FUTURE AND EMERGING TECHNOLOGIES
FLAGSHIPS AND LARGE RESEARCH INITIATIVES
Boosting the delivery of cutting-edge technologies and aiming for game-changing effects

These visionary, long-term, large-scale research initiatives address major science and technology challenges in Europe. They involve hundreds of research teams with the aim of boosting the EU’s scientific and industrial landscape.

Activities based on jointly defined Research & Innovation roadmaps
Alignment of Research & Innovation agendas at EU, national and regional levels
Joint governance by EU and national funding authorities

FUTURE AND EMERGING TECHNOLOGIES FLAGSHIPS
Supported under Horizon 2020. They will continue to be supported under Horizon Europe.

GRAPHENE FLAGSHIP
Since 2013
Unlock the potential of graphene, a carbon-based material one atom thick, and other 2D materials

- 9 spin-offs, 160 prototype systems, 46 products launched, 400 academia/industry collaborations
- Cost-effective scalable graphene production
- Ultrafast components for 5G communications
- Lightweight materials for aeroplanes and cars
- Higher efficiency & long-lasting photovoltaic cells
- Flexible sensors for medical sector

graphene-flagship.eu

Human Brain Project
Since 2013
Understand and model the brain

- Brain atlases and models for brain interventions (e.g. stroke, epilepsy)
- Exploring consciousness mechanisms
- Building a neuroscience data & computing infrastructure
- Using brain models to equip robots with more efficient artificial intelligence
- More than 1000 publications
- 200 doctoral students

humanbrainproject.eu

Updated 05 September 2019
IDEAS/PLANS FOR NEW RESEARCH INITIATIVES

Under the Horizon 2020 Future and Emerging Technologies programme, and to be taken up in Horizon Europe missions, partnerships, and strategic programming.

NEW LARGE RESEARCH INITIATIVE

Energy, Environment & Climate Change

- Artificial photosynthesis for a clean energy future
- Transformative chemistry for a sustainable future

ICT & Connected Society

- Human-centred artificial intelligence
- Using AI to make sense of complex historical datasets

Health & the Life Sciences

- Understanding and treating human cells during diseases
- Bring advanced therapies to clinical practice

Battery 2030+ is part of the EU's Strategic Action Plan on Batteries, supported under Horizon 2020 and with continued support proposed under Horizon Europe.

https://battery2030.eu