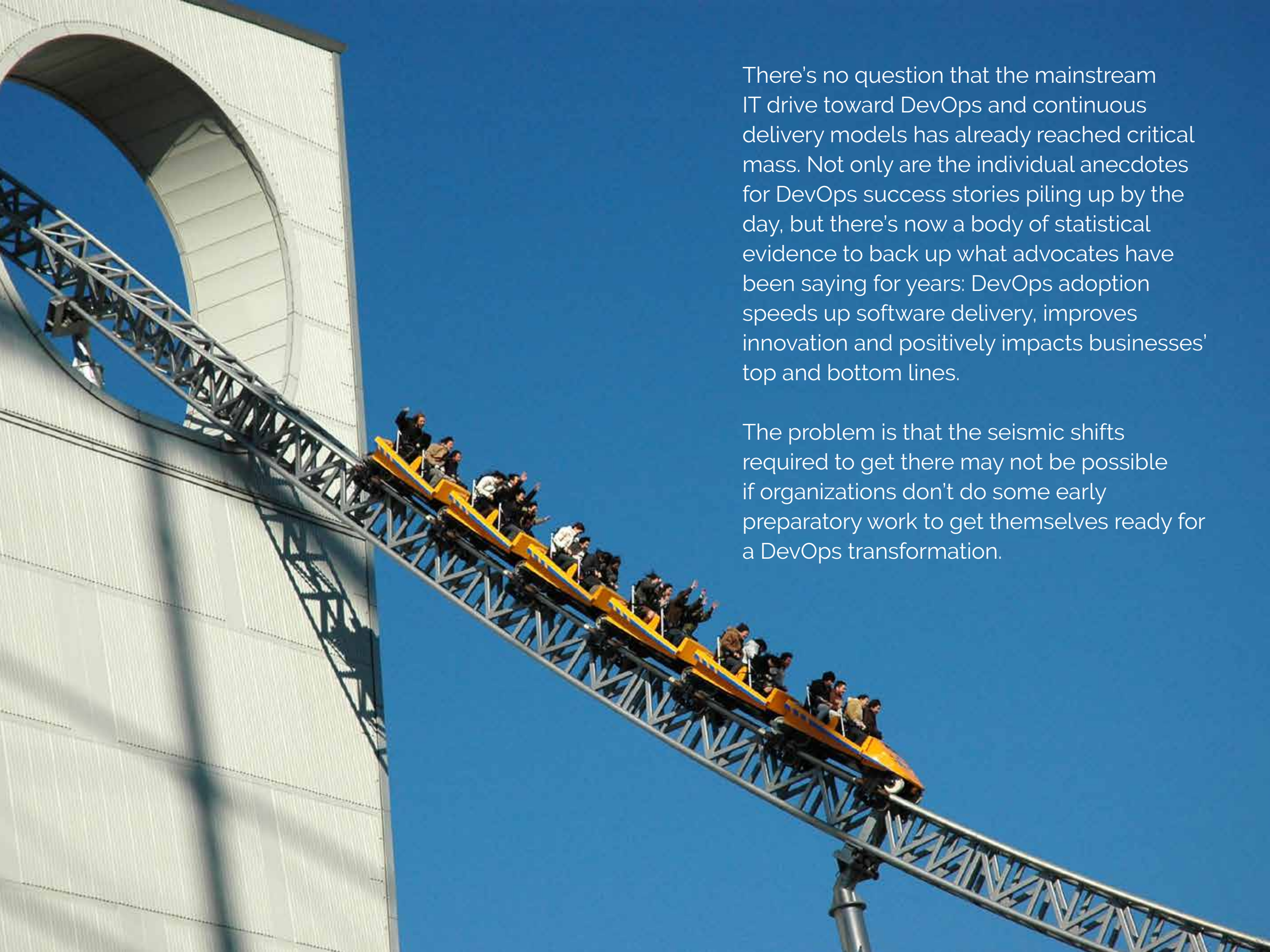
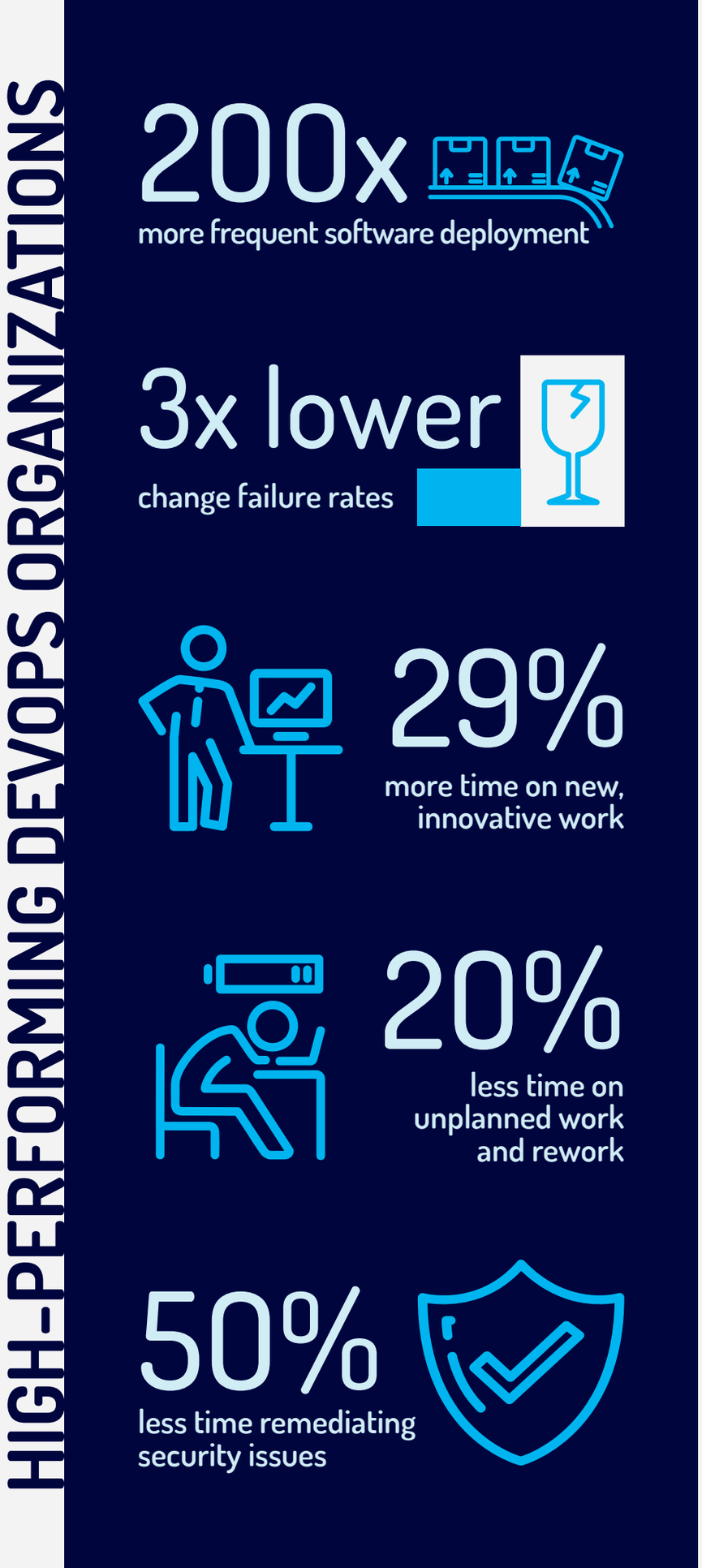
# HOW TO PREPARE FOR THE TRANSITION TO DEVOPS ADOPTION

## 5 PREREQUISITES FOR DEVOPS SUCCESS



There's no question that the mainstream IT drive toward DevOps and continuous delivery models has already reached critical mass. Not only are the individual anecdotes for DevOps success stories piling up by the day, but there's now a body of statistical evidence to back up what advocates have been saying for years: DevOps adoption speeds up software delivery, improves innovation and positively impacts businesses' top and bottom lines.

The problem is that the seismic shifts required to get there may not be possible if organizations don't do some early preparatory work to get themselves ready for a DevOps transformation.




The stories behind these statistics are playing out with increasing frequency, but mainstream adoption of DevOps is still in its early days. While 40 percent of organizations are already adhering to DevOps patterns in some form or other, 60 percent of them haven't even started their DevOps journeys yet, according to studies from 451 Research.

For many in the latter group, diving head-first into a DevOps transformation can seem daunting. Many of the principles behind DevOps — collaboration between developers and operations staff, adherence to lean management practices, frequent code releases and test-driven development — can seem monumentally difficult to strive for from an organization trapped in traditional development and operational patterns.

The good news is that it doesn't have to be achieved all at once — in fact, the whole point to the DevOps movement is to continuously seek incremental improvement in processes and code. Nevertheless, organizations just starting to dip their toes into the water do need some bare minimum proficiencies lined up to set their initiatives up for success.

***Here's what organizations will need at the start line for a productive DevOps marathon.***

# UNDERSTANDING DEVOPS ASPIRATIONS

Before we jump into the prerequisites, though, it might be helpful first to review exactly what these prerequisites are setting you up to achieve. In other words, let's define what it means to become a "DevOps" IT shop.

Most common traits of DevOps organizations fall into three major categories. Many practices cross over between these philosophical categories and there can be a lot of complexity involved in instituting more advanced individual practices

But to truly transform into a DevOps organization, IT groups must be moving to make improvements along all three of these in tandem:

## CULTURE

DevOps organizations seek to break up silos between developers, operations, QA and security to try to improve IT delivery holistically. As such, IT 'tribes' of the past are encouraged to work together and communicate more frequently throughout the software development lifecycle.

## AUTOMATION

In DevOps shops, repetitive, frequent tasks prone to human error are increasingly automated.

Developers are given more capabilities to automatically provision development environments, test code and push it live. Meanwhile, operations staff are focused on creating automated systems rather than performing discrete tasks. The emphasis for ops is in establishing infrastructure as code for both speed and stability of system configuration across development, production and test environments.

Additionally, DevOps firms focus on increasing the usage of test automation and continuous integration practices to bake QA directly into the software development lifecycle.

## MEASUREMENT

DevOps organizations also work to record and measure as many processes as possible in order to provide timely and relevant feedback to developers and operations staff for continuous improvement. They establish metrics that relate developer activities against software and business performance to drive the direction of future software releases.

IT TAKES A LOT OF WORK TO ACHIEVE THESE IDEALS AND SOME DEVOPS ORGANIZATIONS ARE BETTER AT PULLING OFF PRACTICES SOME AREAS COMPARED TO OTHERS. FORTUNATELY, EVEN BEFORE STARTING TO PUT THESE PIECES TOGETHER, ORGANIZATIONS CAN START TO TAKE SOME BABY STEPS TO GET THERE.

**HERE ARE THE TOP FIVE.**

# PREREQUISITE 1:
# ELIMINATE BARRIERS TO EFFECTIVE COLLABORATION

One of the most important ways that organizations can take to start laying the groundwork for DevOps is to start thinking about what cultural, process or tool-based impediments might stand in the way of collaboration between different IT teams and find ways to get rid of them.

Getting this prerequisite squared away starts by finding ways to encourage access between those teams. This means working to establish more paths for different IT tribes to mingle professionally and socially. That can include organizing events such as lunch-and-learns, happy hour guest speaking engagements talking about industry best practices and for IT-wide retreats or, for larger organizations, conferences.

Additionally, firms should start finding ways to take advantage of modern collaboration tools. IRC may be a great longstanding tool for developers, but often hasn't been picked up elsewhere because it is not the right fit for the rest of IT staffers. So try to up the availability of alternative tools.

The goal should be to establish tools that allow for both real-time and asynchronous communication improvements that'll help implement ChatOps strategies. This could include tools and platforms like Slack, Hipchat or VictorOps.

Organizations should also be seeking to incentivize all IT staff members for collaboration through the right key performance indicators (KPIs). Consider measuring collaboration output and against traditional performance metrics. Additionally, start cross-referencing ops metrics against development metrics to encourage IT-wide performance and the spirit of cooperation.

Finally, mangers must remember that this collaborative work will eventually improve IT performance but that it does take time. So start now by budgeting in time for collaboration in current development and deployment schedules.

# PREREQUISITE 2:
# GET RIGHT PEOPLE POSITIONED FOR EARLY PILOT PROJECTS

Transitions are never easy and some people are more likely to push back than others against moving away from status quo.

Organizations readying for a leap into DevOps will need a committed group of champions to get them on the right path. Finding the right people to fill those roles will take some early planning. Teams can get started by evaluating across the staff to find people already predisposed with the skills and temperament good for DevOps. These are people who'd be willing to lead the charge and who have flexibility to transition and willingness to learn.

Consider moving these people into skunkworks-style teams for pilot projects and then once they've gained experience and metrics to prove success, find ways to get them to work-department wide to evangelize among their colleagues.

# PREREQUISITE 3:
# CROSS-TRAIN EMPLOYEES OUTSIDE THEIR TRADITIONAL ROLES

One of the biggest challenges of moving to DevOps is helping veteran operations staffers for prepare for the massive shift to automation. Organizations that aspire to DevOps patterns need to get these folks into the mindset of spinning up infrastructure as code. This means these people need to learn the intricacies of configuration management software like Puppet, Chef, Ansible and so on. The idea is to get them up to speed on what it takes to develop the type of back-end systems that will more tightly couple automated operations functions with developers' daily work.

Developers aren't off the hook for cross-training, either. They'll need to be trained in those same automation tools and ideally an organization should seek out a few key developers who they think can transition to DevOps engineer roles. These developers can transfer their coding skills from coding product to actually developing in-house automated testing and provisioning tools tailored for enabling the organization to continuously deliver their software.

# PREREQUISITE 4:
# EXPERIMENT WITH TOOLS THAT SUPPORT MODERN SOFTWARE ARCHITECTURE

Speaking of training, now is the time for everyone in IT to mentally prepare themselves for a transition to a whole new cadre of tools.

"A lot of shops that haven't started doing DevOps yet, they're still operating in pretty much the same way they have since the '90s." says Donnie Berkholz, analyst for 451 Research. "The difference was maybe, 'Hey, we were using HP UX before and now we're using Linux.' Or they were using some major database vendor before, and now they're using Postgres or MySQL or MariaDB or some open source database, but it was still the same architectural approach, it was still the same style of maintenance."

More importantly, IT should be looking to get into the 'cattle versus pet' mindset about server provisioning in the cloud, where organizations are thinking of servers as clusters and fleets that are quickly spun up or down according to demand rather than long-lived individuals.

Experimenting in these technologies doesn't have to be expensive — in many instances it is possible to run hosted private clouds to support these explorations.

**DevOps transitions work better when departments have already started experimenting and gaining familiarity with tools such as:**

**Git and GitHub**

**Docker and containerization technologies like Kubernetes**

**Data clusters and non-relational database technology like Hadoop and Cassandra**

# **PREREQUISITE 5:**
# EVALUATE CLOUD PROVIDERS

As we've alluded to already, the scope and scale of DevOps requires a cloud-first mode of operating. Organizations seeking to benefit from DevOps methodologies should look to partner with a provider that offers a broad range of cloud hosting environments and managed services.

Providers with hybrid cloud offerings, including both public and private resources, are generally well positioned to help IT organizations to maximize deployment flexibility, security and overall performance.  Since automation is critical in the DevOps world, care should be taken to survey the openness of a potential partner's API ecosystem,  their integration capabilities, and friendliness as a BYO-provider supportive of custom DevOps tools.

Finally, selecting a cloud hosting provider that delivers managed support across the entire environment can be extremely helpful in focusing resources on high-ROI activity, rather than managing day to day operational tasks associated with keeping the infrastructure up and running.

As a leading cloud hosting and managed services provider with over 17 years of industry experience of cloud hosting and managed hosting services, Hostway stands as a useful partner for organizations seeking to transition to DevOps.

The Hostway Hybrid Cloud is comprised of Azure Public Cloud and Hostway Virtual Private Cloud (powered by Windows Azure Pack) environments — all wrapped in proven Hostway managed support.  This flexible, highly reliable platform allows organizations to quickly spin up and down resources on a utility basis, while also having access to dedicated resources where maximum performance and control over the environment is important.  For IT shops familiar with Microsoft virtualization technology and Azure, the Hostway Hybrid Cloud has proven to be especially easy to adopt as it leverages familiar toolsets and API's.  Given Hostway's reputation as a leading cloud hosting provider, its Azure-consistent Hybrid Cloud, and selection of managed services — Hostway offers a solid foundation for IT organizations looking to run DevOps.

HOSTWAY®
GLOBAL WEB SOLUTIONS

Hostway Services, Inc.
100 N Riverside, Suite 800
Chicago, IL 60606
(855) 812.4613

twitter.com/hostway
facebook.com/hostway
linkedin.com/company/hostway-corporation
plus.google.com/+hostway

DevOps.com
Custom Publishing