



## SmartEEs Success Stories

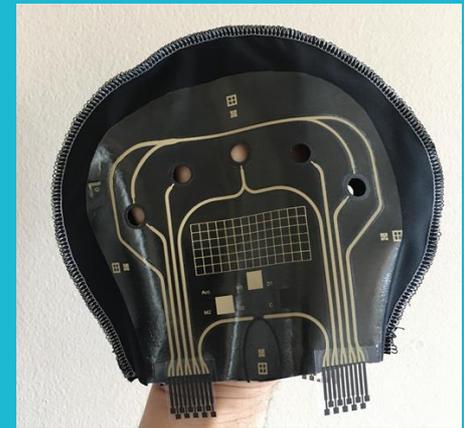
### Bitbrain

Bitbrain® is a neuro-technology company that combines neuroscience, artificial intelligence, and hardware to develop innovative products.

Bitbrain was founded in 2010 as a spin-off company of a research team from the University of Zaragoza, pioneer in approaching brain-computer interface applications outside laboratory investigation settings.

Bitbrain designs, develops and commercializes solutions based on its proprietary EEG devices, cloud solutions and AI-based signal processing, and provides neurotechnology R&D innovation consultancy.

[www.bitbrain.com](http://www.bitbrain.com)



### Problem to be solved

Existing electroencephalography (EEG) recording systems based on “traditional electronics” requires multiple wiring, which hinders the setup of the system and reduces user comfort and his/her acceptance of the technology, This constitutes a barrier to the wide development of neurotechnology and the penetration of applications at home.

### Solution provided by SmartEEs

FlexCap application experiment tackle these issues and propose a novel electroencephalography (EEG) recording system that takes advantage of flexible and printed electronics. The conventional rigid EEG headset with multiple wirings is replaced with an elastic cap functionalised with conductive tracks on which it is possible to plug-in EEG sensors. This results in a more comfortable and user-friendly EEG system, that removes the barriers preventing the development of neurotechnology applications at home.

### Business model & SmartEEs’ impact

Thanks to SmartEEs' support, Bitbrain was able to develop a novel more comfortable and user-friendly EEG system with integrated flexible electronics to overcome well-identified barriers for user acceptance and expanding the applicability of EEG recording devices beyond current state of the art.

FlexCap user-friendly EEG system opens up new market opportunities for Bitbrain (e.g., augmented reality/virtual reality for educational purposes). Moreover, following SmartEEs' successful experience Bitbrain and CEA will continue their fruitful collaboration and have already submitted for evaluation two H2020 proposal to the European Commission (1 FET Open and 1 FET Proactive).

