Six Unexpected Challenges to Modernizing Apps

App modernization brings undeniable benefits. Organizations can reduce costs, improve productivity, increase business agility, improve security and more. Companies know that staying competitive and delivering value to customers requires a trusted foundation to accelerate innovation. They see the application future they desire: cloud-based, containerized, microservice-based applications created to run with DevOps processes.

While these organizations have a well-defined vision, the path to achieve it is unclear. The most common approach is to attempt to shift into that future state by jumping there in one fell swoop, swapping out the entire infrastructure stack all in one go instead of evolving current teams and processes. With this approach, there are huge technical, organizational and operational hurdles to overcome, which can be more difficult and time-consuming than originally expected.

An organization will likely encounter the following unexpected challenges when using the one-fell-swoop approach to modernize applications:

1. **It's all or nothing** – When jumping feet first into the app modernization journey, an organization will often find there is an all-or-nothing set of options that leaves applications stuck completely in the old world or completely in the new world. This means that unless all the requisite effort is put in, that application or application component will still be in the old world and the business will have nothing to show for their efforts.
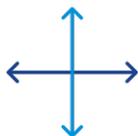
2. **It limits options and creates new issues** – Because of the all-or-nothing nature of this transition, if business priorities change (due to a new product launch or a merger/acquisition, for example), the app modernization effort may come to a halt without any realized value.

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3. **It presents a steep learning curve** – Because the new, modern app world is completely different from the old world, developers and DevOps teams find the learning curve to be steeper than anticipated, leading to further silos and errors.

4. **It's slow** – The process to refactor, rearchitect, retool and retrain is arduous and complex, and can greatly hinder the app modernization process, increasing the manual effort to complete the transition to the new stack.

5. **It leaves the organization straddling two different worlds** – The reality is that the transition may take years to truly be complete, which will require teams to straddle both the old world and the new world, leading to a much slower process than anticipated.

6. **It's single cloud–centric** – Perhaps most importantly, even if the organization masters a single public cloud, most organizations are already using multiple public clouds to take advantage of the best services for every app. This use of multiple clouds further exacerbates all of the previously stated challenges associated with today's current approach to leveraging the public cloud.

VMware helps organizations avoid these unexpected obstacles through our nondisruptive evolution strategy, which enables the quickest time to value, provides maximum choice, and is less disruptive than using the one-fell-swoop approach.

VMware provides a powerful software infrastructure and management stack that can be layered on top of any type of physical infrastructure in any location. Our unique architecture can run all types of applications—traditional and modern—in addition to a broad set of platform-as-a-service (PaaS) solutions.

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How VMware helps avoid the unexpected

Provides maximum choice

VMware enables choice at all levels, whether that's the location where applications run, the underlying infrastructure and hardware, or the cloud provider. We offer a wide array of choices for the application, including:

- Application architecture (traditional VM-based, container-based, microservice, etc.)

- Public cloud services (e.g., Redshift, Cloud Spanner, and more, from any cloud)

- Enterprise-vetted OSS packages

- PaaS and container-as-a-service capabilities

Ensures the quickest time to value

The VMware approach enables the quickest time to value by breaking down the modernization journey into a series of short, discrete and mostly automatable steps. This allows enterprises to realize immediate tangible business value while iteratively and quickly progressing toward their future vision.

Causes the least disruption

Rather than forcing businesses to take large discontinuous jumps between states that are time-consuming and risky, VMware provides a consistent experience that allows them to make forward progress nondisruptively. We enable this by providing steppingstones that gently move a business toward their future state goals while preserving the flexibility to accommodate unforeseen changes.

Offers the most flexibility

App modernization takes time, even when the right approach is the quickest, so organizations must be able to adapt. With maximum choice comes maximum flexibility, which means organizations can always make forward progress, even in the event of unforeseen change.

Ultimately, app modernization is a transformation that thousands of organizations will undergo, but depending on their preparation, this process can be either efficient and timely or arduous and complex. VMware delivers the trusted foundation to accelerate innovation and provides multi-cloud services for all apps, enabling customers to seamlessly evolve their applications.

Of course, many businesses realize that while they have a future state direction right now, that direction may change in the future. And if it does, optionality will be key. VMware meets customers where they are, offering the flexibility and choice they need to build the future.

Want to learn more about how VMware powers app modernization? Check out our white paper, The Fastest Way to Modernize Apps Isn't What You Think, or contact a VMware expert.