

WHITEPAPER



# Enhancing Portfolio Management with React and TIBCO Spotfire Integration

by  
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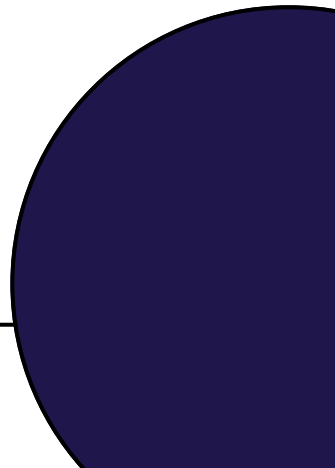
TIBCO<sup>®</sup> Spotfire<sup>®</sup>

# THE CONTENT



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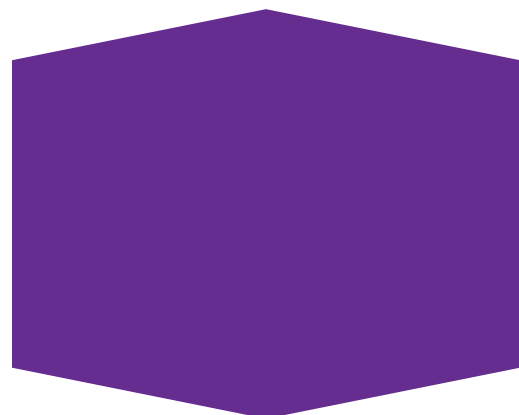
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As the financial technology (fintech) industry evolves, portfolio managers increasingly rely on advanced analytics to optimize their trading strategies and make informed decisions. A leading fintech company, focused on delivering analytics solutions to portfolio managers, has developed a cutting-edge trading platform that integrates stock exchange data with sophisticated analytics.

To further enhance the platform's capabilities, Dattico integrated a React-based web application within TIBCO Spotfire. This integration allows portfolio managers to interact with data through a customized interface while leveraging the powerful analytics and visualization tools of Spotfire. This white paper explores the technical approach and benefits of this integration, demonstrating how modern web technologies can be seamlessly integrated into traditional analytics platforms to provide a more dynamic and responsive user experience.

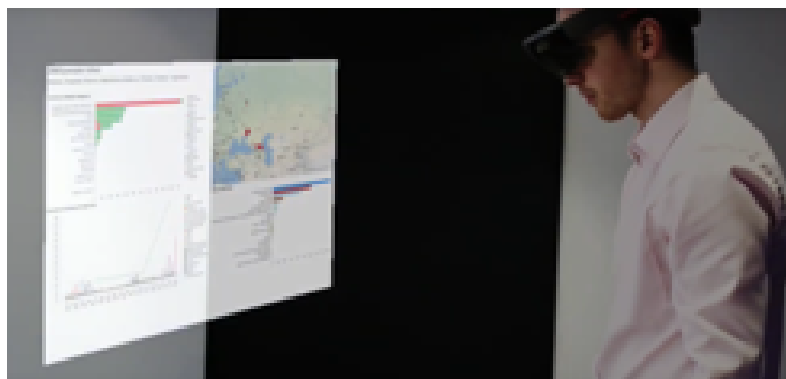


# STATEMENT

Portfolio managers require real-time access to accurate and comprehensive data to make informed trading decisions. The fintech company's platform provides these managers with critical analytics insights, focusing on stock exchange data. However, the native interfaces of traditional analytics platforms like TIBCO Spotfire may not always align with the specific needs of traders, who demand highly customized and interactive tools to manage their trades effectively.

Traditional methods of enhancing Spotfire's interface can be restrictive, limiting the extent to which the platform can be customized and integrated with external data sources. To address these limitations, the fintech company, in collaboration with Dattico, embarked on a project to integrate a React application within TIBCO Spotfire. The goal was to create a more flexible, intuitive, and interactive interface that could cater specifically to the needs of portfolio managers.

## SOLUTION APPROACH



The integration of a React application into TIBCO Spotfire was achieved through several key steps, each designed to enhance the functionality and user experience of the fintech company's platform for portfolio managers:

1. **Embedding React within Spotfire:** The React application was embedded directly within TIBCO Spotfire, allowing it to function as a native component within the Spotfire environment. This was achieved by leveraging Spotfire's ability to host web content, enabling the React application to interact seamlessly with Spotfire's data and visualizations.
2. **JavaScript API Interaction:** The integration relied heavily on JavaScript APIs to facilitate communication between the React application and TIBCO Spotfire. These APIs allowed the React app to interact with Spotfire's document properties, enabling real-time data updates, user interactions, and visual adjustments. For instance, portfolio managers could select specific data sets, apply filters, and view customized analytics directly through the React interface, with all changes reflected instantaneously in the Spotfire visualizations.
3. **AWS Amplify for Backend Integration:** The backend of the React application was powered by AWS Amplify, which provided a scalable and flexible environment for managing data operations. The application utilized GraphQL queries to retrieve and manipulate data, such as fetching portfolio information and tracking subscriptions. This backend integration ensured that portfolio managers always had access to the most up-to-date and accurate data, critical for making informed trading decisions.
4. **IronPython for Advanced Logic and Automation:** To handle more complex interactions and automate processes within Spotfire, IronPython scripts were employed. These scripts were triggered by the React application through JavaScript API calls, allowing for advanced data manipulation and automation directly within the Spotfire environment. For example, portfolio managers could automate routine data analysis tasks or trigger specific actions based on predefined criteria, significantly enhancing the efficiency of their workflow.
5. **Custom User Interface Design:** One of the key benefits of this integration was the ability to design a user interface that was specifically tailored to the needs of portfolio managers. The React application provided a highly customizable interface, enabling users to interact with their data in more intuitive and meaningful ways. Whether selecting portfolios, validating data, or executing trades, the interface was designed to support the specific workflows and requirements of traders, ensuring that they could manage their portfolios with greater ease and precision.

The integration of a React application within TIBCO Spotfire, developed by Dattico for a fintech company specializing in analytics solutions for portfolio managers, represents a significant enhancement in the tools available for managing trades. By combining the flexibility and responsiveness of modern web technologies with the powerful analytics capabilities of TIBCO Spotfire, this solution provides portfolio managers with a more intuitive, interactive, and efficient platform for analyzing stock exchange data and making trading decisions. This project exemplifies the fintech company's commitment to innovation, enhancing their existing platform's capabilities and setting a new standard for how traditional analytics tools can be augmented with modern technology. The result is a seamless, interactive, and highly responsive data analysis experience that is invaluable for any trading strategy in today's fast-paced, data-driven market.

# Conclusion.



Senior Project Manager focused on delivering platforms for Artificial and Business Intelligence with a track record on helping companies become data driven. Experienced in building cloud solutions both in Azure and AWS. With 16 years in data and 27 years in IT, he is ready to understand all aspects of the solution and communicate complex issues to stakeholders.

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