

Outcome of the IHI JU Science and Innovation Panel on ideas submitted for potential IHI topics

Reference number of the idea: N° TI_001198

Neuroelectronic medicine and the European health strategy

Overall opinion

The idea addresses emerging neuro-electronic technologies, which would offer several advantages when compared to conventional therapies for the treatment of neurological and psychiatric diseases such as stroke, dementia, Parkinson's disease, etc. It is proposed to establish a platform consisting of key stakeholders that would enable the EU to become a worldwide leader in this field and strengthen its competitiveness.

On one hand, the idea is described in a rather general manner, and specific details about the background, state of the art, current knowledge gaps, limitations of current approaches, objectives, specific impacts, and advancements beyond the state of the art cannot be clearly derived.

On the other hand, it appears that the technology could revolutionize and significantly outperform current solutions, such as deep brain stimulation and cochlear implants, thus enabling even more targeted therapy with a better impact on patients' quality of life.

Overall, the level of maturity of the technology remains unclear. Questions remain on what initial observations (e.g., supported by scientific publications) have been made and how feasible it would be to integrate this technology into clinical practice (from both a technological and regulatory standpoint).

At this stage, and in the current stage of development of the submitted idea, the opinion of the SIP would not yet be favourable.