



OPPORTUNITY

Improve the performance of Medtronic's endoscopic PillCam by leveraging real-time data interoperability and availability.

INNOVATION

Integrate and automate endoscopy data with clinical systems and, crucially, deliver a new scalability and customizability.

SOLUTION

PECS interoperates with both clinical and imaging data, automates workflows and data exchange, and supports rapid and highly customizable deployment in a wide range of contexts, even outside hospitals.

IMPACT

In its pilots, PECS has demonstrated the potential for dramatic streamlining of implementation. Such rapid, scalable rollouts could enable a wide range of facilities to adopt advanced diagnostics.

Revolutionizing Capsule Endoscopy: Seamless, Real-Time Connection to Hospital Ecosystems

As healthcare systems evolve with regulatory and clinical demands, medical device connectivity has become essential. Interoperability requirements and US and EU regulations make standalone devices no longer able to meet modern hospital needs. Without integration into Electronic Medical Records (EMR) and Picture Archiving and Communication System (PACS) systems, critical diagnostic data is siloed, delaying care and limiting usability. Clinicians also face mounting inefficiencies, such as having to review patient data at dedicated workstations. Hospitals struggle with data accessibility, security, and opportunities lost to lack of connectivity, making unified solutions not just valuable, but mission-critical.

Modern Data Integration Upgrades Classic PillCam Design

Medtronic's PillCam™ EHR Connectivity Solution (PECS) seamlessly integrates capsule endoscopy with hospital EMR, PACS, and Radiology Information Systems (RIS). Built on interoperability standards such as HL7 and DICOM and **InterSystems HealthShare®** and **InterSystems Health Connect™**, PECS automates secure exchange of clinical and imaging data. This unified platform centralizes workflows, eliminates manual entry, and ensures real-time data availability. Unlike previous PillCam™ versions, PECS delivers scalability for diverse contexts, enabling a wide range of messaging formats, imaging workflows, and configurations tailored to each organization. Able to deploy rapidly with a future-ready architecture, it lays a foundation for next-generation, AI-driven automation and interoperability.

“Today with InterSystems, we get into production in the hospital in about a month... it saves us something around a year in configuration. It helps patients receive a diagnostic test that is less invasive... and the physician can get all the data quickly, in an elegant way.”

Medtronic PECS team

Rapid, Streamlined Implementation Scales to Any Deployment Size

Through early pilots, Medtronic’s automated and seamless connectivity between the PillCam™ capsule endoscopy system and hospital workflows has shown the potential to significantly streamline deployment and enhance operational efficiency—demonstrating a path to reduce typical implementation times from months down to weeks. Such rapid scalability could enable hospitals and clinics of all sizes and locations to adopt advanced diagnostic capabilities and expand access to care for more patients worldwide.

Key Innovations in Medtronic’s PECS System

- **Seamless Interoperability Across Systems** means PECS connects diagnostic devices directly with EMR and PACS platforms, unifying secure access to patient data. Supporting industry standards like HL7 and DICOM, it ensures compatibility and creates true integration where data flows effortlessly.
- **Rapid Deployment and Scalability** could potentially reduce deployment times from months to weeks, transforming implementation. Hospitals could quickly on-board new systems and expand capabilities without disruption. This agility could accelerate time-to-value and support rapid growth.
- **Workflows Customizable and Adaptable** by each hospital that tailor configurations to match its unique operational needs. PECS adapts to different EMR systems, clinical processes, and regulatory requirements, ensuring optimal performance and long-term scalability in any healthcare setting.
- **Enhanced Patient Access and Experience** extends even to hospitals with remote branches. Patient information verification and secure transmission of results to the hospital network’s central EMR, PACS, or RIS improves data reliability and ensures compliance with medical information standards.

About the Winner: Medtronic

[Medtronic plc](#), is a leading global healthcare technology company that attacks the most challenging health problems facing humanity. Their mission—to alleviate pain, restore health, and extend life—unites 95,000+ passionate people across more than 150 countries. Their technologies and therapies treat 70 health conditions and include cardiac devices, surgical robotics, insulin pumps, surgical tools, monitoring systems, and more. They deliver innovations that transform the lives of two people every second, every hour, every day.

About the InterSystems Impact Awards, Selected by an MIT Panel

Each year select client organizations are recognized at the InterSystems READY conference for projects driving positive change. Nominations are evaluated by independent judges from MIT on three criteria:

- **Makes a meaningful difference**
- **Breaks new ground**
- **Sets an example**

To learn more about the InterSystems Impact Awards visit

<https://www.intersystems.com/intersystems-impact-awards-2026/>