

# SOLUTION OVERVIEW

## Business Intelligence

### Global Pharmaceutical Manufacturer Gains Visibility into Quality & Delivery KPIs of Contract Manufacturers

*With the help of Flexware Innovation, a pharmaceutical manufacturer is working faster and smarter. By automating and streamlining their data collection and reporting processes, the company is gaining the speed, agility, and accuracy they need to respond rapidly to changing circumstances in their supply chain.*



## The Challenge

When a global pharmaceutical manufacturer wanted better visibility into key performance metrics for its contract manufacturers (CMs), they set out to build a dashboard that could provide directors and executive managers with a comprehensive view of global operations. They wanted to keep a close watch on quality-oriented KPIs such as customer complaints and product deviations, as well as supply chain performance measures such as on-time delivery.

Historically, pulling together these metrics was a laborious manual process that consumed valuable bandwidth from internal manufacturing leaders. It often took the form of ad hoc communication with each CM. The resulting data then needed to be compiled, normalized, and organized before meaningful reports could be produced.

The customer's team wanted an automated solution, with sophisticated dashboard features that would allow them to draw meaningful insights from their data. They needed a system that could combine internal data from the company's quality control and supply chain management systems with external input from their worldwide network of contract manufacturers, then render visualizations that could assist them in making better business decisions.

This project was especially challenging because it called for external data from a wide array of sources to be gathered and normalized prior to analysis. Previously, each contract manufacturer collected and stored their data in different ways.

Some data came directly from the software used by the contract manufacturer. In other cases, data feeds were not available, so a standardized manual process was required. At the same time, Flexware's customer needed to apply strict data security measures to ensure that the information they collected would only be accessible to authorized users.

The company's external manufacturing team chose to extend the company's existing data warehouse, tapping into its internal quality management systems while also incorporating input from external stakeholders. To do that, they needed to automate the collection and transformation of diverse datasets, routinely updating the data warehouse with new information to reflect what was happening in their supply chain.



## The Solution

The pharmaceutical manufacturer's engineering and production team enlisted their long-time technology partner Flexware Innovation to assist them in designing and developing a governance portal through which stakeholders from across the organization could track key metrics, flag exceptional conditions, and act quickly to address any problems.

Flexware's Business Intelligence team designed a solution to be built on the Microsoft Power Platform. The proposed Governance Portal would leverage the advanced analytics and dashboarding capabilities of Power BI, fed by a data collection app developed using Power Apps and automated data flows driven by Power Automate.

The company's internal quality assurance applications would serve as a source for data about manufacturing deviations and observations. Other internal systems provided information pertaining to customer complaints. These internal sources were to be augmented with data provided by the company's contract manufacturers themselves.

Using Power Apps, Flexware designed a front-end application through which contract manufacturers could enter their data manually on a routine basis. It was important that the resulting apps be user friendly, simple to deploy, and easy to update. The Flexware team built a Manual Entry Application that would allow CMs to key in their data and automatically post it to a central data store managed by the company.



The solution pulled data from the customer's data warehouse into a purpose-built data mart that was then used as the source for reporting. Microsoft's Power Automate, Power Apps, and SSIS all served roles in the proper transfer of data from CMs, automatically updating QA and complaint metrics from the company's internal systems.

Flexware used Microsoft Power BI to deliver a range of configurable dashboards, reports, and visualizations to customer's business users. The resulting Governance Portal delivered role-based content, personalized to the managers who were responsible for handling CM relationships. Color-coded formatting served to highlight any potential areas of concern that required management attention.

## The Outcome

Flexware worked alongside their client's internal teams to design, develop, and deploy the Governance Portal in under 6 months. As a result, managers at the company have significantly better visibility to CM performance. They have everything they need in a single location, with data security measures that deliver appropriate role-based views to stakeholders throughout the company.

The new portal enables managers to drill down to explore the details behind the report. They can filter results by manufacturer, CM, product, or date range. The capacity to filter, sort, and drill down gives managers far greater flexibility to explore the information at length, ask questions, and gain new insights.

Managers are also getting this information much faster than they did in the past. Processes that used to take seven days are now completed in just four hours. Historically, the customer spent days collecting, collating, and organizing the information manually using Excel spreadsheets. This was a monthly task that often required long hours to gather the data and prepare reports for management. Today, that process is fully automated and standardized.

The portal has also eliminated the need to re-format information in PowerPoint for reporting to upper management. Previously, that was a tedious process that consumed a half-day every month. Today, the team delivers presentations to management from directly within the Governance Portal. If any questions arise during the presentation, they can simply drill down to the details, usually getting the answer they need right away.

The new reporting process is more accurate as well. Because data flows are now automated, the company has eliminated the possibility of spreadsheet-based errors from its Governance reporting.