

# Stanford SOCIAL INNOVATION<sup>Review</sup>

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***Next Generation Nonprofits Supplement***

*Sponsored by AWS*

**Cloud Transformation**

By Allyson Fryhoff

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*Stanford Social Innovation Review*

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# Cloud Transformation

A road map for your nonprofit's sustainable, digital future.

BY ALLYSON FRYHOFF

It was impossible to imagine a nonprofit using the same advanced technology as the world's largest corporations twenty years ago. But cloud computing—the on-demand delivery of IT resources over the internet with pay-as-you-go pricing—has made the impossible possible. With the cloud, nonprofits have access to the same innovative technologies available to for-profit companies, and they can leverage those technologies to increase their impact.

Getting started with cloud technology can be daunting for nonprofits with limited resources and staff. A 2020 Salesforce report found that the vast majority—85 percent—of 725 nonprofits surveyed said that technology is critical to their success. However, fewer than one-quarter—23 percent—had a vision and long-term strategy for how technology would be incorporated into their organization and programming.

Nonprofits looking for an entry point into their cloud journey can turn to AWS to overcome barriers to technology adoption and enhance their mission outcomes. AWS has more than 15 years of experience partnering with nonprofits. While each cloud journey is unique, AWS has found that organizations are most successful when they approach this process in four steps:

**Envision** | In this phase, your organization defines its goals for the future by determining what problems need to be solved to advance your mission, and why. Some possible answers might include better efficiency, cost savings, or more access to innovative technology, tools, and services.

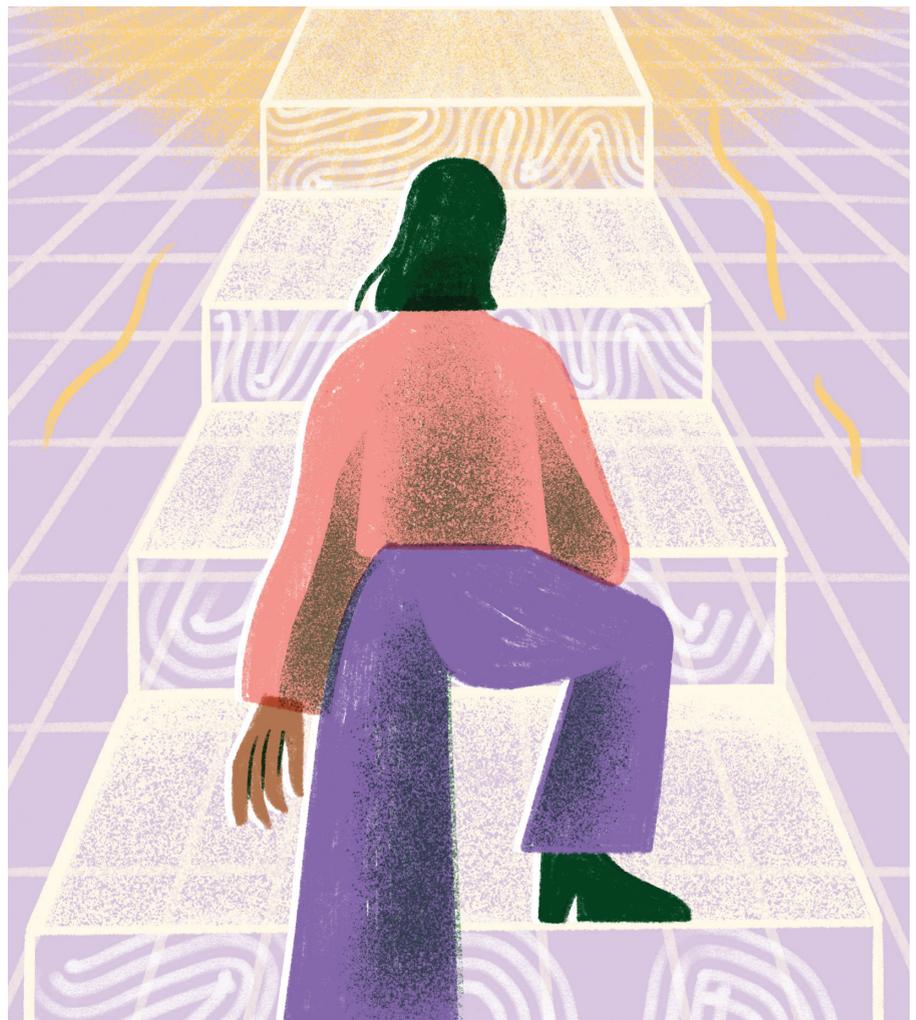
A lack of funding results in a nonprofit's inability to deliver on its mission. So, if your objective is to enhance fundraising, some potential goals might be to build better donor management, generate personalized email campaigns, or create dashboards that track the impact of donations. AWS recommends that you assign each goal to a senior leader who is capable of driving change when roadblocks are encountered.

One successful example of the envisioning process is EB Research Partnership (EBRP),

a nonprofit dedicated to funding research aimed at discovering treatments and ultimately a cure for epidermolysis bullosa (EB)—a family of life-threatening, rare genetic disorders that affect the skin. A pervasive issue for EB patients and their families is data management. Patient information and medical research are siloed, meaning researchers and individuals have a hard time accessing current information on the disorder. EBRP's leadership determined that one of their objectives was to use cloud tools to combine this data together on one platform, making it easier for patients and their families to access educational resources and connect with other patients, doctors, and clinical trials. This led EBRP to build a cloud-based platform that guides patients to the nearest doctors, research studies, treatment clinics, trials of new drugs, and patient support groups—similar to the way that GPS navigates you to your destination.

**Align** | Once your organization has identified the purpose of its cloud journey, you can direct your efforts to encouraging your stakeholders to align on this vision. Alignment is often the most challenging part of any cloud journey because it requires people to change how they work.

Identifying gaps across the organization can help build alignment. For instance, do you have the right skill sets in house? Do you have existing contracts and licenses to consider? All stakeholders, no matter their role or contribution in the cloud journey, should be included in this phase. By involving your full team and identifying their concerns from the start, you'll help stakeholders understand that their input is



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valued and that they have a stake in the success of the cloud journey. This process also helps to build trust among all involved stakeholders.

The Urban Institute, a nonprofit research organization that provides data to advance upward mobility and equity, wanted to make data-driven decision-making easier for people. In 2016, they began transferring their data from an on-site data center to the AWS cloud, which has enabled them to run sophisticated data analytics and microsimulation models with flexibility, speed, and accuracy. By leveraging the AWS IMAGINE Grant—AWS’s public grant that offers nonprofits money, computing credits, and tech support—the institute built a demo of a cloud-based data hub that helps policy makers and researchers use local data sets for policymaking. To ensure a successful rollout, the Urban Institute knew they would need to identify areas of skill building on their team. They utilized free AWS training opportunities, such as the Developing Serverless Solutions and Architecting on AWS courses, to train their staff. By increasing their cloud knowledge, the institute was able to launch their cloud efforts with confidence.

**Launch** | Experimentation defines this phase: identifying a specific challenge, working with your cloud partner to design a solution, and building a pilot. The pilot should have clear goals and metrics to help you determine when you are ready to scale, or if any improvements are needed. All experimentation should tie back to specific goals—and focusing on your original goals will remind you to not lose sight of the bigger picture.

For example, PATH is a nonprofit on a mission to end homelessness in California. Before using cloud infrastructure, their case managers had to manually sift through market-rate listings in newspapers and online, which increased the time it took to find high-quality, affordable housing for clients. Beginning their work with AWS in 2019, PATH built a mobile application that automatically pulls in real-time information on properties in the area and filters for clients’ housing preferences and special needs—drastically reducing the time it takes to get clients into their rental units. Before launching the app, PATH created a pilot program to test the app’s functionality before scaling it to address the needs of the larger homeless population in California. PATH tested the app in Los Angeles, used their learning, and later launched the app in additional cities.

**Scale** | In this final step, your organization is ready to expand your pilot and run your cloud applications at full scale. To ensure you’re seeing returns from your investments, you’ll want to continuously measure your progress against your original goals. The first project is always the most difficult as your team begins building the organizational muscle to do new things. But once you begin, you’ll find other opportunities to automate tasks that were previously time-consuming and manual.

About five years ago, the Los Angeles LGBT Center established a cloud contact center to provide community health services at a lower cost. Compared with a traditional contact center, a cloud-based contact center can be staffed by employees working remotely and allows for easy scaling up to support an increase of customers. When COVID-19 hit the United States in 2020, the nonprofit orchestrated a live telethon to raise funds to help some of the most vulnerable people in Los Angeles. To support the atypical increases in calls received, they scaled their existing cloud-based contact center to support the greater call volume and, as a result, were able to raise nearly \$1.3 million for their cause.

As all the examples demonstrate, moving to the cloud is not a one-and-done transformation but an iterative approach of building momentum and learning from experience. Think of these four phases not as rigid steps but as a future-oriented, gradual progression. ◆

# Data-Driven Crisis Analytics

Mercy Corps has paved a new era of innovation with cloud-driven programming that fully grasps the complexities of humanitarian emergencies.

BY CAROLYN FLOREY

In the humanitarian aid community, research methods have traditionally skewed toward the qualitative: Participant interviews, focus groups, and field surveys have been the predominant tools determining context-specific interventions. With advances in data science, however, aid organizations have been able to supplement these evidence-driven methods with quantitative ones.

For global humanitarian NGO Mercy Corps, supporting communities affected by crises is just the first step. Finding the means to sustain livelihoods and become more resilient to future upheaval requires longer-term, more complex and dynamic solutions. What a humanitarian organization like Mercy Corps needs, then, is the ability to gather information and data as well as the ability to synthesize and analyze the data in a continuously evolving environment.

Mercy Corps is committed to investing in and improving our capacity to apply quantitative data to drive program processes, impact, and scale. This approach extends beyond our work in crisis analytics and immediate humanitarian response to medium- and longer-term programmatic design and implementation. Through our 10-year global strategy, Pathway to Possibility, Mercy Corps has committed to be an evidence- and data-driven organization that will first focus on the foundational components of people, culture, structure, and systems as the groundwork for an overall strategy. We now know that proper collection, processing, and analysis of large amounts of data have the potential to improve our programs around the world.

When it came to finding the right technologies to accomplish such complex tasks, it was essential to our success that we had the dedicated resources and strong partnerships. Internally, our technology for development team helps our program teams leverage technology to improve their performance and quality. We also have a global crisis analytics team dedicated to in-depth analysis to support our humanitarian operations in the world’s most complex operating environments.

Externally, partnering with AWS has allowed us to leverage cloud architecture and products to facilitate advanced data storage, sharing, and analytics, as well as to have a thought partner with a vision for transforming the humanitarian and disaster-response sector. Designating ownership, leadership, and staff across both organizations, furthermore, allows us to take more risks in data-driven transformation.

## A BLENDED APPROACH

“Crisis analytics” is the umbrella term used in the humanitarian sector to describe how an organization generates, aggregates, and ana-

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