

Innovating for Digital Transformation: Dell EMC's David Goulden Details His Vision— and Roadmap for Success





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A CONVERSATION WITH DELL EMC'S DAVID GOULDEN

Enterprises must grasp the opportunities of the digital era in order to stay competitive, but they can't ignore their systems of record. Balancing these needs and innovating on both sides will challenge every enterprise—and every CIO.

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The digital revolution is transforming business—and Dell EMC is innovating in parallel to give customers the infrastructure to thrive. In this interview with David Goulden, president of Dell EMC, David shares his vision of the new digital era, and explains how CIOs and IT leaders must evolve in order to capitalize on emerging opportunities.

What are you hearing from CIOs worldwide in terms of what their businesses require of them, both as members of the C-suite and as champions for IT?

Goulden: CIOs are facing two challenges. On the one hand, their competitive strategies call for digital business transformation, so that they can seize the opportunities presented by big data and the Internet of Everything. The number of smart, internet-connected devices will explode, and we'll have huge quantities of useful data coming in from all those sensors, apps, and services—potentially 1,000 times what we have today, created by 1,000 times more endpoints.

We're going to have these incredible sources of information, but we're also going to have the computing capabilities to analyze them in real time. In fact, those capabilities are becoming more and more

affordable, bringing them further and further into the enterprise mainstream. That's going to create a massive change. Look to any industry, from medicine to the auto industry to education, finance, or insurance, and the potential exists to transform society and accelerate the pace of human achievement. Think of driverless cars, personalized services, even personalized medicine based on your own genome. Today that's something that takes 24 hours and costs \$1,000, but in 15 years it could take 90 seconds and cost \$1.

On the other hand, established enterprises feel threatened by digital disruption and new competitors, some of which were born as digital pioneers. We recently surveyed over 4,000 business leaders from around the world and seventy-eight percent considered digital startups a threat. Additionally, over forty-eight percent confessed to not knowing what their industry will look like in three years. The survey also revealed that forty-five percent are concerned that their business could become obsolete. In a way, both challenges are two sides of the same digital coin. Enterprises know that they need to transform and grasp the opportunities—it's the only way to compete with the upstarts. They also know this will require a great deal of business, technological, and cultural change to develop a deeper “digital DNA” in the organization.

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What will it take to drive this business transformation?

DG: To innovate around this explosion of data from the Internet of Everything, enterprises will have to transform across three key areas. It's going to be IT that has to transform first, because modernizing and optimizing existing infrastructure and systems frees up the resources needed to innovate elsewhere. The second area is transformation of the workforce, not just empowering staff with new technologies and tools, but bringing new software and other technical skills into the organization. Companies can't effectively compete using off-the-shelf services and applications exclusively; they need the expertise and capabilities to build their own, focused on their customers' and their industry's specific needs.

Those first two transformations—IT and workforce—are going to drive a third transformation in security. Here, the new approach requires that security become a core component of the corporate strategy, protecting the company and its data while facilitating new business initiatives. These three transformations are inextricable. You need all three to succeed.

Going into more detail, what's involved in the IT transformation?

DG: Modernizing the existing IT infrastructure comes first. Many organizations have 20 or 30 years of investment in IT infrastructure and the systems of record that have helped to build their business. These include large databases that have grown a lot bigger over time, sometimes 100 or even 1,000 times larger than the data volumes they were designed for initially. Modernizing will drive efficiencies.

Thankfully, the technology is keeping pace and working in our favor. Reductions in the cost of flash storage, along with increased densities, are helping to deliver higher performance and capacity. Scale-out hardware is making it easier to optimize as volumes grow. Software-defined, hybrid cloud infrastructure, as well as converged computer and storage technologies, deliver maximum availability and performance more efficiently. That's all working to push costs down.

After that, it's all about automating service delivery. Business people should be able to get most of their IT via self-service, and the experience should be frictionless. IT turns into an “as-a-service” platform—essentially a cloud-like experience, where all parts of the business can get instant or near-instant access to the capabilities they need. That involves a transformation of the whole operating model



and organizational structure so that IT operates more like an internal service provider, with well-defined service levels and clear costs. It's not just about efficiency, but about agility, flexibility, and transparency.

What about the workforce transformation?

DG: To compete, enterprises are going to need a more technologically empowered, digitally savvy workforce, equipped with innovative—even disruptive—technology and tools. They'll use a wide range of new devices, some physical, some virtual, and they'll have access to digital workspaces tailored to their needs. That's going to make them more agile, with the data and intelligence they need right at their fingertips.

Enterprises need to redevelop the ability to write software, and that's a big ask when many companies haven't written that much code over the last 20 years. Enterprises need to build apps and services that will either give them an edge when doing business or enable them to interact with their customers in new, powerful ways.

Doing that won't just mean adding in-house development capabilities, but transforming the organization's methods, taking a more iterative approach that values speed as a key priority. If you're a services company, this is going to help improve your services on a daily basis. If you're a product company, you can update products in real time and ensure you remain competitive. That's an exciting change, but one that's going to demand different expertise.

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How do these changes impact security?

DG: As more businesses become digital, we are creating a smart and massively connected world with more devices. We are going from thousands of endpoints to millions, and there are petabytes and zetabytes of information moving between private and public clouds. Applications are fundamentally different and people are interacting in new ways. Security must transform to effectively help mitigate the increased exposure to risk while enabling change and growth.

Organizations must embrace transformative security as a core business component, not just embrace security as an IT mandate. With SecureWorks and RSA in our portfolio, we have the breadth, technologies, and expertise to help customers closely wed cyber risk and security measures to the priorities of the business.

For example, a business-driven security strategy uses comprehensive visibility to paint an accurate picture of what’s happening across the environment. It delivers insights faster through better analytics and detection capabilities, with automation and orchestration for a more rapid, more efficient response. It also provides an understanding of contextual intelligence around a given incident, where security teams can prioritize their response and take the right actions. All of this helps to create explicit links between what security technology is telling us and what that means in terms of business risk.

It sounds like IT will have to balance two very different sets of requirements?

DG: Yes. Traditional workloads and the new cloud-native workloads will require fundamentally different architectures and supporting infrastructures. Those in the traditional arena are client-server workloads sitting on a shared, very resilient infrastructure, and that resilience is absolutely key. Flash and scale-out hardware, not to mention programmable infrastructure, will make it easier to optimize for these. By comparison, the new cloud-native applications have workloads that are distributed and often containerized. They leverage scale-out architecture at both the application and infrastructure levels. They’re able to run, with resilience, on more industry-standard infrastructure.

That’s good news for enterprises, as they generally want to focus less on building the infrastructure they need and more on developing the applications that can differentiate them. After all, it won’t be the data center or the technology that differentiates one business from another, but what the business builds on top of that.

That’s where technologies like Pivotal Cloud Foundry, our cloud-native developer platform, come in. We know from experience that strong developer platforms can be used to build powerful, focused apps that are specific to the enterprise, its needs, and its industry, while making the most of this explosion in data and computing power. These cloud-native apps enable banks to better serve their customers, healthcare companies to deliver more personalized packages, and product manufacturers to use the data from embedded sensors to enhance reliability and performance.

And by optimizing the traditional infrastructure, you make the savings you need to invest in your new, cloud-native apps and services?

DG: Right. In IT, we’re currently spending \$2.7 trillion on today’s systems of record. Achieving a ten percent or twenty-five percent efficiency on the lifecycle cost could gain billions of dollars to spend elsewhere. By optimizing the more traditional IT infrastructure, the enterprise gains more funds and scope to compete and grow. What’s more, the old do-it-yourself approach to infrastructure meant companies were spending more on their infrastructure than on business-generating applications. When they let go of that and make a strategic investment in converged and automated infrastructure, they free up resources to reinvest in projects that could drive the business forward.



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How will the IT budget evolve to keep pace with all this change?

DG: There will be a shift in spending from the more traditional infrastructure to new applications and the platforms that support them. Beyond that, the definition of the IT budget will blur. It's going to be hard to differentiate the IT spend from the marketing spend or the cost of goods, because IT will be more deeply embedded across the business. This is going to push the transition to IT-as-a-service, because there's a desire to see what's being spent, where it's being spent, and where the value is. As the IT and business budgets merge, this desire for budgetary transparency will grow.

What challenges are CIOs are facing in meeting these business and technology imperatives?

DG: CIOs understand the need to transform and are keen to grasp the opportunities, but while many organizations are trying, progress is patchy. They're being held back by budgets and lack of resources, or by a lack of in-house skills and expertise. In some cases, there's not enough senior-level support, while in others data privacy and security concerns are holding them back. Even some of those who want to move to a converged infrastructure or hybrid cloud can't always figure out the methodology they need to use, while others find that getting back into the development business is very challenging. That's why what we do with Pivotal is so crucial.

How is the new entity, Dell EMC, most relevant to these digital opportunities and challenges?

DG: Dell EMC provides the essential, resilient infrastructure for digital transformation. For organizations that want the fastest way to cloud, we have engineered hybrid cloud solutions. For those that would like to build their own, we also provide the cloud building blocks. We lead in important technologies like scale-out network-attached storage, flash storage, and hyper-converged infrastructure. Dell Technologies, including Dell EMC, uniquely offers everything from PCs and servers

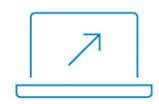
to computing, networking, security, and development platforms. That creates real synergies and advantages. Importantly, we offer customers choice and flexibility.

We also help our customers get started for a lower incremental cost by not requiring them to jump in and buy the whole set of capabilities to start innovating. For example, customers can take Pivotal Cloud Foundry as a service from Virtustream, sign up at minimal cost, and start running organic cloud-native apps. And when organizations get bigger, they can always move their apps in-house or to a hybrid cloud.

In summary, what advice would you offer to today's CIOs based on where you see industries headed?

DG: Every company, in every industry, is going to face a business transformation. Becoming a digital enterprise requires a holistic approach that encompasses IT, workplace, and security transformations, and Dell EMC is uniquely positioned to help enterprises change and succeed. We, as a company, are having these same discussions, and making our own strategic plays.

The most important advice is this: Carefully consider your partner on this journey. Choose a partner with the breadth of expertise, vision, and resources, and the R&D to see you through this transformation. There's no question about the tremendous opportunity ahead, or the path forward to seizing it. Let's get out and build it.



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