



Customer Success Story: Seagate

Overview

Seagate is deeply committed to quality. As the worldwide leader in the design, manufacture and marketing of hard disk drives for a wide range of consumer and business applications, the quality of its products directly impacts its marketplace position and continued growth.

An aggressive effort to optimize business processes is a key component of Seagate's integration of business excellence into all aspects of the organization. Implementing Six Sigma and Lean principles, which focus on enhancing quality and process to improve overall customer value, the company's quality team models projects, workflows and processes to achieve ever increasing levels of excellence.

The Metastorm ProVision Enterprise Modeling software supports model-driven Six Sigma and Lean at Seagate by combining business process modeling and statistical analysis to help improve business processes. Seagate leveraged this knowledge repository to achieve two quick wins, dramatically accelerating reporting times and reducing defect rates within its design area. A vast number of new opportunities for quality and business improvement are expected as sophisticated modeling becomes increasingly pervasive in the company.

Challenge

Eliminate Sub-optimization Using Six Sigma and Lean Methodologies

Seagate's Business Excellence Quality team is a strategic arm of WWQA. The team includes a half dozen Six Sigma "Master Black Belts" (MBBs) who train and mentor other business units, while helping to identify and realize "futures" for business benefits.

As experts in Six Sigma and Lean, the team members understand the costs and consequences of "sub-optimization."

Highlights

Manufacturing

Challenge:

- To mine and prioritize projects across organizations to eliminate sub-optimization using Six Sigma and Lean Methodologies

Customer Benefits & Results:

- Improved report turnaround time tenfold
- Reduced failure analysis submission defect rates
- Accelerated time to market
- Increased product quality – reduced disk drive defect rates by 66%
- Built on existing Visio diagrams through the robust import capabilities of Metastorm ProVision

This occurs when different groups and units pursue their own immediate priorities, losing sight of the larger business objectives that drive the company. If a "silo effect" of this sort takes hold, it can riddle an enterprise with resource duplication, misallocated resources and process inefficiencies.

To break out of this pattern, Seagate's Business Excellence Quality team launched a Quality Process Mapping/Modeling Initiative in 2006. The initiative was introduced to mine and prioritize projects, explained Peter Gibson, Senior Staff Master Black Belt for Quality. "We wanted to map our projects and processes – across sub-organizations – to objectively prioritize their value relative to quality as a whole. This would allow us to avoid sub-optimizing within Seagate's sub-organizations."

As the team saw it, new opportunities for performance improvement could be identified if it could map processes horizontally across organizational units. The team could prioritize projects and isolate inefficiencies that were diminishing performance. "Modeling sheds light on where important handshakes occur and helps us clarify opportunities for optimization," said Gibson.

Solution

Multi-Dimensional Modeling Drives Operational Performance Gains

The Business Excellence Quality team recognized that it would need a sophisticated modeling solution and began

exploring its options.

Having used Visio and PowerPoint for modeling in the past, Seagate's team understood the limitations of such two-dimensional approaches. "We needed a way to look more holistically at the enterprise," said Gibson. "I can't map a large scale organization in just two dimensions."

He explained that a more advanced and intricate modeling approach would be necessary to express the various elements of the organization. Deeper capabilities would be needed to capture the multiple levels of detail associated with a process or a procedure – and then, to share it with the relevant parties.

After surveying the market for possible solutions, the Business Excellence Quality team adopted Metastorm ProVision (formerly Proforma ProVision). It provides the richness of analysis and insight that the team was seeking, as well as robust capabilities to import and leverage data from other tools, like Visio.

Now it was time to capitalize on these capabilities. As part of the Quality Modeling Initiative, the Business Excellence Quality team's MBBs went out on the road to meet key organizational leaders. To gain executive buy in, the team began by conducting two small-scale projects that would rapidly generate business value.

First, the team looked to streamline the product reliability report process. Having analyzed the process and created models that provided a clear visualization of it, the Business Excellence Quality team identified redundancies, inefficiencies and opportunities for automation.

In the second situation, the team modeled and analyzed the process for Seagate's disk drive failure analysis submission.

"We mapped out processes and collaborated with different teams," said Gibson. "We automated processes, removed redundancies and eliminated archaic procedures. Through such efforts, we streamlined processes and created a much more effective end product."

Results

Saving Time, Eliminating Inefficiencies, Increasing Product Quality and Enabling Quicker Time to Market

The Business Excellence Quality team has generated enthusiasm for its Quality Process Mapping/Modeling Initiative through these "quick wins."

In the first project, product reliability report turnaround time was reduced tenfold through process streamlining – saving one engineering group 200 minutes a day of total reporting time. As a result, three engineers were freed from tedious administrative

tasks and could devote their energies to true engineering activities that deliver higher value to the enterprise. Moreover, the recipients of reports gave them much higher ratings in terms of their detail and value. Ultimately, the engineers' ability to produce the reports quickly means faster time to market and higher product quality.

In addition, defect rates on the disk drive failure analysis submission were reduced by two-thirds through the elimination of process inefficiencies. By identifying more effective ways to verify key information post-failure, the design team accelerated product delivery and achieved faster time to market.

These important contributions were recognized within the enterprise when Gibson and his team received the Seagate Business Excellence Award. The award noted the team's innovative efforts to enhance organizational quality and efficiency.


As an added benefit, the Business Excellence Quality team developed an organizational map that is rich in valuable detail and expansive in its perspective. "This provides the executive team with a comprehensive view of the Quality organizations," said Gibson, describing the map as the backbone on which key decisions about functions, roles, processes, trade-offs and investments can be diligently assessed. "Having it tied together in process map form makes it much easier to look across the organization."

The model-driven initiative is gathering momentum throughout Seagate. "We have raised awareness within the Quality organization that there are many process efficiency improvement opportunities in a traditionally operational-focused environment," said Gibson. "Executives have told us this approach will enable them to do more with less and represents a major aid to their upstream quality efforts."

Having completed the organizational and functional map, the Business Excellence Quality team is now running several quality improvement projects. Team Master Black Belts are training project members on how to effectively use modeling solutions to continually enhance process quality. In the next phase of its endeavor, project leadership responsibilities will be handed off to the Quality functional units – and the Master Black Belts will assume the role of project mentors.

"ProVision is such a comprehensive solution, and there's so much power to it," concluded Gibson. "We are now seeing and appreciating what it can do. Initially, I just wanted the ability to drill down into a process map. Now, I am seeing so much more value than that."

Gibson expects to enhance collaboration throughout the



organization by communicating through rich and detailed models – going significantly beyond what can be communicated through documentation alone. He also points to the possibility of enhancing market analysis and new product introductions through scenario building. As he put it, “Our modeling capabilities will enable us to play with various scenarios – even optimizing our processes before we put them in practice.”

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