

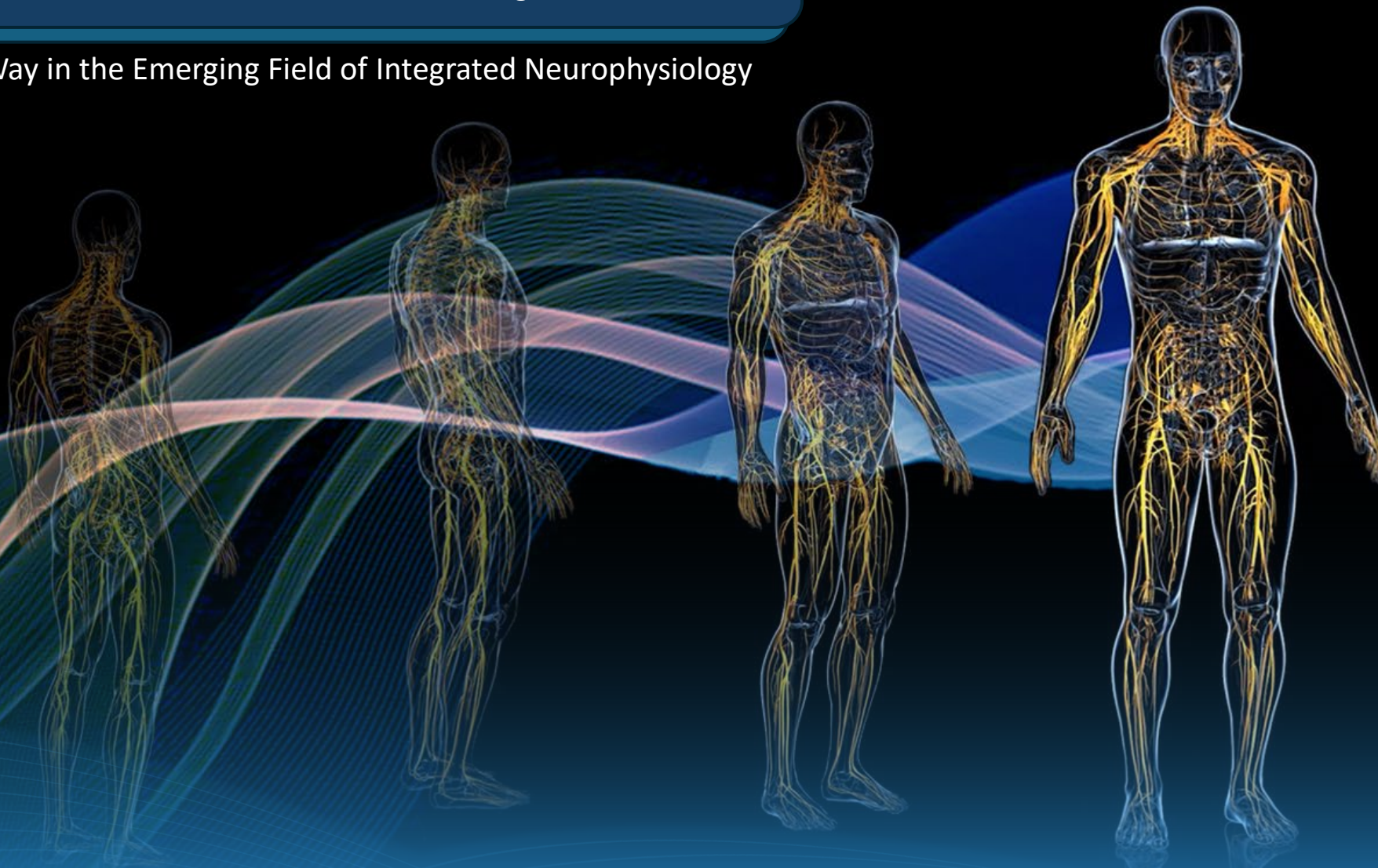


Sideways Strategies, LLC.

Medical Device Design

INVESTOR DECK

Leading the Way in the Emerging Field of Integrated Neurophysiology



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Founders



Hieu Ball, MD
Orthopedic Spine Surgeon



Jon Block
Surgical Neurophysiologist

Our founders have been working together as a surgical and research team for over 20 years and have published award-winning research that first introduced new surgical neuromonitoring techniques that have proven to reduce surgical nerve injuries in far lateral lumbar spine surgery which have gained widespread acceptance and changed the way this surgery is performed.

Our research led to the realization that it was possible for significant improvements in our ability to protect patients from surgical nerve injuries by developing new hardware and software systems that utilize advanced neurostimulation and recording techniques that can acquire neurophysiological data with vastly improved accuracy and reliability.

Our patented automated neurophysiological data acquisition systems that have the potential to produce vast improvements across a wide range of surgical and clinical applications where nerves or nerve pathways are located, assessed or monitored.



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Mission Vision

Our goal is to lead the way in the emerging field of Integrated Neurophysiology by developing our proprietary automated neurostimulation and recording devices that have the potential to vastly improve patient care across a range of surgical and clinical applications.

Providing Clinicians with

HIGH QUALITY NEUROPHYSIOLOGICAL DATA

Unprecedented Accuracy, Reliability & Clinical Utility

- More Accurate Diagnosis
- Improved Therapeutics
- Safer Surgery

CORE TECHNOLOGIES



High Resolution Nerve Localization Systems

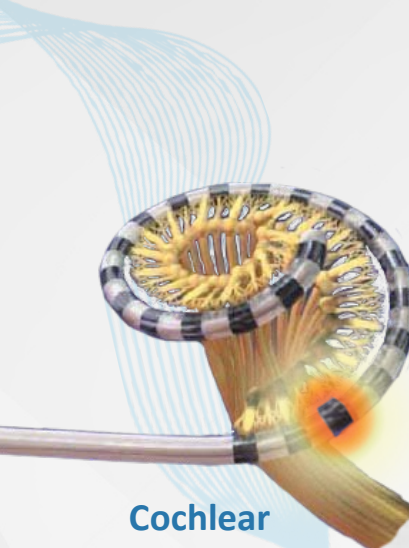


Neurophysiological Data Optimization Systems

Evolution of Precision Neurostimulation Technology

Proof of Concept

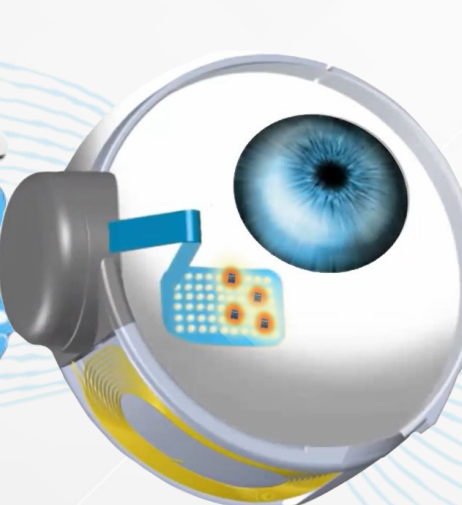
Our patented medical devices operate by the same basic scientific principles used in several existing commercially available medical devices that are powered by precision neurostimulation technology. This technology has already proven to be effective in some of the most incredible medical devices ever developed. They have helped the deaf to hear with cochlear implants, brought relief from uncontrollable tremors in people suffering from Parkinson's disease with deep brain stimulation, and provided sight to the blind with retinal implants. Emerging precision neurostimulation technology continues to improve and the applications for this powerful technology are continuing to expand as with our patented high-resolution nerve localization systems and neurophysiological data optimization systems. Our advanced systems have the potential to replace existing simple, imprecise methods acquiring neurophysiological data that are currently being used in multiple clinical and surgical applications and have not undergone basic design improvements in decades.



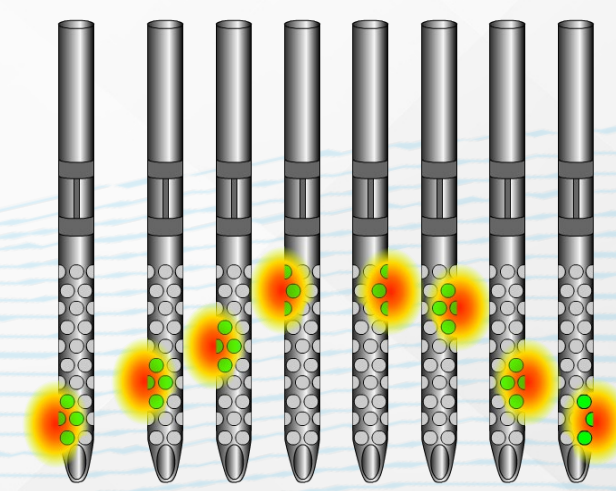
Cochlear Implants



Deep Brain Stimulation



Retinal Implants



High-Resolution Nerve Localization System



The World's First High Resolution Nerve Localization System

Able to calculate the location of nerves with unprecedented precision



Our HRNL system (right) uses an advanced method of neurostimulation known as Current Fractionation, where multiple electrodes are arranged on the surface of the instrument, each independently powered by its own independent power source, providing the ability to precisely shape and steer the electrical field surrounding the instrument.

Our patented systems utilize emerging precision neurostimulation technology to calculate the location of nerves with unprecedented precision. Our HRNL systems can be used in many types of surgeries and offer significant advantages over existing traditional methods of nerve localization (left) that commonly use a single stimulating electrode, powered by a single power source that provide surgeons with low-resolution, vague information about the location of nerves within the surgical field.



**Traditional Low-Resolution
Nerve Localization**
Single Electrode
Single Power Source

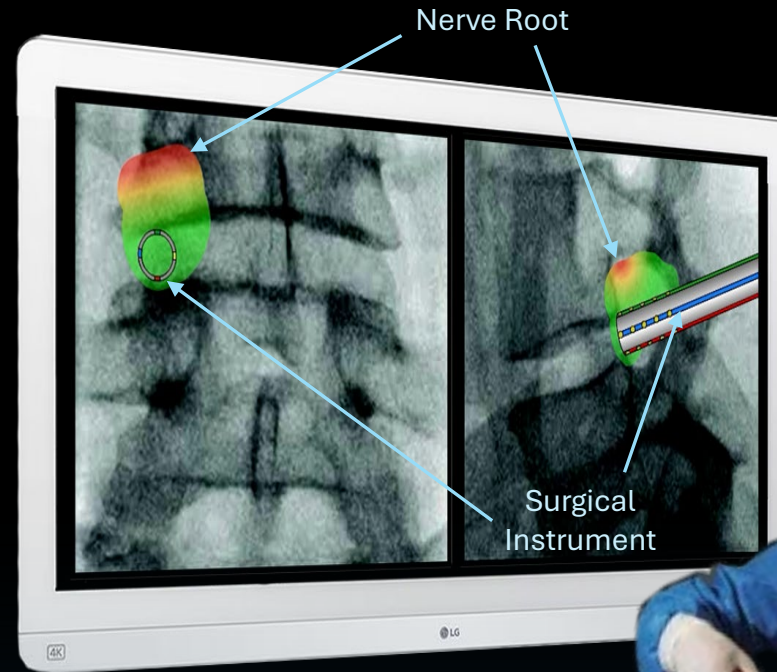
**High Resolution Nerve
Localization System**
Multiple Electrodes with
Independent Power Sources



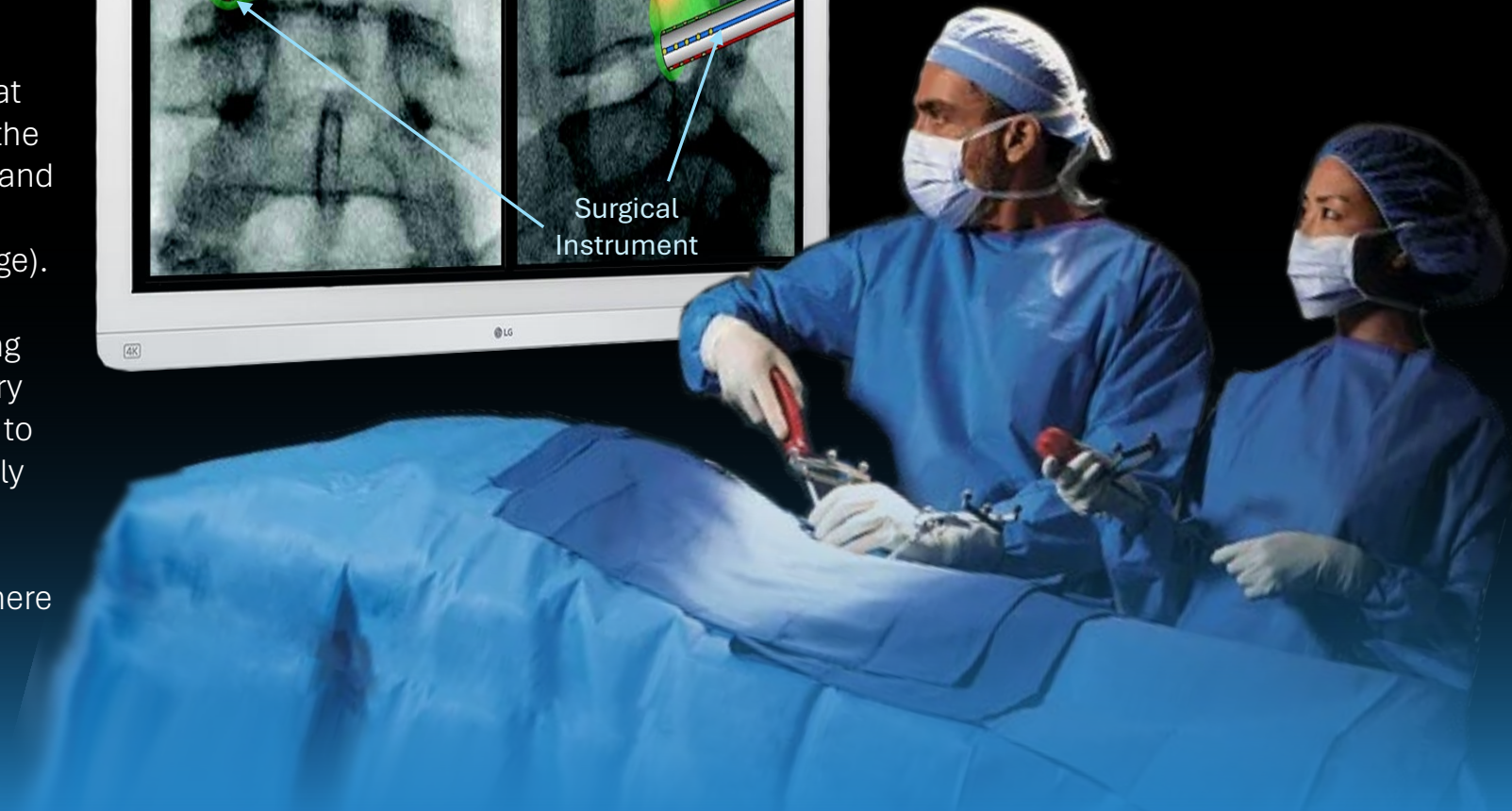
The World's First Image–Navigation / High Resolution Nerve Localization System

Future surgical platforms will evolve to include High Resolution Nerve Localization (HRNL) systems that are capable of performing a complex volumetric multi-dimensional analysis that provides accurate, quantitative measurements that reveal the precise location of nerves in the surgical field. This example shows a common minimally invasive lumbar discectomy surgery that integrates a HRNL system with a 2-dimensional image navigation system that provides the surgeon with a heat map showing the precise location of the nerve root in the surgical field in relation to the patient's bony anatomy and the surgical instrument - using just an anterior to posterior view (left image) and a lateral view (right image).

By knowing the precise location of the nerve root exiting the spine, the system can guide the surgeon's trajectory to the surgical target, navigating around the nerve root to avoid injury. As surgeries trend towards more minimally invasive methods through smaller exposures, the surgeon's ability to directly visualize nerves within the surgical field becomes increasingly diminished, and there is a growing demand for effective nerve localization strategies.



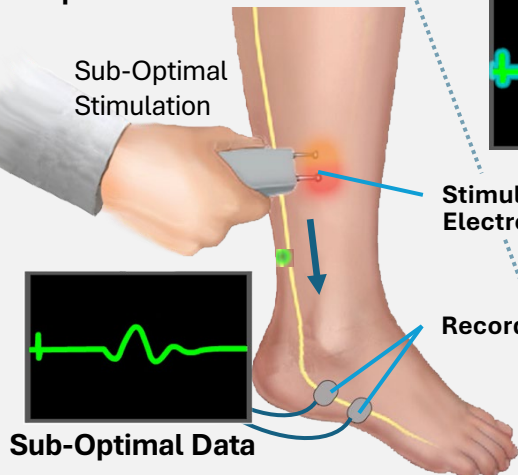
Future image-guided or robotic surgical platforms with proprietary high resolution nerve localization technology will have a clear and distinct competitive advantage over all other surgical platforms on the market.



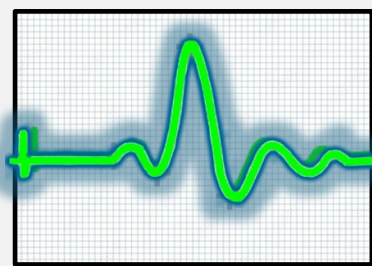
The World's First Neurophysiological Data Optimization Systems

Our patented neurophysiological data optimization systems use computer algorithms to acquire reproducible, reliable, high-quality neurophysiological data that cannot be accomplished by existing manual methods of data acquisition. Our automated systems use grids of multiple independently powered electrodes to selectively activate peripheral nerves and systematically capture optimized evoked responses. Below is an example of traditional nerve conduction studies (left) showing how clinicians use a simple electrical stimulation method with a single power source to manually locate and activate the nerve to capture a response with a single pair of recording electrodes. These manual methods are highly susceptible to human errors often result in sub-optimal data acquisition that lead to inaccurate diagnosis and can be misinterpreted as nerve pathology.

Traditional Manual Data Acquisition Method



Patented Optimized Data Acquisition System



Optimized Data

SAFER
SURGERY

MORE
ACCURATE
DIAGNOSIS



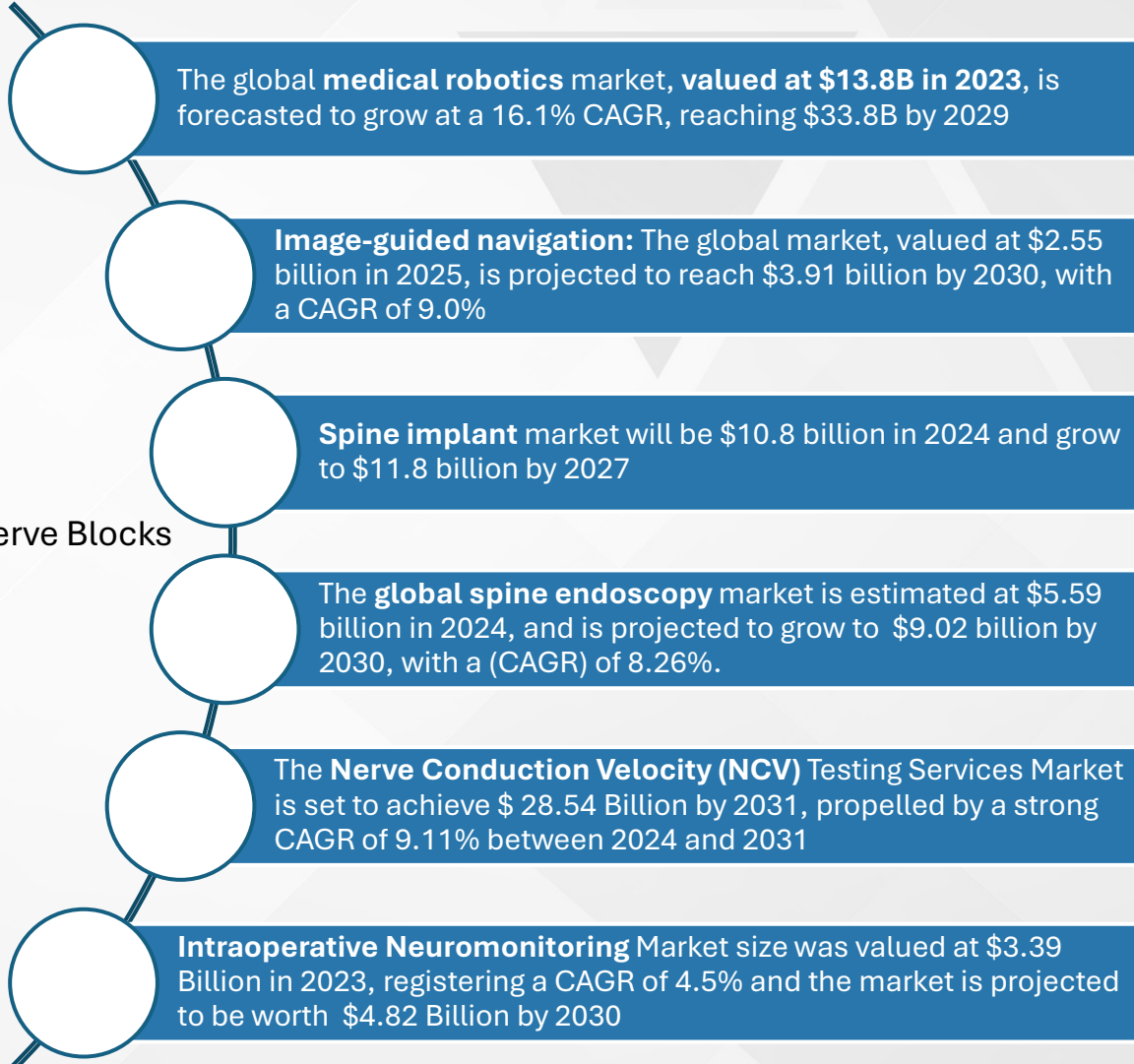
Optimized Nerve Conduction Studies

Optimized Intraoperative Neuromonitoring

Applications

- **High Resolution Nerve Localization Technology**
 - Integration with Image-Guided Surgical Platforms
 - Integration with Robotic Surgical Platforms
 - Spine Surgery:
 - Transpsoas Lateral Lumbar Approach
 - Posterior Approach / Endoscopic Systems
 - Orthopedic Surgeries
 - Total Hip Replacements
 - Knee Replacement Surgery
 - Regional Anesthesia- Nerve localizing Syringes for Regional Nerve Blocks
 - Neurosurgical
 - Motor Mapping for Brain and Spinal Cord Surgery
 - Peripheral Nerve Surgeries
 - Prostate/Pelvic Surgery
- **Neurophysiological Data Optimization Systems**
 - Intraoperative Neuromonitoring
 - Nerve Conduction Studies

Market Analysis



The global **medical robotics** market, **valued at \$13.8B in 2023**, is forecasted to grow at a 16.1% CAGR, reaching \$33.8B by 2029

Image-guided navigation: The global market, valued at \$2.55 billion in 2025, is projected to reach \$3.91 billion by 2030, with a CAGR of 9.0%

Spine implant market will be \$10.8 billion in 2024 and grow to \$11.8 billion by 2027

The **global spine endoscopy** market is estimated at \$5.59 billion in 2024, and is projected to grow to \$9.02 billion by 2030, with a (CAGR) of 8.26%.

The **Nerve Conduction Velocity (NCV)** Testing Services Market is set to achieve \$ 28.54 Billion by 2031, propelled by a strong CAGR of 9.11% between 2024 and 2031

Intraoperative Neuromonitoring Market size was valued at \$3.39 Billion in 2023, registering a CAGR of 4.5% and the market is projected to be worth \$4.82 Billion by 2030

Go to Market Strategy



*Sideways Strategies is at the initial Seed Stage and currently 100% owned by the two founders who have self-funded the company to date.

Use of initial funding round:

- Establish/hire core team and management
- Further secure existing patents and expand IP portfolio with additional patent applications
- Develop a prototype for High Resolution Nerve Localization System
 - confirmed that they have the capabilities to manufacture a prototype system
- Animal Studies: Use High Resolution Nerve Localization prototype in an animal study to prove nerve localization abilities are far superior to traditional nerve localization methods
- In Silico Study: Create computational models of High-Resolution Nerve Mapping Systems and Data Optimization Systems
- Secure additional funding/grants for product development
- Plan for next round of funding for medical device manufacturing and FDA Approval Process



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Thank You

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