

# Quality Management System for a Pilot Manufacturing Facility

## Overview

One of the largest manufacturing companies in the world that produces a wide variety of complex products needed a way to improve the quality of its new products, and get them to market sooner. As a strategic technology partner, Nagarro developed a web based quality management system to accelerate process development at company's newly created pilot manufacturing center.

## Problem Description

Having a wide variety of different complex products spread across several business units made managing the production and quality of new products a difficult task. Prior to the project, the client spent tens of millions of dollars building full-scale production lines and years optimizing production process and quality of new products. A decision was made to build a pilot development center with an integrated quality management system; however, this required forming a partnership with an experienced company with a viable solution. The

pilot development center needed a scalable system that would allow the company to define process steps and variables, input data, and get analyses in order to optimize production for its various new products. Further, knowledge from pilot projects needed to be transferable to full-scale manufacturing facilities.

## Solution

Based on its expertise and experience in building mission critical shop floor systems, Nagarro was chosen as a strategic technology partner to design and build the quality management system. Using Enterprise Services, Nagarro built a highly scalable, seamlessly integrated web-based quality management system capable of collecting both complex and generic data, analyzing it, and producing custom reports. Specific features of the system:

- Ability to create and manage manufacturing steps and associated process and quality variables for new pilot projects
- Customizable interface able to handle new product lines with differing process steps and data collection/control systems
- Process scorecards to monitor performance and quality of pilot projects

- Comprehensive security framework integrated with LDAP active directory system for authentication
- Generic data collection and analysis frameworks allowing unique data acquisition and custom analysis options for each pilot project

## Benefits

- Reduced time to market for products as a result of improved process quality on pilot projects through an integrated quality management and optimization system
- Reduced costs and timelines of pilot manufacturing projects as result of faster understanding of cause and effects between process variables and their impact on quality
- Ability to transfer pilot development knowledge to full scale manufacturing facilities
- Allowed the client to proliferate best practices in advanced manufacturing and quality management across different business units as pilot projects were transferred to full scale factories