The Challenge: Impediments to Actual Insights

In today’s increasingly competitive marketplace, the need for data-driven insights and agile decision-making has never been greater. Organizations are under pressure to identify opportunities and risks from vast quantities of multi-variate data coming from disparate sources, including real-time data feeds.

Life science data in particular is complex, involving vast quantities of experimental, clinical trial, and real world evidence data, needing to be collected, managed, analyzed, and reported in bringing new medicines to market. To stay competitive, organizations need to empower employees to visually explore and interact with data on the fly, without having to rely on IT, to make better data-driven decisions. They need to leverage the value of analytics beyond an individual or small group, to a wide audience of users across all corporate domains.

Manage experimental data with TIBCO Spotfire®.

AT A GLANCE

TIBCO Spotfire® provides Analytics for the Enterprise, empowering organizations to accelerate discovery by leveraging world class interactive dashboards, coupled with the sophisticated statistics, enabling all kinds of users across all corporate domains.

PerkinElmer is the exclusive global distributor of the TIBCO™ Spotfire® platform for certain scientific and clinical R&D applications.
Delivering Analytics Across Organizations

The premier data discovery and analytics platform, TIBCO Spotfire® empowers users to explore their data freely, giving them the power instantly to visualize, mashup, interact with, and share data at any level of detail, without having to rely on IT or Biostats. It provides powerful capabilities, such as dimension-free data exploration through interactive visualizations, and data mashup to quickly combine disparate data to gain insights masked by data silos or aggregations. Users are able to answer their own pressing questions, uncover answers to questions they didn’t know they had, and even anticipate what happens next. By leveraging TIBCO Spotfire®, organizations can make the most of emerging trends or take preemptive action – before anyone else – achieving a competitive advantage.

**Solution: TIBCO Spotfire® by PerkinElmer**

TIBCO Spotfire® delivers on the need to unify and automate the creation and delivery of analytics in a rich, contextual, and interoperable enterprise framework.

- **Flexible Deployment Options**: Set up On-Premise, in the Cloud, or Hybrid
- **Flexible Client Options**: Tailored to specific user and team needs
- **Enterprise-level Security, Scalability, Extensibility (Integration and Customization)**
- **Streamlined Installation, Upgrade, Configuration, Administration**
- **System Monitoring, Usage Reporting and Analysis**
- **Contextual Collaboration**: Quickly share results via the web with colleagues, collaborators, and through other flexible channels
- **Demonstrated Success**: Decades of Enterprise Deployments, with TIBCO Spotfire® used across Leading Life Science organizations, including throughout Research, Clinical, Manufacturing, Finance, Sales and Marketing, and beyond

**TIBCO Spotfire® is used by all of the Top 25 Pharma and by leading Biotech, CROs, Med Device, Agro, and Material Sciences Companies**

**DELIVER VALUE ACROSS YOUR ORGANIZATION FOR STRONG ROI**

**Support Key Enterprise Requirements**
- On-Premise, Cloud, Hybrid Deployments
- Security and Governance, Scalability, Performance, Integration and Customization, Collaboration, GXP Validation and Audit Ready

**Empower All Users**
- Enables Self-Service for Immediate Access to Data at Decision Time
- Offers Full Spectrum of Capabilities to Suit Different Skill Levels
- Easy and Accessible for casual users
- Deep and Rich Analytics for Advanced Users

**Get Everyone On the Same Page**
- Sharing / Reusability
- Centralized, Reliable Data Access (e.g. KPIs, Simple Reports, Ad Hoc Analysis and Dashboards through to Real-Time Analytics
- Full Spectrum of Analytics to Fit all Use Cases

“By focusing on the scientific product development roadmap and integrating TIBCO Spotfire® with their suite of informatics products and scientific instrumentation, PerkinElmer will maximize the benefit that TIBCO Spotfire® provides to the R&D community.”

Jonathan Usuka, Celgene

TIBCO Spotfire® Content Analytics.
Enabling Scientists with PerkinElmer's domain expertise in Drug Discovery and Informatics.

PerkinElmer combines advanced informatics solutions with deep scientific domain expertise in life sciences, drug discovery and development, material sciences, and a range of other science-driven fields. PerkinElmer’s solutions like Lead Discovery, OmicsOffice, and High Content Profiler help leverage TIBCO Spotfire® and help scientists gain deeper understanding of their experimental results.

Our experienced service and support teams help with deployment and adoption by providing technical and installation services, end-user training, and support. The PerkinElmer Cloud offers an end-to-end managed service at a predictable cost. Finally, the Analytics Center of Excellence is available to help customers to get the most out of their data and investments.

A key strength of the platform is the broad advanced analytics functionality, including broad predictive analytic functionality, and access to other advanced analytics. From simple use cases to the more complex, TIBCO Spotfire® is recognized as enabling users with a wide spectrum of Advanced Analytics capabilities that are accessible to all users, regardless of skill level.

TIBCO Spotfire® supports key enterprise requirements such as offering flexible deployment options: on premise, cloud, or hybrid. Enterprise-class security, scalability, governance, integration and customization, collaboration support the demands of the entire business.
**TIBCO Spotfire® Clients**

TIBCO Spotfire® end users connect to the TIBCO Spotfire® Server using either an installed client or a web client. TIBCO Spotfire® Analyst is an installed client while TIBCO Spotfire® Consumer and TIBCO Spotfire® Business Author are web clients. To facilitate interactive analysis in a web browser, a TIBCO Spotfire® Web Player service generates visualizations that are displayed in the web browser.

The different TIBCO Spotfire® clients provide enterprises with the right client for every user. TIBCO Spotfire® Analyst and TIBCO Spotfire® Business Author enable power users to work with data sources and create complex analyses, while TIBCO Spotfire® Consumer provides enterprise-class scalability and universal access to geographically dispersed consumers of data.

**TIBCO Spotfire® Automation Services**

TIBCO Spotfire® Automation Services is a highly recommended for a typical enterprise starter pack. A powerful add-on that many of our customers use to automate jobs, it uses the TS Analyst or TS Consumer clients to programmatically controls actions in TIBCO Spotfire® to run automated jobs, using the TIBCO Spotfire® server. (For example, a common job might handle updates or data refreshes based on the source data, for example where the data might have been embedded overnight, it will run jobs so the data is refreshed, or perhaps a user wants to open an analysis, export a visualization from that analysis, and send an email about it to a number of co-workers.)

This add-on is particularly useful to enterprise clients, across many use cases where there are nightly updates of data, where Automation Services would call out. Time is saved by automating repetitive tasks, while larger audiences are exposed to insights coming out of TIBCO Spotfire®, improving productivity, increasing scalability, and lowering administration costs.

**TIBCO Spotfire® Statistical Services**

With TIBCO Spotfire® Statistics Services (TSSS), technical and business professionals gain the benefits of a full predictive analytics ecosystem. They gain more confidence in their decisions by using the latest, most relevant predictive analytics available in R, S+, SAS, or MATLAB – without requiring them to have deep expertise in statistics. Organizations increase efficiency by leveraging their existing investments in predictive analytics, giving decision makers self-service access to easy-to-interpret analytic results through TIBCO Spotfire® applications. Scarce statistical resources deploy and control access to a centralized repository of R, S+, SAS, or MATLAB functions, ensuring only the most appropriate and statistically valid analytic methods are used.

TSSS provides enterprises the ability to easily share advanced analysis visualizations (advanced models built “under the hood”) via the web across the enterprise, so a broad audience of web-based clients can easily interact with these applications. TSSS provides organizations with the benefit of “universal adaptability” by enabling all users, regardless of skill level, to be able to easily interact with advanced models shared via the web.

**TIBCO Enterprise Runtime for R (TERR)**

TERR is an enterprise-grade analytic engine that TIBCO built from the ground up to be fully compatible with the R language, leveraging TIBCO Software Inc’s long-time expertise in the closely related S+ analytic engine. This allows customers to continue to develop in open source R, but to then integrate and deploy their R code on a commercially-supported and robust platform – without the need to rewrite their code. TERR enables organizations to:

- Apply consistent models across multiple applications and users,
- Easily compare multiple analytic models in a single environment, and
- Leverage a compute engine that is up to 20 times faster than open source R.

**Connecting To Data**

The basic TIBCO Spotfire® environment provides three ways for clients to connect to data: by opening a local file, using a native TIBCO Spotfire® connector, or connecting through the Information Services function of the TIBCO Spotfire® Server. Analysts can combine data from multiple sources in a single TIBCO Spotfire® analysis.

Customers who want dedicated TIBCO Spotfire® environments offered in our Cloud SaaS model, can use all the same data sources and connection methods as we support in on-premises installations, although our PerkinElmer Cloud Operations Team may need to be involved to set up secure connections. The PerkinElmer Cloud is designed to support customers with a variety of Cloud applications and services, delivering fully managed end-to-end customer interactions by integrating, automating, and improving complex and costly on premise deployments of applications and services.
Local Files

TIBCO Spotfire® Analyst users can open any file that can be accessed from their local machine or network for analysis. Business author users can upload files to TIBCO Spotfire® Web Player server to use in their analyses. These are some of the file types TIBCO Spotfire® supports: Microsoft® Excel workbooks, text files with comma-separated values, Microsoft® Access databases, and SAS data files. For the full list, see the TIBCO Spotfire® Data Access page.

Data Connectors

TIBCO Spotfire® native connectors and TIBCO Spotfire® Advanced Data Services provide a mechanism for TIBCO Spotfire® to connect to more than a hundred enterprise data systems covering the entire spectrum from commercial relational databases like Oracle® and web services to open-source big data systems like Apache Spark™ and Apache Hadoop®. Users can choose to load the entire data set into the TIBCO Spotfire® in-memory data engine or they can use on-demand data access to limit data volumes and improve interactivity.

A complete list of TIBCO Spotfire® Connectors is available online.

PerkinElmer Clinical Connectors

Customers using TIBCO Spotfire® in clinical applications can implement any of the PerkinElmer Clinical Connectors: Advanced Connector for SAS, Connector for Medidata Rave®, Connector for Oracle Inform, and Connector for Oracle Argus. These Connectors provide customers with fast and convenient ways to review clinical data across studies, accelerating time to market for products across the entire portfolio of clinical candidates.

PerkinElmer Cloud

The PerkinElmer Cloud is a platform-as-a-service (PaaS) offering intended for companies with tens, hundreds, and thousands of users who need the full TIBCO Spotfire® platform, but want PerkinElmer to manage their environment and upgrades. It is a full TIBCO Spotfire® environment with the latest software version and managed by PerkinElmer. It can include TIBCO Spotfire® Automation Services, Statistics Services, Data Services. The PerkinElmer Cloud platform offers customers with a secure cloud computing environment that can scale to suit changing customer resource utilization. The platform includes the setup and deployment of a fully functioning (GxP validated) TIBCO Spotfire® platform and includes all of the initial network, Layer-7 Firewall, and security configurations with intelligent threat monitoring and one-time VPN setup.

PerkinElmer’s Clinical Research applications powered by TIBCO Spotfire®.
PerkinElmer and Attivio®

PerkinElmer has partnered with Attivio® to provide customers with access to the Attivio® cognitive search engine and semantic data catalogs – both of which are fully integrated with TIBCO Spotfire®. Attivio® extends the scope of TIBCO Spotfire® analytics to include human-created information and unstructured text. For example, full text search can be built into TIBCO Spotfire® applications and dashboards against content loaded into AIE. The product is seamlessly integrated with TIBCO Spotfire® Information Services. Structured and unstructured data is blended to provide answers from sources such as PDF documents, e-mails, XML files, RSS feeds, and many database types. Text analytics tools such as sentiment analysis, key phrase extraction, and entity extraction and classification functionalities are provided out of the box.

PerkinElmer Real World Evidence solution, powered by TIBCO Spotfire®.