Cloud@ Scale
PLAYBOOK
IT’S TIME TO ACCELERATE CLOUD ADOPTION

Close to 75% of U.S. companies now rely on public cloud platforms. According to AHEAD’s research, nearly a quarter (21%) plan to move all of their infrastructure and apps to the cloud.

Yet, in many cases, cloud adoption is confined to pockets within the enterprise. This is in part because technology leaders remain stymied over how to extend applications from the data center to the public cloud to the edge. Too many firms have yet to scale their cloud investments and capture the promised benefits of flexibility, speed, and savings. Is your organization stuck?

AHEAD’s team of enterprise infrastructure experts designed this playbook to help organizations finalize their cloud strategy for 2021 and scale cloud adoption in a way that drives significant ROI.

The components of cloud planning are presented in three sections:

- **APPLICATIONS**
- **PLATFORMS**
- **OPERATIONS**

Each section includes essential cloud best practices and frameworks for lifting and scaling your cloud approach. Use the accompanying checklist to ensure you’re ticking each box towards cloud success.

For a deeper dive into each topic, watch the on-demand sessions from our complementary Cloud Planning Summit.
You’ve covered the essentials. Now incorporate these elements to add fuel to the fire of your 2021 cloud strategy.

- **INNOVATE** Create a framework for developing and managing applications.
- **ACCELERATE** Amplify your DevOps approach with code for even faster software delivery.
- **ORCHESTRATE** Choose the right container orchestration platform.
- **ORGANIZE** Establish a Cloud Operating Model.
- **SIMPLIFY** Automate wherever possible.
- **INVEST** Focus on skilling-up and training your team through a cloud community of excellence.
- **PROTECT** Balance the needs of your security team and cloud sponsors.
- **STREAMLINE** Optimize your cloud environment to reduce costs.
- **ALIGN** Configure cloud governance for compliance.
- **IDENTIFY** Mature your monitoring and incident response to observability-as-code.
- **ACTIVATE** Integrate service management with cloud, containers, and DevOps.
Applications

Cloud native technologies accelerate enterprise modernization. Containers, Kubernetes, and serverless computing help organizations build new and differentiating experiences, transform infrastructure, and modernize their most important core business applications. Use these modern applications resources to ignite major business transformations from the data center to the cloud to the edge.
Establish a Framework for Modern Applications

When it comes to application software, enterprises have a speed problem. Businesses expect no app downtime and no outages, along with frequent delivery of new features. To meet this challenge, enterprises need a framework for tackling greenfield cloud-native app development, legacy app modernization for cloud, and cloud management – and doing so holistically.

WHY DO WE NEED A MODERN APP FRAMEWORK?

**Incremental Monolithic Design**

Decades of incremental additions to core apps have eliminated flexibility and fluidity.

**Arduous Regression & Deployment**

Today’s critical apps require weeks, if not months, to manually regression test. These apps often take multiple days to deploy.

**Siloed Collaboration (Dev vs. Ops)**

IT orgs remain siloed and very few Operations and App Development teams work together in unison and partnership.

**Wrestling Enterprise Infrastructure**

IT shops are missing the opportunity to leverage cloud native platforms that get them out of the business of managing enterprise infrastructure.

Ineffective application architectures slow you down!
Ineffective testing & deployment cycles slow you down!
Ineffective collaboration slows you down!
Ineffective effort slows you down!
Take an Environments-on-Demand DevOps Approach

Better software, faster. That’s the dream, right? An environments-on-demand approach to DevOps allows developers to create environments with a focus on code, rather than back-end resources, to launch environments faster and more effectively.

OUTCOMES OF ENVIRONMENTS-ON-DEMAND

- Clear Roadmap & Priorities
- Well Understood Metrics & KPIs
- More Frequent Releases, Faster Issue Resolution
- Reduced Time to Provision New Services
- Faster Delivery of Features
Choose the Right Container Orchestration Platform

Picking the right container orchestration platform can be critical to your overall success in supporting modern applications. Strategy, architecture, operations and the specifics of your business—what we like to call “unicorns”—all play a key role.

KEY FACTORS FOR CHOOSING A CONTAINER ORCHESTRATION PLATFORM

- **Strategy**
  - Predictable development cycles
  - Reduced instances of shadow IT and sprawl
  - Faster time to market

- **Architecture**
  - Clean integration with existing systems
  - Foundation designed to support future app needs
  - Improved operational readiness

- **Operations**
  - Effective day-to-day containers usage
  - Positive day-one experiences
  - Optimized application availability

- **Unicorns**
  - Considerations for the unique regulations/requirements for each industry and organization
  - Roadmap that will grow with your use case, saving time and money down the road
Platforms

Cloud platforms lay the foundation of an enterprise cloud program. From building a foundation with a cloud operating model, to optimizing through automation, to addressing the needs of both your security and cloud teams, the following concepts will help strengthen your public cloud foundation.
Establish a Cloud Operating Model

The cloud is not a destination, it’s an operating model. The AHEAD Cloud Operating Model is a fundamental approach to ensuring AWS, Azure, or GCP scale effectively to meet application team needs. This framework introduces the 12 pillars of the cloud operating model which should be considered when establishing and optimizing your cloud platform. Each pillar represents an opportunity to apply against other cloud components, optimizing performance across every aspect of your cloud platform.

**AHEAD CLOUD OPERATING MODEL**

- Education
- Identity & Access Management
- Security
- Account Structure
- Storage, Backup & Disaster recovery
- Monitoring & Operations
- Network
- Automation & Orchestration
- Governance
- Common Services
- Enterprise Service Management Integration
- Cost Controls
Empower Your Team Through Automation

Many enterprises struggle with project lag caused by too many hand-offs, project sprawl, and a lack of visibility into project progress. Automating wherever possible can speed up development, test, and release cycles. These benefits can be realized quickly and efficiently through the establishment of an Automation Hub—a modern automation architecture that drives service delivery through improved project visibility.

**BENEFITS OF AUTOMATION**

- **MANUAL STEPS**
  Reduce manual handoffs in favor of automated hand-offs via ServiceNow with metrics and reporting.

- **RELIABILITY**
  Increase standards definitions and create automation to deliver the same configuration and experience every time.

- **TIME TO MARKET**
  Reduce time to market by offering quick access to technology and solutions that the business needs with no friction.

- **VISIBILITY**
  Increase understanding of the environment, usage patterns, and deliver accountability with full transparency to process and cost.

- **SATISFACTION**
  Bring the Azure-, Amazon-, or GCP-like experience to workloads that have sensitive data or requirements, and make this easy to use.
Defend Your Cloud Environment

Security teams are faced with a threat like never before: Adoption of new enterprise platforms at a breakneck pace. Most information security teams struggle to keep up with security events from on premises environments and have now been thrust into the realm of public cloud. Secure your hybrid cloud environment using industry standards, take advantage of native cloud services to enhance your existing security stack, and use cloud delivered APIs to reduce security operations burdens.

**DEFENSE IN DEPTH STRATEGY**

1. Identify TTPs and cross reference those with the NIST CSF functions
2. Evaluate processes that support defenses against those TTPs
3. Work within the organization to establish a current state risk posture through identification in gaps in process
4. Create a plan of action for process, tooling, and architecture to mitigate holes in processes and technology
Platforms and applications lay the foundation for cloud scalability and success, but operations drive day-to-day cloud consumption. Understanding what is happening under the hood of your cloud environment gives your team the information needed to continually optimize for cost savings, security and regulation compliance, and peak performance.
Manage Cloud Costs and Compliance

All organizations are thinking cloud as they manage existing public cloud environments or consider migrating workloads, but the current state of enterprise adoption creates a unique set of challenges. Tools like cost optimization, chargebacks, cloud spend commitments, and secure configuration of your cloud environment can help manage compliance requirements and keep costs in check.

COST OPTIMIZATION FRAMEWORK

- **Eliminate**: Fundamentally eliminate cost from excessive consumption
- **Simplify**: Remove duplication and redundancies
- **Utilize**: Maximize utilization
- **Standardize**: Suppress variability, focusing on common attributes
- **Centralize**: Leverage economies of scale
- **Automate**: Eliminate manual and cumbersome procedures
- **Renegotiate**: Balance portfolio and minimize the impact of lock-in

Current State Cost Driver
Make Observability-as-Code a Reality

The world of monitoring has changed. Metrics, logs, and traces are informing the actions of both developers and cloud operators. With a flurry of information pouring in from observability stacks, you can shift attention to event correlation, separating the signal from the noise, and establishing a proper incident response strategy -- all done “as code.” Observability-as-Code doesn’t just rethink traditional point and click dashboarding, it rethinks so much more, like monitoring agent deployment, threshold triggers, and notification alerts.

GOALS OF OBSERVABILITY-AS-CODE

- Faster Development / Better Testing
- Change Management / GitOps
- Centralized Configuration Repository
- Mirroring Test & Dev Environments to Production
Integrate Service Management with Cloud, Containers, and DevOps

Enterprises are using ServiceNow in the world of cloud, DevOps, continuous integration and deployment, as well as ephemeral workloads. Your team can maintain excellent enterprise service management practices in this new world by leveraging your CMDB, enhancing asset management for cloud deployments, continuing governance around change and incident management, and providing the financial visibility that your organization requires.

SIX AREAS WHERE SERVICENOW CAN HELP SCALE CLOUD ADOPTION

- Financial Visibility & Business Alignment
- Tracking Assets in the Cloud
- Project Durations: Metrics & KPIs
- Change Management: Continuous Deployment of Critical Apps
- Shifting On-Premises to Multi-Cloud
- Cloud Governance & Compliance
About AHEAD

AHEAD modernizes infrastructure and applications, enabling our clients to operate in the cloud with maximum efficiency, security, and reliability.

For a deeper dive into each topic in this playbook, watch our complementary Cloud Planning Summit.

To start a conversation with one of our cloud experts, send us a message.

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