

Enabling a data-informed public sector

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

EC-BDTI-PILOTS@ec.europa.eu



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

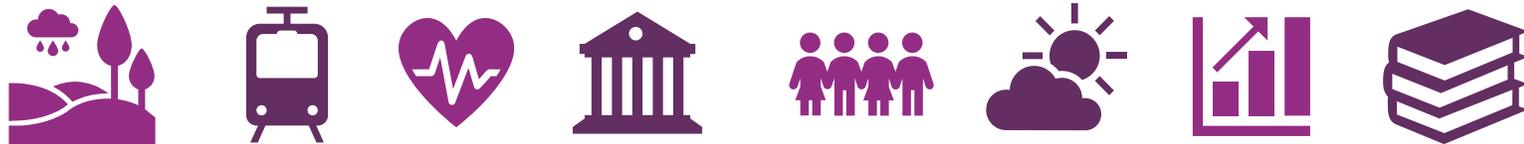
DG DIGIT
Directorate-General
for Informatics



Public Sector Information and the role of Data analytics

Data is **everywhere** and growing at an unprecedented pace.

Big Data: 3V - Volume, Variety, Velocity



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)?



BDTI: 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



* <https://joinup.ec.europa.eu/collection/semic-support-centre/data-spaces>

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

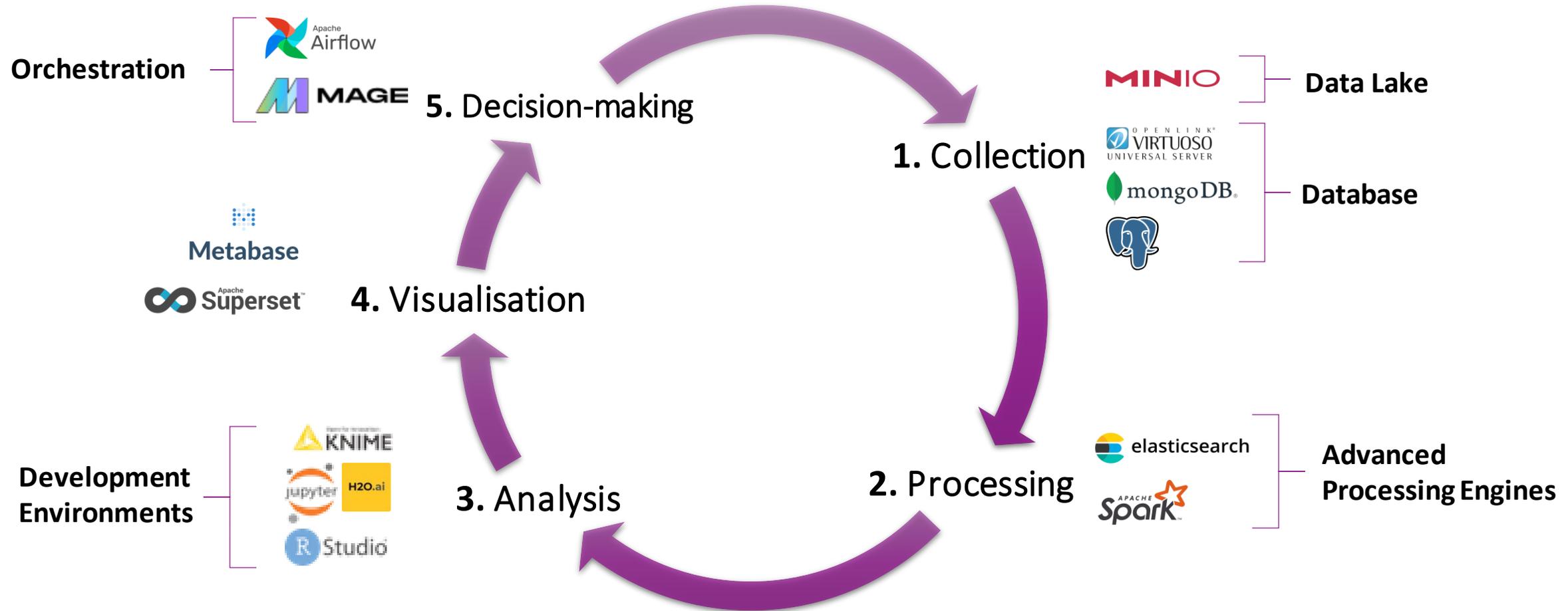
(Cloud, data and AI)

Advanced digital skills

Deployment and wide use of digital technologies



Open-source tools to support your data journey



The BDTI portal



portal.p1.bdti.dataplatform.tech.ec.europa.eu

European Commission

- Home
- My Account
- Service Catalog
- My Services
- My Data

Logout

v0.9.4

Welcome

BDTI is a Platform-as-a-Service (PaaS), hosted in the cloud, that offers the necessary managed infrastructure and software frameworks for statistical analysis to data engineers, data scientist, and data analysts for a variety of use cases. The platform enables users to select from different components a deployment suited as a solution for their use case. Standard deployments are readily available, but BDTI allows combining components for a custom solution.

Documentation

[Learn more](#)

BIG DATA TEST INFRASTRUCTURE (BDTI)

Watch on YouTube

<https://youtu.be/fdzNCB1CVUM>

Optimisation of Public Lighting - Dún Laoghaire County

The goal of this dashboard is to support you to achieve savings and CO2 emission reduction by turning lighting off when and where the least necessary. By default, lighting is always on between sunset and sunrise.

Daily full-lighting expenses versus projected expenses

Date	Full-lighting (Euro)	Projected (Euro)	Savings (%)
Tuesday, April 18	22.4k	17.7k	17.7%
Wednesday, April 19	22.4k	17.5k	17.5%
Thursday, April 20	22.4k	18.1k	18.1%
Friday, April 21	22.4k	18.3k	18.3%
Saturday, April 22	22.4k	19.9k	19.9%
Sunday, April 23	22.4k	19.7k	19.7%
Monday, April 24	22.4k	17.3k	17.3%

Projected savings next week

27.3k Euro

Projected emission reduction next week

3.36 tCO2

Scenario comparison of projected cumulative savings over 1 year *

Scenario comparison of projected savings and emission reduction after 1 year *

Traffic level name	Cumulative emission savings (tCO2)	Cumulative savings (Euro)
5 Very high traffic	170k	13.4k
4 High traffic	144.4k	10.5k
3 Medium traffic	726.9k	5.8k
2 Low traffic	466.6k	3.7k
1 Very low traffic	221.5k	1.7k
0 None	0	0

The BDTI portal

100% ❤️
open-source
components



Data Lake

MINIO

Databases

PostgreSQL

MongoDB

OPENLINK
VIRTUOSO
UNIVERSAL SERVER

Development Environments

Jupyter

R Studio

Open for Innovation
KNIME

H2O.ai

Advanced Processing

APACHE
Spark

elastic

kibana

Visualisation

Apache
Superset

Metabase

Orchestration

Apache
Airflow

MAGE

Who is BDTI for ?



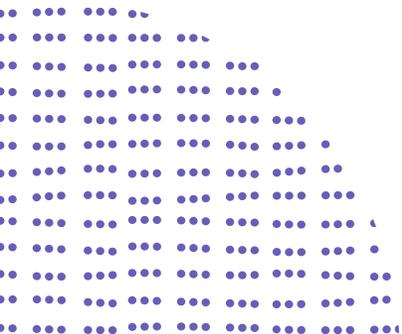
European Public Administrations

All European Public Administrations at **local, regional and national level** 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

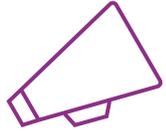


Your test environment is set up



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



EC-BDTI-PILOTS@ec.europa.eu

[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>