The Future-Ready Enterprise
Essential IT capabilities for a changing world

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More than ever, business is changing technology and technology is changing business. That means every enterprise is only as innovative as its IT. When IT is limited by legacy systems, the enterprise is limited, too. While the imperative to evolve—or revolutionize—IT may be clear, the path hasn’t always been easy. Now there’s a way to unleash enterprise potential, now and in the future, with dynamic IT that transforms, so the business can transform.

**Change: The only constant**
Organizations of all sizes worldwide are tackling more—and bigger—challenges than ever before. In seemingly every facet of the enterprise, business as usual is out; change is in. And nowhere in the enterprise is this more apparent than in IT.

Over the last few years, the velocity and impact of technology evolution has been swift and far-reaching. While these rapid advancements mean greater opportunity, they can also add stress to already overburdened systems and processes. From data deluge and software-defined to cloud computing and evolving threats, these technology trends are more than just buzzwords—they are rewriting the rules of IT and disrupting the status quo.

In addition, the role of IT within the organization is changing, too. IT teams historically focused on technology priorities and “keeping the lights on,” are now being asked by CEOs to understand and advance important business initiatives and priorities as well. For IT shops that built deep technical expertise, this can be a significant change in focus—often leaving teams on unsteady footing as they learn a new balance of technology and business goals.

Further complicating the matter, IT models are in a state of flux as well. IT is at the intersection of traditional and new IT. Traditional models—the server, storage and networking architectures many teams are familiar with—have a vital role in organizations, facilitating important applications and workloads like databases and virtualization. However, IT teams are often finding they need to quickly build expertise in new models, as well—the techniques emerging from nimble, innovative sources worldwide which topple existing paradigms and make possible initiatives like software-defined everything, cloud and big data.

While this is a time of significant change for many organizations, it’s also a time of significant opportunity. The key to successfully taking advantage of these opportunities is the ability to bridge between current infrastructure and future investments, even when the nature of those investments is unknown. That’s why, rather than try to predict the future, organizations need to prepare for it, by embracing a model that enables the integration of important new capabilities within existing systems—infrastructure, people, processes—on their terms, in a way that doesn’t cause further disruption or solve short-term problems by replacing them with long-term ones.

**Building systems with certainty in uncertain times**
Building a technology strategy can be like building a house: Even the humblest structure evolves from a blueprint. At the outset, usually only the roughest
guidelines are available—number of rooms, building codes, budget—and from there the architect begins to plan. Many considerations are made before construction even starts. Then, once building is underway, unforeseen challenges always arise—a soil issue that went undetected, unavailability of a specified material, a need for one more room—and more decisions will be made which ultimately impact the functionality and usability of the finished structure. Even once the house is built, it will continue to evolve—weathered elements need replacing, landscaping requires maintenance, once-trendy design begs for updating.

Even with the same guidelines, no two architects will arrive at the same blueprint for the same house. Similarly, how well the plans are able to accommodate the inevitable challenges of both construction and years of ongoing livability will vary according to the architect’s perspective and ability to discern the occupants’ needs.

The same is true for IT. Architectures are built over time, never reaching “completion” but rather continuing to evolve to meet changing business needs and technology demands. While the fundamental building blocks of IT are the same—servers, storage, networking, devices, software, etc.—the blueprint to building them, as well as the attitudes of the “architects” behind them, can vary significantly.

Legacy IT
Legacy system vendors offer complex, monolithic, proprietary systems, such as mainframes and UNIX platforms, that can be very expensive to acquire and maintain, requiring technicians with very specialized, expensive skillsets. Furthermore, sole-sourcing from one vendor and locking in to the vendor’s roadmaps, technology transitions and timelines limits flexibility down the road. The architects of this model may be analogized as writing their blueprint in a coded language which only they—and their technicians—can decipher and build from in an effort to protect their legacy and margins.

In times of disruption, this costly and rigid approach means high capital costs as well as soaring operational costs. It is little wonder why many modern organizations find themselves evolving away from this outdated IT model.

Proprietary systems
Some solution providers are taking a coupled approach to their hardware platforms and software stack. This “do it our way” model is akin to an architect offering to design any house the occupant desires—as long as it reflects the architect’s signature style and is created with their special paper, using their special pens—all of which the occupant must buy at exorbitant cost and which no other architect can use.

When IT organizations are faced with the mandate to cut costs and run leaner, these proprietary solutions look attractive. Everything is built on x86 architectures and self-contained, generally making ongoing maintenance costs lower. However, acquisition costs are high since vendors still have legacies to protect. In addition, buyers are usually deploying completely proprietary platforms that may not be compatible with anything else in the IT ecosystem, now or in the future. This approach not only creates more complexity, it also increases risk, as organizations are, in essence, ceding control to the vendor and relying on them as the sole source for current and future innovation—a lofty proposition in a
world where technology innovation is more and more often coming from numerous small start-ups. Further adding risk, investments made today may be lost if adopting future capabilities means a “rip and replace” of infrastructure.

These solutions are unattractive in the long run since they encompass so much of the infrastructure-centric, traditional way of doing IT that is better suited to legacy workloads than the agile new capabilities many organizations also need to master.

**Commodity systems**

So-called “white-box vendors” sell inexpensive pieces or parts of hardware with no added value beyond the components being pre-wired. These systems are designed with little regard for how they integrate or operate in increasingly heterogeneous and application-oriented environments. There aren’t usually any formal roadmaps or technology transition schedules, so if buyers want more systems later, the internal components may be very different, which could cause firmware or compatibility issues.

Often, there’s no vendor support, either, so while initial costs for the hardware are low, ongoing maintenance costs can be very high. This blueprint might be said to consist of pre-drawn room templates for the occupant to assemble on their own to form a coherent plan for a house—which they then must build themselves.

This do-it-yourself approach gained favor when cutting-edge organizations touted it as the preferred method for new IT capabilities like private cloud. And as organizations begin the transformation from infrastructure provider to service provider, this model—with its low upfront costs and ability to scale-out capacity—becomes attractive. However organizations often find that the low initial costs of deployment are quickly nullified by the high costs and risk involved in configuring, supporting and, ultimately, replicating deployments. In addition, because the approach is incompatible with most traditional workloads and infrastructure, it often forces organizations into divided or siloed operations, further widening the gap between traditional and new IT.

**A better approach for better results:**

**Future-Ready Enterprise**

As IT organizations evolve, they are often forced to choose: Build your enterprise IT according to one view of the future, ceding control to a particular vendor, or go it alone via a completely do-it-yourself route and assume the risks.

Dell delivers the speed, scale and savings the Future-Ready Enterprise demands.
Now there is a way for organizations to ready themselves for whatever the future holds, without compromise, so they can take advantage of opportunities as they arise.

This is the foundation of Dell’s Future-Ready Enterprise strategy. It’s a familiar approach for Dell, a company that for more than 30 years, has sought to make technology more accessible to more people, to enable them to do more than they thought possible. What once started as one man’s mission to redefine the economics of personal computing has expanded to encompass the entirety of enterprise IT infrastructure, bringing game-changing technology capabilities within reach of organizations of all sizes, not just the largest ones with the deepest pockets and armies of support staff.

The Future-Ready Enterprise strategy gives organizations a way to build IT certainty in uncertain times, with the speed, scale and savings business demands. Understanding that enterprises need to maximize savings at both the point of technology acquisition as well as throughout the technology lifecycle, Dell builds solutions with these needs in mind: making IT more powerful, so business can grow without outgrowing systems; making IT easier to use, so business can move faster; and making IT more efficient, so investments go further.

Furthermore, unlike approaches which bind organizations to a rigid or closed approach—as would a house blueprint written in coded language only the architect could understand—Dell’s Future-Ready Enterprise strategy is founded on flexible design and maximum choice, with modular systems built on open standards, the common languages of technology. This enables organizations to gain IT agility and leverage innovation as they please, without ties to a specific vendor, system size or configuration, or roadmap.

Finally, with Dell’s end-to-end solutions, organizations can become nimble and competitive everywhere in the enterprise, in the manner that best fits their budget, staffing and timing requirements—whether deploying pre-configured systems, using validated reference architectures for guidance or building “DIY” with best-of-breed platforms, or any combination of these, all with the assurance that comes from global support and proven technology.

The opportunity: Become a Future-Ready Enterprise
In order to connect, compete and grow in times of change, today and tomorrow, every organization must be supported by a capable IT foundation. This IT foundation must be powerful enough to accommodate change without creating confusion, efficient enough to deliver value without adding complexity, and flexible enough to enable choice in any context, without adding constraints.

Dell advises organizations to ensure their IT foundation has the following five essential attributes, spanning the continuum of traditional and new IT capabilities:

**Workload-ready**
Applications are the lifeblood of the organization. In order to achieve peak performance and deliver the best information to the organization, it is critical that infrastructure be well-tuned for the workload. However, that process can be complex, with many moving parts—vendors, application configurations, sizing requirements, etc.—to orchestrate.

**Virtual infrastructure-ready**
While the efficiency benefits of virtualization are now well-understood, it’s no surprise that
most organizations still encounter challenges when trying to deploy virtualization. After all, virtualization introduces one more element to manage to an already complicated data center environment. Achieving the efficiency benefits all too often comes at the cost of operational complexity.

**Software-defined**
Few technologies have the power to revolutionize IT as much as software-defined and its promise to topple the familiar paradigm of rigidly coupled software and hardware, a practice which some vendors have relied on to inflate prices and lock customers into proprietary systems. But many organizations are hindered in their adoption of software-defined by a steep learning curve and the prospect of forfeiting investments already made in existing infrastructure.

**Cloud-ready**
Experience has shown that cloud computing can deliver a lot of value, but the process of developing and managing a cloud strategy can be complex. It’s not a question of simply selecting a public cloud—private cloud is also powerful for certain applications, and it could even be a requirement based on security or control concerns particular to the business. So the key challenge becomes: What kind of cloud should be used, and when? Then how do you link them together in a way that makes it seamless and easy to integrate with existing systems and processes?

**Big data-optimized**
The growing data deluge offers organizations a huge opportunity to glean new, deep insights into the business, the competition and the market. Choosing the right platform, then figuring out how to deploy and manage that platform can be a huge challenge, though, since the architectures required are very different from any architectures that have been available to date.

**Bridging today and tomorrow on your terms**
With Dell, an organization can build the essential capabilities needed to make their enterprise future-ready using common infrastructure and an integrated approach. That way, new capabilities can be added at any time, seamlessly, without silos, enabling the business without limitation.

Dell’s unique design philosophy is reflected in every future-ready solution, so that organizations can drive out unnecessary cost and complexity, now and in the future.

**Standards-based**
Solutions based on industry standards make technology more accessible and affordable. Proprietary technology can lock an organization into a particular product or roadmap, eliminating the possibility of adding innovation from other sources and contributing to higher costs.

**Open approach**
The open approach to innovation embraces partnerships and supports third-party hardware, allowing organizations to maintain heterogenous environments without compromise.

**Flexible scalability**
Organizations can scale up, down or out incrementally when more performance, capacity or capability is needed—a critical ability when business dynamics can change on a moment’s notice.
Modular
Modular systems can be deployed and managed with much more cost-effectiveness and agility than monolithic legacy systems. In addition, there is no rip-and-replace to integrate new technology, allowing a seamless migration with technology.

Modern platforms
Many of the problems IT organizations face today stem from retro-fitting old systems to new challenges. Infusing systems with practical innovation—even if it means deviating from established industry norms—can address many challenges of the modern enterprise.

End-to-end solutions
Only Dell offers a full end-to-end enterprise IT portfolio. Organizations can benefit from a full range of integrated, enterprise solutions built to work better together and with existing infrastructure.

Better outcomes, from device to data center
Becoming a Future-Ready Enterprise means freeing business from the limitations of closed, complex, outdated IT. With a flexible set of efficient platforms, complemented by processes and people, powering technology initiatives, organizations can achieve goals once thought beyond reach and experience the benefits of a modern, innovative IT approach.

Speed
Implement new initiatives and manage existing IT faster with systems that are easier to deploy, use and enhance. This frees IT to focus on innovation rather than maintenance.

Scale
Adapt to dynamic business demands without sacrificing performance using solutions tailored to workload requirements and business needs.

Savings
Invest more money into your business, and less in licensing fees, over-provisioning and proprietary premiums. Solutions that are engineered for efficiency drive down capital and operating costs for overall lower total cost of ownership.

Chart the course to your Future-Ready Enterprise
IT is unequivocally the foundation for enterprise innovation—it’s time to ensure that foundation is primed to serve and advance innovation now and well into the future. Let your enterprise evolution—or revolution—start today. Here are some best practice strategies to consider as you begin.

Assess and prioritize needs.
Any change begins with a clear understanding of current enterprise initiatives, challenges and workloads. Talk to frontline IT staff to get their input, as well as project stakeholders throughout the enterprise to understand their goals and objectives. (Alternatively, enlist the help of a technology consultant familiar with evolving enterprise IT to conduct the research to save time and eliminate potential organizational bias.)

With these insights in hand, begin prioritizing by the urgency of the need to address/resolve. A holistic approach can begin yielding value at deployment as well as in the future, so you can begin addressing issues now where solutions are most needed while building a

How Dell evolved to Future-Ready: Network transformation
Like many companies, Dell needed to expand its enterprise network to support growth and key competitive cloud-based initiatives. At the same time, while Dell realized it had an opportunity to put in place new infrastructure that would deliver better overall value, it also had some legacy infrastructure that would be too costly and time-consuming to replace.

After evaluation, only Dell Networking fit Dell’s needs:
• High-performance solutions meet demand and advance critical business initiatives
• Economical, easily managed scalability supports growth without breaking the budget or adding complexity
• Maximum interoperability with legacy vendor equipment protects past and future network investments

Dell now uses Dell Networking to power offices, manufacturing facilities, labs and Solution Centers around the world, as well as its online properties like Dell.com and cloud-based services like SecureWorks managed security.

The Launchpad for Transformation: How Innovative Networking Powers a Dynamic Company
• bit.ly/DellonDellNetworking

Dell Enterprise Solutions | Dell Inc., 2015
While optimizing the enterprise involves a holistic approach, often the best place to start is in the data center, the central “hub” of the enterprise. Evaluate ways to bring storage and compute closer together to achieve better performance for demanding workloads. In addition, consider starting the shift to software-defined with software-defined storage to power storage-intensive applications, or a software-defined networking fabric that can act as a foundation for future software-defined data center initiatives. Look to simplify management and reduce touch points where possible to increase efficiency and enable key capabilities like private cloud and virtual desktop infrastructure throughout the organization.

Don’t stop at the “typical” data center—that prototypical labyrinth of server racks and network cores. Think beyond the form of the data center to its function—efficient computing and handling of workloads. It could be that your enterprise could benefit from data center-like performance at multiple locations, in which case converged infrastructure purpose-built for deployment anywhere—even in a quiet branch office—could significantly transform your IT.

Add open—and validated—capabilities.

Becoming locked-in to a vendor’s proprietary system or roadmap puts your innovation imperatives second to the vendor’s. Adding open capabilities to your enterprise IT helps you retain the flexibility you need to stay agile on the course of your IT evolution while protecting your investment. However, it’s important to go beyond simply ticking the “openness” checkbox, as some open solutions could cause challenges down the way with interoperability or process complexity.

Look for ways to minimize risk and disruption when integrating open capabilities by ensuring the open platforms you are considering have been validated, or even pre-configured, to work with desired applications or tools and will not create a steep learning curve for your IT staff.

The best time to become future-ready is now. Begin your transformation today: Contact Dell to schedule an enterprise IT assessment with an expert who can help you start preparing for the future while maximizing value every step of the way.

Visit Dell.com/futureready to learn more about Dell’s Future-Ready Enterprise strategy and IT solutions.