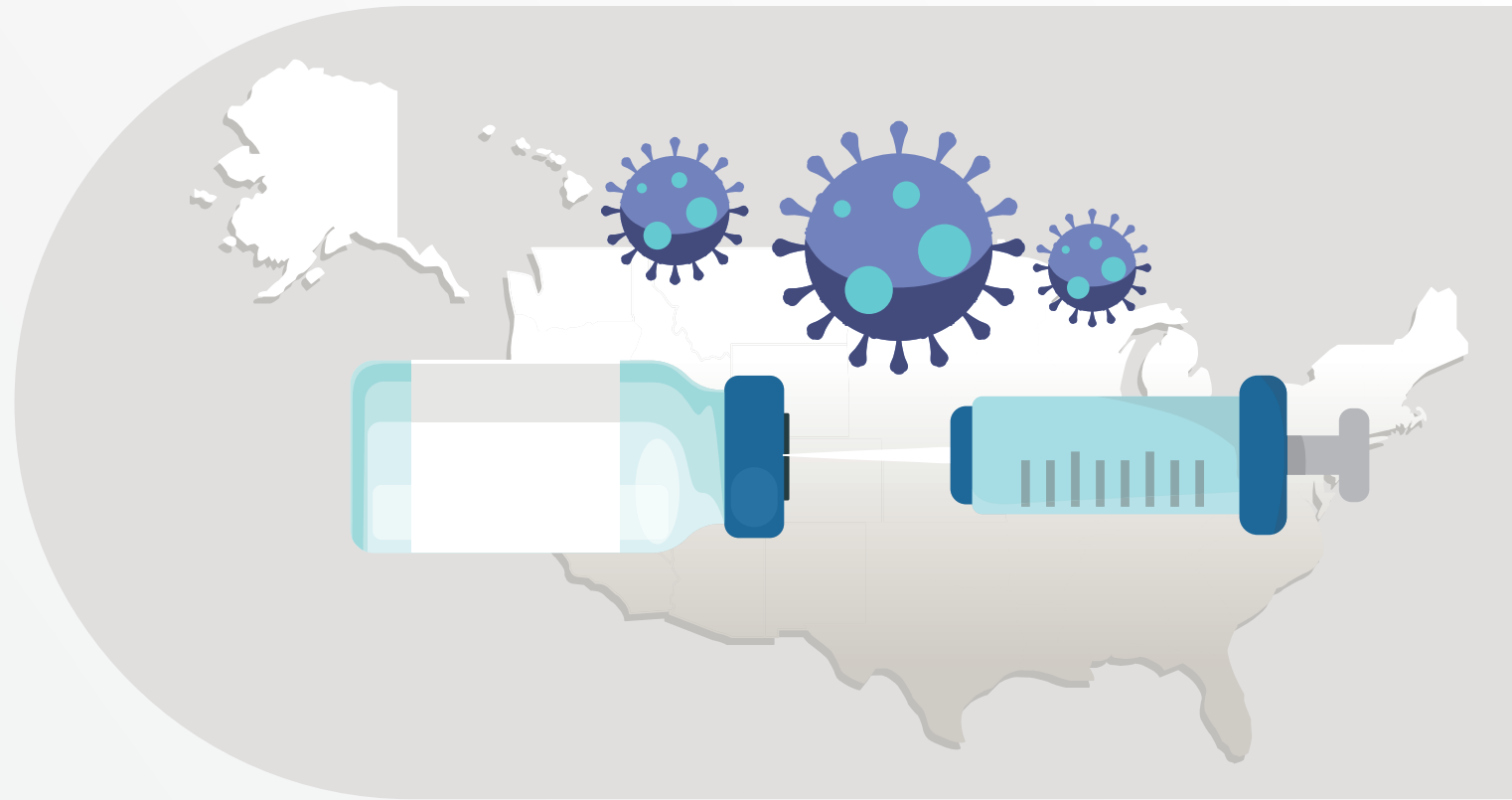


# Case Study

## Business Intelligence & Augmented Analytics

**Smarten Augmented Analytics Delivers COVID-19 Data Management  
& Analytics for U.S. Healthcare Business**



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# Case Study

## Smarten Augmented Analytics Delivers COVID-19 Data Management & Analytics for U.S. Healthcare Business

### Partner

The Smarten Partner is a healthcare service provider in the United States, providing a web-based, patient-centric, healthcare management solution and workflow solutions to assist hospitals and healthcare facilities, increase operational efficiency and reduce costs. One of the Partner Clients is a multispecialty physicians group offering medical management clinical research and other primary and urgent care services. This Client offers COVID-19 vaccination programs with services including COVID testing and vaccination management.

### The Objective

As the number of COVID cases rises, time constraints and the urgency of a global pandemic make it more challenging and crucial to effectively track vaccination programs for COVID-19. The process can be lengthy and tedious. To ease the operational planning, the Partner's Client wanted to track and optimize workflows for the vaccination management and COVID testing process to understand gaps and delays and to explore areas of performance improvement and efficiency. The various stages in the workflow include COMPLETED, TEST PENDING, CANCELLED, NEW TESTS, etc. To identify the duration and status of workflows and track and organize details like COVID-19 tests, the massive scale of immunization, vaccine inventory

management, statutory reporting and dose accounting for the Client, the Partner wanted to develop an intuitive solution with dashboards and KPI monitoring. This solution would track details like number of tests done, COVID test results (positive or negative), testing and vaccination workflow analysis, etc. To accomplish this, the Partner wished to engage a collaborative analytics solution and services to support its needs and to provide meaningful augmented analytics that would be easy enough for all vaccination management team users; a solution that would provide integration and single solution dashboards, KPIs and Reports so users could gather, compile and analyze data. This solution would help the Partner's Client track the delays and time taken for each process (vaccination, billing, COVID test, etc.) and improve monitoring and reporting.

### Challenges

- The need for real-time data to analyze workflow status
- The need to forecast resources and dosage requirement based on analysis of workflow status
- The need to effectively and efficiently manage vaccine inventory and dose accounting
- The need for sophisticated COVID analytics integrated with workflow and applications to bring decision-making and performance to a new level

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## Smarten Augmented Analytics Delivers COVID-19 Data Management & Analytics for U.S. Healthcare Business

- The need for interactive Dashboards to accommodate Client requirements, no matter the technical skill set of the user
- Support to export and publish reports

To overcome these challenges, the Partner wanted a powerful, browser-based analytical solution to support decision-making with factual, clear information on COVID testing and the vaccination process and to answer time-critical questions.

### The Solution

The Smarten team worked with the Partner to collect requirements from their Client to develop BI objects and analytics for the testing environment. Testing deployment was analyzed and verified by the Partner and their Client technical and management teams and used to implement COVID-19 analytics within the ranks of its Client end users.

The Smarten augmented analytics solution provided support to the partner to:

- Create a standard template of COVID data related datasets, dashboards, KPIs and reports for the Client
- Create a process to quickly and effectively roll-out the Smarten solution to Partner Client and to optimize budget and address time constraints

- Integrate Partner workflow management system with SSO and API to improve user adoption
- Modify templates and add new dashboards, reports, and KPIs

This allowed the Partner to:

- Create a competitive advantage by providing ready-to-use analytics
- Mitigate and address Client need for new reports
- Save time and cost by offering self-serve analytics to end users

### Technology and Platform

Server:	Intel(R) Xeon(R) Platinum 8259CL CPU @ 2.50GHz (2 Processors)
OS:	Linux (Ubuntu)
Applications:	Proprietary Healthcare Information App and Workflow Solution
Database:	My SQL

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## Smarten Augmented Analytics Delivers COVID-19 Data Management & Analytics for U.S. Healthcare Business

Key analytical objects implemented in the COVID-19 deployment include:

### COVID-19 Overview Dashboard

- Total tests done
- Total number – Detected
- Total number – Not Detected
- Total number – Inconclusive
- Total number of Patients
- Daily Trend by Total Test vs. Detected
- Total Test by Gender
- Total Test by Result
- Total Test by Facility
- Test and Patient by State
- Total Test By Age

### COVID-19 State Dashboard

- State COVID test map
- Total tests done
- Total number – Detected
- Total number – Not Detected
- Total number – Inconclusive
- Total number of Patients
- Total number of States

- Total number of Cities

### COVID-19 Detail Report

- Patient details
- COVID test results

### COVID-19 Real-Time Snapshot

- Total Orders
- Total Completed Orders
- Total Canceled Orders
- Total Billing Orders
- Avg. Minutes to Billing
- Workflow Duration (In Minutes)
- Workflow Status – Number of Orders Today
- Avg. Time To Billing (In Minutes): Branch
- Previous to Current Workflow (Avg. Minutes)
- Avg. Time to Billing (In Minutes): Insurance Group

Smarten Augmented Analytics provided features and functionality to address critical information with crucial, value-added services to support the Partner Client and end user.

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## Smarten Augmented Analytics Delivers COVID-19 Data Management & Analytics for U.S. Healthcare Business

### The Smarten Team Role

The Smarten team provided support for the Partner team to develop appropriate analytics with enhanced Smarten templates and create datasets dashboards, reports and Key Performance Indicators (KPIs).

The Smarten team provided support to the Partner to collect Client requirements:

- Assessment of their data structure
- Design and development of meta data structure, datasets and cubes
- Integration with Partner healthcare management and workflow solution with API
- User Acceptance Testing (UAT)
- Go-live support
- Analytics and best practices knowledge sharing
- Ongoing support to Partner technical team for modifying and enhancing Smarten analytics objects to support new Client requirements.

#### Key Benefits and Deliverables:

- Real-time dashboard for COVID-19 testing workflow to help the Client track delays
- Short roll-out time

- Enhanced Client value and a seamless augmented analytical platform to manage and monitor COVID and vaccination data
- Smarten Augmented Analytics tools to support end users with average skills
- Seamless integration of dashboards and objects within Partner healthcare management solution

### Conclusion

The Smarten Partner required augmented analytics and reporting capability to provide easy-to-use COVID-19 management dashboards to support the needs of the Partner Client using the existing Partner solution. Smarten Augmented Analytics provided a comprehensive set of reporting and analytics tools, e.g., COVID-19 Overview dashboard, COVID-19 State Overview, COVID-19 Detail report, COVID-19 Workflow Real-time snapshot and more. The Smarten team offered critical support to ensure a smooth and efficient deployment of Augmented Analytics and to assure Client end user adoption and satisfaction. The integration of Augmented Analytics within the Partner proprietary Healthcare Information Application, allowed the Partner to improve customer satisfaction and gain recognition and visibility across the industry.

# Case Study

## **Smarten Augmented Analytics Delivers COVID-19 Data Management & Analytics for U.S. Healthcare Business**

### **Contact Us**

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