5 WAYS A CONTAINER PLATFORM SUPPORTS BIMODAL IT

How Apprenda delivers on the Gartner vision for enterprise IT

APPRENDA WHITE PAPER

5 WAYS A CONTAINER PLATFORM SUPPORTS BIMODAL IT

How Apprenda delivers on the Gartner vision for enterprise IT

ENTERPRISES THAT VIEW CUSTOM APPS TO BE VITAL TO BUSINESS SUCCESS

Since its introduction in 2014, much has been written about Gartner's vision for Bimodal IT. For those unfamiliar with the concept, Gartner believes that successful IT organizations should be divided into two halves or "modes," each with distinct objectives. Mode 1 focuses on bringing reliability to traditional IT, usually at reduced cost. Mode 2 is focused upon delivering agility for new IT projects, usually with the purpose of generating revenue, competitive differentiation, or customer satisfaction.

THINK MARATHON RUNNER

MODE 1		MODE 2
Reliability	Goal	Agility
Price for performance	Value	Revenue, brand, customer experience
Waterfall, V-model, "high-ceremony IID"*	Approach	Agile, Kanban, "low-ceremony IID"*
Plan-driven, approval-based	Governance	Empirical, continuous, process-based
Enterprise suppliers, long-term deals	Sourcing	Small, new vendors; short-term deals
Good for conventional processes and projects	Talent	Good for new and uncertain projects
IT-centric, removed from customer	Culture	Business-centric, close to customer
Long (months)	Cycle times	Short (days, weeks)

THINK SPRINTER

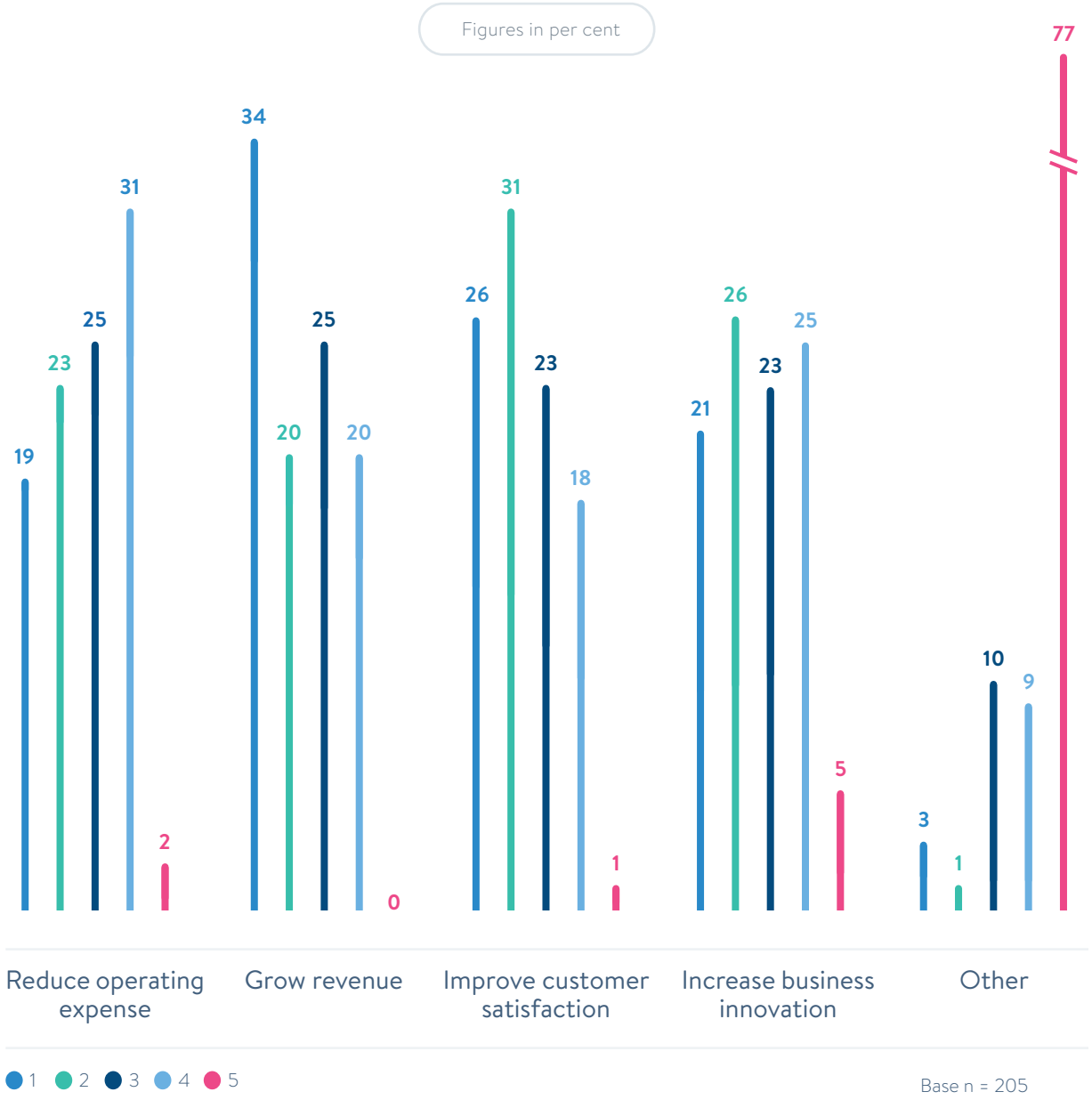
BIMODAL IT

Advocates believe that the model helps IT organizations remain focused on the different requirements of traditional IT versus agile IT, even down to the personnel that support the projects. Detractors, including Forrester, claim that Bimodal IT adds complexity and creates a two-class system that is detrimental to organizational success and culture.

Whichever camp's view you subscribe to, it is certain there is a shift occurring in the goals that enterprise IT is tasked with supporting. In a recent IDG survey of North American enterprises, the top two business goals that IT is tasked with supporting are growing revenue and improving customer satisfaction. Regardless of whether you support Gartner's Bimodal IT delivery model or not, the goals that are to be supported by IT are consistent with the new Mode 2 paradigm.

MAJOR GOALS

Please rank (in order of importance) the major goals of your business that IT is tasked with supporting.



Due to the prevalence of the subject, this whitepaper outlines five ways that a container platform supports the Bimodal IT delivery model. Divided between Modes 1 and 2, it highlights how a container platform can transform "traditional IT", and how some overlooked capabilities provide additional value to "agile IT" in the enterprise context.

MODE 1

1. Application Modernization

Derive additional value from the existing application portfolio

As Forrester notes in the Dec 28, 2015 report **Application Modernization, Service By Microservice**, "Modernizing applications is imperative for organizations to adapt and grow." However, "Rewriting older applications is financially and pragmatically impossible, yet delivering new capabilities often requires organizations to wring new life from older applications."

This presents a big challenge to enterprises with a sizable portfolio of existing custom applications, especially since many container platforms have made a conscious decision to only support greenfield application development projects.

Apprenda's philosophy is that it is of vital importance to support new and existing applications. You could say Modes 1 and 2 of Bimodal IT are in the platform's DNA. Apprenda is built to dynamically modify configuration of an application regardless of how configuration is captured. Other container solutions would require potentially significant code changes for an existing application to run properly.

HOW APPRENDA SUPPORTS APPLICATION MODERNIZATION

The Apprenda platform cloud-enables applications without using an API, refactoring, or re-architecting. There is an API that can be used for some advanced cloud capabilities, but the preference is to build features that applications can take advantage of—such as elasticity, high availability and multi-tenancy—without an API. Apprenda can also automatically add modern tooling to an existing application, one that was never built for a distributed platform, as part of the migration process. Apprenda uses bootstrap policies to add tooling into the application during deployment. With JBoss and Tomcat, for example, Apprenda will automatically add authentication, authorization, and application monitoring to an existing application's tooling or code changes.

2. Enterprise IT Stack Modernization

Eliminate infrastructure-related dependencies that consume time and money

At the end of every server operating system support lifecycle, IT needs to spend time and commit human resources to move applications to the newest version of the operating system. This event impacts development teams (that need to refactor the applications) and IT operations teams (that need to migrate them). The alternative is exaggerated extended support costs that can consume millions of dollars in IT budget and expose the enterprise to heightened levels of risk. These outcomes are at odds with Mode 1's philosophy of reduced cost and increased reliability.

Organizations now have the opportunity to end that time sink by abstracting applications away from the underlying infrastructure, therefore freeing them from any dependencies that might exist. A container platform like Apprenda is the perfect tool to achieve this level of abstraction.

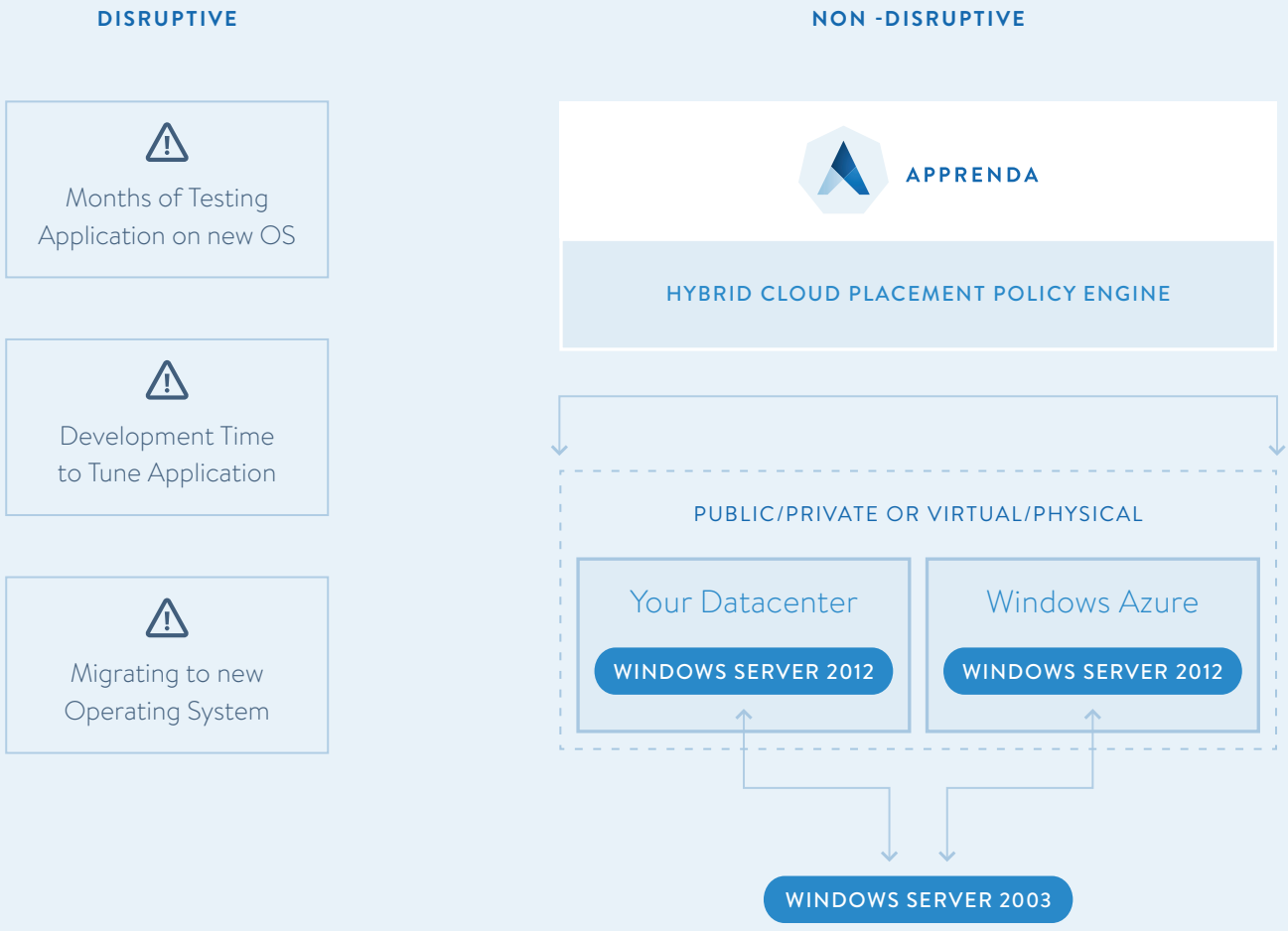
HOW APPRENDA SUPPORTS ENTERPRISE IT STACK MODERNIZATION

While server operating system vendors have made transitions from earlier versions as effortless as possible,delivering a large number of new features means there are still some breaking changes. Apprenda programmatically fixes these and assists with other application modernization needs.

Not only does Apprenda's container platform deliver application cloud enablement, it simultaneously abstracts the apps away from the operating system version, ensuring a lift-and-shift capability to newer operating systems or a seamless migration to the public cloud.

This newly injected freedom presents enterprises with a big upgrade on traditional IT. Legacy need not reside in the enterprise IT stack any longer and applications are portable enough to migrate them to the infrastructure of choice without refactoring.

APPRENDA IMPLEMENTATION



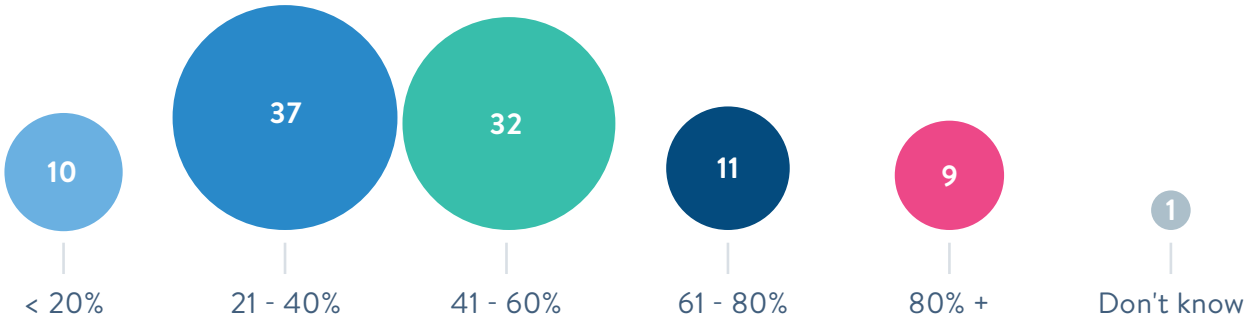
3. SDLC Process Modernization

Minimize SDLC delays for traditional IT through self-service and process automation

Routine tasks like provisioning appropriate hardware can be time-consuming and frustrating for enterprise developers and IT Operations alike. Time that could be spent coding or supporting mission-critical Mode 1 IT projects is wasted in lengthy discussions on server access and configuration requirements. A recent IDG survey found that 52% of enterprise developers spend **2+ days per week** on such trivial tasks.

DEVELOPER'S TIME SPENT ON NON-FUNCTIONAL REQUIREMENTS

What percentage of a developer's time (on average) is spent on non-functional requirements (e.g. authorisation, scalability, high availability, provisioning etc.)?



A container platform like Apprenda can eliminate the delays and frustration that cripple Mode 1 IT delivery in the enterprise context through a powerful combination of self-service and process automation. SDLC tasks that previously took days or weeks are reduced to seconds, spanning creation, deployment, scaling, patching, and versioning.

Unlike IaaS, the container platform paradigm means developers can focus on their code and apps, while the platform abstracts away infrastructure details like servers, load balancers, and storage. Furthermore, standardized configurations between SDLC environments significantly speed up an application's journey towards a production environment.

HOW APPRENDA SUPPORTS SDLC PROCESS MODERNIZATION

Apprenda's self-service developer portal provides enterprise development teams with a frictionless experience for managing applications throughout the lifecycle. Apprenda can be used with public and private IaaS or standalone on virtualization or bare-metal. Operations can focus on hardware, developers can focus on programming, and collectively, IT can focus on Mode 1 IT delivery.

MODE 2

By its very nature, container platforms are born to support an agile or Mode 2 IT methodology. That said, container platform vendors differ dramatically in philosophy, solutions, and capabilities.

Below we have listed two ways that—in Apprenda's experience with forward-thinking Global 2000 clients—a container platform supports Bimodal IT Mode 2 in a production context across the entire enterprise. Without these, the Mode 2 capabilities of a container platform can get stuck in an innovation lab with business value remaining unrealized.

4. Data and Workload Compliance

Protect highly regulated data by defining and enforcing application deployment policies

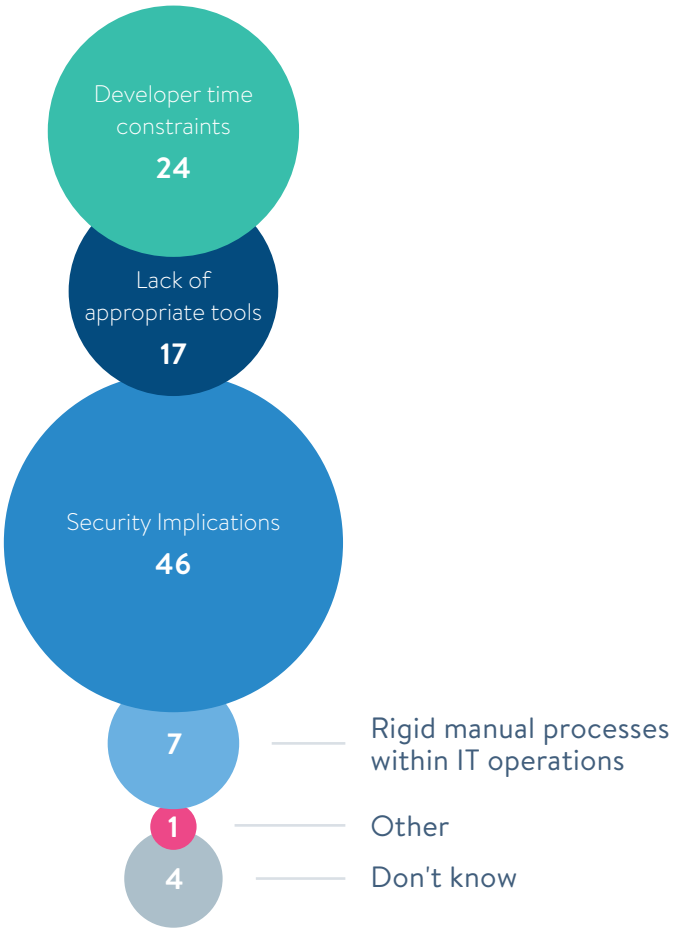
When IDG asked large North American enterprises what the biggest challenge was in expediting cloud-native app development, the answer was categorical: **security implications**. This is unsurprising given the repercussions for organizations that fall foul of cyber crime or industry regulation.

When enterprises manage large numbers of servers in a single logical resource pool, like with a container platform, situations often arise where applications need to be mapped to very specific infrastructure. This is usually born out of the need to keep data secure and compliant.

For Mode 2 IT to be delivered effectively, any container platform needs to have defined app deployment policies that provide fine-grained mapping of applications or application components to infrastructure based upon specific, configurable properties. Instead of creating multiple silos with different rules and configurations based upon business needs, an enterprise-ready container platform enables enterprises to consolidate applications on shared infrastructure, while using sophisticated deployment policies to honor specific business, security, or legal requirements.

CHALLENGE IN CLOUD-NATIVE APPLICATIONS

What is the biggest challenge to expediting the development process for cloud-native applications?



HOW APPRENDA SUPPORTS DATA AND WORKLOAD COMPLIANCE

Apprenda's application deployment policies enable enterprises to automatically control how applications are matched to infrastructure within and across clouds. This ensures that highly regulated data (such as that which falls under the governance of PCII or HIPAA) remains securely hosted on appropriate infrastructure and the business remains compliant. This is a prerequisite for most large enterprises.

5. IT Eco-System Compatibility

Leverage existing data center investments while adding powerful new capabilities

The concept of a new greenfield IT stack to support Bimodal IT Mode 2 is an attractive one. And while it can show real promise in a lab environment, there are reasons why all Global 2000 organizations have spent tens of millions in IT budget on solutions that support their specific business needs. Identity management, version control, application performance monitoring, databases, networking, public cloud, and countless other solutions all play an important role in keeping the business running smoothly. Rather than seeing existing solutions as a restriction to agility, the right enterprise-grade container platform will see them as an opportunity to compliment the existing IT ecosystem.

Apprenda's philosophy is to work with the IT solutions that matter to our clients most. Through out-of-the-box integrations (a list which is continually growing) and a powerful add-on model, Apprenda strongly believes in working with current IT investments and supporting future ones. Mode 2 agility shouldn't come at the expense of investments and future roadmaps.

HOW APPRENDA SUPPORTS IT ECO-SYSTEM COMPATIBILITY

Apprenda positions itself as the "Switzerland" of enterprise IT. Our container platform is vendor neutral by design, with no interest in solely supporting "political" IT solutions offered by a parent company or subsidiary.

Apprenda understands that Global 2000 organizations have large investments in existing operating systems such as Red Hat Enterprise Linux and Windows Server. They have long-term roadmaps for Tomcat, JBoss, or WepSphere. That does not go away upon adopting an agile Mode 2 cloud model.

Furthermore, most container platform solutions conveniently leave the data tier out of scope or simply provide a broker to create a database as part of an application deployment. That means many features will not work when there is a traditional database in use. Apprenda supports all databases and has additional capabilities for two market leaders: Oracle and SQL Server. With Oracle and SQL Server, the database is automatically instantiated and linked to a deployed application. It is the container platform equivalent of Database as a Service.

Lastly, Apprenda understands that Global 2000 organizations will have plans to leverage exciting new technologies when they emerge. Docker and Kubernetes are currently hot, but who knows what lies ahead? Whatever technologies appear next, Apprenda will be there to support it.

EXPERIENCE BIMODAL IT FOR YOURSELF

This paper has outlined five ways Apprenda can be used to support Gartner's vision for Bimodal IT, by highlighting ways of modernizing "traditional" Mode 1 IT and important considerations for leveraging a container platform for "agile" Mode 2. If you are interested in finding out more about this subject, the best way is to experience it for yourself.

Apprenda offers two simple ways to do this:

1. Sign up for the monthly Open Demo webinar
2. Arrange a Proof-of-Concept (PoC) for your organization

Either can be accessed by visiting the Apprenda website or contacting us.

Apprenda Inc.
433 River Street
Troy NY 12180

WWW.APPRENDA.COM