



## Medical Device Company Improves Quality, Saves with TIBCO Data Science

Superior, fast, easy analysis; easier compliance; vendor monitoring

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—Business Analyst

### CHALLENGE

Few technologies are advancing faster than those in the medical field, and the right advanced analytics software can be a game changer. This medical device company is a leader in development, manufacturing, and distribution of medical devices, including technologies that revolutionize whole blood and hemostasis testing.

“We were data-rich but analysis-poor,” says a business analyst. “It was no longer viable for R&D to rely on IT for access to test data and perform one-off analyses in Minitab. They needed fast access to data and consistent and accurate analyses.”

Implementing sophisticated analytics was especially critical because of the volume and complexity of its products, including hundreds of thousands of cartridges with sensors affected by a wide range of environmental factors. “We monitor sensor performance constantly and collect millions of records. We needed an analytics platform that would enable fast access to that data for troubleshooting any problems. And because there are so many factors, we also needed the platform to intelligently monitor test data and automatically alert to emerging issues.”

## DETAIL

**HOURS/DAY**

time saved by every scientist

**MEDICAL DEVICE  
MANUFACTURER**

A market leader and high-volume manufacturer of diagnostic instruments for critical care and hemostasis.

**FAST FACTS**

**Industry:** Pharmaceuticals and Healthcare  
**Country:** United States  
**Employees:** 1,000

**SOLUTION**

The company began looking for an analytics solution to meet its needs. It quickly eliminated most tools because they couldn't deliver the statistical functionality and level of trust required for medical devices. Two contenders were left.

"TIBCO® Data Science was an easy decision," says the analyst. "The people who helped us implement it were simply awesome, and the price was far below what another analytics solution was quoting. With TIBCO Data Science, I quickly built a wide range of analytic processes that R&D can use enterprise-wide. Now when they need answers, they can run preconfigured analyses from the central store. They don't have to ask IT.

**BENEFITS****SUPERIOR, FAST, EASY ANALYSIS WITHOUT PROGRAMMING**

"To implement and maintain other solutions, you need to know programming, but I'm not a great programmer. With the TIBCO Data Science platform, I connect to data, create an analysis, and publish it within an hour. Minitab doesn't come close. It doesn't enable publishing analytic configurations, scheduling analyses to run at specific dates and times, or access to external events via Visual Basic.

**SUPPORT FOR QUALITY, CONSISTENT RESULTS, COST SAVINGS**

"Many analytical configurations are scheduled to run periodically to check various properties. If there is an issue, the system automatically emails the appropriate people or logs the violations to a database. The glucose slope test takes half a day, but with the TIBCO Data Science system, engineers can focus on other matters, knowing they will get an email if a factor becomes an issue.

"You can develop all sorts of insights about your data that you might not otherwise. The TIBCO Data Science batch functionality allows me to do a certain types of analyses using certain variables, and it organizes the results into a nice tree structure along with other documents, which is very helpful. Depending on how you analyze, you can get different results. Various scientists might use different trims on the data, or not trim it at all, so they would all get different results. With the TIBCO Data Science system, we can ensure that they all perform the analysis in the same way, so we get consistent results.

"During cartridge manufacturing, we occasionally experience problems, like an inaccuracy in a chemical formulation for one of the sensors. Scrapping a batch of cards would cost hundreds of thousands of dollars. The TIBCO Data Science system helps us quickly figure out what went wrong and fix it so we can avoid those costs. We can marry test data with electronic device history records from SAP and perform correlations to determine which changes might be causing the issue.

**EASIER REGULATORY COMPLIANCE**

"The TIBCO Data Science platform helps us perform validations required by the FDA. We can easily demonstrate that two product batches made using different chemicals are statistically the same. We're also required to have established escalation procedures based on statistical evaluation of our data. If we did not have the platform, implementing those procedures would have required custom coding. But with the TIBCO Data Science platform, it was quick and easy. We simply have the platform evaluate our data and email the appropriate people — even staff who don't have the platform installed can receive these alerts."

### **AUTOMATIC MONITORING OF SUPPLIER PERFORMANCE**

“Before we install subassemblies, we test them to make sure they meet specifications. The data goes into our LabVIEW database, and the TIBCO Data Science system connects to that data to calculate the process capability index, so we can ensure suppliers are meeting our specifications.”

### **FUTURE**

“There might be cost savings out there that you’re just not seeing because you’re not analyzing your data to the extent you could. Using the TIBCO Data Science system, we’ve discovered interesting things that have saved a tremendous amount of money, and we look forward to finding even more.”



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