

Case Study

Nationwide Blood Testing Consortium



Facts:

Industry: Healthcare Services & Public Safety

Largest non-profit, independent blood donor testing & services consortium

Revenues: \$500 million

Test nearly 4.5M blood donations, from more than 100 blood centers & hospitals, across the U.S.

150 to 499 employees

4 labs, located in Dallas, Phoenix, Seattle & Tampa

AABB accredited, FDA registered, CLIA licensed, and state licenses for CA, FL, MD & NY



Background

This West Coast-based blood donor testing and servicing group was searching for more efficient ways of:

- › Monitoring infections in donated blood;
- › Understanding risk factors for infections in donors; and
- › Allowing for appropriate policy responses to changes in infection rates and/or risks.

As such, the group was tasked to integrate risk factor data and disease marker surveillance information across different blood collection organizations. Thus, creating a nationwide, blood testing data exchange program.

Challenges

- › Needed to successfully accumulate resulting data from three blood centers, including CDC and the National Institute of Health, and then overlay donor demographics on top of test results to result in one single logical output.
- › Lacked a secure & scalable data repository that could support potentially large amounts of data to be uploaded, stored, transformed, and retrieved in a user-friendly manner.
- › Unable to provide evidence that a model is sufficiently purposed to interrogate the data.

Solution

Tectonic implemented a Google Cloud Platform-based information exchange and analytics platform, leveraging Google Cloud Storage, Qubole (Hadoop as a Service) for data integration; Qlik for data discovery and visualization; and Open Source R for predictive analytics.

Proof of Value Outcome

- › Established the technology framework for an infrastructure capable of supporting a repository of data, outward facing user interface portal for external participants, and a method for the authentication and secure transmission of data.
- › Provided design option for a web service/API for the transmission (push and pull) of potentially large files of sensitive information over the Internet.
- › Integrated 6 months of blood testing data from regional testing centers, along with donor demographics and donation events.
- › Experienced cost-effective economics from using Google's Cloud Platform solution – helped Consortium keep the environment alive, without any upfront, heavy investment or commitments from any member of the organization.
- › Fostered shorter learning curve and enabled Consortium employees to perform active development side-by-side with Tectonic.
- › **In less than 30-days**, developed a functional prototype, including predictive analytics model for monitoring new infections in donors.

Proof of Value Platform Powered By:

