Spotfire™

Gilead improves drug safety and operations with enhanced data exploration and visual analytics

80%
FASTER DASHBOARD UPDATES

Challenge

Digital transformation is a continuous process for Gilead. In its FDA-regulated industry, pharmacological research, development, and manufacturing are constantly changing. Regulatory compliance, and the investigation of drug side effects and ensuring safety, have never been more important. To keep up, Gilead needed an analytics platform leveraging deeper data discovery and intuitive data visualizations to deliver fast insights and guide pharmacological decision making. According to Vishakha Mujoo, associate director at Gilead Sciences, "Our requirement was interactive visualizations that could support exploratory data analysis for a highly regulated environment, and yet meet our futuristic AI pathway and help us embrace open source."

"Our need was not just pretty dashboards but something that would have brains, too, and could help us dig deeper to analyze trends in our data and meet our future AI requirements."

— Vishakha Mujoo,
   Associate Director

ZERO
MAINTENANCE INTERACTIVE DASHBOARDS

50X
REDUCTION IN REPORTS WITH A CONSOLIDATED VIEW

Solution

Several groups within Gilead use Spotfire analytics for use cases, from day-to-day operations monitoring to trend analysis, helping everyone better understand their data. The clinical trials group uses it for statistical analysis; the operations team for daily monitoring of live data to uncover issues faster; the submissions team for trend analysis and live monitoring of submissions; and the MSS group for supporting signal detection. Because Gilead uses so many complex dashboards across the enterprise, it even has a team that creates internal dashboards to manage the functionality of all its dashboards.

"Spotfire analytics is helping integrate various groups, connecting the dots, and making sure we can standardize our processes across various functional groups," says Mujoo.

Benefits

The right drug, in the right time

Using Spotfire software to identify outliers and patterns in complex, disparate data sources, Gilead enabled early detection of unexpected drug safety problems. With this increased oversight also came increased confidence and time savings for the business teams.

Mujoo states, "One submission team manager told me, "Before, I was not able to sleep, thinking I may have missed something, but now I have my sleep back. And each of my team members can save one hour every day.""

"For developers, there is a big impact because the turnaround time reduced from one week to one day, which is close to 80 percent."

— Sayali Patil,
 R&D Manager

1500%
INCREASE IN REPORT USAGE

LOWER
REPORT BUILD TIME FROM YEARS TO MONTHS

Visibility and data exploration for everyone

With widespread adoption of Spotfire analytics, all teams can collaborate and find similarities in common data. Exploratory data analysis is fast and easy for everyone. "Everybody is looking at a different view of the same data, like a Rubik's cube, bringing them closer and helping them to collaborate," says Mujoo. "We're able to refresh the data and see live data as and when it happens. That's something that delights users."

Mujoo's team uses Spotfire analytics for real-time analysis of case data, tracking changes and updates quickly and easily. "I see Spotfire analytics as something that is integrating our department," says Mujoo. "The KPI chart is quite popular because it creates a nice dashboard for trends, and then users can drill down for more details. Under the hood may be multiple data sources, but for end users, it is the single source of information."

With IronPython scripts, Gilead also can automate and customize dashboards to meet groups' needs simply and efficiently.

Analytics on analytics

"We never had any kind of dashboard to measure resource productivity, but with Spotfire analytics, we can get quantitative attributes like number of submissions or cases processed by a group or user. We can even view workload peak months or weeks," says Mujoo.

By creating a dashboard, the team can see day-to-day operational data and compare it to historical trends. If a case stays longer than usual in a particular workflow, it can be pointed out as an outlier, and the group or user responsible can identify the root cause.

Internal dashboards

Gilead also uses Spotfire dashboards to manage regulations and compliance. Gilead's Internal Impact Assessment Dashboard helps keep enterprise-wide dashboards updated with FDA guidelines around patient data. Previously when an FDA regulation changed, Gilead had to update certain fields or remove certain kinds of information about a patient manually, which could create errors. When one field would change in the source database, dashboards across the enterprise were affected and had to be tracked down.

With the new overall dashboard, Gilead leadership can conduct proactive resource planning, crucial in a GXP-regulated environment. The Impact Assessment dashboard identifies unused information that can be removed, verifies metadata, and provides a unified view for dashboard owners. This use case had a big impact across the company. Senior leadership can now view statistics at any time. They can export the data without any technical knowledge about Spotfire dashboards. For managers, it helps with resource planning. Data can be exported and shared via email.

GILEAD

Gilead

In the regulated biopharmaceutical industry, Gilead approaches digital transformation as a continuous, evolving process, one that needs an analytics platform to provide deeper data discovery, intuitive data visualizations, trend analysis—and helps everyone better understand their data.

According to Sayali Patil, R&D manager in the global patient safety group at Gilead Sciences, "For developers, there is a big impact because the turnaround time reduced from one week to one day, which is close to 80 percent. Previously, the task was manual, and we had to analyze more than 100 dashboards in the library. This used to take a week—but because of this dashboard, operational efficiency has improved, and there are no human errors or missed information."

Looking to the future, Gilead's goals include automation, artificial intelligence, and accelerated use of the Spotfire solution. Mujoo concludes, "We look forward to data virtualization to add more data sources. We are also looking at adding machine learning and AI capabilities to increase the use of Spotfire analytics in other groups."

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Spotfire™

Spotfire® is a visual data science platform that makes smart people smarter by combining interactive visualizations and advanced analytics to solve complex, industry-specific business problems.