# Enabling a data-informed public sector

*From hype to action using the **Big Data Test Infrastructure (BDTI)***

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European Commission

**DG CNECT**
Directorate-General for Communications
Networks, Content and Technology

**DG DIGIT**
Directorate-General
for Informatics

# Public Sector Information and the role of Data analytics

Data is **everywhere** and growing at an unprecedent pace.
**Big Data**: 3V - **V**olume, **V**ariety, **V**elocity



Data is a key ingredient for **services, products, and effective policy making.**

There is an ambition to create a **single European market for data** and make more data available through powerful and trustworthy infrastructures and technologies, **in line with EU values and regulations, to support citizens, public sector and companies**.

# What is the Big Data Test Infrastructure (BDTI)?

BTDI: Not **only** for big data, but for all **public sector information**

**Six months free\* of charge service** for the EU public administrations

**Ready-to-use data analytics stack** and support

**Cloud platform** based on **open-source** tools

To help the public sector **to derive insights from its data** and accelerate transition towards **data-driven decision making**

\* The cost of the pilot project must fit within the funding boundaries of the BDTI pilot budget

# Big Data Test Infrastructure Objectives

## Objectives

- Increase the easy accessibility, interoperability, quality and usability of public sector information in compliance with the requirement of the **Open Data Directive**

- Boost the **re-use and combination of open public data** across the EU for the development of information products and services, including AI applications

- High-value Datasets – Open Data Directive

- Testing **Business-to-Government** (B2G) data sharing collaborations for the **public good**

- Data Space Support Centre: explore and experiment with your data*

- BDTI provides a safe **testing environment to run big data experiments** for data space customers

# About the Big Data Test Infrastructure (BDTI)

The BDTI is funded by the ==Digital Europe Programme (DEP)==
focused on **bringing digital technology** to businesses, citizens and **public administrations**.

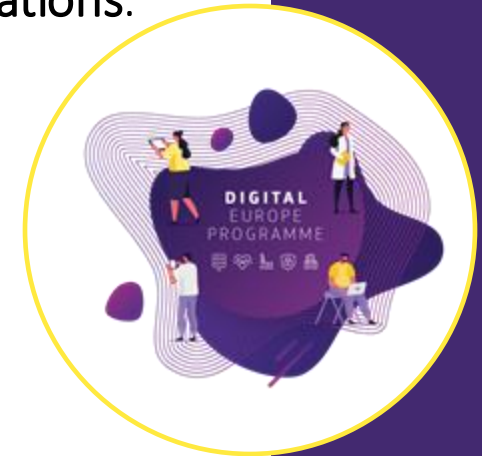The DEP provides strategic funding **in five crucial areas:**

| | |
|---|---|
| **High performance computing** | **Cybersecurity** |
| **Artificial intelligence** *(Cloud, data and AI)* | **Advanced digital skills** |
| **Deployment and wide use of digital technologies** | |

# Open-source tools to support your data journey



**Orchestration** — Apache Airflow, MAGE

**5. Decision-making**

**1. Collection**

MINIO — **Data Lake**

OPENLINK VIRTUOSO UNIVERSAL SERVER, mongoDB, PostgreSQL — **Database**

**4. Visualisation** — Metabase, Apache Superset

**Development Environments** — KNIME, jupyter, H2O.ai, RStudio

**3. Analysis**

**2. Processing** — elasticsearch, Apache Spark — **Advanced Processing Engines**

# The BDTI portal



https://youtu.be/fdzNCB1CVUM

# The BDTI portal

# Who is BDTI for ?

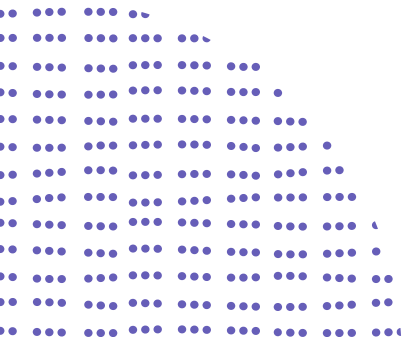**European Public Administrations**
All European Public Administrations at <mark>local, regional and national level</mark> can independently apply for a BDTI pilot project

**Partnerships with academia and the private sector**
Academia (master, PhD students) and startups and companies (GovTech sector) can apply if they are **collaborating** with a public administration

# Why use BDTI?

**Benefit of** ==six months free of charge==, including **advisory and technical** support

**Experiment with data analytics** using high **performance infrastructure** that leverages the power of the **elastic cloud**

**Receive guidance** to move from a pilot to a **production-ready** process

→ **Test your idea** → **Extract value** → **Create knowledge**

# Who used it already?

Generalitat Valenciana needed a solution to sift through vast scientific clinical articles from various sources like PubMed.gov and COVID-19-related publications. Their challenge was to extract valuable insights and knowledge from this immense volume of data.

→ Advanced **data visualisation and text mining tools** to help **extract knowledge** contained in the documents, supporting clinicians and managers in their clinical practices and day-to-day work.

The European Blood Alliance and DG SANTE embarked on a collaborative effort to establish a comprehensive open-access platform in Europe. This initiative aimed to collect crucial data for a focused study on COVID-19 convalescent plasma therapy. The challenge was to identify the most effective conditions for this treatment, utilising data analysis to make informed decisions and streamline research efforts.

→ A ready-to-use, virtual environment in which **data collected through a custom-built website** are ingested and anonymised, to be then analysed with advanced data visualisation and analytical tools. Initially, only donation data were processed, then the scope was increased to capture the **end-to-end of blood plasma, from donation to patient/clinical trial.**

The Municipality faced the complex task of correlating diverse datasets within the city. Their objective was to understand the movement patterns of people across different districts over time. This data analysis challenge was essential for gaining insights into mobility trends and for redesigning services to promote cultural activities and events effectively.

→ Predictive, descriptive and time-series analysis on multiple datasets collected **before, during and after the Covid-19 pandemic** such as: public Wi-Fi sensors, parking and geo-referenced data of people movements (i.e., tourists).

# How to apply: a fast and simple process

Get familiar with the BDTI service on our website

Define your data analytics use case using our BDTI Canva and then fill in the template request form (see website)

Submit your pilot request (template) by email

Meet with us to elaborate on your use case

Pilot Project is approved if:

Brings value, can be done in 6 months, sufficient resources available (skills, team
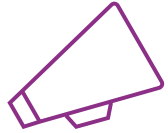
Your test environment is set up

You can start piloting and create value!
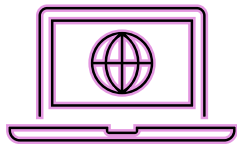
# Thank you for your attention!

Are you working for a public administration in need of infrastructure for data analytics? Get in touch
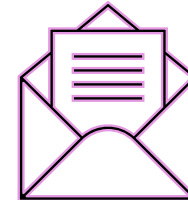
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*BDTI website*

*BDTI's Joinup page*

*BDTI's newsletter*

# Links and resources

- https://big-data-test-infrastructure.ec.europa.eu/

- https://code.europa.eu/bdti/bdti-demonstrator

- https://commission.europa.eu/publications/interoperable-europe-act-proposal_en

- https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en

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

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

- https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence

- https://digital-strategy.ec.europa.eu/en/activities/digital-programme

- https://dssc.eu/wp-content/uploads/2023/03/DSSC-Data-Spaces-Glossary-v1.0.pdf

- https://digital-strategy.ec.europa.eu/en/library/staff-working-document-data-spaces

- https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1113

- https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019L1024

- https://joinup.ec.europa.eu/collection/egovernment/solution/big-data-test-infrastructure-bdti