Regulatory sandboxes for novel neurotechnologies: Innovative reform or hype?

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Abstract

Since the United Kingdom's (UK) Financial Conduct Authority announced their regulatory sandbox in 2015, sandboxes have become the latest and greatest in regulatory policy, particularly for managing emerging financial technologies (fintech). Yet, sandboxes have also begun to find use outside of fintech, including in privacy and environmental protection. Several prominent institutions – including the OECD, IEEE, and UK Royal Society – have now encouraged governments to consider the sandbox model for regulating novel neurotechnologies in their jurisdictions. Proponents argue that sandboxes can enable adaptive oversight and will allow for novel rules to be trialed for neurotechnological products. However, these calls to consider sandboxes come with very little detail about what a regulatory sandbox for neurotechnologies would look like, nor are potential issues or policy alternatives evaluated in detail.

This presentation will argue that, despite the global hype, regulatory sandboxes are ultimately just one of many potential instruments available for the governance of emerging neurotechnologies. Further, it will be argued that justifying the use of this novel instrument will require a determination that sandboxes are better suited than other policy tools and an evaluation of their downfalls in addition to their strengths. To do so, the presentation will describe common features of sandboxes and imagine what a regulatory sandbox for neurotechnologies might look like at the national level. Using concepts from the regulatory literature and a brief review of the unique risk-benefit profile of neurotechnologies, the presentation will then anticipate potential challenges and benefits of using sandboxes in this space. The presentation will conclude by reflecting on how the strengths and weaknesses of sandboxes may compare to potential alternative tools for regulating novel neurotechnologies, and emerging technologies generally, including traditional command-and-control approaches and more flexible options.

Keywords: flexible regulation, hype, neurotechnologies, regulatory sandboxes