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MAPPING A JOURNEY FORWARD

How to Set a Course to Transform the Enterprise

Charting a New Path Forward

The journey to cloud native is simple, right? Find some cloud-native applications, integrate them into your tech stack and you're good to go. If only it were that simple! While there are a lot of technology applications out there that claim they're cloud native, the majority are not—perhaps they're trying to capitalize on the popularity of the term.

Cloud native is a mindset, a methodology, a new way of thinking—designing and building applications using microservices architecture and containers and leveraging tools and platforms like Kubernetes. Yes, cloud-native architecture has a major advantage over legacy monolithic applications when it comes to complexity, speed, scale and resilience. But the journey from monolith to microservices isn't quite that straightforward. The road to cloud native is winding and can sometimes be difficult, but the end result is worth it. As the saying goes, it's about the journey—not just the destination.

Sharon Florentine
Contributing Editor

THE CHANGE AGENT

The cloud fortifies the enterprise and creates the agility and scalability needed to succeed long term. But if you don't stop to ask the right questions in the beginning, the organization won't have the necessary foundation to execute the strategy.

01 ▶

The Cloud Journey

To stay competitive, organizations are pressured to bring new and improved products to market faster than ever before. Yesterday, innovative design, rapid response and zero downtime were differentiators. Today, that's just the cost of entry. Your customers demand more. Fail to deliver, and your customer simply goes elsewhere. Companies obsess over the customer experience. They know that a cohesive customer journey elevates the entire brand experience. Organizations navigate increasingly complex business and technology ecosystems, pressured by users with higher expectations. That pressure can force companies to act— sometimes before they're ready.

Acting to meet the demands of today's customers often brings a startling realization: Legacy technology systems are holding organizations back. Complex, monolithic systems just weren't built to support the agility, flexibility and change required to compete in a modern digital landscape. To create agility for the enterprise, the IT department turns to cloud-native technologies to increase flexibility, drive down costs, improve automation and speed time to market. Cloud-native applications take advantage of open source and microservices architecture to power the organization's digital transformation efforts. On the surface, that seems to be exactly what the company needs.

But that's just the technology solution. While technology is certainly part of the equation, it doesn't account for the business goals, or the people and processes that will ultimately determine success. Relying solely on cloud-native development just means the organization built a technology strategy rather than a business strategy. When IT and the business fail to align and define the desired goals, the outcomes never deliver the expected value to the business. The company made a strategic decision to act without the necesssary understanding of why it was important. They failed to consider their ability to sense and respond to their customer. They haven't achieved the business agility necessary for the business to sense and respond to the market, or the development agility that enables IT to sense and respond to the business.

CLOUD TRANSFORMATIONS ARE FRAUGHT WITH OBSTACLES:

▶ **Unanticipated costs**

▶ **Data privacy and security challenges**

▶ **Lack of skills and expertise**

▶ **Underestimated change management**

▶ **Ongoing cloud management (postmigration)**

A critical first step is to envision the future of the business and ask critical questions about what the organization is trying to achieve. How will this impact the business? What value are they trying to drive for the business? Adopting a cloud–native architecture might be the right approach—or it might not. Technologies like cloud–native applications can enable the transformation necessary to respond to the ever–changing demands of the market. The cloud fortifies the enterprise and creates the agility and scalability needed to succeed long term. But if you don't stop to ask the right questions in the beginning, the organization won't have the necessary foundation to execute the strategy.

Organizations are right to focus on their customers' journeys as they strive to build experiences that exceed buyer expectations. But what about their own journey? And make no mistake, the adoption of a cloud strategy IS a journey. These journeys are disruptive and can seem erratic. You may need to veer left or right along the journey, depending on what you've accomplished. Sometimes you need to go back and add polish to a step you previously completed or address an area that was overlooked. Building a plan outlining how you're going to navigate unexpected detours on the journey will illuminate what is important so you can deliver the desired value back to the business. When companies define their strategy and activate their plan, they help make the journey successful and ensure they arrive at the desired destination.

46%

of organizations say cloud skills are the most critical factor of their transformation success.[2]

Cloud spending to surpass $1.3 trillion by 2025.[1]

MARKET PERSPECTIVE

We explore how an AWS Learning Needs Analysis can help accelerate and scale cloud adoption.

O2 ▶ Closing the Cloud Skills Gap

Q **For organizations focused on closing their cloud skills gap, where should they start?**

✚ A *AWS: As organizations move workloads to the cloud, it's necessary to have a comprehensive cloud training for teams to easily adapt new strategies, mitigate concerns and broaden benefits of the cloud. Before embarking on this training journey, it's important to start with an assessment of where your organization currently stands and what skill gaps exist.*

Q **What is AWS Learning Needs Analysis?**

✚ A *AWS: The AWS Learning Needs Analysis helps you assess cloud skills for a wide variety of roles across your organization—from developers and data scientists to managers and executives. Participating employees complete an adaptive, role-based, self-assessment survey. An AWS expert will review the survey results with you and pinpoint areas of need. They'll then create a targeted, cost-effective training and certification plan that's right for your organization and addresses the needs of your employees.*

Q **When should organizations consider an AWS Learning Needs Analysis?**

A *AWS: There is uncertainty in organizations around which employees have AWS skills, and if the skills they do have are sufficient. You may already have the people you need, but a targeted strategy could help you achieve your goals. AWS Learning Needs Analysis is primarily used for organizations with a large number of individuals to train. The results from the survey help justify an investment in training and certification programs.*

Q **What are the benefits of conducting an AWS Learning Needs Analysis?**

A *AWS: There are several benefits that will help you align training investments with your business goals, including:*

➤ *Data-driven planning – Helps the organization develop a training and certification plan based on facts and data.*

➤ *Targeted skills enablement – Provides guidance on where training investments should be directed.*

➤ *Organizational alignment – Acts as a self-reporting mechanism to engage employees in training plans.*

OUR
PERSPECTIVE

TEKsystems leaders Brian Copeland and Leslie Deutsch share perspectives on how companies that define their strategy and activate their plan help make the journey successful and ensure they arrive at the desired destination.

03 ▶

Building a Cloud Foundation

Every organization is on some type of journey to transform and modernize the business. The most successful journeys strategically apply technology to enable their business goals and deliver value to their customers, but the paths these journeys take are different for every organization. A company running workloads on Amazon Web Services may need to consider AWS Landing Zone. A Microsoft Azure shop might consider Azure Kubernetes Service. Google Cloud infrastructure users may need to anticipate how to drive DevOps automation across their Google Cloud tech stack. Regardless of the technology ecosystem, mapping out a plan for where you want to go is critical to success. The plan must be nimble and flexible, so you can adjust and course-correct along the way.

Take, for instance, the adoption of a cloud strategy as a journey. There are numerous considerations that must be addressed as part of the strategy. Navigating the journey and identifying what is important and critical to success often relies on extensive experience and a deep understanding of what you're trying to accomplish. The plan can act as a compass to ensure you meet key milestones and don't miss crucial waypoints.

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*"**Journeys are disruptive**. Because they're disruptive, having a plan for how you're going to address it within the organization is critical to success."*

Brian Copeland
TEKsystems

There are several key stages of a cloud journey to consider.

➤ **Business and Technology Foundations**. Envisioning the future of the business and then identifying how technology can enable the delivery and flow of that value is a critical first step to a purposeful cloud journey.

➤ **Cloud Foundations**. First understand what and then how. An integral building block is defining, building and maturing a Cloud Center of Excellence (CCoE) focused on the technology foundation. Creating a Center for Excellence (C4E) focused on skills development and cloud adoption is critical for the long-term viability of any cloud journey.

➤ **Build and Migrate**. Build the right secure cloud foundation, and then start small for big wins. Establishing a migration factory will drive speed, repeatability and quality across your migration.

➤ **Modernize (Refactor)**. Some applications should be refactored to take advantage of the cloud or to bring new business capabilities.

➤ **Continuous Improvement**. A key focus of any cloud journey must be on keeping the cloud environment as efficient and cost-conscious as possible.

Cloud migrations are disruptive events in the enterprise. Not only are you moving your company's infrastructure and applications to new technologies, but you are essentially lifting the business from traditional brick, mortar and metal to the cloud. This disruption must be addressed and accounted for. There are processes, skill sets and applications that all need to change. Organizations that embark on a cloud journey need to address all aspects of organizational change management, including and especially the human aspects of change.

Addressing the Cloud Skills Gap

The cloud is the greatest enabler for both business and delivery agility, but true transformation is driven by your people. As organizations move to the cloud, ensuring that the people and teams in your organization are growing their skills is critical to the success of your adoption. The first step in ensuring your people have the right skills is to identify and assess the skill gaps. Often organizations address the skill gaps with a one-size-fits-all approach to training. Everyone in the organization, regardless of skill level or experience, receives the same training curriculum. Besides being costly and terribly inefficient, it's a poor experience for your employees. A better approach is to quickly and efficiently identify the skill gaps with data-driven tools, such as an AWS Training and Certification Learning Needs Analysis. The Learning Needs Analysis includes an adaptive survey that covers the critical cloud roles and the related functions. The simple self-assessment provides a holistic view of the skills and capabilities of your employees.

Once you've identified the skill gaps, the biggest challenge is time. The pace of work doesn't slow down because you need to upskill the workforce. Companies must help find time for employees to complete the training as they advance across their learning and development journey. Human beings process information and learn through different modalities. It's critical to meet employees where they are—determining what learning experiences will provide the most value and deliver the best results.

Clear communication is key as organizations progress along the journey building out their learning and development plans. Most employees aren't fond of taking skills assessments without a clear understanding of why. Leaders must clearly articulate where they're going and provide clarity on how these skills and certifications will enable the organization to reach their destination.

Every company is on some type of journey, driven by demands to elevate the customer experience or the pursuit of competitive advantage. Those journeys are disruptive and almost never follow a straight and narrow path. Mapping out a plan so you always know exactly where you are on the journey is crucial to a well-executed strategy. Your journey map will ensure you reach your destination, but the journey doesn't end there. Building agility and durability across the enterprise will ensure you're ready for the next disruption coming around the bend.

▲ *"It's critical to meet employees where they are—determining what learning experiences will provide the most value and **deliver the best results**."*

Leslie Deutsch
Executive Director, Learning Solutions
TEKsystems

TEKsystems' Tips

Own your strategy: Off-the-shelf strategies rarely deliver the anticipated value because the organization isn't bought in. Get the right stakeholders in the room. Pinpoint the business problems you need to solve. Then develop your own roadmap.

Address change management: Organizational change management is a vital step toward successfully transforming the enterprise. It's important to understand how employees will be affected and clearly and consistently communicating these effects to help drive user adoption.

Live for today, plan for tomorrow: Lean on partners to shore up gaps where you may not have the skills or capabilities, while thinking through how to build the long-term skills and capabilities in-house.

Avoid myopic thinking: Bring in the expertise you need to transform, but don't allow the vision to remain with a select few. Articulate the vision and transfer knowledge to the teams who will manage the cloud long term.

Bridge the gaps: Cloud journeys often originate from the IT department. Don't let the journey get siloed in IT. Engage business stakeholders early so they can articulate and define the business goals and objectives.

Real-World Application: Snap, Inc

Snapchat boasts 347 million daily active users who send photos (Snaps) and videos, and use the company's augmented reality Lenses. The company says that Snapchatters play with AR lenses 6 billion times per day on average. Users expect high performance, speed and, most importantly, on–demand access. Delivering on those expectations requires scale and flexibility. And the stakes are high. If Snapchat is offline for even one second, hundreds of millions of people will know. That downtime is bad for the company's reputation and ultimately impacts the bottom line with loss of revenue and customers.

In 2017, 95% of Snap's infrastructure was running on Google App Engine (GAE). At the time, the architecture was effective for running the organization's workloads. As the company grew, creating new products and services, they encountered scaling challenges that became too much for GAE to handle. The company needed a new solution. They needed to chart a new course to maintain competitive advantage.

The company chose to evolve the way their cloud infrastructure is built, from running a monolith inside of GAE to microservices running in Kubernetes across both Amazon Web Services and Google Cloud. Snap adopted a multicloud model where they can pick and choose which workloads to place on AWS or GCP. With multiple cloud providers, Snap can take advantage of the best parts of each provider's services and mix and match to suit the needs of their business. Today, less than 1.5% of Snap's infrastructure sits on GAE. Snap has boosted traffic capacity, reduced latency and can more easily scale workloads across multiple cloud platforms. In the new environment, the company can focus on delivering differentiating value for their customers.

All information shared herein was accessed from public sources as indicated.
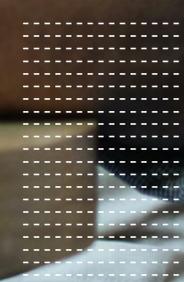
TEKsystems Portfolio

- Delivering expertise in modern cloud analytics, data modernization service, AI and machine learning, master data management, data governance and quality, real-time analytics and IoT across 300+ customers, including 20% of the Fortune 100.

- 1M+ learners reached across 15+ countries over the past 15 years

- 150+ customized training programs annually

- We're an Amazon Web Services (AWS) Partner Network Training Partner. Our skilled practitioners use real-world experience to guide your teams on how to develop and deliver on AWS.

- Proprietary tools to accelerate timelines and deliver results with a million+ lines of code of TEKsystems IP leveraged covering 55+ accelerators across AI, conversational platform, data engineering, data visualization and cloud analytics.

- As a Microsoft Gold-Certified Partner, we bring qualified expertise and deep experience to help you maximize ROI and achieve real value. From discovery and design to adoption and improvement—we'll tailor our solutions to meet your needs and help you stay ahead of what's next.

- 1Strategy, a TEKsystems Global Services company, is an AWS Premier Consulting Partner offering consulting services focused exclusively on AWS solutions. 1Strategy is a Machine Learning Consulting Partner and has earned multiple AWS competencies, including DevOps, Migration, Data & Analytics and Security.

- Leveraging our Machine Learning Partner Specialization in the Google Cloud Partner Specialization Program, we'll help your data insights come into focus, unlocking smarter innovation and digital transformation.

- As a Snowflake Elite Partner, we have the proven skills and experience to help you leverage Snowflake's innovative technology and achieve data-driven results.

- As a Tableau Premier Partner, you'll benefit from our 30+ data and analytics accelerators and a library of BI platform capabilities, processes and proven frameworks that are agile, repeatable and scalable across a Tableau environment.W

- In good company
Transformational technologies demand equally transformative partnerships. Full-stack capabilities coupled with depth and diversity of experience in leading platforms that help organizations grow, innovate and thrive.

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect the views of TEKsystems, Inc. or its related entities.

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Brian brings over 30 years of senior-level experience in the software development industry, specializing in organizational transformation and development. His career has included 10 years as the test operations manager for the Titan II, 34D, IVA and IVB rocket programs, managing both flight and ground software-testing facilities for Lockheed Martin. He also served as the senior manager of quality assurance for shared services with Deloitte & Touché, LLP. His experiences range across a wide range of industries, including aerospace, medical device, title insurance, legal services software, Big Four consulting firm, healthcare and banking industries. Brian is currently an executive director in Solutions & Sales Enablement for TEKsystems Global Services.

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As the executive director of Learning Solutions at TEKsystems, Leslie oversees a team that drives learning and adoption services within our client organizations as well as our internal programs. These programs focus on building a future workforce with tomorrow's skills, upskilling and reskilling current teams, or changing behavior needed to impact productivity.
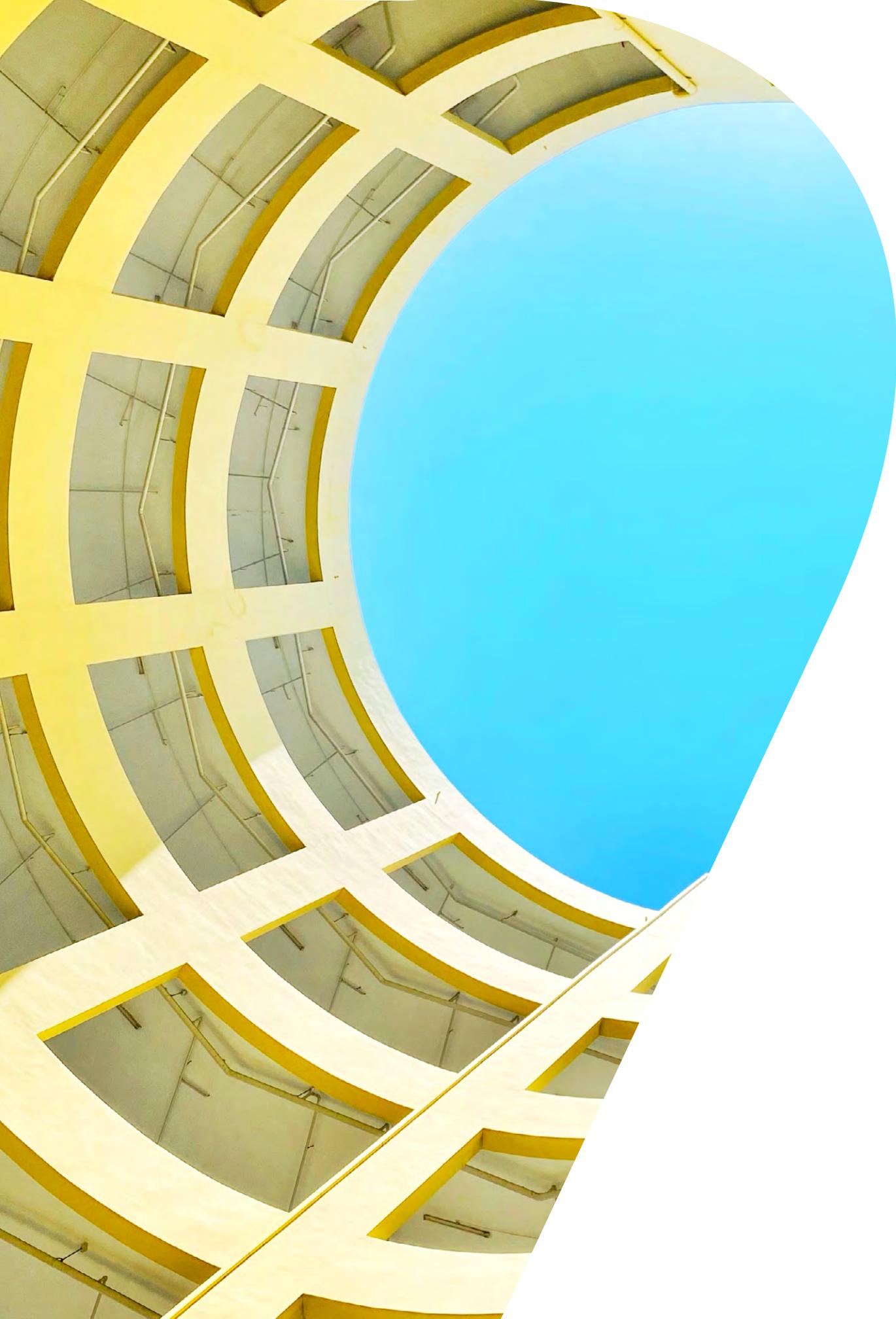
About TEKsystems®

We're TEKsystems. We accelerate business transformation for our customers. We bring real-world expertise to solve complex technology, business and talent challenges—across the globe. We're a team of 80,000 strong, working with over 6,000 customers, including 80% of the Fortune 500 across North America, Europe and Asia, who partner with us for our scale, full-stack capabilities and speed. We're strategic thinkers, hands-on collaborators, helping customers capitalize on change. We're building tomorrow by delivering business outcomes and driving positive impacts in our global communities. TEKsystems is an Allegis Group company.

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Sharon Florentine is the contributing editor for Version Next, Now, TEKsystems' quarterly publication. She is an award-winning independent writer and editor with more than 20 years of experience in the tech industry. Her work has appeared in Computerworld, PC Magazine, CRN and eWEEK, among others, and she is a passionate advocate for equity, diversity and inclusion in tech and beyond. Most recently, Sharon was a senior writer for CIO.com, where she covered software development, Agile, IT careers, learning and development, and DE&I. She lives near Philadelphia.

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