


# Pharma Manufacturing Analytics



Enhance pharma quality and resilience with AI-powered analysis

- Q What are the **top 3 factors** contributing to **production delays**? 
- Q What factors are contributing to the decrease in yield for product Y?
- Q What is the impact of the supplier X price increase on production costs?
- Q Which suppliers are our top 10 most on-time vs top 10 most delayed?

## Life Science Manufacturing Challenges Today

There are many potential points of failure in manufacturing at life science companies today. Quality control is absolutely critical to the safety of patients, causing downstream impacts on your brand. Monitoring production processes to ensure consistent quality and compliance with regulations is a challenging endeavor for any life sciences company. Meanwhile, supply chain disruptions increase operational costs and lead to bad outcomes for vulnerable populations.

Manufacturing teams have their work cut out for them, but AI-powered analytics can help.

## AI-Powered Analytics for Manufacturing Teams

Tellius helps pharma manufacturing teams make better-informed demand forecasting, quality control, inventory, and operational decisions. The platform works by connecting disparate data sources—manufacturing, supplier, inventory, logistics, sales, regulatory, and many more—and upon this unified base, offering:

- A Google-like natural language search interface and AutoViz layer for ad hoc exploration
- Robust automated insights to isolate key drivers, root causes, and anomalies
- Intuitive point-and-click live dashboarding, reporting, and embedded analytics
- Accessible advanced analytics using tools such as AutoML

This approach allows production, supply chain, quality assurance, and quality control teams to self-serve ad hoc analysis to better inform decision-making and become truly data-driven.

## Why Tellius for Pharmaceutical Manufacturing

Tellius is an AI-powered analytics platform that enables life science organizations to answer ad hoc questions and get faster insights from multiple sources more easily, using ML automation.



Spot insights into key drivers of quality issues to quickly implement more effective change controls.



Explore and iterate analysis of manufacturing quality issues rapidly, without relying on advanced analytics teams.



Provide holistic views across all manufacturing data sources to make smarter, data-driven manufacturing management decisions.



Identify problems before a drug becomes OOS and forecast future risks through ML/AI-based pattern and anomaly detection.

# PHARMA SUPPLY CHAIN ANALYTICS USE CASES

## Delay/Variation Root Cause Analysis

Identify the root cause of issues before a product becomes out of specification by applying Tellius' automated insights to automatically parse every variable and combination of variables for key drivers across all your connected datasets. Once identified, implement more effective quality assurance, monitor progress in live dashboards and via real-time alerts, and ultimately, improve capacity planning to mitigate manufacturing risk and streamline operations.

## Supply Chain Optimization

Manufacturing teams leverage Tellius' natural language querying and live dashboarding and reporting capabilities to optimize supply chains by identifying disruptions or quality problems via automated root cause analysis. This automation enables manufacturing teams to more quickly understand potential issues and plan mitigation efforts. Vizpads and Tellius Feed, powered by anomaly detection, provide a holistic view into inventory levels and supplier performance.

## Batch Monitoring for Quality Assurance and Control

Detect deviations from specifications and take corrective actions before issues arise. Tellius enables monitoring with simplified Vizpads, enhanced anomaly detection, and intuitive automated insight generation. By combining sensor data and process variables, manufacturing teams can identify deviations, understand root causes of problems, and implement solutions in a faster, more efficient way.

## Quality Forecasting

Quality control issues put your business at risk. Improve demand forecasting by getting a complete picture of all your data, a lightning-fast analytics engine for quick answers, and intuitive ML tools to simplify analysis. With Tellius, predict quality control issues and delays through point-and-click ML modeling to solve issues before they become problems. Make smarter, data-driven manufacturing management decisions via more holistic views across manufacturing and supply chain data sources.

## Success Story

The QA team at a top 20 pharmaceutical firm struggled to identify product delay root causes due to technology (i.e., inaccessible quality/audit data stored in legacy DBs with no reporting capability) and skill gaps (i.e., QA specialists manually analyzing raw data in Excel). QA delays meant high regulatory risk.

The QA team now uses Tellius for easily accessible, up-to-date metric tracking, dashboarding, and natural language search for ad hoc investigative work. Automated insights diagnose what drove quality process failures and segment identification of processes most prone to failure. Proactively attacking problems, the firm has reduced its aggregate quality process cycle time by 30%, reacting more quickly to quality issues and being able to granularly pinpoint down to the plant level where issues arise.

**30%**

**Reduction in product defects**  
via anomaly detection

**10%**

**Reduction in production losses**  
by identifying root causes of  
part shortages

**10X**

**Faster supply chain  
analytics vs.**  
manual approaches