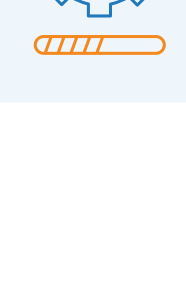


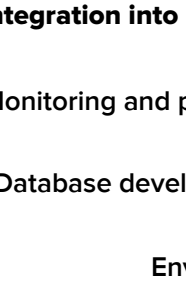
# KEY CONSIDERATIONS FOR DEPLOYING CUSTOM APPLICATIONS IN THE CLOUD

## Public Clouds Are Becoming a Preferred Destination for Custom Application Development and Deployment

### Challenges

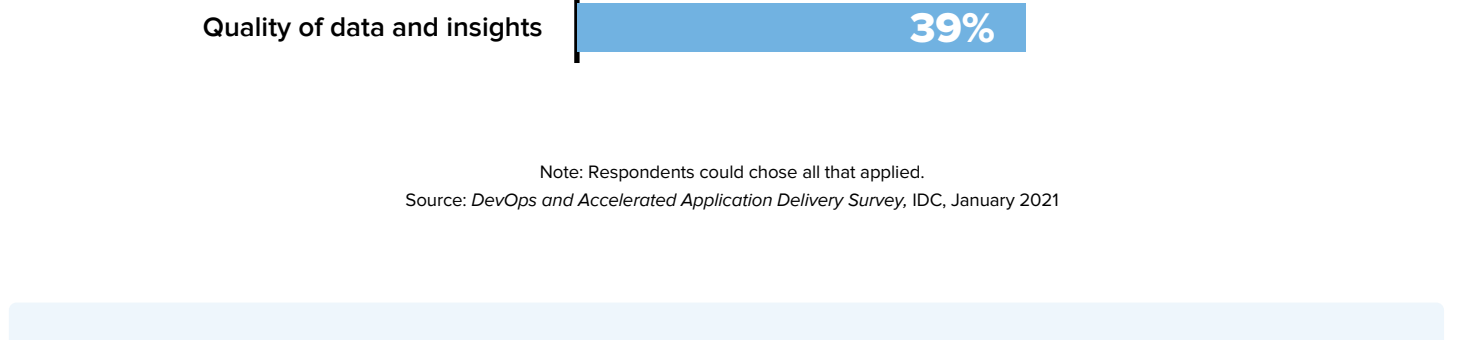


**Custom applications often represent heavy support burdens for IT staff.** Issues may be compounded by lack of personnel skilled in an application's specific architecture and infrastructure and by capacity constraints in on-premises datacenters.



**Integration into legacy app environments remains the top technology bottleneck in the application delivery pipeline.** Moving applications to the cloud and application modernization can resolve many challenges.

#### Top Technology Bottlenecks



Note: Respondents could choose all that applied.  
Source: DevOps and Accelerated Application Delivery Survey, IDC, January 2021

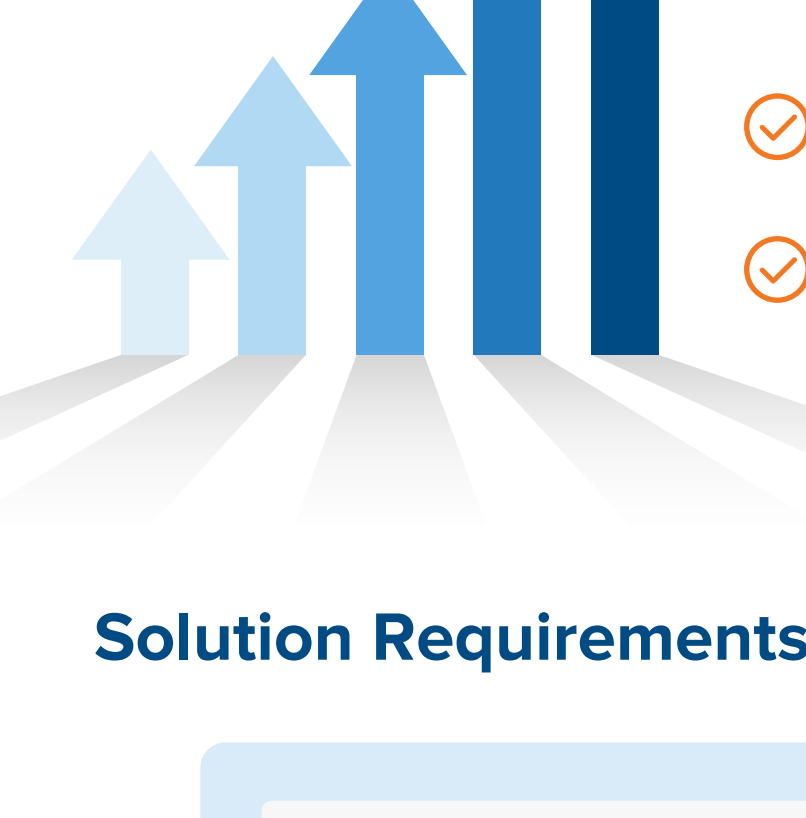


**Modernizing while dealing with legacy applications** is a formidable challenge.



**Multiple environments and tool stacks** can inhibit DevOps scalability.

### Benefits



✓ **Public clouds offer cost-effective services** to meet custom applications' needs for data, storage, disaster recovery, artificial intelligence, and edge computing.

✓ **Clouds also scale** by expanding or contracting bandwidth as workloads require.

✓ **Plus the ability** to meet changing market needs with favorable economics, improved risk mitigation of disaster recovery, built-in compliance, more robust and easier security, and DevOps cloud services.

### Solution Requirements

✓ **Organizations are taking a selective approach to choosing a vendor** for migrating custom applications and their workloads to the cloud.

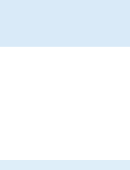
#### Requirements include:



Comprehensive and high-performance services



A zero-trust architecture approach



Robust integration capabilities



Pre-built reference architectures



Flexible compute

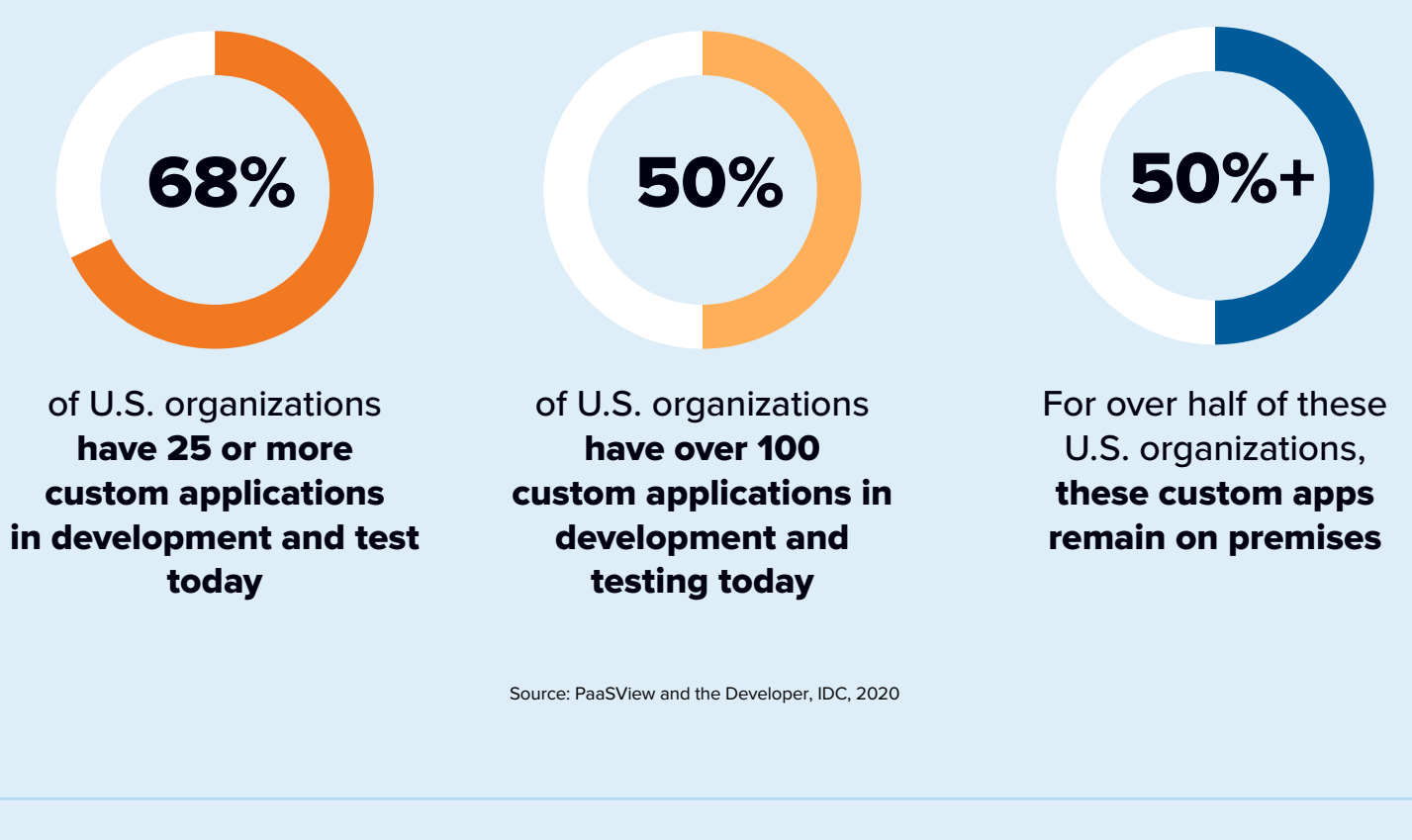


Access to cloud-native technologies to support continuous modernization

## Custom Apps Are Primed for the Cloud with Extensive Support for Dev/Test

Custom applications are prevalent in all sizes of organizations.

#### Percent of U.S. Organizations by Number of Custom Applications in Development and Testing Environments



68% of U.S. organizations have 25 or more custom applications in development and test today

50% of U.S. organizations have over 100 custom applications in development and testing today

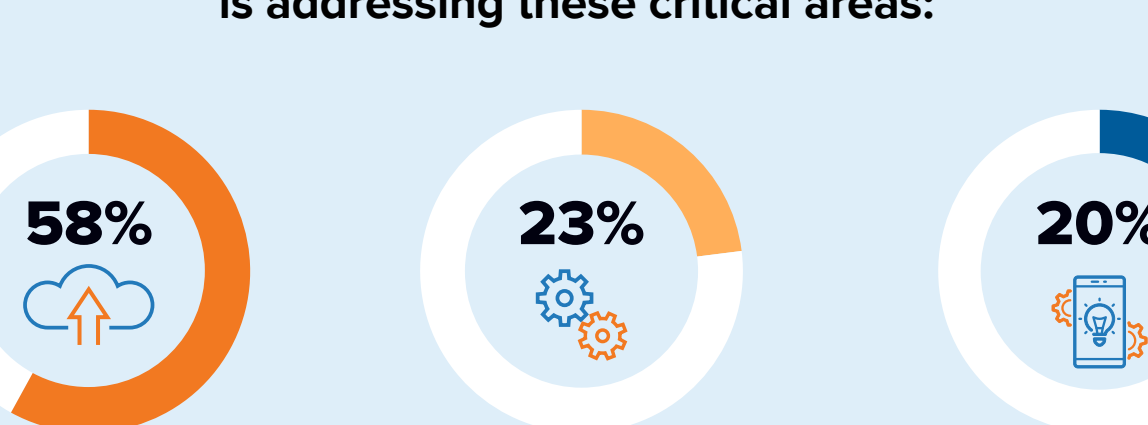
50%+ For over half of these U.S. organizations, these custom apps remain on premises

Source: PaaSView and the Developer, IDC, 2020

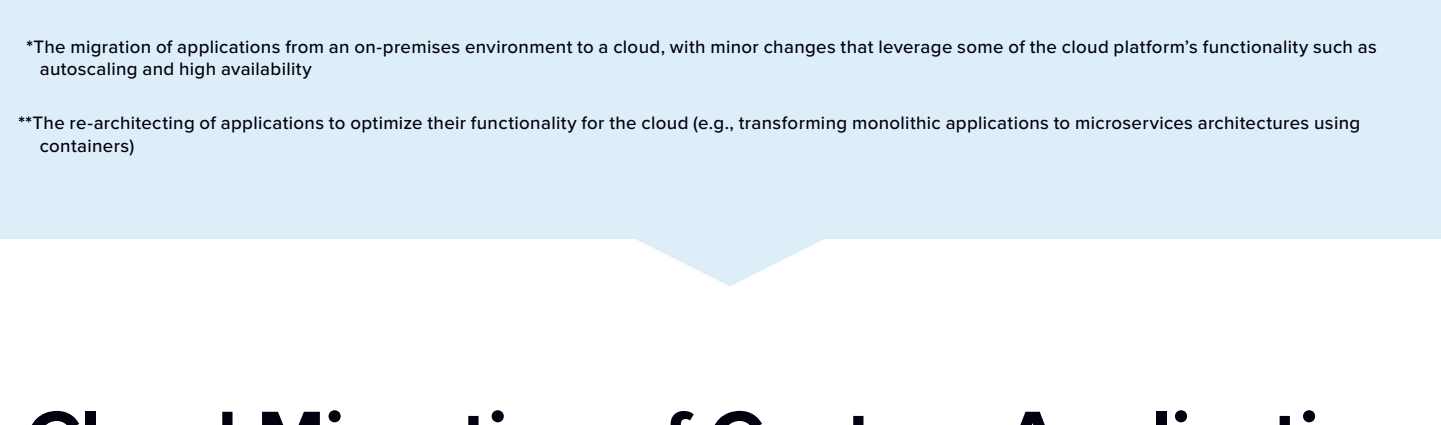
**There is still a large opportunity to move custom apps to the cloud.**

#### Where Applications Reside

U.S. 2020



**Cloud-based application development at U.S. organizations is addressing these critical areas:**

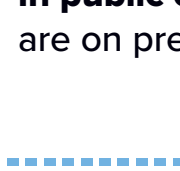
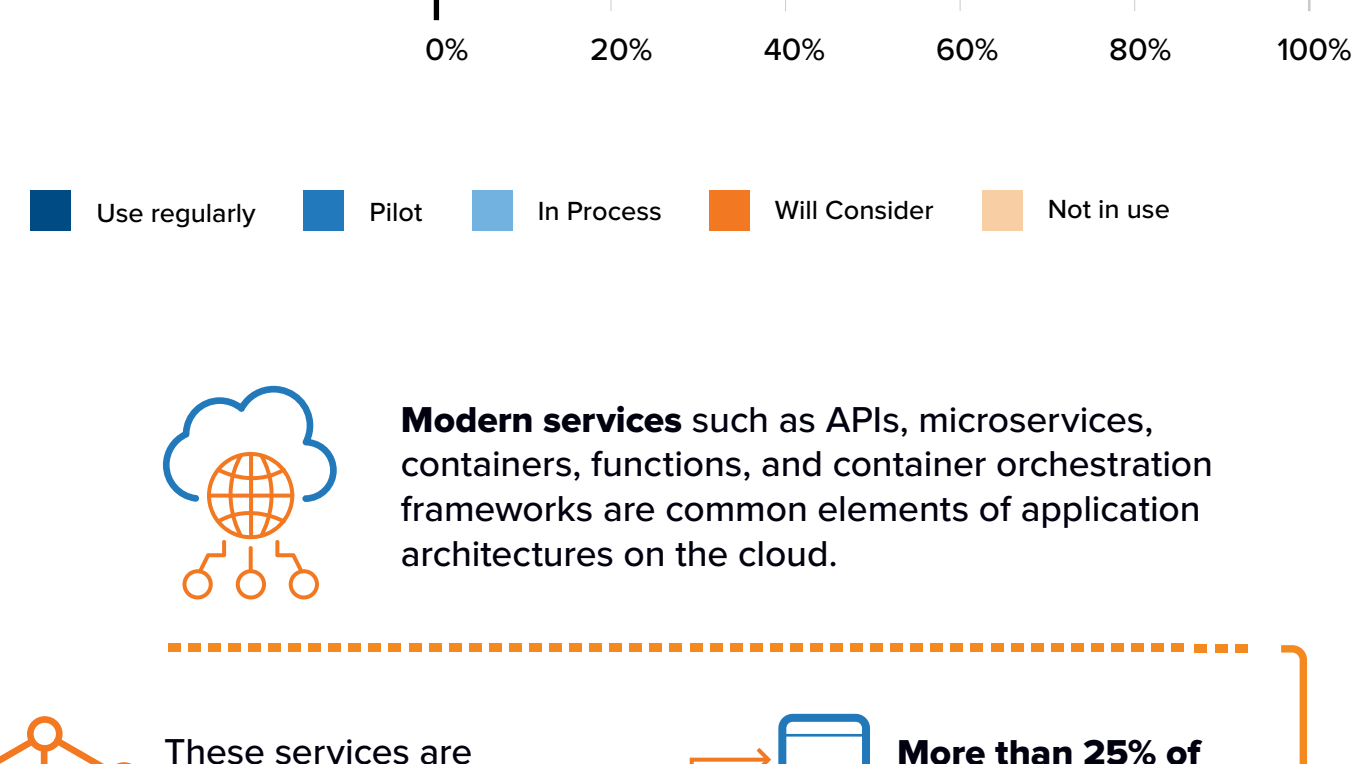


\*The migration of applications from an on-premises environment to a cloud, with minor changes that leverage some of the cloud platform's functionality such as autoscaling and high availability

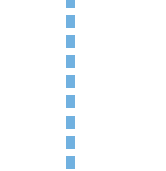
\*\*The re-architecting of applications to optimize their functionality for the cloud (e.g., transforming monolithic applications to microservices architectures using containers)

## Cloud Migration of Custom Applications Drives Application Modernization

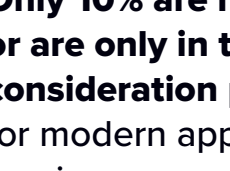
Organizations are widely using modern development methods.



**Modern services** such as APIs, microservices, containers, functions, and container orchestration frameworks are common elements of application architectures on the cloud.



These services are rendered **more effectively in public cloud** than they are on premises today.



**More than 25% of U.S. organizations** regularly use multiple modern services.



**Only 10% are not using or are only in the consideration phase** for modern application services.

Source: PaaSView and the Developer, IDC, 2020

### Cloud-Native Development Rates Rising

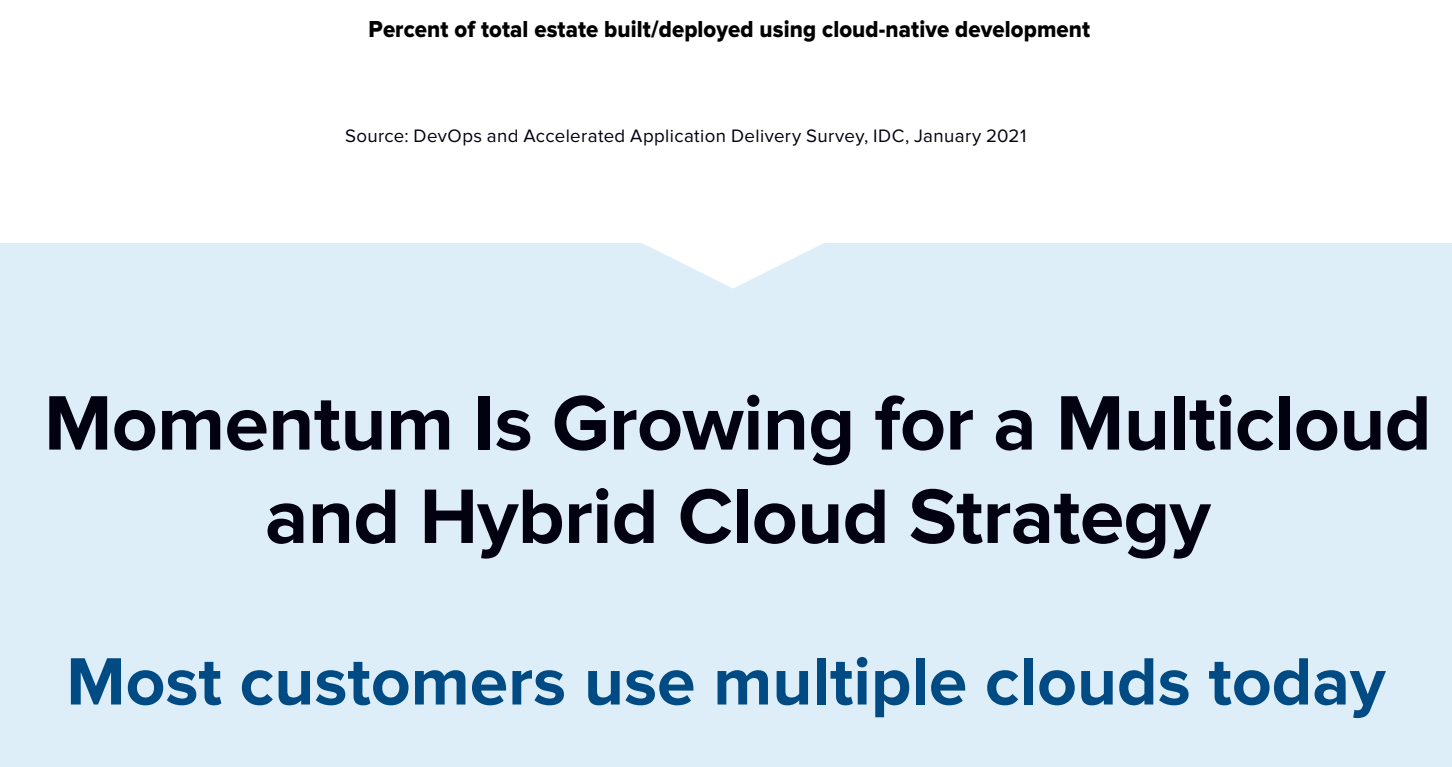


**DevOps teams are leaning into cloud-native development** and expect continued momentum through 2022 – although progress is likely impeded by the friction of maintaining existing legacy applications. **Moving existing applications to the cloud can overcome that friction.**



Relative to the total number of custom apps, a **larger portion** are being built and deployed as cloud native.

**By 2022, nearly 80% of organizations will be deploying at least one-quarter of their applications as cloud native, compared to only 59% in 2020.**



Source: DevOps and Accelerated Application Delivery Survey, IDC, January 2021

## Momentum Is Growing for a Multicloud and Hybrid Cloud Strategy

### Most customers use multiple clouds today

47% of worldwide customers using clouds for production-grade applications use between 3 and 4 vendors (43% for U.S.).

Partner ecosystem, available back-end services, costs, performance, service-level agreements, and optimization for specific workloads could also justify a movement from one cloud platform to another.



An important consideration with most enterprise custom applications is working with a cloud vendor that accommodates split architectures (i.e., across application and database services) and uses fast interconnects across those services.

Source: PaaSView and the Developer, IDC, 2020

### Message from the Sponsor

Oracle Cloud Infrastructure (OCI) combines the elasticity and utility of public cloud with granular control, security, performance and predictability, all backed by the industry's most comprehensive set of guaranteed service level agreements (SLAs).

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