

Solodev DCX Case Study: OneBlood



Executive Summary

OneBlood is one of the largest non-profit bloodbanks in the U.S., providing hundreds of hospitals and thousands of patients with life-saving blood. To fulfill their mission, they needed to grow their donor base while enhancing the retention of existing donors, specifically through digital channels. In addition to modernizing their website and making content management easier for their digital marketing team, they needed a dynamic solution that could schedule appointments and integrate with complex backend systems to furnish safe, secure, HIPPA-compliant blood results online. Solodev DCX – powered by AWS – provided a highly functional content management (CMS) and customer experience platform that enabled their large, distributed team to build, test, and distribute content while rapidly scaling cloud resources during a crisis. Additionally, Solodev DCX enabled OneBlood to build a unique, personalized retail Rewards Store that provided greater choice to donors while reducing costs, streamlining inventory, and improving loyalty.

Customer Challenge

Donating blood is a powerful yet personal choice. To help incent this act of giving, OneBlood has built a brand of trust with its donors, providing ease and convenience throughout their brick-and-mortar and mobile centers. Each pint collected means that another patient has a fighting chance, so their mission is absolutely vital to the communities they serve. Additionally, OneBlood furnishes donors with the results of their blood tests, helping improve their health and wellness by screening for HIV, Hepatitis, and other diseases. Given the cost and complexity of their donor engagements, they realized that each step of their donor's journey could benefit from digital transformation.

To achieve this, OneBlood needed a comprehensive digital strategy that began at the center of the customer experience: their website. Hosted on-prem with an aging codebase, the existing website was in desperate need of modernization from both a design and infrastructure perspective. They required a contemporary frontend that reflected the tenants of their brand story and the visual expression of their trust. The navigation needed to be intuitive, and they also required a web-based search functionality, making it easier for donors to find locations, blood drives, schedule appointments, and more.


Seeing a significant shift to mobile engagement, OneBlood needed a responsive website framework that provided dynamic experiences across every screen. They also required a platform that was API-first, enabling donors to securely access their sensitive, HIPPA-regulated blood test results through the device of their choice. This required a complex integration with HemaTerra, a unique CRM platform that managed blood data for healthcare applications. Additionally, their marketing team required API integrations for a host of digital tools such as email campaign managers and analytics platforms. All of this required a central platform that connected with everything.

About OneBlood



As the third-largest blood bank in the U.S., OneBlood provides donated blood to more than 200 hospital partners across multiple states. With hundreds of physical and mobile locations – including their signature “Big Red Bus” – OneBlood is a vital source for all types of blood, plasma, and platelet supplies. Additionally, their state-of-the-art biologics are responsible for testing thousands of donation samples rapidly and accurately, so supplies can be stored and distributed within their lifecycle.

The need for blood never stops, and OneBlood's couriers are delivering vital supplies to hospitals 24 hours a day, 365 days a year to help ensure that hospitals have access to blood when lives are on the line.



One of the biggest challenges for OneBlood was their rewards experience. For years, they had offered gifts and merchandise to donors in an effort to celebrate their impact and cultivate loyalty. Normally, this required purchasing and inventorying products like movie tickets – items with cash value that might go unused by the donor. Carrying these costs was difficult enough, but more importantly, they didn't provide the recipient with a truly compelling experience. They wanted a more immersive online store that provided greater choice for donors and more control for their retail marketing team.

Why AWS

When selecting a cloud platform for their digital strategy, OneBlood chose AWS for its flexibility, scalability, high availability, and security. Migrating from their existing on-premise hosting to the AWS Cloud allowed their IT department to shift from managing hardware to focusing on governance – from HIPPA to data privacy. Now, their team was able to dedicate more resources to securing and optimizing their HemaTerra platform, which handled protected health records from donor blood tests. AWS is also uniquely committed to the needs of non-profit organizations (NPOs).

OneBlood's multi-state footprint required a highly available infrastructure to meet five nines of uptime and redundancy. AWS provided that peace of mind, delivering a solution capable of scaling on-demand to meet unplanned spikes in traffic – especially during a crisis situation – and a geotransitioning strategy for securing their website data across multiple datacenters. Performance was key, so having AWS provide low latency solutions to deliver high-bandwidth experiences like video was an absolute requirement. Finally, OneBlood wanted a cloud partner with vision and a roadmap of innovation.

Why Solodev DCX

As an APN Advanced Technology Partner with multiple Public Sector Competencies and non-profit customers, Solodev was the perfect fit for OneBlood. Built from the ground up for AWS – and meeting the rigorous tenants of the AWS Well-Architected Framework – the Solodev DCX platform provided a frontend layer of enterprise scalability for essential cloud services OneBlood required. As an API-first platform, Solodev offered more than easy-to-use content management tools for managing their website – they also provided a gateway for connecting their applications, including HemaTerra.

OneBlood also tapped Solodev's proven expertise in the healthcare sector, leveraging their experience with large, distributed networks of hospitals and handling critical patient data through their websites. They also chose Solodev for their custom migration and development capabilities, as well as their team of AWS solution architects. Along with their frontend knowledge around UI/UX and ADA accessibility, Solodev's software and support provided OneBlood with a turnkey partner for building the future of their digital customer experience.

Partner Solution

To transform OneBlood's website and connect their ecosystem of applications, Solodev began with an extensive discovery and research process that clearly defined the goals and KPIs for success. Understanding the donor's journey was critical to building a frontend design that reflected their mission and values.



By collaborating with their team, Solodev was able to deliver a sleek, modern, mobile responsive website that was intuitive, easy to navigate – and set a new bar for blood donation websites across the country. Additionally, the new website had a net positive impact on their search engine optimization and ADA accessibility posture. Solodev also provided complete training and support.

Handling digital blood data in a safe, secure manner presented significant challenges. To build a more streamlined solution, Solodev worked closely with HemaTerra – a global provider of donor lifecycle, supply chain, and experience management resources – to successfully integrate their API and manage blood donation data through a secure portal. While the functionality of the API was already extensive, Solodev and HemaTerra partnered to add rich features for capturing medical data and scheduling appointments at various locations.

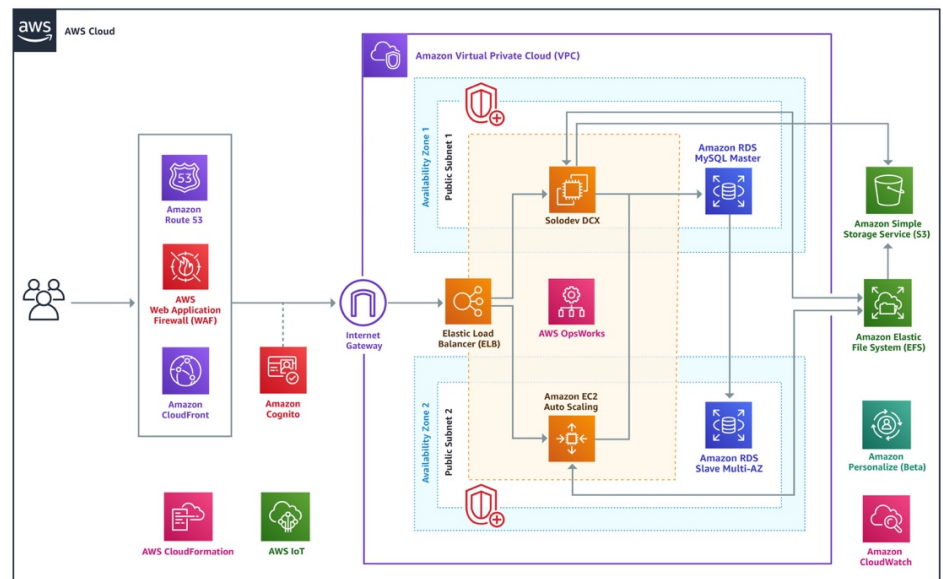
Because OneBlood relied heavily on video marketing, Solodev customized a multi-platform solution that enabled them to distribute high-quality content with greater speed and efficiency. To enhance loyalty programs, Solodev built a digital retail experience called the Rewards Store, their first online portal for donors to claim rewards for blood donations. To offer a more scalable solution, Solodev integrated with CashStar – a leading gift card platform – to offer donors access to leading consumer and retail brands like Best Buy, Banana Republic, Dominos, and more. This shifted the value of the transaction from pre-purchased inventory to gift cards that could be used online or offline.

Solodev DCX Enterprise Edition – available through the **AWS Marketplace** – was chosen for OneBlood's high availability requirements. Fully deployed via **AWS CloudFormation** in a secure **Amazon Virtual Private Cloud**, Solodev DCX was deployed on an **AWS Elastic Compute Cloud (EC2)** cluster and fully managed by **AWS OpsWorks** – featuring auto scaling and load balancing capabilities, an **Amazon RDS MySQL** database, and **Amazon Elastic File Storage** for scaling resources up and down as needed. Objects were stored in **Amazon Simple Storage Service (S3)**, and the application and infrastructure monitored by **Amazon CloudWatch**. OneBlood also added **AWS CloudFront**, a powerful content delivery network (CDN), to radically improve the speed and performance of their website while elevating redundancy.



Solodev® DCX Enterprise Edition

AWS Reference Architecture





Results and Benefits

OneBlood continues to reap the benefits of digital transformation with Solodev and AWS. Not only have they improved SEO and accessibility while reducing their bounce rates, but they have achieved higher conversions from donors who are booking appointments online and using their digital services. By furnishing their test results through a secure portal, they have streamlined their digital customer experience, improved satisfaction, and automated a previously manual process.

Since the retail Rewards Store and CashStar integration, OneBlood has seen significant improvement in donor satisfaction, and they continue to grow their retail offerings. Now, phlebotomists and service members at their various locations can direct donors to the digital Rewards Store to select a gift card of their choice, which increases loyalty and improves the overall donor experience. **This new retail model also reduces waste, increases productivity, and saves OneBlood thousands of dollars each year.**

Recently, OneBlood leveraged the scalability of Solodev DCX and AWS to address a human crisis for Zainab Mughal, a little girl with a rare blood disorder. Within days of running an inspiring, multi-channel campaign that leveraged Solodev's custom landing page capabilities, OneBlood saw a spike in traffic from across the globe. Leveraging AWS auto scaling, they were able to meet the surge and capture vital form data – stored in Solodev DCX on AWS. This rapid scaling helped OneBlood identify a small pool of donors that have continuously provided blood for Zainab's critical procedures including bone marrow transplants. As of April 2019, the prognosis is positive – and Zainab is on the road to recovery.

Next Steps

Solodev continues to work closely with OneBlood to support, monitor, and improve the effectiveness of their digital ecosystem, ensuring that the Solodev DCX software, the HemaTerra integration, and the AWS infrastructure are running at peak performance. As OneBlood expands its applications, Solodev is also providing custom development services to support new functionality and third-party integrations. Solodev is also working to implement Amazon Personalize for Solodev DCX to train models using AWS machine learning – and recommend more relevant and meaningful content to their blog readers. Solodev and OneBlood also plan to strengthen their partnership in the cloud with AWS, accessing deep learning, analytics, propensity modeling, and data science to better predict donor behavior and help improve the digital customer experience.

About Solodev

Solodev DCX is a content management (CMS) and customer experience platform that lets individuals and teams work together on their digital transformation in the AWS Cloud. Businesses and organizations of all sizes collaborate on Solodev DCX to build feature-rich websites and applications, distribute content across channels and devices, review code, and publish their most ambitious ideas to the world with training and 24/7 support – all powered by AWS. Solodev DCX is available in both single and multi-tenant options, and through the AWS Marketplace in Lite, Professional, and Enterprise Editions, including container deployments for both Docker ECS and Kubernetes EKS. Solodev is an Amazon Partner Network (APN) Advanced Technology Partner ISV with competencies in Government, Education, and Digital Customer Experience. Learn more at www.solodev.com

