IT megatrends' impact on infrastructure

Best Practices: How IT megatrends impact infrastructure transformation

The future of your infrastructure starts now

Your IT infrastructure plays a pivotal role in delivering the responsive services and positive experiences employees and customers demand today, serving as a bridge to a New Style of IT that integrates cloud, mobility, big data, and security. To meet these demands, infrastructure and operations leaders must work with the business to quickly, affordably, and securely deliver IT at a pace that keeps you ahead of the competition.

Dynamic digital enterprise drives IT's new mandate

The key is to think about how your infrastructure can support and drive a better digital experience—for customers, employees, and business partners. A strategic approach can help you start—or continue—to build an IT infrastructure that will meet current and future business demands, avoid common pitfalls, and reach your ultimate goal: a secure, future-ready IT infrastructure that:

- Supports on-demand IT services with cloud computing

- Enables the most productive workplace through a hyper-connected enterprise infrastructure

- Empowers a data-driven enterprise with new insights from big data analytics

What's changing and why?

The world today is undergoing relentless, disruptive change, with ceaseless information flows, threats and uncertainty, and constant connectivity. New channels, new markets, and new business models are emerging.

How do you respond? As HP Chairman, President, and CEO Meg Whitman reminded attendees at the December 2014 HP Discover conference in Barcelona, "No company survives without adapting." Everyone in the enterprise has a role to play—and those in charge of the IT infrastructure must proactively adapt in harmony with their business colleagues.

The ideal infrastructure must be software-defined, modular, secure, open source, and managed by a common solution. Recent HP research revealed that 88 percent of respondents from leading enterprises believe that changes and improvements to their IT infrastructure are needed to stay competitive. And 70 percent of these firms say that making such changes delivers an extremely significant impact, such as an improved customer experience.[1] To learn more about these infrastructure leaders, read *2015 Report: Profiling infrastructure leaders.*

To start or continue evolving your infrastructure, you must assess where you are and where you want to be. "There has to be a realization of what are we in the business of providing as an IT organization," says KC Choi, vice president, Americas Enterprise Group, solutions architecture and cloud at HP. "It used to be that we had the luxury of a lot of time, and we could kick around a lot of different technologies, and figure out what was best, and what combination of things worked optimally." Not anymore.

Leading enterprises recognize the benefit of change

88% Leaders

75% Mainstreamers

61% Laggards
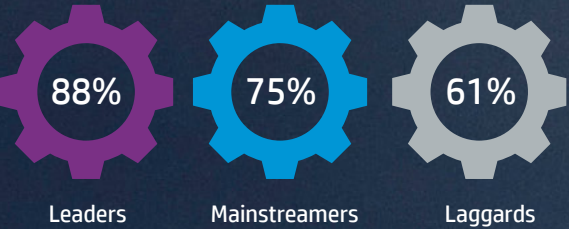
Leading companies embrace the need to change and improve their IT infrastructure to a greater degree than less successful firms, according to recent HP research.

Source: HP Research, 2015 Report: Profiling infrastructure leaders, *February 2015*

[1] *HP Research,* 2015 Report: Profiling infrastructure leaders, *February 2015*

How to assess, plan, and evaluate your efforts

Move forward by answering these five questions:

1. What does the ideal IT infrastructure for your organization look like?
Look at this from the perspective of a service broker responding to—and even anticipating—the needs of your "customers," who include employees, lines of business, customers, and partners. "Whether you decide to do cloud, or you build it yourself, you want to achieve an outcome-driven capability so that it's not a science experiment anymore," Choi advises.

There's no one-size-fits-all model to work from. "In a lot of cases IT departments don't really have a great understanding of exactly what they've got," says Kitty Chow, worldwide portfolio manager, HP Technology Services. "It's important to be able to define to a level of detail what the 'new' looks like, and what the 'old' is—and only then can you truly create that bridge."

2. How can you achieve greater standardization and eliminate IT silos?
"Converge everything," advises Jason Newton, director, Enterprise Solutions, HP. "Standardize as much as possible. That is a critical foundation for eliminating as much physical complexity and realizing cost savings." At the same time you must avoid creating new silos as you complete initiatives in the area of cloud, big data, and mobility.

3. What about your business data?
You should also eliminate the silos walling off corporate data. "To turn your corporate data into insight, you're going to need a platform and tools to do that," says Peter Moser, HP Enterprise Group Americas Presales. "You have to get the data…securely. Once you get it, you've got to aggregate it. Then you've got to apply intelligence to it to get the answers you need when you need them."
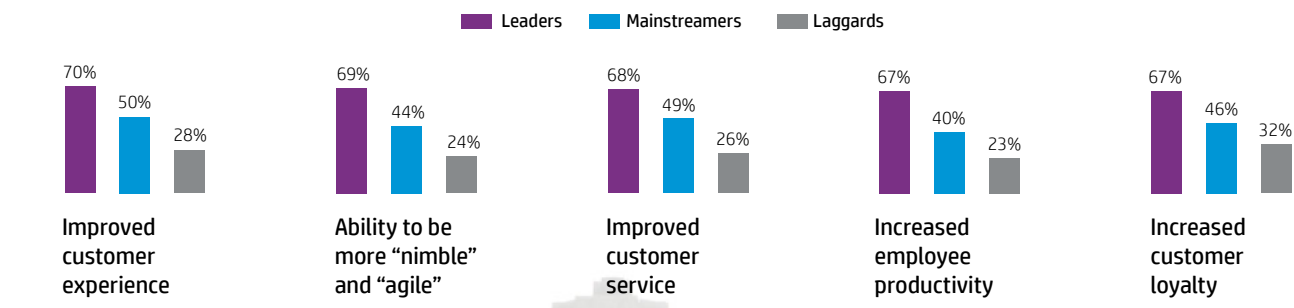
4. Who is going to be involved?
While many functions, team leads, and skill sets must take a seat at the table, "it's incredibly important to understand that the face of engagement now is delivered through software in a digital way," Newton says.

You also need to assess employees' skills to ensure they align with your overall goals. "If organizations are not structured around service delivery and management, they may have people in the wrong roles," cautions HP Cloud Adviser Lee Kedrie.

5. How will you integrate security into your infrastructure?
The typical enterprise takes nearly 250 days to detect a security breach. With integrated solutions, you can shave that down to a week or less, according to Eric Schou, director, HP ArcSight, Enterprise Security Products. "When security isn't integrated, you have gaps," Schou adds. "The key is to have a maniacal focus on your most important assets."

Digital technologies deliver an extremely significant impact for leading enterprises

Leaders   Mainstreamers   Laggards

	Improved customer experience	Ability to be more "nimble" and "agile"	Improved customer service	Increased employee productivity	Increased customer loyalty
Leaders	70%	69%	68%	67%	67%
Mainstreamers	50%	44%	49%	40%	46%
Laggards	28%	24%	26%	23%	32%

Leading firms achieve a higher level of business benefits from digital technologies than do less high-performing companies.

Source: HP Research, 2015 Report: Profiling infrastructure leaders, February 2015

Paving the way forward

How are companies deriving real-world benefits from dynamically delivering IT as a service? We present some examples:

Delivering on-demand IT services

Today's leading enterprises must focus on how cloud technology—augmented with key management, security, and provisioning techniques—can quickly and easily deliver the services users require. According to HP's Kedrie, when enterprise organizations deliver professional tools in a non-user friendly way, "it creates a chasm."

You can bridge this expectation gap in three ways:

- **Support internally facing DevOps.** DevOps allows IT development and operations teams to work in harmony and enhances the implementation of agile methodologies. A U.S.-based HP customer is applying DevOps to streamline applications testing and lifecycle management. The result? Higher-quality production apps that perform better.

- **Transition existing workloads to hybrid cloud** The IT department of a global HP customer realized that a hybrid cloud approach was vital to drive digital transformation and address collaboration, big data, and mobile technology needs. The company now securely delivers and manages many petabytes of digital data to customers and partners worldwide. Big data now provides a new opportunity for better decision-making within the organization.

- **Become a business service provider, externally or internally.** Even if you just want to better manage your internal cloud provisioning services, you can't do that unless you establish an environment that operates on an OPEX (versus CAPEX) financial model and on-demand provisioning capability. "A lot of times the businesses own the applications and the assets are not even in control by IT," Kedrie notes. "They can't leverage those pools of assets effectively."

Enabling the most productive workplace

Wirelessly connected mobile devices allow us to work anytime, anywhere, which IT infrastructure makes possible by providing network bandwidth, secure data storage and access, and virtual desktop services. To deliver this freedom of choice, your IT infrastructure should:

- **Enable unified and efficient communications and collaborations, both internally and externally.** "With next generation communications and collaboration platforms, we can create ad hoc or instant communities of interest," notes Jordan Whitmarsh, worldwide mobility lead, HP Technology Services. HP has rolled out Microsoft Lync enterprise-wide, unifying communications among a variety of channels, including email, instant message, and voice.

- **Deliver business information and processes to mobile clients.** A global automaker needed a better, secure way to keep its designers around the world supplied with the latest design data. "It sometimes took 12 to 14 hours to transmit very large data sets to individuals in India or China," says Whitmarsh. "The guys offshore were always working on yesterday's data. They deployed a client virtualization solution with 3D graphics within their central data center headquarters and enabled their designers to connect into that data center."

- **Enable flexible expansion and contraction of the business.** InkaBinka, provider of a news delivery mobile app, empowers busy consumers who want to stay informed but don't have time to read long-form news articles. The company's IT infrastructure comprises a massive technology stack to handle its fluctuating workload and serve up results to customers in a flash. "HP Moonshot is enabling us to grow faster than we anticipated," says InkaBinka COO Chris Brahmer. "We're actually accelerating our product roadmap because we know we can bring it to market faster."

Empowering a data-driven enterprise

Enterprises must determine how best to store, manage, and analyze big data to create a data-driven enterprise that bases decisions on real-time insight. As Executive Vice President and General Manager of HP Software Robert Youngjohns says, "Big data can get as big as it wants" with the right foundation in place.

Your IT infrastructure should help make it possible to:

- **Enable data-driven customer intelligence and tailored marketing campaigns.** In a data-driven move to stay ahead of all key forms of media and better serve fans, NASCAR teamed up with HP to design and build the NASCAR Fan and Media Engagement Center (FMEC) to help the organization track near real-time responses to fan engagement and more. The solution provides key metrics and analysis to better serve stakeholders such as sponsors, track owners, drivers, race teams, and broadcast partners. The FMEC "allows us to use analytics to make smart decisions in real time as well as over time," says NASCAR Executive Vice President and CMO Steve Phelps.

  An HP enterprise customer more accurately targeted offers by using HP's Big Data analytics platform to transform customer use data into actionable insights. HP Vertica's speed, combined with using Hadoop to move the data into the data warehouse, provided the firm with significant ROI and a quick payback.

- **Gain insight from connected devices in the Internet of Things:** In a number of industries, such as oil and gas, and other areas of energy, "You might be grinding a drill bit through the earth, and your sensors are saying you're about ready to hit a gas pocket and if you hit it, it's going to blow up. That's a real time decision," HP's Moser says. You need the ability to collect, aggregate, and analyze that machine data.

Get started today

Getting started with an Infrastructure for the New Style of IT—a checklist

This list can help frame the conversations you'll have with your team and business partners to bring about an infrastructure transformation.

☐ **Prioritize three to five critical business drivers.**
As simple as it sounds, it's easy to neglect this step. There is usually a short list of business goals that nearly every IT initiative—and especially your infrastructure transformation—should support: improving customer service, streamlining your supply chain, making better business decisions, and better anticipating market demands.

☐ **Locate IT or operational silos that create bottlenecks.**
Once you see which IT activities, systems, and teams are walled off from one another, you can make strides to break down barriers. You can also take this opportunity to standardize wherever possible, which helps future-proof your infrastructure and lends itself to a multivendor environment.

☐ **Clarify your vision for aggregating, storing, managing, analyzing, and securing corporate data.**
While you want to be able to analyze 100 percent of your data, the flip side to that is not all data is created equal. Your infrastructure and storage architecture should reflect this; you must also consider speed and latency when evaluating analytics solutions.

☐ **Identify the players involved.**
"There's a new set of players to partner with. That's not just the lines of business, but also the developer community within each of those businesses," HP's Newton says. Bringing in these folks early helps ensure widespread buy-in throughout the company.

☐ **Integrate security in a holistic way.**
The only way to outwit cyber criminals is by anticipating their next moves, which requires an end-to-end approach to enterprise security. Recent HP research revealed that 88 percent of leading companies prioritize security, compared to only 67 percent of the laggards. [2]

[2] *Source: HP Research,* 2015 Report: Profiling infrastructure leaders, *February 2015*

Download additional Infrastructure Insights

2015 Report:

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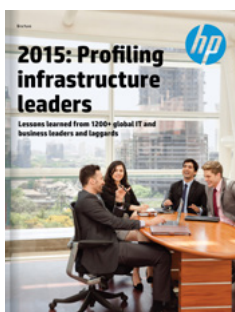
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