



Hewlett Packard
Enterprise

Viewpoint

Get ahead of demand

Cloud and mobility can shape your business strategy





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It's a given customers have always been "king." Consumerization of IT now gives customers, employees, and other stakeholders more power than ever. Hewlett Packard Enterprise can help you anticipate demand—and succeed.

Customers are increasingly in control of their relationships with enterprises. As "wired" consumers, they compare prices on line, discuss brands and products over social networks, and offer praise or critiques on Twitter and Facebook.

Shoppers use barcodes and scanning applications via mobile devices to find better deals. Travelers use mobile phones to avoid delays. Employees and partners are also "customers"—using the same technologies to find information or to offer comments and reviews. Stakeholders of all kinds are increasingly comfortable with cloud services. They consult social media to assess brands, make purchases, and build business relationships.

To keep up, organizations need those same always-on capabilities: mobile connectivity with the scale and economy of cloud computing. To meet customer expectations in this changing world, however, enterprises must transform their businesses, strategies, and mission-critical software applications.

In this paper, we examine:

- Powerful trends driving cloud and mobility across the enterprise
- How organizations can transform themselves
- Benefits of migrating to a more customer-centric posture

Keeping up with customers

Customers and other stakeholders are taking more control of the enterprise relationship.

Customers, employees, partners, and citizens now expect anywhere, anytime communications. They demand product and price transparency, using barcodes and scanning applications to find the best deals. Many now prefer the speed and convenience of self-service solutions. Leveraging mobile applications, travelers may know more about current conditions than travel industry personnel.

As the consumerization of IT accelerates, shoppers are increasingly comfortable with cloud-based services. Employees and partners now demand universal access to business data and systems across smartphones, audio, micro-blogging, and other consumer-oriented technologies.

At the same time, many organizations confront more stringent regulations, tougher competition, and continuing global economic weakness. Many also struggle with aging and obsolete IT infrastructures. These include applications portfolios that increase risk and cost while hindering innovation, flexibility, and growth.

To meet those challenges, organizations need the same tools as customers. They must understand how key stakeholders use mobile devices, social intelligence, and instant access to information and systems. By leveraging emerging-generation cloud and mobile capabilities, organizations can build collaborative ecosystems, extend and strengthen customer relationships, and leverage new scale and economies.



Consumerization of IT is transforming business dynamics worldwide.

Applications are key in this more mobile, cloud-enabled and customer-driven environment.

A transformed applications portfolio supports accelerated time to market, better decision-making, and lower costs. Transformation ensures that enterprise applications pay for themselves through higher performance and better results. By enabling mobile and cloud-based applications, organizations can more closely align IT to their broader strategic objectives.

Yet, experience proves one critical truth: Addressing cloud and mobility as separate projects can lead to delays, difficulties, and outright failure.

HPE recommends a more logical enterprise-class approach to cloud and mobility transformations. In this model, cloud and mobility initiatives are integrated into an organization's overall IT strategy and governance. Those strategies and policies must be refreshed to support cloud and mobile implementations. And most successful transformation should begin by first working on existing enterprise applications.

By transforming applications to exploit cloud and mobile capabilities, organizations can improve productivity and revenues, strengthen brands, and build loyalty and satisfaction in an increasingly customer-dominated marketplace.

The bottom line is: Organizations must make the right decisions at the right moment. This is enabled by cloud and mobility capabilities that serve customers and the enterprise.

Making it work well

In today's increasingly customer- and employee-oriented world, businesses need to deploy secure cloud and mobility solutions. But to make those emerging systems work, astute organizations are taking a transformational approach that addresses the requirements of design, development, management, and hosting of applications and processes.

Enterprise leaders must first understand their organization's fundamental reasons for pursuing cloud and mobility—and should closely link those initiatives to their broader strategic objectives. Successful cloud and mobility initiatives will be integrated seamlessly into larger IT policies and governance structures. They open flexible alternatives to augment, replace, or rationalize traditional service models.

Most importantly, any workable cloud or mobility transformation will focus on creating measurable business value—immediately and over the long term.

Transforming to mobility

HPE recommends a logical and proven approach to mobile transformation at the enterprise level.

Organizations should first evaluate, create, and refine the fundamental policies that will determine the success of any mobility effort—including security, privacy, and end-user computing. Most current information privacy and security policies were created for nonmobile environments that were controlled, standardized, and easily monitored. Suffice it to say, those protections are wholly inadequate in a setting where users bring their own devices and expect anywhere, anytime access to organizational networks, information, and systems.

Policies must be in place to govern ownership of mobile devices, the protection of company-owned and personal information, passwords and encryption, physical device security and loss prevention, support requirements, and the cost of purchasing and operating enterprise mobile devices.



"Wired" consumers are increasingly sophisticated shoppers and buyers.

Enterprise-class mobility also must be supported by an infrastructure that includes a mobile application deployment model, network and security architectures, and a collaborative enterprise environment.

Selecting an application deployment model is one of the most crucial decisions in any enterprise mobility initiative. There are several types of deployment models for native mobile applications. They include deployment to the native device environment, deployment to an encrypted container on the device, and deployment using a thin-client approach.

There are also a number of ways to create applications for mobile devices such as:

- Optimized websites for mobility
- Development tools designed specifically to create applications for multiple mobile platforms
- Single-platform development
- Applications that require rich media support
- Mobile enterprise applications support access to multiple backend data sources
- Mobile business intelligence and content portal clients

Forward-looking organizations work to identify application first movers to support customer needs, ensure early successes, and drive uptake of enterprise mobility.

Most existing enterprise firewalls and network security structures were designed to provide perimeter-based protection for web-based applications. Those previous-generation network and security architectures cannot secure employee-owned devices accessing core systems behind a corporate firewall. Network architectures must be adjusted to address user-owned device access to enterprise data and applications from internal and external access points.

A truly collaborative enterprise infrastructure also should address email, instant messaging, social networks, document retention, corporate asset tracking, personal privacy, and other issues in a mobile workplace.

Finally, organizations should understand the architectural, application, and infrastructure variables in a mobile-enterprise environment.

As customers and employees increasingly drive business relationships, organizations are naturally shifting away from the traditional company-out model of application design and toward a new customer-in design approach. In the emerging mobile application architecture, monolithic applications built around a particular business process are giving way to multiple, smaller applications designed around users.

New visualization and information architectures also are emerging as rich, mobile-user interfaces to drive major changes in how humans and computers interact. Interfaces are shifting from the keyboard and mouse model to one that processes inputs from multitouch screens, microphones, accelerometers, cameras, GPS chips, and other devices. In this setting, applications must handle more complex events to new, data-visualization models, unique hardware, and display capabilities.

Application integration is a crucial and often underappreciated requirement of any successful enterprise mobility effort. In fact, many organizations must re-examine their basic approach to enterprise application integration. They need to shift from a traditional complex-transaction model to one designed to support micro-transactions, lightweight services, and smaller applications running on more powerful mobile devices.

Organizations need to be cloud and mobility savvy to shape business strategy.

Mobile and cloud systems must do more than just fit within an overall application strategy. They must integrate smoothly and explicitly with existing systems of record, including business applications and processes. A scalable infrastructure will provide high service levels globally and on a 24x7 basis—supporting real-time, complex event processing.

A well-integrated architecture will support thousands of low-latency transactions. It also will interface with and process inputs from numerical controls, RFID chips, multipurpose sensors, point-of-sale devices, and other systems.

To support deployments to personal and company-owned devices, mobile applications must undergo robust testing and quality assurance procedures. A well-planned enterprise application store will support applications for all major mobile operating systems. It also will allow testing of applications developed internally or by external software providers. And it should enable over-the-air updates and remote wipes or deregistration of lost devices.

Establishing a mobile enterprise is a complex challenge. Savvy organizations will use a proven management-of-change strategy to support a smooth and successful transformation.

Transforming to the cloud

Organizations move toward cloud-based capabilities for many reasons. The most common one is the desire to gain agility and to drive innovation to optimize cost and productivity, and to ensure the security of enterprise data and systems. Whatever the objective, most successful initiatives follow a proven and methodical pathway to cloud transformation.

Any cloud-oriented transformation should start with a careful assessment of business and technology requirements.

Applications experts and cloud specialists can examine the current-state environment. Based on their findings, they can determine:

- Which applications should move to the cloud
- Any adjustments those applications might require
- How cloud-based applications can be integrated with other business systems and software

Only those applications that promise to deliver measurable value from running in a cloud or mobile infrastructure should be considered for this migration.

Organizations then can focus on the best pathway toward a modernized, cloud- or mobile-enabled application portfolio. A phased approach to transformation is best. It should leverage applications rationalization, modernization, migration, and new development options.

Modernization strategies can include rehosting, replacing, integration, and rearchitecting. A coordinated approach to modernization can reduce the total cost of transformation by reinvigorating and reusing existing assets whenever possible.

A growing toolset is available to organizations making this transformation. The toolset includes cloud application development guidelines, cloud advisory tools, and modernization techniques.

By taking a strong approach to transformational management, organizations can realize positive results while minimizing the cost and risk of cloud deployments. Good management will address a range of concerns such as:

- Requirements and competency management
- Application dependencies
- Service lifecycle management



Applications are key in this more mobile, cloud-enabled, and customer-driven world.

- Configurations
- Cloud-based security
- Enterprise-scale delivery
- Governance and pricing models

Governance and strong program management are essential. As with enterprise mobility, management of change—including personnel, processes, and technologies—must be a crucial element in any successful cloud transformation.

A cloud-based modernization effort will encompass operational considerations, such as the application performance and quality requirements for a specific organization. A proven modernization methodology will establish the broad roadmap and detail the specific tactics and tools needed to support an enterprise transformation.

Finally, a robust transformational framework provides the overall strategy, architecture, and planning basis. It also has specific responsibilities and activities for migrating to cloud-based capabilities.

Organizations can minimize transformational risk by ensuring cloud and mobility technologies integrate seamlessly with existing business systems. Cloud-oriented transformation should be planned to deliver value as quickly as possible while minimizing disruptions of ongoing business operations. Strategic transformational planning can ensure improved integration and security, a reduced total cost of ownership, and enhanced return on the cloud-transformation investment.

Expected business outcomes

Enterprises can benefit measurably from a successful cloud- or mobility-driven transformation. Organizations can leverage cloud and mobile capabilities to:

- Enhance customer intimacy and provide solutions to previously unmet customer needs
- Improve the productivity and responsiveness of mission-critical applications
- Reduce total cost of ownership with a “consume-what-you-need” model
- More closely align IT to the larger business strategy
- Reduce the complexity of infrastructure and software licensing
- Help IT remain relevant by building a connected mobility environment that opens secure, universal access to people, applications, and data
- Replace or transform high-cost platforms to create a portfolio that delivers higher value in a flexible, service-oriented environment
- Deploy value-based mobile and cloud applications to accelerate time to market
- Improve quality, risk management, and compliance

Use our proven capabilities

HPE is uniquely positioned to support your enterprise-class cloud and mobility transformations. We offer the expert knowledge, proven methodologies, and global resources needed by organizations like yours that hope to harness the power of cloud, mobility, security, and information management and analytics.

Our cloud and mobility services can include secure, enterprise-class design, development, management, hosting, and delivery of applications and processes. Those capabilities span application, outsourcing, technology, and support services. They are backed by proven solutions for applications transformation to cloud and mobile environments.

Specific HPE capabilities include:

- SOA and integration services, applications transformation to cloud
- Enterprise cloud services for SAP and Microsoft Dynamics CRM applications
- Enterprise mobile services
- SAP mobility solutions
- Mobile user experience design
- Mobility-testing solutions.

An extensive partner ecosystem enables HPE to act as a single point-of-contact system integrator for complex cloud and mobility transformations.

Meet—even exceed—expectations

Customers have always been in control. In today's changing marketplace, connectivity, social intelligence, and other technologies give them and other stakeholders new and powerful influence over the business relationship.

Forward-looking organizations can leverage cloud computing and enterprise mobility to help meet—and even exceed—those customer expectations. But they first must rethink their core business strategies and transform mission-critical applications. We strongly recommend a transformational approach that puts business objectives first, and addresses cloud and mobility in an integrated, holistic way.

Technology cannot and should not drive transformation. Instead, organizations that recognize solid business-oriented reasons to change can leverage these emerging technologies to create a more responsive, customer-oriented enterprise.



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