

Cloud: An Irresistible Force

“Executives need ample flexibility to respond to the market. That means both reducing costs and increasing innovation.”

—ORACLE CEO MARK HURD



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PROFIT

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Cloud Ends the 80/20 Budget Tyranny

Now create the future your customers want—and your company needs.



In today's tumultuous business world, where disruption is everywhere and customers are calling the shots, companies that cannot aggressively fund customer-centric business innovation will die.

■ In a world where the notion of an app for personalized DNA mapping is not so far-fetched, where 3-D printers the size of tractor-trailers pump out materials for building an entire home in 24 hours, where the world's largest industrial company runs TV ads celebrating its hiring of world-class coders, and where energy companies now sell services that help their customers buy *less* energy from them, the big question we have to ask ourselves is this: Am I part of the revolution, or am I embracing and propping up the status quo?

If there's any middle ground between those extremes of joyfully creating the future or stubbornly preserving the past, that middle ground is disappearing—quickly. But the good news is that the technology enabling the sweeping end-to-end business transformations listed above is available to everyone. And more and more CIOs and other visionary business leaders are shifting the conversation from “Where can I do some low-risk cloud trials?” to “How can the cloud help us drive end-to-end business value and accelerate customer-centric innovation?”

Cloud computing—infrastructure as a service, platform as a service, software as a service, and data as a service—has demonstrated its ability to help solve a number of business problems. But the overriding benefit winning the hearts and minds of CIOs is that the cloud is freeing them from the tyranny of the 80/20 IT budget trap, in which 80 percent of their precious IT spending was sucked up by low-value and no-value integration, maintenance, and legacy support, leaving only 20 percent for innovation.

And those numbers tell the most important story: In today's tumultuous business world, where disruption is everywhere and customers are calling the shots, companies that cannot aggressively fund customer-centric business innovation will die. For the first time in a generation, CIOs have a viable alternative to that 80/20 budget tyranny, because cloud computing lets them push more and more “keep the lights on” costs over to cloud providers, allowing those CIOs to redeploy huge chunks of their budgets toward innovating and growing revenue for their companies.

But the beauty of end-to-end enterprise cloud computing is that it does much more than transform the economics of IT. It also accelerates the pace of innovation because updates happen quarterly rather than every five years. It shortens the time to value because businesses don't have to own and manage sprawling IT factories and spend millions of dollars and tens of thousands of hours splicing together disparate piece-parts that were never intended to work together. And the cloud lets businesses plug into our modern mobile-social world so that those companies can move at the speed of their customers.

At the same time, software-as-a-service systems are revolutionizing the employer-employee relationship by helping companies identify, engage with, recruit, and retain world-class talent; give employees more of a voice in building skills, relationships, and careers; and quickly identify the high-potential leaders of tomorrow.

Then there are the cloud-driven transformations taking place in finance, allowing CFOs to deploy resources more quickly, intelligently, and profitably; in the supply chain, helping companies get new products to market more quickly; and across a growing number of vertical-industry applications, where the cloud brings all of these competitive advantages to bear in high-change, high-touch fields such as retail, hospitality, healthcare, financial services, and communications.

In this special issue of *Profit*, several top Oracle executives—including CEO Mark Hurd and President of Product Development Thomas Kurian—share their insights on how the cloud is enabling and accelerating business transformations in companies large and small in every industry and on every continent.

We hope you find that this digital format allows you to discover the ideas you need in the formats you want—text, video, links to related content, and more. And we hope those ideas will help you not just keep up with but instead get ahead of the remarkable changes taking place in today's business world. □

BOB EVANS (@bobevansIT) is senior vice president, communications, at Oracle.

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transformation

Past the Tipping Point

Why it's time to build your business with the cloud at its core



Reggie Bradford, Senior Vice President, Product Development, Oracle (left) and Daryl Szebesta, Vice President, Cloud Transformation, Oracle

If you were starting a business today, you'd absolutely build it with the cloud as core. So why wouldn't you have the same vision for an existing business?

■ Cloud computing has been getting good press lately, with some very bullish forecasts. Still, a number of barriers are holding back CXOs.

Inertia is one. Companies have invested a lot of money in training and personnel for their legacy systems and processes. And big, dynamic changes

don't happen overnight, especially at large, complex organizations. Also, there's fear that the cloud will introduce a "vanilla" capability that won't meet business needs. And there's a fear of commitment, especially about the right approach: single vendor or multivendor?

Further, there are legitimate, even if inflated, concerns regarding security, data privacy, and data residency. And some CIOs still stand guard at the gates of IT, protecting their turf, their colleagues, and their on-premises approaches.

We don't want to minimize the problems inherent in such a major technology shift. We would like to provide a clearer understanding of the cloud and how its benefits outweigh its potential downsides.

For instance, there's the transformation of the back office—those systems that are mission critical but not core such as payroll and HR. State-of-the-art business processes are key to developing motivated and engaged workers who, with the right tools and support, drive innovation and competitive advantage. That "up-to-date-ness" comes from the cloud, which distills the experiences of multiple organizations and makes them available to your organization.

The cloud's ease of implementation accelerated a trend whereby today's CIOs are positioned to play more of a business partnership/consulting role with their line-of-business counterparts. For example, tapping social networks

became a priority for CMOs several years ago. But social technologies weren't on the CIO's agenda, so in many cases marketers went around the IT department to implement them because they needed to innovate fast, and conventional on-premises software couldn't keep pace. Savvy CIOs learned from this experience and today seek to partner with CMOs on social networking and other marketing efforts.

The most compelling reasons for implementing cloud services have been much discussed: speed, agility, reliability, flexibility, and cost savings. But other reasons need more emphasis.

For instance, the cloud is where the cutting-edge vendor R&D is being conducted and implemented—period. In marketing alone, there are 3,800 cloud services providers, up from 100 in 2011. Compare that with zero new vendors offering pure-play on-premises systems.

Another cloud advantage is standardization in a positive sense—data standards, standard processes, and so on. It's the flip side of the complaint about the cloud's "vanilla" nature, and a much-underappreciated merit, especially to global organizations. However, to achieve the advantages of standardization, an organization's enterprise architects must think through their cloud deployments, especially if contemplating a heterogeneous cloud—one consisting of services from disparate vendors—which can create a data and integration rat's nest that drives up costs.

Finally, the cloud upends the traditional vendor/customer relationship in several important ways—most of them positive. For instance, the cloud transfers the R&D effort and expense to the service provider, and mitigates the overhead and hassle related to upgrading.

There was a tipping point a year-and-a-half ago, when we moved from *if* cloud to *when*. We've crossed the chasm to where the benefits now greatly outweigh the risks. If you were starting a business today, you'd absolutely build it with the cloud as core. So why wouldn't you have the same vision for an existing business? □

REGGIE BRADFORD is senior vice president of product development at Oracle. **DARYL SZEBESTA** is vice president of cloud transformation at Oracle.

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STEVE WALKER BOBADLER/GETTY IMAGES



KEVIN TWOMEY

SIMPLY IRRESISTIBLE

Oracle CEO **Mark Hurd** says the desire for cost savings and innovation makes moving to the cloud an inevitability.

BY AARON LAZENBY

Having cake. Eating cake. Alone, either is good. But it's better to have both. That's what Oracle CEO Mark Hurd says (more or less) about the increasing adoption of enterprise cloud services in a still-challenging economic environment.

"There's a lot of pressure on companies to perform," says Hurd. "Executives need ample flexibility to respond to the market. That means both reducing costs and increasing innovation."

If "innovation" is shorthand for "new research and development spending" or "expanding the portfolio of products and services," the challenges of improving margins *and* making new investments appear to be mutually exclusive. But Hurd believes that new, powerful cloud technologies are allowing companies to achieve both goals. And the attraction is undeniable.

Here, Hurd shares his thoughts on this dynamic, the changing role of the CIO, and how consolidation of the IT industry will help cloud systems span the enterprise.

PROFIT: Why is cloud computing the right fit for the current macroeconomic environment?

HURD: Despite the fact that many equity markets have seen significant gains over the past few years, revenue growth of the biggest companies has been fairly flat. For the most part, earnings and market value growth are a result of reduced expenses. In that environment, if companies are going to maintain earnings growth, it's going to come from somewhere—and IT is not immune to those cuts.

Our customers are constantly going through the evaluation of "How do I get rid of spending that is less important and then reinvest that in spending that is most important?" And so that's what's going on in the overall market.

And the cloud, to your question, plays a role in the fact that it can do two things at the same time. It can actually lower your costs. If the cloud did nothing but lower your costs, most of our customers would do it. Because if I can get exactly the same thing and it just costs less, and it's simpler, and it's secure, let's do it.

Now, simultaneously, if I could get all of that and I could actually get more innovation, then it becomes sort of something that's irresistible.

PROFIT: In your eyes, what is the relationship between IT innovation and revenue?

HURD: I know only a few ways to take market share and drive new revenue. I can engineer better products and services, I can build better relationships with my customers and deliver a higher level of service, or I can give my customers a lower price.

It's counterproductive to lower my price, because I have to sell more units to make up for that lost revenue. Generating brand-new products can take a long time. Improving service is typically the quickest way that I can take market share. So aligning technology strategy to better service customers becomes an essential path to revenue growth.

There are unique opportunities for differentiating yourself from competition. By the way, they don't come along every day. And usually, they show up in a crisis. If I'm in the airline business, I get to a gate, and there's one seat left, and two people get to the gate at the same time. Who gets the seat? And you have a shot to make a difference with me that I'll probably remember the rest of my life.

The way to overachieve in those situations is to have better information, to know who you're talking to, and to know how to motivate that customer. To seize the very unique opportunity, you have to differentiate that relationship and be nimble enough with your technology to capitalize on that moment.

PROFIT: How do enterprise applications help companies capitalize on that moment?

HURD: Data becomes very important. Information, the ability to mine that information, take advantage of that information at those unique opportunities where I can gain share. Then clearly, on the other side of it, there is the fact that I just want stuff that costs less. I don't want to have a different server from five different companies, three different operating systems, multiple databases, multiple applications, middleware, and all of this different based on each application set.

And so what has happened historically for most of these applications that have automated processes for our customers over the past 20 or 25 years is that they've all been very monolithic. They typically haven't integrated cross-application.

They've been highly customized to the processes that our customers have had, and those processes were automated 20 years ago.

The world has changed multiple times since then. Consumers now expect immediate gratification. They expect immediate answers to the questions they have, and they'll make buying decisions based on the ability to access the availability of services or products on a nanosecond sort of basis.

So the ability to serve up content, serve up the desired capability, now becomes not just a nice-to-have but a must-have if you're going to compete in the next generation. And the ability to get to a modern set of applications—a next-generation set of applications—becomes really critical.

In addition to that, as a cloud user you get a whole set of innovation on a continual basis. This is not like the old days where you would get an application and you might get a release every two or three years. Now you might get five features a week. You might get 300 or 400 features in three or four months. That's a lot of innovation that, frankly, you had to do almost no work to benefit from.

PROFIT: How can the office of the CIO influence this cost cutting/innovation dynamic?

HURD: The role of the CIO is changing. I think historically the CIO built from the bottom up. There was a lot of procurement leverage in the IT strategy, which was sort of "let's get two vendors in each category baking off and try to lower our acquisition costs."

As you know, today, most of our customers' budgets, or 80 to 85 percent of their budgets, are spent just running the environments they've got. So the innovation part of the budget has been 15 percent—not enough to get done all the things we've talked about.

I think the role of CIO has to be to get this simple, lower cost of the infrastructure, and at the same time get easy-to-run, easy-to-integrate, easy-to-move data—both intra-application and interapplication—and move as much to the innovation part of the budget as they can.

PROFIT: What are the most powerful levers the CIO can pull to make this happen?

HURD: In the IT market, 30 percent of overall enterprise IT budget is spent on the development and testing of applications. It is one of the most underutilized spends in the IT industry. Total enterprise IT spend is roughly a trillion dollars, so US\$300 billion of it is “dev-test.”

And that dev-test environment has historically been very much like what you would think of in the rest of on-premises IT today. You buy a server, an operating system, and a database. You buy some authoring tools and put that all in the data center, and developers start to program on it. They would probably use [the environment] 20 to 25 percent of the time, meaning 75 percent of the time it just sits idle in most of our customers’ data centers and in their infrastructure.

I look out in the parking lot and I see my car, and I think about the fact that it’s doing nothing. It just sits there. So my car is utilized, I don’t know, 3 percent a day? 97 percent of the day, it sits there waiting for me to use it. Now, imagine if you could get that car on demand. And you paid for it only 3 percent of the time. Would you do it?

Think of that as much of the way of infrastructure. Let’s just use this dev-test example. 20 percent of the time, dev-test is productive. People aren’t using it on the weekends most of the time. You get a percentage of productivity during the week. Imagine if you could dial that up, and it looked exactly the way you wanted, using exactly the capabilities you wanted or you could access, and you could get it on demand. And you paid for it only when you used it.

That’s an argument for why you see such rapid movement of development and testing, which eats up a lot of infrastructure, to the cloud.

I made a prediction a year ago that you would see all dev-test move to the cloud by the time you got through the next 10 years, which is nine years now. And I think if anything, I could be not aggressive enough. I think the financial case is so compelling, and the technological capability now is so compelling, because this isn’t just like the car example. You actually now can go to the cloud and get more capabilities than you’ve had on premises, while variablizing your cost at the same time. So it’s a very compelling value proposition. And that is budget that is, typically, directly controlled by the CIO.

PROFIT: While Silicon Valley is synonymous with innovation, do you think the cloud requires a change in mindset from the industry’s big players?

HURD: This valley is a great place—a lot of innovation, a lot of excitement—but much of what’s happened in enterprise

“IMPROVING SERVICE IS TYPICALLY THE QUICKEST WAY THAT I CAN TAKE MARKET SHARE. SO ALIGNING TECHNOLOGY STRATEGY TO BETTER SERVICE CUSTOMERS BECOMES AN ESSENTIAL PATH TO REVENUE GROWTH.”


IT has been companies building pieces. I’m an operating system company. I’m a hardware company. I’m a database company. And by the way, customers have been very thoughtful, and they bought the way that the companies have built and then sold.

And then they’ve performed the task of integrating all of this on premises, and that’s what’s created this complexity—all of these different operating systems, all of this different hardware, and all the different databases that are out there. I think a common mistake is that businesses think they can make one isolated move to the cloud and not think about what the destination looks like. They’re not making sure that they have as much commonality as possible.

That’s why I think there will not be nearly as many cloud companies as there were on-premises companies. I think the IT industry will consolidate, it will simplify, and customers will demand more from fewer, to be able to provide a simpler environment, easier to integrate, easier to manage, and easier to innovate.

I’ve said many times that I think one of Oracle’s core differentiators is the fact that most of our competitors are either all cloud or all on premises. The fact that we can do both and be able to align those two worlds, I think, becomes a very critical capability of Oracle’s that our customers benefit from. □

Aaron Lazenby ([@alazenby](#)) is editor in chief of Profit.

 Find more new ideas for cloud-driven transformation

THOMAS KURIAN

WHAT'S NEXT IN ORACLE CLOUD

Virtual data centers, compute services, open source certifications, analytics, and more

BY JOHN FOLEY

■ With hundreds of software-as-a-service applications, Oracle Cloud is expansive. And with a growing portfolio of infrastructure-as-a-service and platform-as-a-service offerings, it is also comprehensive.

The responsibility for all that development lies with **Thomas Kurian**, president of product development at Oracle, whose team has been busy adding new capabilities at all layers of Oracle Cloud.

In advance of Oracle OpenWorld 2016, Kurian gave *Profit* an update on the latest innovations in Oracle Cloud.

PROFIT: As Oracle ramps up its infrastructure-as-a-service (IaaS) offerings, what are we working on for compute?

KURIAN: Oracle's IaaS strategy is to allow customers, using software APIs and a graphical user interface, to define software-defined virtual data centers that run in Oracle Cloud. These software-defined data centers obviously include virtual networks to which customers can attach different kinds of compute and storage.

And we do four things uniquely: We give you very fast and very predictable performance and scalability; great reliability and availability; highly differentiated security; and a high degree of control and governance. Compute is the building block, and we've got five flavors of compute services for different kinds of workloads.

PROFIT: What is Oracle doing to enable open source and non-Oracle software to run in IaaS?

KURIAN: Our cloud runs any piece of software, whether that is Oracle, Microsoft, IBM, open source, or a packaged application. As long as the

software runs on Linux, Windows, Oracle Solaris, Ubuntu, or CentOS, it can run in our cloud.

On open source, we're doing a lot of things with the community to get three kinds of things done with our cloud. One is to certify the most popular open source packages with our cloud. This could be Cassandra, Hadoop, Node.js, Tomcat, MySQL, a variety of NoSQL databases, Kafka, Mesos, Docker, and many others. You can pick and choose. There are about 480 open source packages we have certified.

We're working with a number of partners who have test-and-development tools that people like to use as part of their continuous integration dev-test or DevOps cycle, and we're working on automating the developer lifecycle across this environment. And we have done several optimizations on some of these key technologies for performance, reliability, and ease of use. For example, we've introduced a service to allow people to use Hadoop, Spark, and

“
FIRST AND
FOREMOST,
WE’RE
WORKING WITH
THE DEVELOPER
COMMUNITY
TO MAKE OUR
TECHNOLOGY
ACCESSIBLE
TO EVERYBODY
WHO WANTS TO
USE IT.”

—Thomas Kurian, President,
Product Development, Oracle

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cloud-driven
transformation

Kafka analytics completely elastically, with great performance and via an API.

PROFIT: What differentiates Oracle’s cloud infrastructure offerings from those of other cloud providers?

KURIAN: Five things: unbelievably fast performance; scale and reliability; control, so IT departments can procure cloud services and track utilization; deep security through the entire stack, whether it’s around data security, certificate management, encryption, or segregation of duties; and ease of migration.

PROFIT: What is Oracle’s platform-as-a-service (PaaS) strategy?

KURIAN: It’s about solving three things. One, it gives customers a complete platform based on Oracle and open-source technology that’s standards-based for building cloud services and applications.

Two, it dramatically lowers the cost of ownership for people using the software, because we’ve taken all of the cost and labor associated with installing, configuring, patching, backing up, encrypting, and maintaining the Oracle software and eliminated it by automating all of these tasks through software.

And third, it’s built on top of our IaaS, so you inherit the benefits of the IaaS from a performance, scaling, reliability, and security point of view.

PROFIT: How can customers of Oracle’s or another company’s software-as-a-service (SaaS) applications use Oracle’s PaaS?

KURIAN: You may want to build an extension to our SaaS or another company’s SaaS application. We have a product called Oracle Application Builder Cloud Service. It’s meant for a person who’s a declarative developer, not a hardcore programmer.

Second is Oracle Integration Cloud Service. Assume you have our cloud SaaS for customer relationship management and you want to connect it to Oracle E-Business Suite as an enterprise resource planning system that sits on your premises. You can use Oracle Integration Cloud Service to do API management, secure messaging using its service bus, and define orchestration or business processes on top of it using our Business Process Execution Language (BPEL) solution.

Third, imagine you’re running HR in our cloud. You’re an HR professional, and you want to blend some data from HR with information from payroll. Oracle Visual Analyzer allows you to extract data from our SaaS applications or from an on-premises system. All you need to know is Microsoft Excel to do an extract. You upload the data using a spreadsheet, and then blend it. All you need is a browser.

PROFIT: What are some of the new ways in which Oracle is working with the developer community?

PELLA DIFFERENTIATES WITH AN INTEGRATED CLOUD

Iowa-based window and door manufacturer Pella doesn’t simply manufacture its products—it sells them directly to its customers and offers service as well. Its employees must therefore have a good view of all the company’s interactions with those customers.

Pella has made this possible by integrating its Oracle Service Cloud with Oracle Marketing Cloud and Oracle CRM On Demand Sales, so the

company not only can deploy service agents where demand is growing but also can make the entire customer record available to those agents at the moment the customer calls in, giving them access to the full history of products owned, purchased, and serviced.

“Having these capabilities provides an experience that our competition can’t deliver,” says Rick Hassman, CIO at Pella.

—Sasha Banks-Louie

KURIAN: First and foremost, we’re working with the developer community to make our technology accessible to everybody who wants to use it. If you’re a developer, with our cloud you can access any software we have with a browser or an API core, and we’ve published our APIs into a catalog. We make all these services available. Second, we know developers love open source tools and technologies. We talked here already about everything we’re doing to integrate these technologies with services in our cloud so you can use the best tools to automate how you build, deploy, and manage software environments.

Third, we’re doing some specific things for the new class of developer called the *infrastructure developer*, the person traditionally called DevOps. If you look at IaaS, what it’s really done is take hardware and made it programmable through an API, and there’s a new class of developer who’s responsible for spinning up infrastructure. □

John Foley (@jfoley09) is senior director of strategic communications at Oracle.

JOHN FOWLER

ORACLE'S SECRET WEAPON IN THE CLOUD

The new SPARC S7 is engineered for security and performance.

BY JOHN FOLEY

■ Oracle recently launched the SPARC S7 microprocessor, a designed-for-the-cloud chip that is the latest in a long line of advanced RISC microprocessors.

The SPARC S7 is closely related to the SPARC M7, unveiled in October 2015. Both are used within Oracle's engineered systems and RISC servers, which power Oracle Cloud and many other clouds.

In this *Profit* interview, **John Fowler**, executive vice president of systems at Oracle, explains how the SPARC S7 brings new levels of performance, efficiency, and security to the cloud.

PROFIT: How is Oracle's new SPARC S7 different from the SPARC M7?

FOWLER: The SPARC M7 had breakthrough technology. What we were trying to do was really improve security with Silicon Secured Memory and encryption, and greatly improve the efficiency of analytics applications by putting some logic in the processor design that helped with analyzing and scanning data. We think that's really the next 10 years of processor evolution. It's not just cores and performance, but putting in more specific features to help software.

What we decided to do in the SPARC S7 is take those same core technologies and bring them to horizontal scale and highly scale-out price points.

PROFIT: Why does Oracle, a cloud company, continue to invest in creating the world's most advanced microprocessors?

FOWLER: We are working to build the world's best infrastructure for customers, and we want them to be able to use x86 and also RISC microprocessors.

In the case of SPARC, we're able to put in unique features based on our understanding of software. So for example, we've incorporated security features and integrated data-analytics acceleration.

PROFIT: Why and how does Oracle remain such a good partner with Intel?

FOWLER: We partner with Intel to make all of our software work and build a full family of hardware products around Intel. It's not *either/or*. It's really an *and* strategy. x86 and SPARC give customers choice.

PROFIT: At the SPARC S7 launch, you emphasized three themes: security, efficiency, and simplicity. Why those three things?

FOWLER: Cloud computing exacerbates many of the technical challenges people have in enterprise computing. By its very nature, you're sharing resources, so security becomes even more important. The second thing is, since you're

sharing resources and infrastructure, you want to be as efficient as possible because that's a basic cost equation. And finally, what people expect of the cloud is the ability to rapidly provision new services and go compete by moving quickly.

PROFIT: How do the new SPARC processors make these environments more secure?

FOWLER: We built in a very wide capability of encryption of the chip, but more importantly, we built in dedicated processor resources to handle encryption. What this means is your application can run at virtually the same performance encrypted as unencrypted.

The second big area we worked on was protecting memory. Since an application can access any memory it's entitled to, we added a technical capability so an application can't do that unless it has a matching key for all types of memory.

PROFIT: What are the benefits of using the new SPARC processors in Oracle's own cloud environment?

FOWLER: We deploy both x86 and SPARC in our cloud. Customers can choose to use SPARC, and what they gain are advanced security—the encryption and memory protection—as well as very high performance and efficiency per core.

PROFIT: Oracle also recently released a SPARC-based Oracle Compute Cloud service. How is it different from other cloud infrastructure services?

FOWLER: It's different because it offers SPARC. From Oracle, you can get both x86 and SPARC infrastructure as a service. They're priced identically. We expect to see customers that are interested in higher levels of mission-critical security or doing data-analytics type applications, because that is where SPARC is differentiated.

PROFIT: What is the Data Analytics Accelerator in SPARC processors?

FOWLER: The Data Analytics Accelerator is able to scan very large amounts of data for strings and filter and decompress data from memory, and it does it at an enormous rate. The software support for this is integrated into Oracle Database 12c today. We've opened up the programming interface and created a developer community around this.

PROFIT: What about the need for interoperability between on-premises and public clouds?

FOWLER: We believe the next decade is about enterprises making choices between using cloud services, platform as a service, infrastructure as a service, and on-premises computing. We've linked the management tools and the provisioning tools so that if you want to straddle these worlds—move workloads back and forth—you can. □

John Foley (@jfoley09) is senior director of strategic communications at Oracle.

ELECTRONICS RETAILER ACCELERATES BUSINESS WITH SPARC-BASED PERFORMANCE BOOST

At [B&H Photo](#), high performance is built into the company's DNA. "We do about a million database queries per minute," says Krishna Tangirala, CTO at B&H. "And that's not easy to keep up."

The company's Ninth Avenue shop is a cultural icon in Manhattan. But it's the retailer's high-volume ecommerce website that [creates loyal customers and drives business upward](#). "We take pride in the performance of our website and ecommerce environment," Tangirala says. "Every millisecond translates into dollars."

B&H is about to move its entire ecommerce system, along with its enterprise resource planning system, to an updated hardware platform built using Oracle's SPARC T7 servers, which employ the SPARC M7 proces-

sor. Tangirala is practically giddy. "I'm getting a processor that's amazing in terms of performance," he says.

Looking further ahead, B&H wants to pair that impressive online transaction processing performance with real-time online analytical processing, enabled by the Data Analytics Accelerator, one of the SPARC processor's hardwired Software in Silicon features. This will offer B&H customers a more immediate, interactive experience, featuring "dynamic, up-to-the-second information" relevant to their buying process, such as what products are trending in social media, Tangirala says.

—John Soat

“
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—John Fowler, Executive Vice President,
Systems, Oracle

Find more
new ideas for
cloud-driven
transformation

STEVE MIRANDA

SHIFT, OR FALL FURTHER BEHIND

Disintermediation looms large for companies late to the cloud.

BY MARGARET HARRIST

■ For those IT organizations plugging along on outdated software and counting on their competitors to do the same, Oracle Executive Vice President of Applications Development **Steve Miranda** has a wake-up call: businesses are moving to the cloud in a big way.

“We’ve almost crossed the threshold where Oracle Cloud customers have done more upgrades to their cloud applications than all of our on-premises customers in all of our lines of business have done ever,” says Miranda.

Quite the bold statement, but consider this: Oracle’s applications development teams are delivering two upgrades a year for each of their cloud offerings across enterprise resource planning (ERP), human capital management (HCM), customer experience (CX), and supply

chain. From large enterprises to small and mid-size businesses, all of these cloud customers are doing upgrades every six months.

TICKTOCK

Most companies recognize that many of the on-premises applications they’re using to run their business don’t have the capabilities they need—and that they perpetuate predigital-era business processes.

“I talk to leaders of a variety of companies—from startups to some of the largest businesses in the world—and the main issue they’re concerned with is responding to the speed of change and the disintermediation or the potential disintermediation to their businesses,” Miranda says.

If you think about the speed of change going on in business today, and the implications of two

upgrades in a decade versus two upgrades a year, the opportunity that cloud presents for business is dramatically clear—as is the risk for those not moving toward the cloud.

Of course, Oracle is not immune to that disruption. No company is. But Miranda sees Oracle’s longevity in the applications development world as a distinct advantage in the cloud era. Which may seem counterintuitive: if you wanted modern applications geared to today’s digital business world, wouldn’t you look to newer, cloud-native software vendors?

“Our close connection with our customers over the years in areas such as finance, HR, procurement, and supply chain has given us a deep understanding of the challenges they face and the requirements they have,” he says. Oracle’s applications development teams “have the advantage

of a huge, global installed base and the resulting technical knowledgebase of what has worked for customers in the past, [and] what hasn't worked."

MOVING TO THE CLOUD

Companies take a variety of paths in moving business areas to the cloud. For some, it makes sense to move an entire area—such as ERP or supply chain—in a subsidiary and then roll it out across the greater organization. Most begin their transition to cloud-based applications in a single area (such as sales automation or procurement).

Whichever approach makes sense for a business' operations, Miranda stresses the importance of keeping the entire suite in mind. "Companies that start by moving one of the functions within ERP to the cloud, for example, should pay attention to how that function interacts with other ERP areas," he says. "These integrations within ERP, as well as the integrations between ERP and supply chain and marketing, are critical for a digital business."

Another critical factor in deciding the right path to the cloud for a company is its cultural ability to change. Companies' established and deeply ingrained business processes are likely a product of years of application customization and reinforce siloes that are anathema to digital business operations. Reviewing those current processes is a critical step to understanding the change management issues that come with moving to the cloud.

"Companies have typically built up baggage as their systems have evolved and as they have evolved," Miranda says. "Smaller businesses have an easier time making a complete move to the cloud because they have a relatively clean slate. By thinking in terms of suites and how those suites are connected, they can eliminate the need for integrations to start forming and prevent that baggage from starting to build up."

"While we're going to continue to invest in everything our customers need in their on-premises applications, we feel very strongly that the cloud is clearly a superior delivery model," Miranda says. "The benefits of the cloud in terms of cost and future-proofing the business from a pure technology perspective—in addition to the speed at which we can deliver new features and capabilities that keep organizations up to date—enable our customers to be far more agile and innovative." □

Margaret Harrist is director of content strategy and implementation at Oracle, where she focuses on digital disruption, enterprise resource planning, big data, supply chain, Internet of Things, and SaaS. Follow her at [@mharrist](#).

HOW ENGINE MAKER CUMMINS USES SIX SIGMA TO IMPROVE CUSTOMER CARE

Companies that don't realign their customer care strategies and processes will likely see their customer satisfaction rankings slide.

Cummins, a global manufacturer of engines and related technologies, [set out to design its social customer care program](#) using the same approach employed to launch many programs at this engineering-centric company: Six Sigma.

The process enabled the team to

- Decide that it was important to use the same tool across the organization "in order to have a successful customer care process," says Michael Nagel, web and social media manager at Cummins
- Agree on overall corporate objectives for

social customer care, including desired benefits for customers and potential cost savings for the company

- Agree that human interaction needed to trump automated responses—and document why they came to this conclusion
 - Benchmark itself against recognized leaders in social customer care
 - Put a small-scale pilot in place in North America
- While Cummins' social customer care program is very much a work in progress, the foundation established using Six Sigma will enable the company to adapt well to changing demands.

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—Steve Miranda, Executive Vice President, Applications Development, Oracle

Find more new ideas for cloud-driven transformation

FRANÇOIS LANÇON

ON THE ROAD, SPEED KILLS; IN THE CLOUD, SPEED WINS

It's all about changing faster than the competition.

BY ROB PRESTON

■ Time to market. Talent acquisition.

Customer feedback loops. If you're not faster than the competition in all of these domains, your business is going nowhere fast.

That's what digital transformation is all about—but digital transformation isn't for wimps. It's an ongoing technical, procedural, organizational, financial, and cultural challenge, no matter the industry.

François Lançon, senior vice president for Oracle Asia Pacific, understands this challenge better than most, having worked with customers across the region's 25 countries for more than 15 years. While acknowledging that the term *digital transformation* is being "abused and overused" by the marketing establishment, Lançon nonetheless sees the

transformation itself as a top CEO priority. Modern CIOs, therefore, are taking on the mantle of digital leadership, he says—while old-school CIOs will be left behind and ultimately replaced.

Lançon views digital transformation as the end-to-end digitization of the business processes within an enterprise. It's not just something the HR or finance or marketing team does in isolation. It's end to end—from back office (finance, HR, manufacturing, and so on) to front office (sales, marketing, customer service, and the like).

Those processes are generic to most enterprises, he says, and as long as they're run on legacy on-premises applications, they're inflexible and expensive to maintain and upgrade, especially when they've been highly customized. Moving applications to shared cloud services will improve efficiencies and generate IT cost sav-

ings, but more important, it will create consistent, best-in-class processes—ultimately accelerating companies' ability to innovate.

The real payoff will come when companies tie their front- and back-end applications together and connect them to their sensor-laden devices, machines, infrastructure, and other "things" to get real-time feedback on their products and business operations.

"The cherry on top of the cake is the analytics," Lançon says, which will generate what he calls the "CEO view" of the financials, operations, and customer experiences of the business.

WHAT'S GETTING IN THE WAY?

So what are the main obstacles to digital transformation? [Lançon cites three.](#)

"The number one obstacle is emotional—the

loss of control, the loss of ownership,” he says. Part and parcel of that were initial concerns about information security, allowing a third party to guard the keys to the digital kingdom. Those concerns have largely gone away over the past 6 to 12 months, as customers now understand that their data is in fact more secure in Oracle Cloud, Lançon says. “That’s a major step.”

The second obstacle continues to be industry regulations, particularly those governing data sovereignty. Cloud providers have responded with “some very creative solutions,” he says, citing [Oracle Cloud at Customer](#), which offers customers the very same services available in Oracle Cloud—compute, middleware, database, and tools—in an integrated system that resides on a company’s premises. Cloud providers are also building data centers in customers’ countries to mollify concerns about data sovereignty, security, performance, and country-specific legal restrictions.

The third and most overwhelming obstacle is inertia, the fact that companies have sunk a lot of investment into their complex, aging IT infrastructure, including tens of millions of dollars of customizations, and their various departments are comfortable with—even complacent about—them. Moving those applications to shared cloud services requires business buy-in and considerable realignment. “This is the one being resolved right now,” Lançon says.

So of all the reasons companies should embrace the cloud, which is the most important one? To lower their operational cost structures? Increase their agility? Free up IT resources for more-innovative work?

“Oh, there’s only one: *speed*,” Lançon says. Most companies spend only a very small fraction of their total budget on IT, he notes, so the cost savings are “interesting,” not game-changing. The cost part of the equation “isn’t going to change the life of your company,” he says.

But accelerating the speed of innovation will. Lançon points to the gaming industry, where Niantic changed the dynamic overnight when it brought together two established technologies—augmented reality and GPS—to create the blockbuster [Pokemon Go](#) application.

“Companies need to react to change at a very different speed than they did five years ago,” he says. “This is what the cloud brings you: speed. You can change things faster than your competitors. And if you still have the old stuff, you can’t. This is what it’s all about.” □

Rob Preston (@robpreston) is editorial director in Oracle’s Content Central organization.

AUSTRALIAN FINANCE GROUP GOES ALL-CLOUD IN BOLD INNOVATION STRATEGY

Shortly after Jaime Vogel joined Australian Finance Group (AFG) as CIO four years ago, he determined that the company’s IT model was in need of an overhaul to ensure it could meet the growth and competitive opportunities ahead. Digitally adept “fintech” startups already were nibbling at the home-mortgage and other businesses of AFG’s nationwide network of brokers, now at about 2,600 members, while the company was expanding into new markets, including commercial finance, insurance, and securities. It was time for bold changes.

About a year into the job, Vogel went to AFG’s board with a plan: Progressively migrate all of the company’s IT applications and infrastructure to the cloud. The broader goal: Redirect IT spending that had gone mostly to system maintenance and support to customer-facing and revenue-generating projects. Vogel floated an eye-popping stretch goal: Allocate 75

percent of IT spending to new innovation projects, instead of the habitual 20 percent.

Having moved about 80 applications to the cloud, including its Oracle enterprise resource planning, business intelligence, incentive compensation, planning, and document management solutions, AFG shut down its two data centers in May 2016. That shutdown alone saved the company about AU\$500,000 (US\$385,000) a year, but the total benefit is much higher, because the cloud transition has freed up money for Vogel to expand his team and shift some people to more-productive work.

Today, AFG spends about 60 percent of its IT budget on innovation, well on its way to that stretch goal. “It’s a massive transition,” Vogel says. “The fact that we’re very, very close to that point today is a credit to the business and the IT team.”

“

THIS IS WHAT THE CLOUD BRINGS YOU: SPEED. YOU CAN CHANGE THINGS FASTER THAN YOUR COMPETITORS. AND IF YOU STILL HAVE THE OLD STUFF, YOU CAN'T. THIS IS WHAT IT IS ALL ABOUT.”

—François Lançon, Senior Vice President, Oracle Asia Pacific



Find more new ideas for cloud-driven transformation

CHRIS LEONE

CUSTOMER VOICES DRIVE CLOUD INNOVATION

Online community shares ideas, requests features, and accelerates change.

BY CHRIS MURPHY

■ An overlooked and underestimated advantage of cloud computing comes from how much—and how fast—customer feedback can drive new features and innovations in an application.

Here's just one example. Last year, the human resources information systems director at a global consumer goods company posted a suggestion to Oracle's online [Idea Lab](#): "In the Oracle Human Capital Management Cloud [Oracle HCM Cloud] workflow used to terminate an employee, how about adding a link to quickly reassign that person's direct reports?" Online community members gave that idea 30 thumbs-up votes and zero thumbs-down, and Oracle added the feature to the latest release of Oracle HCM Cloud this spring.

"80 percent of the features in our last release came from feedback directly from customers, a lot of it from that online customer community," says Chris Leone, who, as senior vice president of applications development at Oracle, leads the company's 2,000-some developers focused on Oracle HCM Cloud.

INNOVATION ON DEMAND

Oracle has always listened closely to customers, but the cloud changes both the scale of that listening and the pace at which Oracle can deliver on fresh ideas.

Of the approximately 6,000 companies that are Oracle HCM Cloud customers, more than three-fourths have signed up for the online com-

munity. As of July 31, 2016, there were 17,645 members of the Oracle HCM Cloud community alone. Historically, such online communities haven't been as popular in the on-premises application world, where everyone's HR environment is unique because of different upgrade schedules and widespread customization. A tip that one person offers in that context might not work for someone at another company.

According to Leone, activity in the cloud community has grown because people are sharing information across organizations. "They're saying 'Hey, take advantage of this new succession planning feature, or this new career development tool,' he says. They're sharing reports."

The pace of innovation is also much faster in

the cloud. Because Oracle HCM Cloud gets a new release about twice a year—often adding 500 or more new features, along with the option for smaller updates between releases—new ideas from the community can get developed and implemented quickly. In the on-premises world, implementing that idea for managing terminated employees' direct reports might not have happened for two years until a new version was released, and then another year or two (or three or four) until the company upgraded its system.

"Customers are seeing the product evolve much faster than they ever imagined, and it's evolving in the way that they're asking it to evolve," Leone says. "It's kind of this closed loop now. We're moving faster and listening more to our customers, and they're seeing it."

CLOUD HR APPS INSPIRED BY CONSUMER APPS

As Oracle rewrote its application portfolio for the cloud over the past decade, it looked to the world of consumer apps for inspiration. Oracle HCM Cloud's learning management module, for example, which launched last year, was modeled on how people search and learn from YouTube.

"They watch a video, and then they go do it," Leone says. "Kids today, that's what they do natively. I have a nine-year-old, and when he wants to figure out how to get to the next level of a video game, he watches a YouTube video, and then goes and does it."

And the person who made that game video is a fellow gamer. "You're not learning from someone who built the game—it's a best-practice practitioner," Leone says. Oracle emulated that by giving companies a platform for employees to post and share their video content internally.

AGGREGATED INTELLIGENCE, PREDICTIVE ANALYTICS

Another of the next big opportunities for HR leaders comes from getting more insight from all the data that cloud HR systems collect. Oracle can't see an individual company's data, but it can aggregate data to build data-driven alerts and recommendations. Its new learning management system, for example, can recommend training based on a person's activity, role, or collaborations. Or, the HCM system can do predictive analytics to estimate which employees are most likely to leave.

That algorithm isn't so much different from a "propensity to buy" algorithm that Amazon or any other ecommerce site uses to guess what movie or shirt to put in front of a shopper. But Leone says some companies are wary of predictive tools, and they have either not turned on that

LEARNING SYSTEMS PROVIDER STAYS CURRENT WITH THE CLOUD

Blackboard is a maker of learning management and student information software used by K-12 schools, universities, governments, and corporations.

With customers in more than 100 countries, development in multiple countries, and global growth plans, Blackboard has complex HR needs for a 2,800-employee company. It chose Oracle Human Capital Management Cloud (Oracle HCM Cloud) because the system could meet those global needs, lessen the internal IT sup-

port burden, and provide a steady stream of innovation and new features.

Because Oracle serves such a wide customer base, Jonathan Sax, vice president of HR operations at Blackboard, expects a lot of industry best practices to flow to Blackboard through the Oracle HCM Cloud system. "Something as simple as a better user interface sometimes can make the difference between a good decision and a bad decision," Sax says.

function or limited access to the HR team. Such predictive tools can be scary in a corporate environment, Leone acknowledges, "but it's coming. You see it in the consumer world."

Being open to new opportunities is one of the biggest success factors Leone sees for companies trying to make a digital transformation. HR leaders should find the people willing to embrace change, and focus on one or two initiatives that are most strategic to the business. HR leaders don't have to drive digital change across the organization all at once, Leone says, but "you need to create a roadmap to move your organization forward in the digital world." □

Chris Murphy (@murph_cj) is director of cloud content at Oracle.

“
80 PERCENT OF THE FEATURES IN OUR LAST RELEASE CAME FROM FEEDBACK DIRECTLY FROM CUSTOMERS.”

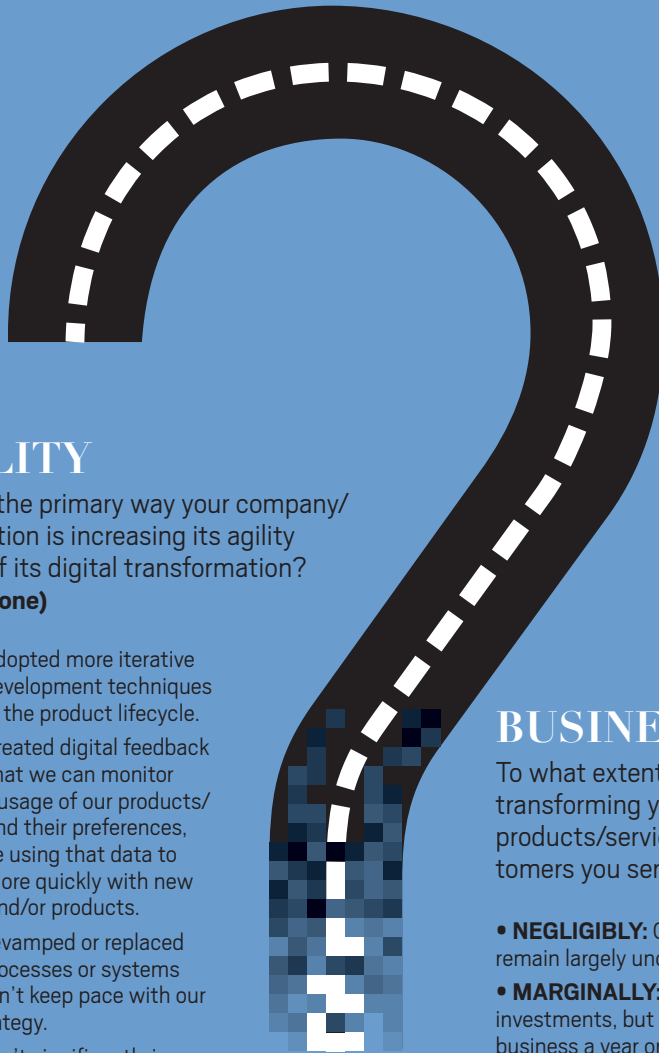
—Chris Leone, Senior Vice President, Applications Development, Oracle



Find more new ideas for cloud-driven transformation

WHERE IS YOUR COMPANY ON THE PATH TO DIGITAL TRANSFORMATION?

Take our 11-question online assessment to find out—and learn why digital transformation is so important. Here's a sample of what you'll find online.



AGILITY

What is the primary way your company/organization is increasing its agility as part of its digital transformation? **(Choose one)**

- We've adopted more iterative product development techniques to shorten the product lifecycle.
- We've created digital feedback loops so that we can monitor customer usage of our products/services and their preferences, and we are using that data to respond more quickly with new features and/or products.
- We've revamped or replaced internal processes or systems that couldn't keep pace with our digital strategy.
- We haven't significantly improved our business agility.

CLOUD UPTAKE

To what extent is your company/organization using cloud software, infrastructure, and/or platform services? **(Choose one)**

- **MINIMALLY:** Industry regulations and/or our management philosophy discourage us from using cloud services.
- **CASE BY CASE:** We're implementing cloud services in niche areas and/or to support specific projects.
- **BROADLY AND STRATEGICALLY:** We're moving a variety of our applications, application development, databases, infrastructure, and other IT assets to the cloud.
- **CLOUD FIRST:** Everything that can go to the cloud is going to the cloud unless there's a compelling reason not to do so.

BUSINESS MODEL

To what extent are your company's digital investments transforming your business model—changing the types of products/services you sell, how you go to market, the customers you serve, etc.? **(Choose one)**

- **NEGLIGIBLY:** Our business model, products, and customer base remain largely unchanged in this digital era.
- **MARGINALLY:** We're just starting to see results from our digital investments, but we're confident they will have a material impact on our business a year or two down the road.
- **SUBSTANTIALLY:** Our digital investments are bringing in new customers and increasing the loyalty of existing ones, while also having a materially positive impact on growth and profit margins.
- **ABSOLUTELY:** New digital features, functionality, products, and channels have transformed almost every aspect of our business, turning us from reactive responders to aggressive innovators and disruptors.



Take our Digital Transformation Assessment survey online here