

A background image showing a healthcare worker in a white protective suit, green face shield, and blue surgical mask performing a nasal swab test on a patient. The patient is also wearing a blue surgical mask and is looking upwards. The worker is holding a blue swab tip and a wooden stick. The image is overlaid with a semi-transparent blue filter.

**BUILT REAL-TIME ANALYTICS AND REPORTING TO SCALE TREATMENTS
AND PREVENTIVE TOOLS IN RESPONSE TO COVID-19**

CASE STUDY

A DATA ENGINEERING & BUSINESS ANALYTICS CASE STUDY



The world's largest financier of AIDS, TB, and malaria prevention, treatment, and care programs wanted to mitigate the impact of COVID-19 on treating these three diseases and act as a nodal agency to channel worldwide response to COVID-19 by scaling treatments and preventive measures.

The main objective was to build a centralized data warehouse by automating data ingestion from more than 250+ diverse sources and enabling faster time to insights for decision-making.

ABOUT CUSTOMER



Our client is a partnership designed to accelerate the end of AIDS, tuberculosis, and malaria as epidemics. As an international organization, our client mobilizes and invests billions of dollars a year to support programs run by local experts in more than 100 countries.

Our client challenges barriers and embraces innovation in partnership with governments, civil society, technical agencies, the private sector, and people affected by the diseases.

BUSINESS PROBLEM

The current data flow, analytics, and reporting were designed specifically for HIV, TB, and malaria tracking.

When the client's funding suddenly changed due to COVID-19, they had to scramble to adapt their systems to disburse money while tracking new indicators.

The client needed to adopt a new system to handle several new components:

- ◆ A new disease: The sudden emergence of COVID-19 as an epidemic and its impact on global health.
- ◆ A new focus area: Disbursing money for COVID-19 prevention, treatment and research.
- ◆ A new dimension: Tracking new indicators that would measure the success of this project (i.e., number of people enrolled in prevention programs).
- ◆ Correlation between existing data architecture: To study the impact of COVID-19 on the programs run to treat HIV, TB, and malaria.

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BUSINESS PROBLEM

In order to track new indicators, old components required a change, and new dimensions needed to be added to the system. To incorporate the change, the whole data architecture needed to be redesigned from scratch before implementation could even begin.

To overcome these challenges, the client wanted a data solutions company that builds, operates & manages massive data sources with real-time data analytics capabilities to view HIV, TB, and malaria data alongside COVID-19 data at any time to make informed decisions.

BUSINESS OBJECTIVES

COVID-19
VACCINE



Dedicated data warehouse for the COVID-19 response mechanism.



Faster data collection and enrichment of COVID-19 data sources.



Monitoring and oversight system for COVID-19 related funding.



Faster turnaround time for insights generation with interactive visualizations.



Descriptive and diagnostic analytics for quick decision making.

OUR APPROACH



Zuci Systems, a digital transformation company, worked with the client to improve their data flow, analytics, and reporting capabilities to monitor and disburse funding in response to COVID-19 to the most affected countries.

Zuci Systems data engineers started by creating a dedicated data mart for COVID-19. The new datamart was engineered to pick all the data from various central data warehouses. On top of it, we helped connect more than 250+ data sources with end-to-end data pipelines architecture to make them available for building reports.

To make this happen, Zuci Systems had divided the project into two phases of work:

Phase 1 - 4 to 6 months: The first phase of work included creating a data mart for COVID-19 and building analytics and reports around that data mart.

Continued →

OUR APPROACH



Phase 2 - Ongoing engagement: The second phase included ongoing maintenance of the data mart and analytics tools. And to accommodate new developments in the system.

As part of this project, we built dashboards from 6 months of reporting to 3 months of reporting. And helped the client with near real-time data for quick analysis and to make informed decisions.

We also did a survey & sampling exercise, which was done in 45 countries to see the supply chain impact (are medicines reaching the facility etc.) and health systems (doctors, staff absenteeism, etc.). This gave valuable insights into how health systems functioned in the COVID-19 pandemic and provided visibility on the overall absorption of the funds disbursed to each recipient.

HOW ZUCI SYSTEMS HELPED



Analyzed all of their initial data requirements and tried to understand the various source systems needed to get all of their data.



Built a data model that could help them understand how they could get all of this data from various source systems to track the old and new indicators using the same data architecture.



Engineered an ETL process to deliver all the necessary data into the system in a format that could be consumed easily in reporting tools.



Implemented the data modeling strategy into their ETL toolset.

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HOW ZUCI SYSTEMS HELPED



Finalized what business rules should be applied at each preparation stage so that no important information was lost or misreported during this process.



Once we had prepared all of the business rules on the data at different stages, we started building reports and conducting analytics.



Created a set of 25+ executive dashboards to analyze various key performance indicators.



Deployed and tested the solution on the client's staging environment and handed over the application guidelines.

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HOW ZUCI SYSTEMS HELPED



Post acceptance of stakeholders, our team moved to production.



Provided solution documentation (including a system administration guide), onsite support, oversight for production rollout, and post-production support to ensure successful business adoption.



BUSINESS BENEFITS

15%

Increase in absorption
of funds

50%

Faster data collection
and enrichment

2.5x

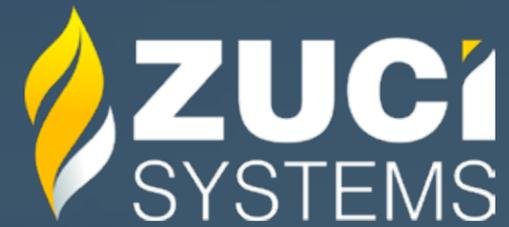
Faster turnaround time
for insights generation

More
Targeted Funding

Near Real-Time Visibility to
Operational Metrics and KPIs

TECH STACK





READY TO BUILD A SINGLE SOURCE OF TRUTH SYSTEM FOR REAL-TIME BUSINESS REPORTING, OPTIMIZATION, AND ANALYSIS?

DROP US YOUR EMAIL, AND OUR EXPERTS WILL GET IN TOUCH.

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