

Flex[®] Robotic System

Medrobotics[®]



Surgical robotics and advanced visualisation

The Flex[®] Robotic System gives physicians the ability to access anatomical locations that were previously difficult or impossible to reach minimally invasively. Sagentia Innovation used its expertise to redesign the system in order to reduce product cost and introduce performance improvements after initial product launch.

Expertise and domain knowledge

- Surgical robotics
- Surgical visualisation
- System architecture design
- Optomechanical design
- Rapid product development
- Cost reduction



Our client asked:

Medrobotics asked Sagentia Innovation to make improvements to its robotic assisted surgery system following its initial launch. We were then engaged on subsequent projects to further develop the vision system.

The project story:

The Flex® Robotic System gives physicians the ability to access anatomical locations that were previously difficult or impossible to reach minimally invasively, due to its flexible robotic endoscope with accessory channels for flexible instruments. It was initially launched for transoral procedures and was subsequently cleared for colorectal procedures.

Sagentia Innovation worked with Medrobotics to introduce improvements to the Flex Robotic System following its initial launch. Sagentia Innovation facilitated a cost reduction workshop at the start of the second generation program. We then undertook a rapid 5 month design and development of the durable and consumable modules within a revised system architecture and handed off to Medrobotics at Design Freeze.

Our subsequent projects focused on advanced visualisation including stereoscopic imaging, image processing and enhanced illumination.

Contact us

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Results: deliverables and outcomes

- The second-generation Flex® Robotic System launched in 2016 with significantly reduced cost of goods of its single use disposable
- The system received a Gold Award and Best in Class at the 2016 Medical Design Excellence awards
- We delivered a prototype stereoscopic vision system with chip-on-tip camera for demonstration to surgeons at clinical conferences

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