

## Performance Made Transparent: Innovative Scientific Instrument Company Chooses QAD Service and Support Suite to Manage Its Global Service Operations

### The Company: FEI Company

FEI is a leading diversified scientific instruments company. It is a premier provider of electron and ion-beam microscopes and tools for nanoscale applications across many industries: industrial and academic materials research, life sciences, semiconductors, data storage, natural resources and more. With a 60-year history of technological innovation and leadership, FEI has set the performance standard in transmission electron microscopes (TEM), scanning electron microscopes (SEM) and DualBeams(tm), which combine a SEM with a focused ion beam (FIB). FEI's imaging systems provide 3D characterization, analysis and modification/prototyping with resolutions down to the sub-Angstrom (one-tenth of a nanometer) level. FEI's NanoPorts in North America, Europe and Asia provide centers of technical excellence where its world-class community of customers and specialists collaborate. FEI has approximately 1800 employees and sales and service operations in more than 50 countries around the world.

### The Challenge: Facilitate Service Business Growth and Global Standardization

FEI has experienced some growth in the last year despite the tough global economic environment, and expects to continue growing in the next few years. FEI needed to have a strong systems foundation for their services operations; one that would support improved efficiencies, sustain continued growth, and improve the customer experience. And, because they are a global organization, they needed a system that would facilitate standardizing their processes throughout their sites around the world.

"We had to get the foundation strong and facilitate the global process standardization to allow scalable growth. It was needed to further refine and unify our service call process," says James Fetterman, Vice President Worldwide Services at FEI.

One of the biggest challenges FEI needed to address was their lack of workforce schedule visibility. They had no visibility of their service workers, where they were, or what they were doing. What they did have was a very manual method of recording field service activity after a service call was conducted which led to inefficiencies due to the manual double FSR entry process. The most critical

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information around quality and operational efficiencies were captured manually, and it slowed down the velocity of their business. It typically took one week after a service call was made to get information updated and available for analysis in their system due to their manual processes. This delay in getting the service call information into their system had a domino effect which caused a delay in invoicing, and therefore delayed the payment from the customer. FEI also found that service call information was siloed, with minimal exchange of this information between departments.

"We were doubling our work getting call information into our system," added Fetterman. "There were multiple steps to get the data into the system and double entry of information, which caused delays in updating the database and opened the door for potential errors with re-keying the information. We knew we could get the service call entered more quickly, improve accuracy, and be more productive."

FEI currently has a total worldwide installed base of over 7800 systems. The development of these solutions has been driven by FEI's strong customer technology base that includes patented and proprietary technologies and the technical expertise and knowledge base of research and development personnel worldwide.

FEI's service and upgrades market provide support for products and customers for the entire life cycle of a tool from installation through the warranty period to contract coverage or on a time and materials basis through to end of the product's life. FEI believes strong technical support is an important part of the value proposition that it offers customers when a tool is sold. FEI's Service and Components market provides support across all markets and all regions.

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Prior to implementation of QAD's Service and Support Suite of products, FEI had different homegrown methods to collect and process service data. Business processes had some variations across the globe and required users to enter the same information in multiple systems more than once since the data collection did not integrate with backend ERP (QAD Enterprise Applications). This resulted in suboptimal processes, delayed data entry and created challenges related with aggregate reporting.

#### **The Solution: QAD Service and Support Suite Brings Transparency and Clarity**

In order to address these challenges, after a thorough selection process, FEI chose QAD's advanced field service management capabilities provided by combination of QAD Service/Support Management (SSM), QAD Mobile Field Service and QAD Field Service Scheduler products.

QAD Mobile Field Service (MFS) extends QAD Service/Support Management (SSM) functionality to field service engineers working remotely at customer locations so that they can receive assignments, record activities and order parts from their laptops or handheld devices.

QAD Field Service Scheduler (FSS) provides a visually assisted, centralized scheduling tool for dispatchers and service managers. FSS allows intelligent mapping and planning to schedule visits and better visualization and management of call status and engineer workload.

“QAD offers a world-class Service and Support product suite that enables us to manage our service organization with transparency and efficiency,” added Fetterman. “QAD's solutions improve the exchange of information between FEI's field service, logistics and service support teams. The result is that we have effective planning, professional logistic control and better call activity management. When a customer calls for service, we are confident that we are providing them with the best service based on up-to-the-minute information. This means that we are servicing our customers better, which contributes to higher levels of customer satisfaction.”

FEI's first site went live in mid-October 2009. By the end of November 2009, most sites in Europe and North America were using the new system. The remaining 50+ service locations across 5 continents plan to go live by the end of January 2010. Before the first pilot, two Conference Room Pilots and a global User Acceptance Testing session were held covering business requirements of FEI's different regions (North America, Europe, Asia Pacific, Japan).

#### **The Benefits: Efficiency, Quality, Transparency, Profitability**

FEI improved their visibility and efficiency of the service workforce, as well as the overall quality of work. FEI obtained more transparency of their services workforce, and improved their scheduling and balancing of the workforce. They also eliminated steps and reduced the time required to report service calls. FEI saw improvements in the accuracy of the data, and were able to collect additional critical information that was never captured in the past such as the FSE repair comments. These improvements were made even while their business grew, and without the need to increase the size of the existing workforce. After implementing QAD's Service and Support Suite, FEI's service organization was more profitable, and was now helping fund additional new product initiatives.

“Immediate benefits observed were related with field activity recording and balancing the field workload,” said Fetterman.

Due to various and suboptimal methods used in the past, “data entered did not capture all the information; we were losing valuable service knowledge information,”

explains Fetterman. “Previously, our process required multiple contacts between engineers and the call center. This would increase the workload at our call center unnecessarily and contribute to delays during the entire call management process. Our data entry process for call activity used to have multiple steps and it would take up to one week in most cases, delaying the time to invoice, which in turn delays collection.”

“Service engineers would need to call the contact center when they had a new service request while at the customer’s site. Creating this new service request would take a long time, we would lose visibility, and it would hinder our escalation process. Now the service engineer can create a new call themselves, and we have immediate visibility,” added Fetterman.

FEI’s key benefits:

- Field activity recording improvements in data entry time and accuracy
- Eliminate repeated Field Service Report data entry
- Make it easier and faster for Field Service Engineers to submit Field Service Reports (2 days vs. 1 week)
- Electronic part ordering to help reduce contact with help desk
- Updated parts delivery status electronically communicated with no helpdesk intervention
- Speed up parts reverse logistics and better manage service parts inventory
- Ability to capture repair comments for knowledge mining
- Better visibility of service call schedules in order to efficiently balance field workload (call schedule transparency was required to efficiently balance field workload)
- Electronically capture signature to meet commercial procedure requirements and give customer immediate proof of service

“We can now grow service revenue without necessarily adding workforce at the same rate,” said Fetterman. “And, even while we grow our business, we continue improving our service quality. We are now able to balance the field workload and provide better capabilities for our engineers to do their jobs. This will hopefully help us keep and attract top talent, improving job satisfaction of our field service organization.”

The Future: QAD Service and Support Suite Brings Transparency and Clarity

As the next step, FEI plans to implement a “diagnose before dispatch” call process which is expected to:

- Improve first call fix rate by about 50% (engineer does not have to return to the site with parts needed)
- Improve on site call avoidance by about 20% (fix the problem on the phone before dispatch)

“This new process, will allow FEI to get the full benefits from global consistent scheduling system with thorough scheduling rules to minimize management involvement in scheduling of field service engineers and parts,” said Fetterman.

Highlights	
<b>Company</b>	
Company Name	FEI Company
Industry	High Tech Industrial
Products	Electron and ion-beam microscopes and tools for nanoscale.
<b>Solutions</b>	
Solution	eB2.1 SP4, .Net UI, QAD Service/Support Management (SSM), QAD Mobile Field Service (MFS), QAD Field Service Scheduler (FSS)
Implementation Partner	QAD Global Services
Hardware Platform	IBM, HP
Operating System	IBM-AIX, HP-UX
Database	Progress OE 10.1B
Languages	English, Dutch, German, French, Chinese, Taiwanese, Japanese
Number of sites	9
<b>Results</b>	
<ul style="list-style-type: none"> <li>• Reduced data entry time from 5 days to 2 days</li> <li>• Improved planned maintenance inspection timeliness by 5%</li> <li>• Increased field service engineer utilization by at least 5%</li> <li>• Reduced aged parts write-off by 10%</li> </ul>	