C\SD

SECURE DATA ACESS CENTER

Enabling researchers and data scientists
to securely access sensitive data

Insee
Mesurer pour comprendre

GENES

cnrs

HEC PARIS

ÉCOLE POLYTECHNIQUE

PROCEDURE FOR GAINING ACCESS TO DATA

01

Have prior authorization (granted by the data producer and/or a specific committee ...)

> See our tariffs

From 3 200€ per year per project

02

Sign a contract with CASD

03

Participate in a CASD enrolment session

04

Receive the SD-Box and begin...

SECURE DATA ACESS CENTER

SECURE ACCESS TO SENSITIVE DATA

Secure bubble technology (*) is mainly used by researchers and data scientists to perform data analysis. More recently, with the implementation of GDPR and the various security standards set out by the CNIL (French National Commission regulating Data Protection), data is increasingly being used in secure and certified environments for data production.

There are multiple advantages of using secure cloud technology hosted in France:

- data security requirements are integrated, by design, in the architecture of secure bubbles.

- a secure environment designed for data science with a wide range of tools and services available and their associated packages, as well as adequate computing power suitable for processing large volumes of data.

- the ergonomic design of the secure bubbles is particularly adapted to the daily uses of data scientists with a complete virtual office enabling sharing and collaboration.

The architecture also secures remote work from home and facilitates exchanges between production managers and study and research managers in the same secure environment. It also facilitates collaboration with the world of academic research.

NUMBERS

400 data sources provided securely (see the complete list of available sources)

More than **1000** projects managed and hosted

Nearly **800** secure data user organizations representing **3500** users since our creation

More than **400** referenced publications and communications (articles, book chapters, books, theses, reports, conference papers, etc.)

"CASD is an example of the type of infrastructure for sensitive health data"

— nature

COMPUTING POWER AND AI CPU, RAM, TERAOCTETS, GPGPU

—AI DATASCIENCE

CASD has developed infrastructures for data processing using Artificial Intelligence (AI) algorithms. This was implemented **in 2017** as part of a partnership with BNP Paribas to optimize the management of their customers > https://www.margo-group.com/fr/actualite/salon-big-data-retour-conference-bnp-paribas-retail-banking/

CASD now offers Tensorflow and GPGPU-based configurations for projects aiming to run deep learning algorithms on very detailed data - which therefore also require a secure environment to improve the operation and accuracy of the models produced.

CASD proposes a service enabling it to be a reference infrastructure in French AI strategy presented to the European Commission to promote research and development > https://knowledge4policy.ec.europa.eu/ai-watch/france-aistrategy-report_en

"The environment provides a large number of tools and software associated with customizable computing power making it possible to process any type of analysis and algorithm"

Eric Debonnel, IT and Data Science Manager

R&D

10 years of investment to optimize the security, reliability and ergonomic design of the system.
Ongoing developments to improve user experience.

Software tools and AI

Python	python
Tensorflow	
R	R
Stata	stata
SAS	SAS
QGIS	QGIS
GIT	git
SciLab	Sci lab

SECURITY AT THE CORE OF CASD ACTIVITIES

CERTIFICATIONS

ISO/27001
ISO/27701
HDS
SNDS
CNIL.

Information Security
FR078964

Protection of personal data
FR60212

Health data host

Approval from the health data security repository

Data processing authorization
2014-369

DATACENTERS

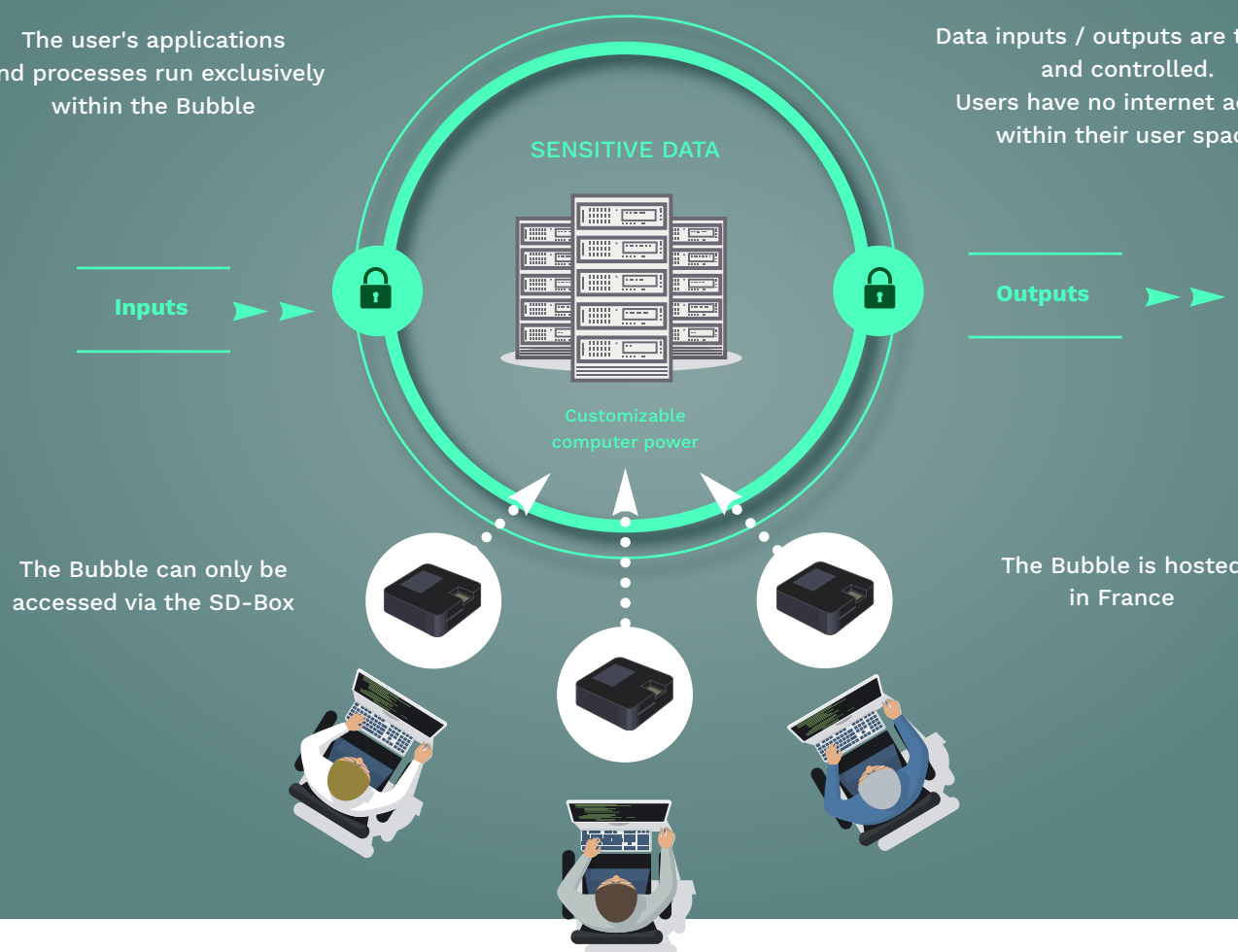Sovereign hosting in Île-de-France
in 2 high security datacenters

THE BUBBLE

The Bubble is a **complete turnkey Datalab,** with sufficient power and reference software in a familiar environment, forming a tightly sealed group of secure servers
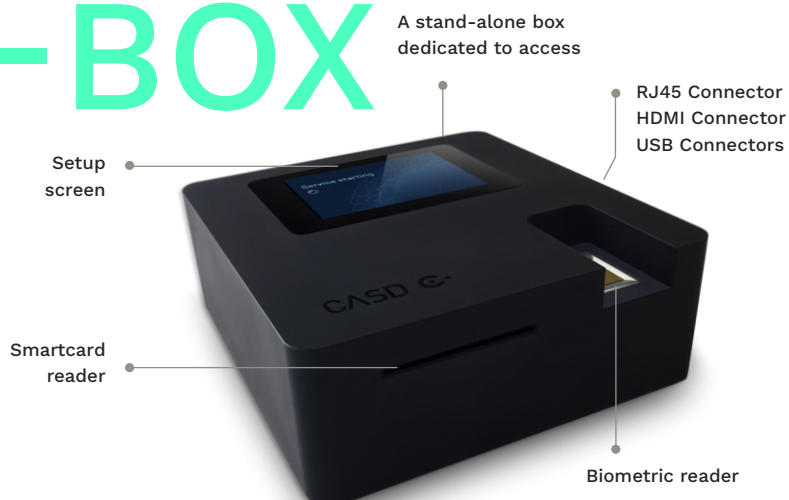
The user's applications and processes run exclusively within the Bubble

Data inputs / outputs are tracked and controlled.
Users have no internet access within their user space

SENSITIVE DATA

Inputs

Outputs

Customizable computer power

The Bubble can only be accessed via the SD-Box

The Bubble is hosted in France

THE SD-BOX

The SD-BOX guarantees data access security via the CASD central infrastructure and user working environment by integrating, **throughout the system,** the most demanding requirements in terms of access station certification (ISO 27001, ISO 27701, health data security standard certification, PSSI-MCAS, etc.**)**

A stand-alone box dedicated to access

RJ45 Connector
HDMI Connector
USB Connectors

Setup screen

Smartcard reader

CASD

Biometric reader

EXAMPLES OF DATA SOURCES HOSTED BY CASD

THE
DATA

Insee
▼

**Individual
& Household data**
RP / BDF / CVS / DADS / EECa

Company Data
EAP / ESS / EAE / DADS

Department of Labor
▼

MMO

RESPONSE

AGREEMENTS

Tax data
▼

FARE

FICUS

LIFI

IR

Interior
▼

Integrating new entries

Justice
▼

Criminal record

Cassiopée (Application Chain
Supporting the Information System on
Criminal Procedure and Children)

Health
▼

SNDS

PMSI

CONSTANCES

Social data
▼

ACOSS and CNAF

BPI
▼

Innovation

Private data
▼

BNP Paribas

RTE

Generali

EXEMPLES OF USER ORGANIZATIONS

Insee

Court of Auditors

Department of Health & Solidarity

Generali

French Department for Ecological Transition

Bpifrance

General Inspectorate of Finance

Department of Higher Education, Research and Innovation

French Assemblée Nationale

Collège de France

Department of Justice

Vidal

BNP Paribas

RTE

Edenred

Constances cohort

Department for the Economy, Finance & Recovery

Institut Curie

Inserm

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