Surgical Devices: Product Innovation Overview

Boston Engineering provides product design and engineering consulting from concept development through commercialization.

We combine innovative thinking, technical experience, and regulatory insights to develop new capabilities that empower surgeons, physicians, and clinicians to advance patient care.

Certified for ISO 9001 and ISO 13485 standards, Boston Engineering applies its phase-gate development process to:

- Accelerate new product development
- Mitigate risk
- Reduce production and maintenance costs
- Comply with stringent regulatory requirements

Our Impact

Interscope/MassMEP

Provide medical entrepreneurs with the technical expertise to develop a gastrointestinal endoscopic device (single interventional tool for mucosal resection). Services include integrated product development and quality management system (QMS) design.

Impact:

- Regulatory approval:
    - U.S. FDA Clearance
    - European Union CE Mark approval
- Protect client IP with seven U.S. patents to date

Advancing Endoscopy
Interscope®

Multinational Surgical Devices Brand

Redesign device to prevent failure caused by autoclave sterilization and to address usability complaints.

Impact:

- Increase sales, company credibility in key market segment with device relaunch
- Design, implement a sensorless motor control algorithm to replace failing components
- Improve performance by reducing vibration and smoothing acceleration-rate profiles

Orthopedic Device Company

Develop a sensor-based instrument to reduce cost and to increase precision for acetabular cup alignment during hip replacement surgery.

Provide industrial design and engineering — including the development of proprietary sensors, wireless technology, and software.

Impact:

- Develop advanced device to:
    - Increase successful outcomes
    - Extend implant life
    - Expand access based on affordability
    - Cut healthcare costs
- Secure Series D financing to fund regulatory approvals and clinical validation

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About Boston Engineering

Boston Engineering provides product design and engineering consulting from concept through commercialization and connectivity. Boston Engineering is also the Northeast's largest PTC software reseller and is a ThingWorx IoT partner.

Certified for ISO 9001 and ISO 13485, the company's industry expertise includes commercial, defense, and medical. Founded in 1995, Boston Engineering is headquartered in Waltham, Mass.

Centers of Excellence

- Human Factors/Industrial Design
- Embedded Systems
- Control Systems
- Internet of Things (IoT)/Connectivity
- Robotics
- Design for Manufacturability & Assembly
- Product Lifecycle Management (PLM)

BOSTON ENGINEERING™

Imagine the Impact ™

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