Stryker Endoscopy R&D Accelerates Time to Market With SPK's Application and Infrastructure Management

Challenges

Stryker Endoscopy R&D had the typical problem of a dynamic engineering department – the network, systems, applications and tools were inadequately supported. The internal IT department tried hard, but the service levels required by the engineers and their unfamiliarity with engineering applications presented a difficult challenge.

As a result, the design engineers themselves began playing an active role managing the tools. Unfortunately, this took time and effort away from their primary goal – designing and delivering quality products to market on schedule. Further, since technology support wasn't their core competency, the results were not great. This led to systems, networks and tools functioning sub-optimally. When the tools don't function superbly, engineers are far less productive, again affecting time to market. A recent Aberdeen Group 2009 report proved that improving engineering productivity can translate directly into a substantial increase (35%) in revenue (Product Design Made Easy: Free Up Engineering for More Revenue, David Houlihan/Michele Boucher, August 2009, Aberdeen Group).

Results

Enter SPK and Associates. We happened to call Stryker's Engineering Services Manager one day regarding a new workstation he wished to purchase. He answered the phone sounding very distracted. When asked what was troubling him, he stated, "My entire R&D design network has been down and unusable for over 1 week. I have engineers sitting around twiddling their thumbs while the product delivery schedules are being shredded. I've had my IT consultant in here several times and he hasn't been able to fix it yet, and he's now unreachable for a few days."

The SPK representative immediately asked if he'd like us to send someone over for a few hours to see if we could help free of charge. He eagerly accepted, although he seemed doubtful that we could accomplish anything that quickly.

We figured out the cause of the problem in a few hours, and the network was up and functioning within the day. The outage was costing Stryker about $15,000/day in lost productivity. That didn't include any estimate of lost revenue because of missed product release deadlines. The MCAD engineers were back using their 3D design tool. This success earned us a contract to manage their Engineering network, systems, storage, and applications. But the larger benefits of having SPK manage their technology were experienced over the following months and years.

We started off managing the R&D Unix network, systems, storage, and MCAD design application. Immediately, the results were evident, all leading to faster time-to-market and improved product quality:

- The network, systems and applications became more reliable. The average availability of the technology increased sharply to 99.0%. As a result, the engineers' productivity improved.

- The design engineers no longer had to support their own systems and applications. This saved them an average of $20K/month of lost time.

- SPK introduced and seamlessly integrated new R&D tools into their development processes. These shortened their design lifecycles and improved product quality.

- SPK immediately saved them over $200k in application licensing costs through effective license monitoring and management.

Now Stryker's R&D engineers and management have one place they can go to get any of their technology problems resolved. They simply contact SPK and the issue gets resolved. They can get back to their development work and avoid the frustration of tracking the issue with the various technical people who might be required to solve the problem. They're confident the problem will be handled efficiently, and that they will receive prompt communication and updates.

Let's say a software engineer has difficulty checking code into their ClearCase software configuration management system. In the past, they might have contacted the engineer who managed ClearCase. If it was a simple ClearCase problem, it would get resolved. But more often than not, there's something else involved—a network issue, or an Active Directory authorization problem. Now the engineer managing ClearCase has to find someone in IT to help. That engineer isn't really sure what the root cause is, and the IT representative has no idea how ClearCase actually works. The problem gets shuttled around, and no one is sure who actually owns it. Communication back to the developer is spotty, and the developer feels like they have to track the issue in order to get anything done. Precious development time is wasted, and the developer is frustrated.

Challenges
• Poor support of Engineering tools
• Excessive downtime of tools
• Design engineers spending too much time on tool support
• Direct impact on time-to-market and product quality

Solution
• Complete, integrated application/systems/network tech support for R&D by SPK with SLA's

Benefits
• 99.5% availability of R&D technology (apps, systems, networks)
• Savings of $20k/month in design engineering productivity
• Improved time-to-market
• Better product quality

Solution

Today, SPK provides complete application, system and network management for Stryker Endoscopy's R&D department. Their current product development environment is complex, and includes mechanical, electrical, and software development. The following resources, managed by SPK, are used in their development lifecycle:

- Segregated lab R&D network
- Linux and Windows servers
- Databases: IBM DB2, SQL Server, Oracle, MySQL
- VMWare environment
- Compute Farm
- Machine Shop
- MCAD applications: PTC Pro/Engineer, Pro/Mechanica, Intralink; Ansys, Labview, Matlab, Solidwords, Stratasys Rapid Prototyping, Zemax Optical,

- EE applications: Altera Quartus, Cadence Orcad, MGC PADS, Cadence Allegro

- Software Engineering applications: IBM Rational ClearCase, ClearQuest, RequisitePro; Doxygen; Green Hills; Parasoft; Microsoft Visual Studio

- Other: PTC Integrity (Requirements Management, Test Management, Traceability); Minitab

SPK's knowledge and expertise of the tools used by engineers to develop and release products provides a significant advantage to an R&D organization. We are unique among Service Providers in our focus on product development applications and systems, so we can provide efficient and quick solutions for any issues that arise.

These tools are managed cohesively and proactively. All critical services are monitored through a monitoring system and problems remediated 24x7. SPK consistently meets their SLA agreement for all the R&D tools and services. The engineers no longer have to worry about supporting or fixing their tools.

Besides supporting existing technology, SPK continually reviews Stryker R&D's business needs and processes to determine if there are alternative methods and technology that can further accelerate time-to-market or product quality, cost effectively.

"SPK better understands R&D needs than traditional IT departments. They have provided us with critical application support and around the clock management of our engineering systems and networks. With their help, our product development continuity has improved dramatically. Our R&D group also relies on SPK to establish new product environments and test setups. Their assistance in all these areas has helped reduce overall time to market."

–Stryker Endoscopy's Director of Engineering Services

About SPK and Associates

SPK is a California based firm that provides exceptional technology solutions to help companies design and build products better, faster, and more cost effectively. We excel at improving time to market and product quality in highly innovative and highly regulated industries such as Medical Device. We have deep expertise in the applications, systems, networks, and processes R&D uses to develop and release products to market.

Our specialties include Software Engineering Consulting, SDLC/Application Lifecycle Management, Build/Release services, Network Design and Management, Infrastructure Management, MCAD and EE Application Management, PDM and PLM, Systems Integration, and Application Hosting and Management for ENOVIA.

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