

## **HBP FPA: Human Brain Project Framework Partnership Agreement**

### **Description**

Understanding the human brain is one of our most significant scientific challenges. Such an understanding can provide profound insights into our humanity, leading to fundamentally new computing technologies and transforming the diagnosis and treatment of brain disorders. Modern ICT brings this prospect within reach.

The HBP Flagship Initiative (HBP) thus proposes a unique strategy that uses ICT to integrate neuroscience data from around the world, to develop a unified multilevel understanding of the brain and diseases, and ultimately emulate its computational capabilities. The goal is to catalyze a global collaborative effort. A Core Project will build and operate a tightly integrated network of six ICT platforms, providing HBP researchers and the scientific community with unique resources and capabilities: multilevel atlases and high-fidelity reconstructions of the mouse and human brains, tools and workflows for brain simulation, high-performance computing infrastructure, interactive supercomputing, a federated network of anonymized clinical data, Neuromorphic Computing Systems, and Neurorobotics capabilities closing the loop between brain simulations and the environment. Partnering Projects will enable independent research groups to expand the capabilities of the Platform and use them to address otherwise intractable problems in neuroscience, computing and medicine. Collaborations with other national, European and international initiatives will create synergies, maximizing returns on research investment.

This document outlines the concept underlying the HBP Flagship Initiative, describes mechanisms providing for effective governance of the initiative and proposes a detailed Research Roadmap, showing the allocation of specific activities to the Core Project, the partnering Projects and external collaborations. The document will form the Framework Partnership Agreement governing the Core Project.

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