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POV

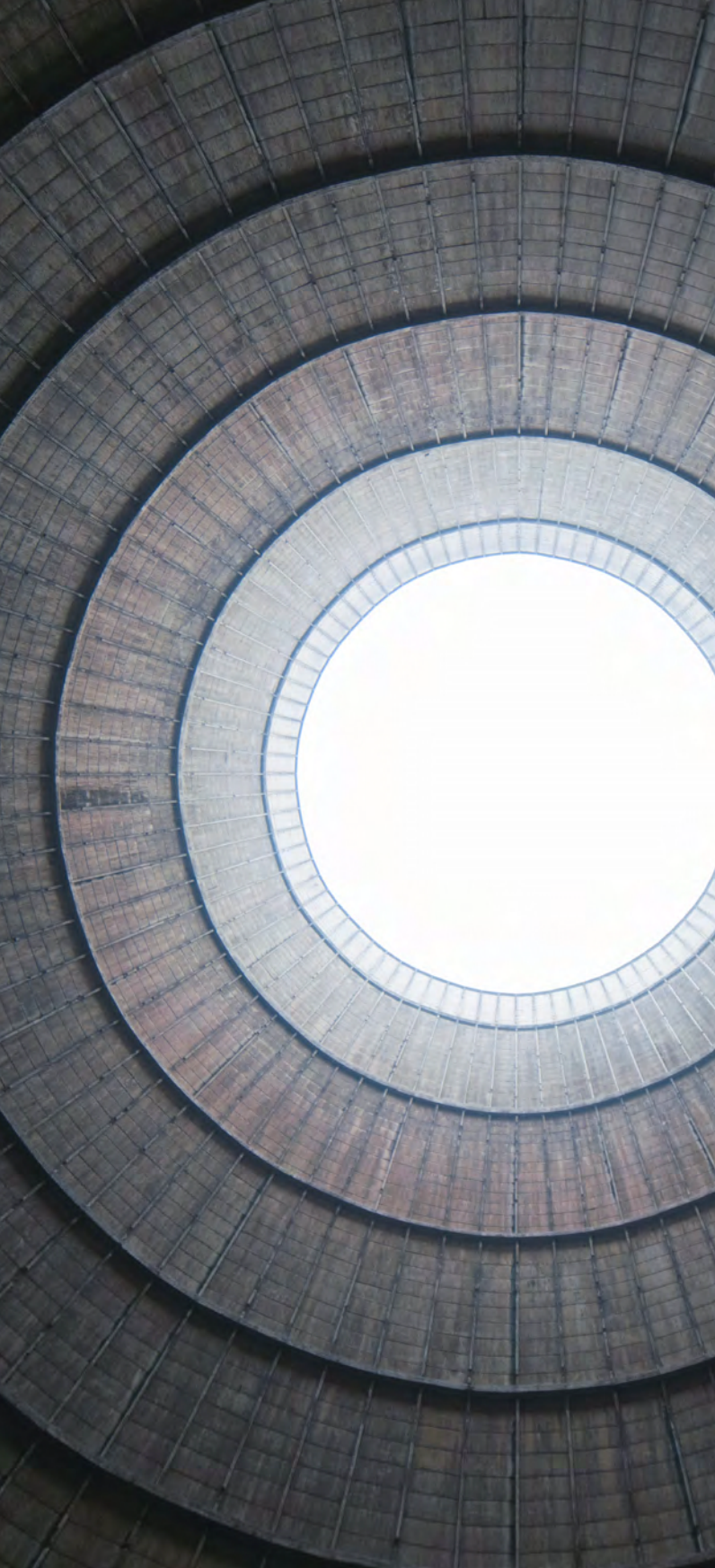
The background of the top half of the page is a photograph of modern skyscrapers at night. The buildings are illuminated with lights, and their reflections are visible on the wet pavement in the foreground. The image is framed by a large, white, curved shape that overlaps the bottom of the photo and the top of the text area.

# What Does It Take To Become a DataOps Organization?

4 Questions to Ask Before You Get Started

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## INTRODUCTION

Many organizations move to the AWS Cloud in order to replicate their on-premises systems in a faster, more cost-effective environment. But that “lift-and-shift” mentality doesn’t unleash the full potential of the cloud to transform an organization in more profound ways. True digital transformation democratizes your data, gives your end-users the autonomy to solve problems independently, and positions your team to lead into the future. When you move to the AWS Cloud, data management should no longer be about how to best store and retrieve data—it should now be about how to use that data to solve new, complex problems, and unlock innovation. The term for this new mindset is “DataOps.”

DataOps is a user-centered approach to data that reduces friction between the consumer and the data manager. DataOps organizations know that IT and data analytics are interconnected systems—and that to have reliable and efficient data, you need to examine the entire data lifecycle. At its heart, DataOps focuses on building systems that don’t just answer specific, predetermined questions, but also give users the freedom to experiment and explore. Old systems are designed to find answers; DataOps empowers your users to look for questions that they may never have asked before.

What does it take to become a DataOps organization? In this e-book, we’ll share four questions your team can ask to start the DataOps journey.

## Are you comfortable in the AWS Cloud?

With its high level of flexibility and scalability, the cloud is the necessary foundation for implementing a DataOps approach. That said, every organization's cloud infrastructure will look a little different, depending on its unique technical needs. At the very least, your company should feel confident in the following areas:

### Building federated user communities

Federated user communities allow end-users to log in with a single sign-on and securely access data or systems across the shared domain. This technology supports a central tenet of DataOps: accessibility.

### Designing elastic and scalable systems

Moving from on-prem to cloud-based systems means you can finally free data from restrictive silos. With that in mind, your cloud infrastructure should be built from elastic systems that can easily sync and share. These flexible, scalable systems can accommodate the exploration and experimentation that comes with DataOps.

### Implementing templates in a CI/CD process

Continuous integration and continuous delivery (CI/CD) pipelines allow your team to quickly and efficiently make changes to your applications and systems without rebuilding from scratch. This is critical when designing elastic infrastructure.

### Focusing on services rather than technology

Many companies think acquiring new tools will help them innovate. But a DataOps mindset is about what those tools can do for you—not just buying technology for technology's sake. Start by identifying a problem you want to solve and work backwards to see which tools will work best. When you focus on the services you want your tech to provide, you are more likely to choose a tool that will truly serve your team.

## Becoming Comfortable in the Cloud

Cloud migration is a complex process with many moving parts—and it involves empowering your team with new skillsets. If your organization isn't comfortable in the cloud yet, rest assured that you can get there. Check out our cloud migration offering for more information on how we can help.

## Do you need reliable data?

Imagine you are a leader at a healthcare organization, and your team finds an inconsistency in your data that indicates patient information has been jeopardized. Do you want them to be able to jump in and take action—or spend valuable hours verifying the data?

The problem is that at many traditional organizations, data isn't always reliable. Siloed information and outdated processes mean teams must spend time confirming that information is accurate before they act on it. That double-checking wastes precious time—particularly in scenarios where safety is on the line. In a DataOps organization, trusting the data is the key to success. You want your users to feel empowered to act when they see something concerning.

DataOps ensures your data is trustworthy because your team has a clear view of your data management practices through the entire data lifecycle. And because data is not siloed, you don't have to worry about information getting lost during transfers or file conversions. On top of that, users in DataOps organizations are educated on how the data systems works—which gives them a better idea of where numbers come from in the first place. Not only are the systems themselves more consistent and reliable, but your end users have more knowledge to identify potential inconsistencies, too.

## DataOps and Business Continuity

When Covid hit, many organizations struggled to get answers about the impact the pandemic was having on business and operations. But at a DataOps organization, your team has the power to ask unprecedented questions, like “How do we continue to operate as we face a global pandemic?”

DataOps can also enable teams to bring in external datasets to solve complex problems. For example, organizations might import transportation data and Covid-19 testing hot spots as they develop a safe return-to-work strategy.

## Do you want your team to have the autonomy to experiment?

Shadow IT, where employees create technology projects outside the knowledge of the IT department, is a common problem at many companies. In fact, experts estimate that shadow IT is likely 10 times as large as known cloud usage. But often, shadow IT is not malicious—it's the natural result of employees wanting to try new, more efficient processes to get their jobs done.

DataOps organizations don't struggle with shadow IT, because experimentation and prototyping are built into the business model. Under a DataOps model, employees are encouraged to try new tools, ask questions about current processes, and see what data can do for them. Users have the autonomy to experiment. Plus, unlike in a shadow IT situation where employees have to hide their work, everyone in the organization benefits and learns from the experimentation that DataOps delivers.

## Do you want your team to have the autonomy to experiment?

Unlike traditional data systems, which tend to focus on one tool or model, DataOps organizations design their systems around the needs of their users. That means you need to be prepared to distribute data across your organization—and put the processes and automation in place to make that happen.

What does this look like in action? Imagine your end-user is an intelligence analyst for the Department of Defense. In a traditional data system, they might have to use a dozen tools to find the answers needed to solve a complex question, because each tool is limited in the kinds of information it can provide. But when you break down those barriers in a DataOps organization, the data can flow seamlessly between those tools—so the analyst can work faster, with fewer headaches.

For many highly regulated organizations, the idea of data flow can be unsettling. But you don't need to build constrictive, siloed systems to stay compliant or secure. Highly regulated organizations can maintain a high level of data governance and continually monitor their systems without sacrificing user autonomy. In fact, many security templates now exist that make it easier to build these systems.



## Transform Your Organization With DataOps

Becoming a DataOps organization isn't about putting new cloud-based tools in place. Instead, it's about embracing a new philosophy that allows you to unlock the full potential of the AWS Cloud. Enabling your team to experiment, prototype, and get creative with your data is what sparks innovation and positive change—and it has the power to position your organization for the future.

Even if your organization can't check all these boxes yet, it doesn't mean you can't get there. The experts at SMX have years of experience helping highly regulated organizations stay compliant while developing flexible data systems that allow their users to get creative with data. To learn more about SMX and DataOps, email [solutions@smxtech.com](mailto:solutions@smxtech.com).

