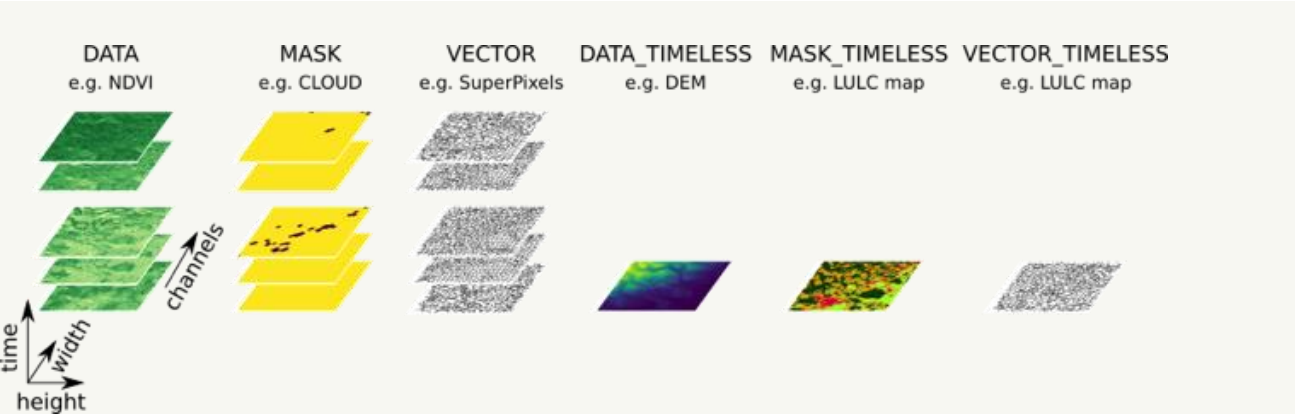
Extracting information from the data



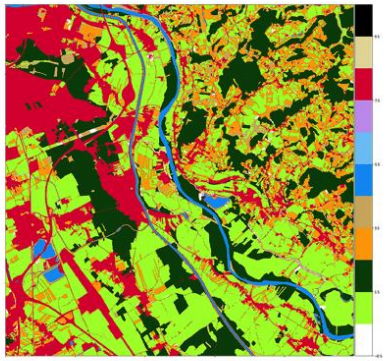
https://github.com/sentinel-hub/eo-learn

eo-learn

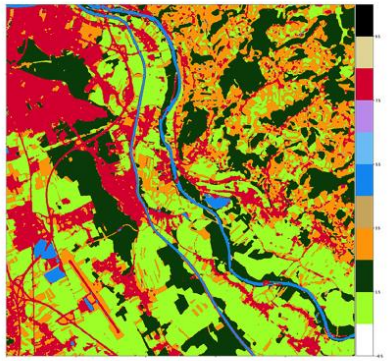
Funded by the H2020 Framework Programme of the European Union



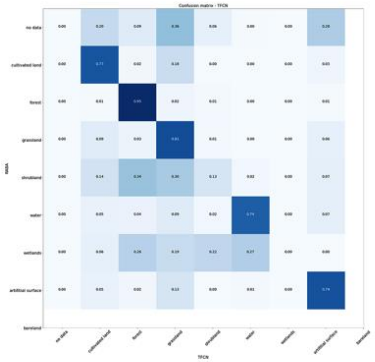
Ground truth



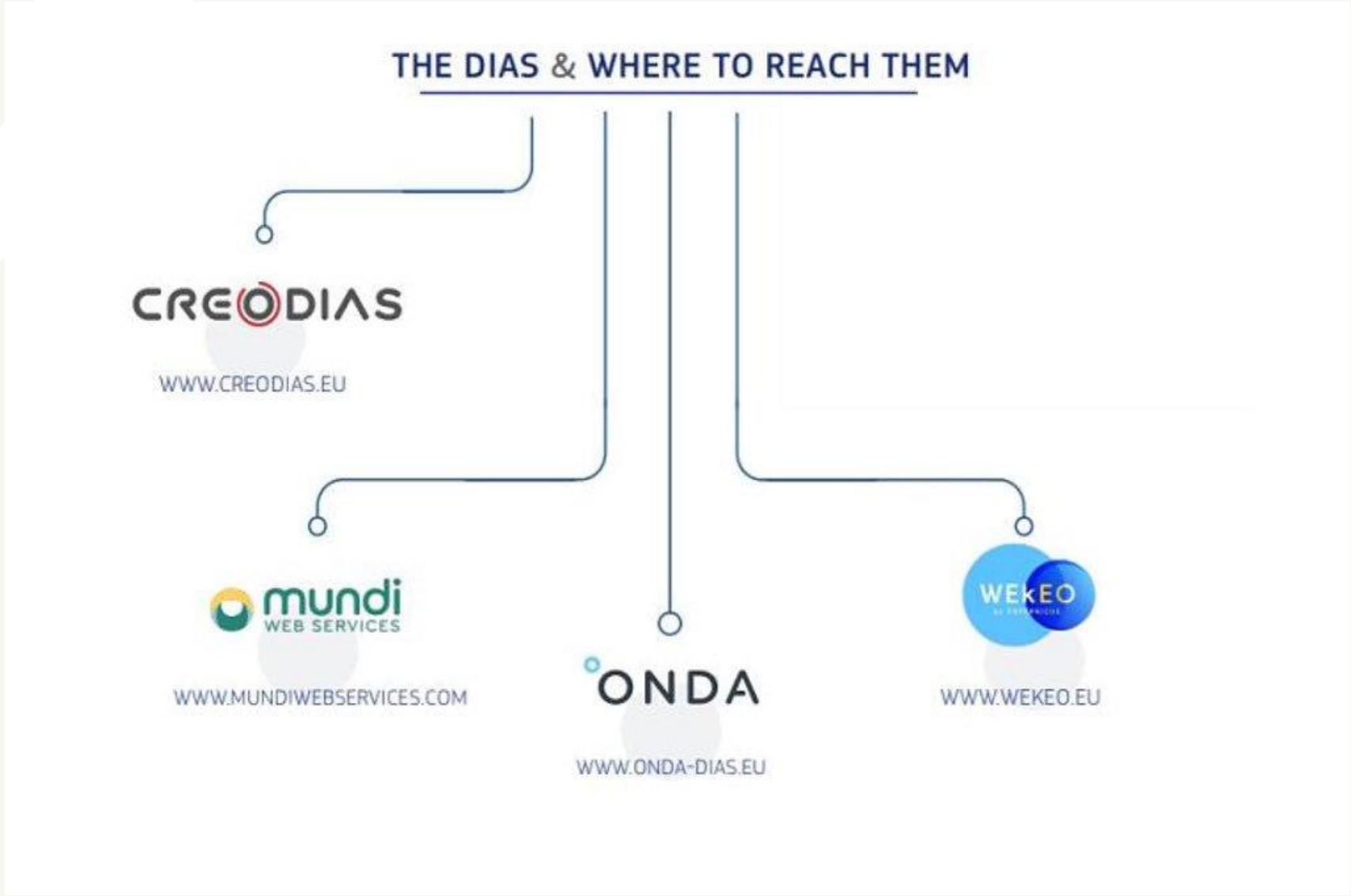
Predicted



Confusion Matrix



Cross-cloud deployment



EURO DATA CUBE

1.2 ANNUAL AND LONG-TERM AVERAGE DROUGHT INTENSITY

```
def calc_annual_drought_intensity(cube_moisture, cube_phenology, years_names):

    drought_intensity_values = np.zeros_like(cube_phenology['sos_doy_3m'].compute().data)
    cube_moisture_flattened = cube_moisture['anomaly_filtered'].values.flatten()
    for time in range(len(cube_phenology.time.data)):
        start_ind_season = cube_phenology.isel(time = time)['SOS_start_ind'].values.flatten()
        end_ind_season = cube_phenology.isel(time = time)['EOS_start_ind'].values.flatten()

        drought_intensity_values[time,:,:] = np.reshape(np.array([np.nanmin(cube_moisture_flattened[np.arange(int(star
                                                  if not np.isnan(start_ind_season[x]) else -32768 for x in rang
                                                , drought_intensity_values.shape[1:])

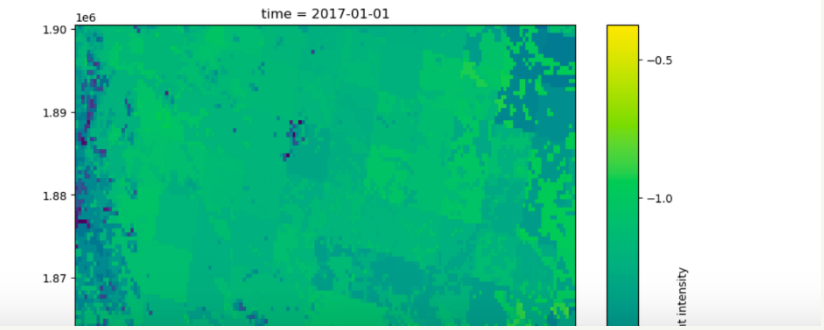
    cube_drought_intensity = xr.DataArray(drought_intensity_values, dims = ['time', 'y', 'x'], name = 'Annual drought
                                          coords = {'time': np.array([dt.datetime(item, 1, 1) for item in years_names]),
    cube_drought_intensity = cube_drought_intensity.where(cube_drought_intensity<=0,0)
    cube_drought_intensity = cube_drought_intensity.where(cube_drought_intensity!=-32768,np.nan)

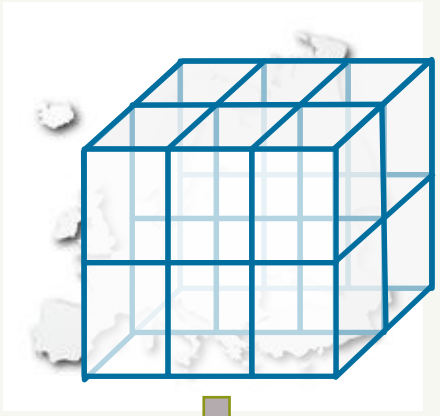
    return cube_drought_intensity
```

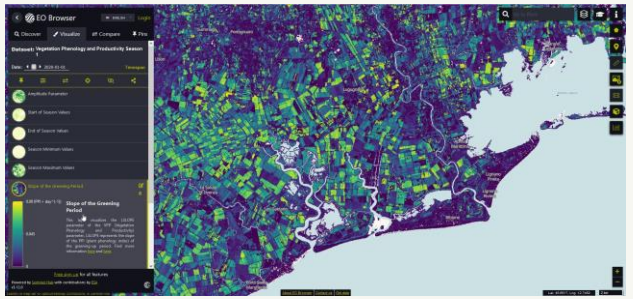
```
annual_drought_intensity = calc_annual_drought_intensity(sma_xcube, MRVPP_xcube, years_names_excl_2020)
long_term_drought_intensity  = annual_drought_intensity.mean(axis = 0) # long-term drought is just taking the mean ove
```

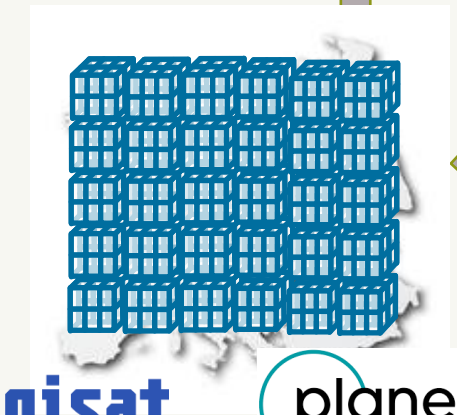
Visualize annual drought intensity

```
annual_drought_intensity.sel(time='2017-01-01 12:00:00', method='nearest').plot.imshow(figsize=(10, 10))
plt.show()
```









SINERGISE

BROCKMANN CONSULT GMBH

EOX

gisat

planet.

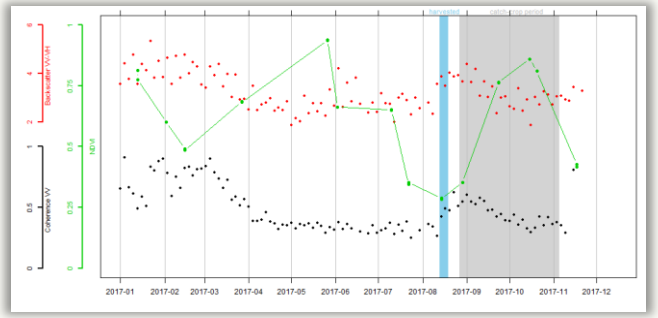
sentinelhub

Sen4CAP

- Crop type mapping
- Vegetation growing indicator
- Grassland mowing detection
- Agricultural practices monitoring

Crop type information & vegetation growing indicators

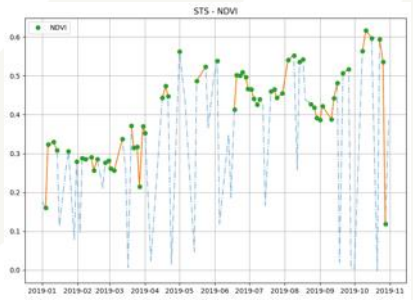
Number of detected mowing events

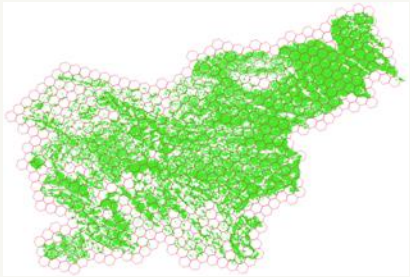


Physical markers to monitor EFA agricultural practices

Area Monitoring System

Data → ARD stream → Signals → Markers →



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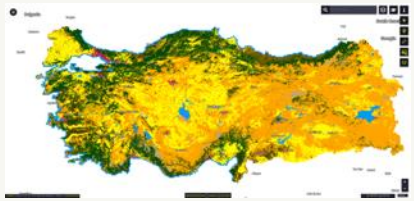
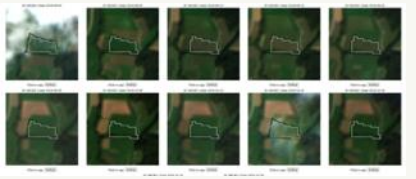
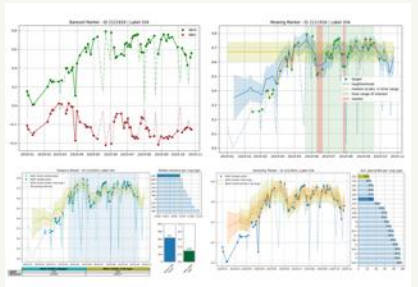
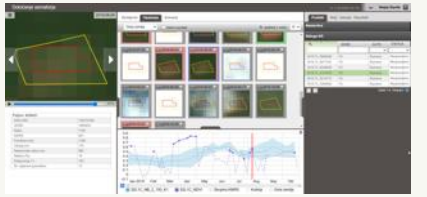
        "stDev": 0.31436594348376923
      }
    }
  ]
}
```







Public Engagement: Custom Script Contest Winners

Week 1

Transportation (ship traffic) modal shift

Michel Deudon (FR)

Week 2

Water quality monitoring key rivers

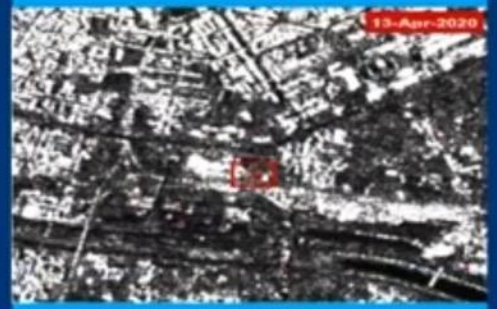
Giulio Meucci (IT)

Week 3

Lettuce, Labour and Food Security

Karl Chastko (CA)

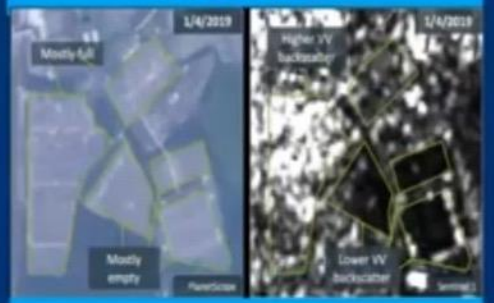
Week 4



SAR for Construction Activity Monitoring

Jorge Tíscar (ES)

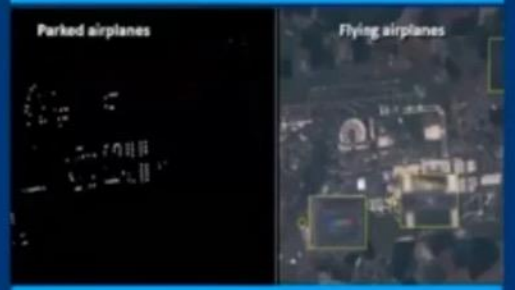
Week 5



Car Park Monitoring

Samuel Barrett (AT)

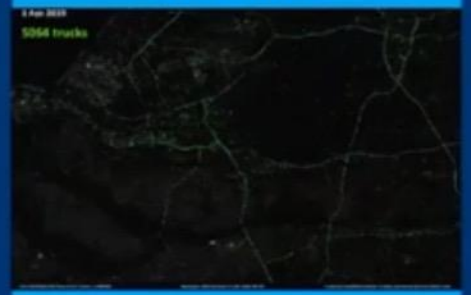
Week 6



Airport Activity Monitoring

R. Minetto et al (US)

Week 7



Truck Detection

Henrik Fisser (DE)

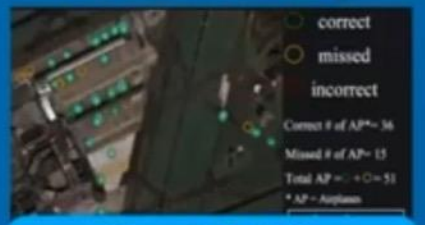
Monthly Winner Categories

Agriculture

Wheat Harvest Disruption

Samuel Barrett (AT)

Human Activity



Airport Activity Monitoring

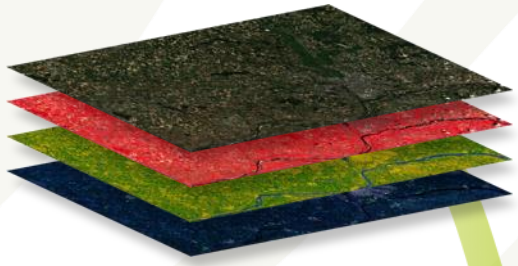
Nozhan Balafkan (NO)

Economic Operator

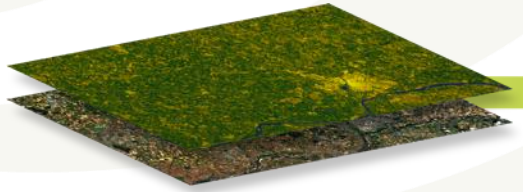
Airport Activity Monitoring

R. Minetto et al (US)

Sentinel Hub

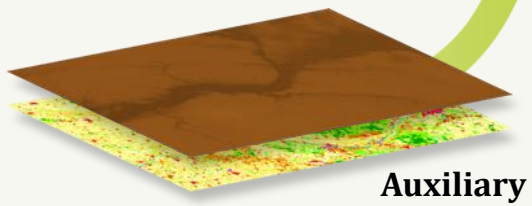


Open Imagery



Commercial Imagery

Bring Your Own Data



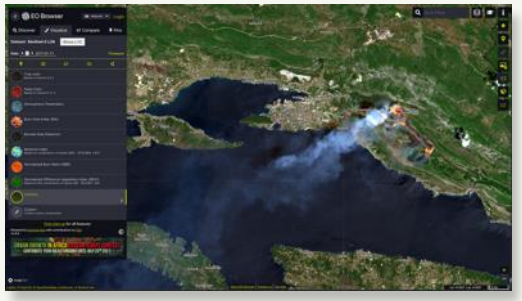
Auxiliary Data:
CORINE Land Cover, DEM

sentinelhub

Cloud API

Machine Learning

Programming:
JavaScript, Python, R, etc.



Web/Mobile Apps

GIS

Statistics – February 2023

Cloud API

400 k
monthly active users

15 BN
km² processed

55+ PB
of satellite imagery

500 TB
added every month

4 Sentinel missions

8 Landsat missions

MODIS, Copernicus Services

Airbus, Planet, EU Space Imaging

EO Browser

180 k
monthly visitors

70 M
processed requests

Visitors from 170 countries

Open-source and free to use

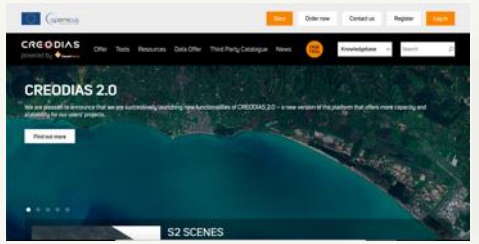
Copernicus Data Space Ecosystem

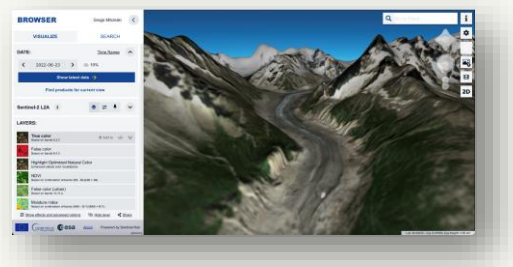
PROGRAMME OF THE EUROPEAN UNION

copernicus Europe's eyes on Earth

CREODIAS

dataspace.copernicus.eu ⟷ **commercial offering by 3rd parties**





ODATA Open Data Protocol S3 | sentinelhub | openEO

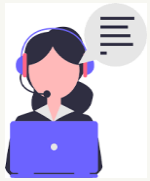
ODATA Open Data Protocol S3 | sentinelhub | openEO

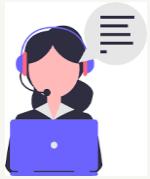
jupyterlab **on-demand**

jupyterlab **on-demand**

IaaS

IaaS





+ more

Our Vision

Sinergise's vision is to bring vast volumes of available Earth Observation imagery to the level where it can be used in people's everyday lives.

Even in decisions as mundane (but also important) as *"Will I buy this fast fashion dress from a corporation even if I can see with my own eyes the river pollution they cause in Indonesia?"*.

What's Next?

An ongoing monitoring of our planet,
crunching tens of TB of data becoming available every day,
automatically extracting relevant information

Going large…

VIEW ALL NEWS >

Planet to Acquire Sinergise Business to Expand its Data Analysis Platform

03/29/2023

Acquisition will allow customers to more easily extract insights from Earth Observation data

SAN FRANCISCO & LJUBLJANA, Slovenia--(BUSINESS WIRE)-- Planet Labs PBC (NYSE: PL), a leading provider of daily data and insights about Earth, today announced it has signed an agreement to acquire the business of Holding Sinergise d.o.o. ("Sinergise"), a leading developer platform for earth observation (EO) data. By reducing the complexity of analysis and insights extraction, as well as the cost of EO data storage, Planet aims to continue expanding into new vertical markets with products and applications where EO data is highly relevant such as agriculture, civil government, insurance, financial markets, and sustainable supply chain management.

EU_opendata

Publications Office of the European Union

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Monthly Newsletter

Thank you & See you tonight

- 17.45 – 18.45: Short guided tour
- 19:00 Networking event at the Ljubljana City Hall

data.europa.eu The official portal for European data

REPUBLIC OF SLOVENIA
MINISTRY OF PUBLIC ADMINISTRATION
MINISTRY OF DIGITAL TRANSFORMATION

European Parliament Office in Slovenia