A key enabler to advance brain science

France Nivelle
EBRAINS - Human Brain Project
Chief Communications and Content Officer
EBRAINS’ mission:
Enabling brain research advances and innovation

It builds on the work of the Human Brain Project and takes it to the next level.

Human Brain Project

HBP scientific work

HBP infrastructure: EBRAINS

2023
EBRAINS’ mission: Enabling brain research advances and innovation

EBRAINS offers the science community state-of-the-art

- Brain data and atlases
- Simulation and modelling tools
- Access to (super) computing resources

It builds on the work of the Human Brain Project and takes it to the next level

Human Brain Project

HBP scientific work

HBP infrastructure: EBRAINS

2023
EBRAINS Focus areas

- Neuroscience
- Brain Medicine
- Brain-inspired technologies
What EBRAINS brings to the scientific community

Data and Knowledge
- Online solutions to facilitate sharing of and access to research data, computational models and software

Atlases
- Navigate, characterise and analyse information on the basis of anatomical location

Simulation
- Solutions for brain researchers to conduct sustainable simulation studies and share their results

Brain-Inspired Technologies
- Understand and leverage the computational capabilities of spiking neural networks

Medical Data Analytics
- The Medical Data Analytics service provides two unique EBRAINS platforms, covering key areas in clinical neuroscience research

Co-developed by and with researchers
An integrated platform with cutting-edge workflows

Data

Curation

Knowledge Graph

Integrated modelling and simulation tools and workflows

and access to HPC resources

EBRAINS
Ensuring the best service for the communities

Three key elements

1. Supporting projects with data management and modelling tools and offering compute and storage solutions
2. Accompanying researchers in addressing scientific questions
3. Developing specific customized solutions
Example of support: providing researchers with data sharing facilities
Examples of customized solutions

EBRAINS powers brain simulations to give insight into consciousness and its disorders

The European research infrastructure EBRAINS powers a new approach to understand the brain mechanisms underlying consciousness.

New EBRAINS-enabled tool to help guide surgery in drug-resistant epilepsy patients

Ultra-high definition predictive brain tool seeks to give surgeons a sharp eye to spot epilepsy in a patient's brain.

A robot on EBRAINS has learned to combine vision and touch

Brain models are helping to discover better robot navigation methods.
EBRAINS: a distributed research infrastructure

EBRAINS services are provided by best-in-class academic centers across Europe and are coordinated by a central hub.
EBRAINS commitment

- Open science
- FAIR principles
- RRI
- Co-design
- Impact
- Collaboration
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Excellence
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