Issar, Shugrue and Houghtlin in Risk Management Magazine: The New Landscape of Neural Data Privacy Laws

February 26, 2026 Neil Issar, Davis Shugrue, Morgan Houghtlin

PRACTICES Privacy and Cybersecurity

Haynes Boone attorneys Neil Issar, Davis Shugrue and Morgan Houghtlin authored an article for *Risk Management Magazine* examining how states like California, Colorado, Connecticut and Montana are regulating this emerging category of sensitive data, and what it means for companies in healthcare, technology and beyond.

Read an excerpt below.

Neurotechnology is rapidly evolving and expanding from science fiction to experimental labs to real-life consumer applications. New technologies including wearable consumer devices and implantable medical devices may soon allow companies to gain direct access into consumers' minds by collecting a new class of highly sensitive information known as neural data.

Neural data generally refers to all information derived directly from measuring activity in a person's nervous system. Because neurtechnology devices measure signals directly from the brain and nervous system, the data could reveal real-time insights about an individual's mental state, emotions and cognitive function. The sensitive nature of this data raises novel legal and ethical risks for organizations that collect, process or even store the information. To proactively manage the emerging risks around neural data, organizations must understand how this data interacts with business processes. In addition, the legal and regulatory landscape around neural data is also evolving with at least nine U.S. states enacting or considering laws regulating the collection and use of this data, creating new risks and obligations for protecting individual privacy.

Neurotechnology on the Market

While the concept of neural data and neurotechnologies may seem futuristic, such technologies are already penetrating healthcare and consumer markets. For example, wearable electroencephalogram (EEG) devices that measure neural data through electrodes placed on the scalp, like the Muse headband, the Emotiv EPOC X, and Neurable's EEG-enabled headphones, are readily available for consumers. These devices allow users to leverage neural data for meditation, wellness tracking, gaming and even workplace productivity monitoring.

In December 2025, the FDA granted the first premarket approval for the Flow Neuroscience headset, a home-use transcranial direct current stimulation (tDCS) device designed to treat major depressive disorder. tDCS devices deliver electrical currents to specific brain regions, which scientists believe could be used to combat depression, anxiety, mood imbalance and insomnia.

Additionally, companies like Elon Musk's Neuralink are currently conducting clinical trials of surgically implanted brain-computer interfaces—devices that attach directly to the brain and enable users to control digital devices through thought-generated neural signals and could help patients suffering from neurological conditions or physical paralysis.

Even if an organization does not design or sell neurotechnology, it may interact with neural data in other ways. Healthcare providers may process neural data from implanted medical devices designed for clinical monitoring and care.

Technology companies may create or support platforms for consumer wearables and medical devices that generate and store neural data. Marketing companies may utilize neural data to track consumer attention, engagement or responses to products. Each scenario in which an organization encounters neural data opens the door to potential legal liability and regulatory risk.

Defining Neural Data

Although states have enacted unique statutory definitions, the term "neural data" broadly encompasses information generated by measuring the activity of an individual's central or peripheral nervous system, but not information that is merely inferred from downstream physical indicators of neural activity, such as heart rate or facial expressions. The distinction between direct measurement and inference is central to legal compliance as recent state legislation focuses specifically on neural data collection rather than more general biometric data collection.

Neural data collection could pose risks to both individual mental privacy and cognitive liberty. First, neural data collection threatens mental privacy because it could bypass a consumer's consciousness by targeting information directly from the nervous system. The unauthorized collection, storage and analysis of this data may reveal a person's subconscious reactions and emotions before that individual can control or consent to the disclosure. Without guardrails on data collection, this data could be sold or shared with third parties, effectively commoditizing the most intimate aspects of an individual's being.

Second, neural data collection raises concerns about cognitive liberty. With access to consumer neural data, companies could create highly personalized, subliminal advertising or content designed to exploit emotional tendencies or desires, effectively bypassing conscious defenses to influence behavior or purchasing decisions. Additionally, companies selling or operating implanted brain-computer interfaces could apply neural stimuli directly to the nervous system to manipulate brain activity and decision-making. As neurotechnology becomes more pervasive, it is vital that consumers and companies recognize and address these risks.

Existing State Legislation for Neural Data Protection

As neural data collection practices expand, state legislators are attempting to keep pace. Currently, four states have enacted legislation to limit neural data collection and bolster consumer privacy. California's Senate Bill (SB) 1223 defines neural data as information generated by measuring central or peripheral nervous system activity, excluding data inferred from non-neural sources. The law designates neural data as "sensitive personal information" protected under the California Consumer Privacy Act, providing consumers the right to opt out and limit a business's use of neural data to what is reasonably necessary to provide requested goods or services.

To read the full article from *Risk Management Magazine*, click here.