

# Invacare Corporation Improves Effectiveness

Client Taps Keane for Application Development and  
Management Outsourcing, Quality Assurance

## Abstract

Invacare Corporation manufactures and distributes home medical products that promote recovery and active lifestyles — from wheelchairs to respiratory products to medical supplies. To better support Invacare’s corporate mission to produce high-quality products, Invacare’s IT department turned to Keane. Keane leveraged its process improvement expertise and in-depth knowledge of Invacare’s application environment to help Invacare develop and implement a Quality Assurance Program. With the program in place, Invacare is improving the quality and effectiveness of its IT products — as well as ensuring that it meets the software compliance requirements mandated by the Food and Drug Administration.

## Client

Headquartered in Elyria, Ohio, Invacare Corporation is the industry leader in the \$6 billion market for home medical products — manufacturing and distributing the world’s broadest

product offering to approximately 25,000 independent, home medical equipment (HME) providers in more than 80 countries. The company’s goal is to provide the highest value in mobility products and home medical equipment for people with disabilities and those requiring home healthcare. To that end, Invacare continuously strives to achieve excellence in its products, processes, and service.

## Challenges

Invacare’s Information Technology (IT) department plays a critical role in supporting the company’s mission and ensuring that Invacare meets the software verification and validation compliance requirements set forth by the Food and Drug Administration (FDA). To meet these challenges head on, Invacare recognized a need to formalize its quality assurance processes and improve the quality of its software assets — and turned to Keane.

Keane has been a key IT partner for Invacare since 1998. Since then, Invacare has expanded the partnership to include

**“Based on our long-term experience with Keane, we knew they were the right partner for our quality assurance initiatives. With their help, we’re well equipped to meet our FDA requirements as well as ensure the highest levels of quality in all we do.”**

Russ Lenahan, Vice President  
of IT, Invacare

## Application and Infrastructure Solutions

production support for legacy mainframe systems as well as new technology Oracle applications. Today, Keane provides 24x7 production support for nearly all of Invacare's systems. Based on Keane's process maturity expertise and knowledge of its application environment, Invacare leveraged its partnership with Keane to develop and implement a Quality Assurance Program that would inject quality assurance processes into every phase of the project lifecycle.

## Solution

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As a first step, Keane formed a Quality Assurance SWAT team with key members of Invacare's IT personnel. Together, the team conducted a gap analysis to assess the state of Invacare's current procedures against ideal QA processes and the FDA's requirements. A QA Program was then developed to monitor and improve processes, enforce standards and procedures, and ensure that problems are found and resolved. Specific tactics of the program include:

- » Installing a project tracking system — to ensure that all IT projects are documented and tracked according to standardized criteria
- » Implementing a password policy — to meet FDA compliance requirements
- » Developing written software quality assurance policies and procedures for every phase of the project lifecycle
- » Creating checklists to validate that quality assurance standards are met

- » Defining and documenting package selection criteria — to ensure that the off-the-shelf software Invacare uses meets FDA software requirements
- » Developing and scheduling training for staff — to bring new and existing employees up to speed on quality assurance processes as well as FDA requirements

Keane also added a new role to the team — Dedicated Software Quality and Configuration Coordinator. To ensure success, the Coordinator conducts quality audits during certain phases of the project lifecycle, uses audit results to identify continuous improvements for future projects, and manages the project tracking system.

## Benefits

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Since forming its production support partnership with Keane, Invacare has been able to improve efficiencies, reduce costs, and free up its staff for new development and enhancement projects. Now, by working with Keane to implement a Quality Assurance Program, Invacare can meet the FDA's software verification and validation standards, in addition to reaping a host of additional organizational benefits, including:

- » Better built, higher quality systems
- » Improved integrity with business users
- » Improved project management methodology — resulting in more projects delivered on time and to budget

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- » Continuous quality improvements that enhance future projects

With its Quality Assurance Program, Invacare's IT department is bolstering its ability to support the company's mission — serving as a valued partner to business users and providing the tools necessary to build innovative and high-quality products.

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#### About Keane

Keane is an IT services firm headquartered in the US with more than 12,000 professionals worldwide. For 45 years, Keane has been an Application Services specialist with distinguished project management credentials. Today, we offer a flagship suite of Application Services, as well as Infrastructure and Business Process Outsourcing solutions delivered through onsite, nearshore, and offshore resources. Visit [www.keane.com](http://www.keane.com) to learn how our projects, managed services, and outsourcing engagements deliver value for a range of businesses and government agencies.

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