# Application and Infrastructure Modernization: The Key to Digital Transformation

## In today's digital economy, software is having a profound impact on virtually every industry.

Numerous start-ups have shown they can upend entire business sectors with little more than a cell phone app, and this trend is likely to kick into high gear with the advent of 5G and artificial intelligence.

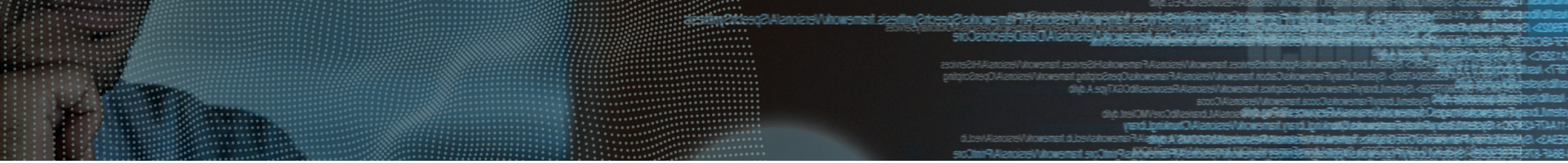
Unlike economic transitions of the past, the current turmoil is driven by the fact that technology no longer requires a newcomer to compete directly with entrenched players. Airbnb, for example, is now a dominant player in the hotel industry even though it doesn't own a single hotel, nor any real estate. Apple provides few apps of its own, but virtually no one can launch a successful one without the App Store. And Uber has put the fear into leading car manufacturers and taxi companies without owning a single car.

Will your industry be next? Many of today's leading corporations are so concerned about this that they are embarking on "digital transformation," the process of converting legacy business models into lean, agile and highly digitized processes. This is easier said than done, however, because it requires the coordinated evolution of three key enterprise elements:

- Applications – which require new methods of development, delivery and integration
- Platforms – which must be modernized and expanded onto cloud-based infrastructure
- Processes – which must be made more agile across IT and multiple business divisions

The key goal here is to create a framework of application and infrastructure modernization that supports the rapid creation, management and maintenance of apps so they can run across disparate hybrid clouds without modification. Using modern DevOps practices, organizations will find they can deliver services quickly to customers, while at the same time provide greater scale and resiliency to meet shifting workload requirements, and all in a more cost-effective manner than on fixed, hardware-centric infrastructure.

This will require virtually all applications to be recoded, or "refactored" for cloud-native functionality. With many of today's start-ups launching on cloud-native applications and infrastructure, legacy data centers will have to convert into private clouds in order to provide the local component of extended hybrid cloud architectures and automation. This is the only way to support the high performance and high availability needed by a modern services environment, as well as the continuous delivery and vast array of microservices that will likely drive application environments in the Internet of Things (IoT).



Microservices, of course, will also require a highly containerized ecosystem that allows them to function on any cloud infrastructure or platform they require. Unlike virtual machines, containers provide a full runtime environment, including libraries, configuration files and other dependencies. This makes them highly portable and suitable for the fully automated, infrastructure-as-code environments emerging on the cloud and the IoT edge.

As can be expected, however, containers will not manage themselves. And since they essentially occupy a distinct layer of the IT stack, they require a targeted approach to management – one that leverages their unique qualities while also helping them integrate into the broader cloud ecosystem.

Red Hat's OpenShift platform is an enterprise class, open-source, on-premises or public cloud solution that leverages the Docker container format and the management and orchestration capabilities of Google's Kubernetes, now maintained by the Cloud Native Computing Foundation. OpenShift has the advantage of functioning equally well for both traditional and cloud-native applications, and since it is both an application development and deployment platform, it offers source-to-image capabilities to turn source code into running applications. It also has the backing of a community-based continual development environment, meaning upgrades and updates are frequent and can be quickly integrated into the broader platform.

## But exactly how will all of this help transform today's legacy environment into the advanced, agile entity required for a digital services economy?

By combining application and infrastructure modernization with emerging tools like automation, DevOps, and containers, the enterprise should see the following benefits:

- Greatly improved application lifecycles and time-to-market
- Virtually zero downtime, with no single point of failure for any workflow
- Knowledge workers focusing on core, strategic objectives rather than mundane systems or data management
- Vastly improved security that continuously and autonomously adapts to emerging threats
- True multi-cloud infrastructure in which applications can run anywhere
- Predictive maintenance and operational efficiency to reduce IT overhead to a bare minimum

## Every journey begins with a single step.

For the enterprise, digital transformation is about changing entrenched habits and attitudes as much as changing systems and technology. A good place to start is with development and application teams, which are likely to have a greater understanding of these benefits than non-technical employees. A top goal should be to trim the development lifecycle, which in many cases can drop from six months (or longer) to as little as one week. Once developers see the advantages of owning their own environments and running their own apps, the transition can extend to platform and process workflows, preferably those that can deliver the greatest competitive advantage through increased speed, availability and flexibility.

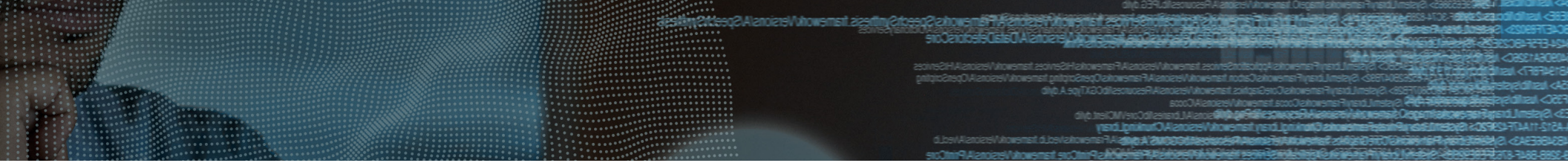
It also helps to identify key influencers within the organization to ensure they are up-to-speed on all of the ways things will change for the better. This may include improved development speeds and tools, as well as flexible deployment schedules, higher levels of security (but not at the expense of decreased performance) and more streamlined operations. By focusing on making employee's jobs more rewarding and less tedious, organizations should find that the transition goes smoothly and the cost/competitive advantages arrive as a matter of course.

Few enterprises have deep expertise in these matters, which is why it is wise to choose a knowledgeable partner to help guide the transition. OnX is a Premier Plus Partner with Red Hat, having earned a top partner award for cloud development under the Cloudform platform. Our certified technical experts strive to become an extension of our clients' IT teams, offering certified expertise on areas like cloud, automation, virtualization and storage. As a full-service managed provider, we also take on the burden of modernizing applications, as well as the ongoing monitoring and management of containerized cloud environments, allowing internal staff to concentrate on core business objectives.

*But make no mistake: this transition is not optional, nor is it merely a better way to run a business. It is crucial to the enterprise's survival in the digital services economy. Once business opportunities begin to rise and fall at the speed of data, companies that remain saddled with yesterday's applications and infrastructure will be as disadvantaged as a mule on a motor speedway.*

Forward-leaning companies across virtually all industries are already making this transition. Once they are up to speed, the laggards will find it nearly impossible to catch up.

Contact us today to learn how OnX can help modernize your infrastructure and applications.



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