

EXISTING BRAIN PROJECTS

<i>Brain Project</i>	<i>Aims</i>	<i>Ethics Component</i>	<i>Duration</i>	<i>Budget</i>
Australian Brain Initiative [AU] http://ausbrain.org.au/	<ul style="list-style-type: none"> - Foster a dynamic, thriving, and globally competitive technology sector based on a sophisticated, world-class brain science capability - Research scope encompasses psychology, behavioural sciences and neuroscience - Alliance aims to foster a dynamic, thriving, and globally competitive neurotechnology sector based on a sophisticated, world-class brain science capability - Understand healthy, optimal brain function; create advanced industries based on this understanding; identify causes and develop novel treatments for debilitating brain disorders; produce sustainable, collaborative networks of frontline brain researchers with the capacity to unlock the mysteries of the brain and ensure the social, health and economic benefit of all Australians 	<ul style="list-style-type: none"> - Neuroethics committee formed for future Australian Brain Initiative - Due to release discussion paper in October 	5 – 10 years	\$500 million
China Brain Project: Brain Science and Brain-like Intelligence Technology [CN]	<ul style="list-style-type: none"> - Study neural basis of cognitive functions - Two supplementary components: (1) improvement and development of diagnoses and therapies for major brain disorders and (2) development of brain-machine intelligence technologies 	- Unknown	TBD	N/A



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<p>Human Brain Project [EU] https://humanbrainproject.eu/</p>	<p>- Build a new ICT infrastructure for neuroscience and brain-related research in medicine and computing, catalysing a global collaborative effort to understand the human brain and its diseases and ultimately to emulate its computational capabilities. Three strategic focuses:</p> <p>Future Medicine: Develop an objective, biologically grounded map of neurological and psychiatric diseases to classify and diagnose brain diseases and configure relevant models; use <i>in silico</i> experimentation to understand the causes of brain diseases and develop new drugs and other treatments</p> <p>Future Neuroscience: Achieve a unified, multi-level understanding of the human brain integrating data and knowledge about the brain across all levels of biological organization</p> <p>Future Computing: Develop novel neuromorphic and neurorobotic technologies based on the brain's circuitry and computing principles</p>	<p>- Approximately 4.5 % of budget directed to the Ethics and Society subproject, responsible for a- research in philosophy and the social sciences, b- ensuring compliance with relevant ethical and legal and ethical norms and regulations</p> <p>- Primary focuses (thus far): privacy and data protection, ethics of simulation and consciousness, dual use, researchers' awareness</p> <p>- Ethics Advisory Board</p> <p>- Ethics Rapporteurs (privacy, non-human primates research)</p>	2013 - 2023	\$1.2 billion total
<p>Brain Mapping by Integrated Neurotechnologies for Disease Studies (Brain/MINDS) [JP] http://brainminds.jp/en/</p>	<p>- Map the marmoset brain to gain a better understanding of the human brain and develop strategies for diagnosis and treatment of human psychiatric and neurological disorders</p> <p>- 3 groups of objectives: (1) The Structural and Functional Mapping of Marmoset Brain group, (2) The Development of Innovative Neurotechnologies for Brain Mapping group, and (3) The Human Brain Mapping and Clinical Research Group</p>	<p>- The establishment of an ethical component is in progress</p>	2014 - 2024	\$30 million/year (total of \$310 million)



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Korea Brain Initiative [KR]	<ul style="list-style-type: none"> - Enable understanding of higher brain function and develop treatments for mental and neurological disorders - Focus on (1) constructing brain maps at multiple scales, (2) developing neurotechnologies for brain mapping, (3) strengthening AI-related R&D, and (4) developing treatment for neurological disorders 	- Neuroethics committee formed	2016 - 2026	\$50 million/year (total of \$350 million)
Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative [US] https://braininitiative.nih.gov/	<ul style="list-style-type: none"> - Accelerate development and application of innovative neurotechnologies to construct a dynamic picture of brain function - Ultimately understand how dynamic patterns of neural activity are transformed into perception, emotion, cognition, and action in health and disease - Emphasis on understanding and modulating brain circuit function 	- Established Neuroethics Division of the NIH BRAIN Multi-Council Working Group- NIH BRAIN strategic plan (<i>BRAIN 2025</i>) emphasizes consideration of ethical implications of neuroscience research, with specific ethics goals	2013 - 2026	\$260M in FY2017 <i>BRAIN 2025</i> outlines professional judgment budget through 2026