

# “Mind Over Matter”: Harnessing Brain-Computer Interfaces for Enhancing Frontline Employee Performance

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## **Abstract**

The next era of technological progress is centred around human enhancement technologies (HET), with Brain-Computer Interfaces (BCI) as a key example. By enabling technology interaction by using thoughts, this marks a paradigm shift in device control. BCIs enable FLEs to engage with customers at the speed of thought while being able to stay focused on serving customers, minimizing distractions from conventional technologies. We establish, in a mixed-methods approach consisting of two sets of qualitative interviews and 3 experimental studies involving a functioning BCI-enhanced FLE, the ‘cyborg effect’. This effect highlights the potential negative impact of BCI-enhanced FLEs as being perceived as cyborg-like. Our research delves into boundary conditions and strategies to counteract this effect, showing conditions where enhanced FLE is seen as more human and warm compared to non-enhanced counterpart.

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