

Boston Scientific is one of the "Big Three" global leaders in Deep Brain Stimulation (DBS), alongside Medtronic and Abbott.<sup>1</sup> Their role is defined by shifting DBS technology from "one-size-fits-all" stimulation to highly personalized, directional therapy.<sup>2</sup>

In Australia and abroad, they are primarily known for their **Vercise™** brand of neurostimulators.<sup>3</sup>

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## Technical Innovation: The "Precision" Strategy

Boston Scientific's primary differentiator is its background in **cochlear implant technology**, which they adapted for the brain. Their systems focus on two key innovations:

- **Multiple Independent Current Control (MICC):** Unlike traditional systems that send a single "blob" of electricity, MICC allows the doctor to control the exact amount of current going to each individual contact on a lead.<sup>4</sup> This helps target specific brain areas while avoiding regions that cause side effects like slurred speech or muscle pulling.<sup>5</sup>
- **Directional Leads (Cartesia™):** They pioneered leads that can steer electricity in a specific direction (left, right, or forward) rather than just a 360-degree circle.<sup>6</sup> This is particularly useful for Parkinson's patients where the target area is often just millimeters away from areas that cause side effects.<sup>7</sup>

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## Role and Presence in Australia

Boston Scientific has a significant and growing footprint in the Australian medical landscape:

### 1. Regulatory Status (TGA)

The **Therapeutic Goods Administration (TGA)** has approved the full suite of Vercise Genus™ systems for use in Australia. As of 2025–2026, their latest **Vercise Cartesia™ X** directional leads are available, which feature 16 contacts—the highest number currently on the market—offering unprecedented "span" for surgeons to find the right stimulation spot.<sup>8</sup>

### 2. Clinical Indications

In Australian hospitals, Boston Scientific DBS systems are primarily used for:

- **Parkinson's Disease:** Specifically for managing motor fluctuations and tremors when medication (Levodopa) is no longer sufficient.<sup>9</sup>

- **Essential Tremor:** To suppress disabling hand or arm tremors.<sup>10</sup>
- **Dystonia:** For both primary and secondary intractable dystonia.<sup>11</sup>

### 3. Local Infrastructure

Boston Scientific operates through **Boston Scientific Pty Ltd**, based in New South Wales.<sup>12</sup> They provide intensive "Clinical Specialist" support in the operating room during Australian surgeries, assisting neurosurgeons and neurologists with the technical programming of the device.

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## Global Role and Competition

Globally, Boston Scientific has pushed the industry toward **software-driven neurology**.<sup>13</sup>

- **Image-Guided Programming:** They partnered with **Brainlab** to create "Neural Navigator" software. This allows doctors to see a 3D model of the patient's brain and the electrical field in real-time on a tablet, rather than programming based on trial and error.<sup>14</sup>
  - **Battery Longevity:** Their rechargeable stimulators (Vercise Genus) are rated for a **25-year battery life**, which is currently the longest in the industry, significantly reducing the need for "battery replacement" surgeries.<sup>15</sup>
  - **Market Growth:** They are a major driver of the DBS market's expansion into the Asia-Pacific region, which is currently the fastest-growing market for neuromodulation due to aging populations.
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## Comparison: Boston Scientific vs. Competitors

Feature	Boston Scientific (Vercise)	Medtronic (Percept)	Abbott (Infinity)
<b>Control</b>	MICC (Individual contact control)	Voltage/Current shared	Current steered

<b>Leads</b>	16-contact directional	8-contact directional	8-contact directional
<b>Sensing</b>	Focus on image-guided steering	<b>BrainSense™</b> (LFP sensing)	iOS-based interface
<b>Battery</b>	25-year rechargeable life	15-year rechargeable life	Non-rechargeable focus

**Note:** While Boston Scientific excels in **steering** electricity precisely, Medtronic is currently the leader in **sensing** (recording brain signals to see how the patient is doing). Boston Scientific's role is increasingly focused on closing this gap by integrating sensing into their Genus line.

Would you like me to help you find a list of Australian neurological centers that currently offer Boston Scientific DBS technology?