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CIO Challenges: The Best Defense Is a Good Offense

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Executive Overview

CIOs have never been as business-focused as they are today, often ranking IT investments that contribute to the *top-line* above other investments. However, despite tightening budgets, CIOs are also investing in future performance.

Introduction

Twice each year, Oracle surveys executives worldwide to gain insights on their business improvement priorities and the technologies in which they will invest. The survey results for the end of 2009 revealed a good balance of revenue-generating business improvement priorities and cost-saving priorities for the total population of the study, but there were also some surprises.

Business Improvement Priorities

In the Oracle study, executives were asked to rank the most important priorities for their entire organizations. The priorities ranged from focusing on revenue, to investing in innovation, to shoring up infrastructure. The result is not a surprise—the current economic situation is somewhat unclear: recovering, but still slow. To get a more specific picture of what the CIOs are thinking, we separated them from the other executives, and compared the two groups of responses.

BUSINESS IMPROVEMENT PRIORITIES	CIO RANKING	ALL OTHER EXECUTIVES RANKING
Attracting and retaining new customers	1	1
Expanding current customer relationships	2	5
Creating new products or services: innovation	3	4
Reducing enterprise costs	4	3
Improving business processes	5	2
Expanding into new markets or geographies	6	8
Increasing the use of information and analytics	7	9
Consolidating business operations	8	-
Targeting markets and customers more effectively	9	6
Managing change initiatives	10	10
Improving enterprise workforce effectiveness	-	7

Figure 1: Top 10 Business Improvement Priorities

The top three priorities, as ranked by the group of non-CIO executives, show a balanced view of business recovery focused on getting new revenue, efficiencies, and reducing cost (see Figure 1).

The CIOs had a slightly different perspective on some of the ranking of priorities. The good news is that the CIOs and other executives agree that the top business improvement priority should be attracting and retaining new customers. This agreement alone will help organizations move toward economic recovery.

The CIOs, however, felt strongly that the top priorities should be current and future revenue generation. *Attracting and retaining new customers* and *Expanding current customer relationships* ranked first and second, and *Creating new products or services—innovation* ranked third. These rankings clearly show that the perspective of the CIO has shifted from a technology support role to acting as a full partner in revenue generation. CIOs are mounting an offense rather than simply focusing internally on cutting costs and being efficient.

Ranking fourth and fifth for the CIOs are *Reducing enterprise costs* and *Improving business processes*. Cutting costs and improving efficiencies are both necessary to dig out of an economic hole, but they were ranked lower in importance. The other executives ranked *Creating new products or services: innovation* and *Expanding current customer relationships* as fourth and fifth respectively, which could mean they are placing emphasis on cost cutting and creating new products rather than on immediate revenue gain.

Which is the right approach for our current economy—focusing aggressively on revenue from new and existing customers, as well as from new products and services, or taking a balanced approach of revenue, efficiency, and cost cutting? Perhaps the CIOs have it right and the noncyclic investments will pay off. Eventually, once organizations are back in the black, it would be appropriate to move back to a more balanced approach.

Ranking lower in importance for both groups were priorities geared toward working smarter (*Improving enterprise workforce effectiveness*, *Increasing use of information and analytics*, and *Managing change initiatives*). It is surprising to see that hot topics in the press, such as talent retention and sustainability, do not show up in the ranking at all.

The task of a CIO is to enable business priorities and improvements with appropriate technologies and systems, now and in the future. Let's take a look at the core technology investments in which executives are interested.

Core Technology Investments for 2010

The surveyed executives were given a list of core technologies in which to invest for 2010 and asked to rank their top five. The list included newer technologies, such as service-oriented architecture (SOA), as well as better-known ones such as business intelligence (BI) and servers and storage. In addition to those listed, the executives could add other technologies as they saw fit.

As Figure 2 shows, both groupings of executives agreed that business intelligence and enterprise applications are among the first three technologies in which their businesses will invest. This demonstrates a good mix of technologies necessary for running the business and technologies that will help them manage and innovate. At first glance, business intelligence scoring so highly might seem peculiar, considering that *Increasing the use of information and analytics* ranks seventh as a business priority. However, because BI serves all business priorities, it clearly is considered a core investment technology.

In addition to enterprise applications and business intelligence, the non-CIO executives included networking, voice, and data communications in their top three ranking. The CIOs, however, included service-oriented architecture and applications very high in their top three. It seems likely that the non-CIO executives favor the visible technologies, whereas CIOs focus on the underlying technologies.

Because executives focus on customers and current business, enterprise applications remain an important priority. However, CIOs also know they need to invest in tomorrow's business performance. In order to become more flexible, some application and infrastructure components need a periodic overhaul. This helps explain why CIOs rank service-oriented architecture and applications as their first core technology in which to invest. The other executives ranked service-oriented architecture and applications as fifth, which could indicate that business executives do not fully understand or have not yet

embraced SOA. To ensure success, CIOs should obtain business buy-in with the investment in SOA.

CORE TECHNOLOGY OPTIONS	CIO RANKING	ALL OTHER EXECUTIVES RANKING
Service-Oriented Architecture and Applications	1	5
Enterprise Applications (ERP, SCM, CRM, etc.)	2	1
Business Intelligence	3	2
Servers and Storage Technologies	4	4
Networking, Voice, and Data Communications	5	3
Security Technologies	6	6
Technical Infrastructure	7	7
Collaboration Technologies	8	8
Document Management	9	9

Figure 2: Core Technology Rankings

Equally revealing is what ranks lower on the technology priority list. Document management is crucial for compliance and digitization, yet it ranks lowest. Either most organizations have document management in place already, or they have failed to make an attractive business case for it. Security technologies and technical infrastructure are ranked relatively low as well, perhaps for the same reasons.

Next Practices

There are myriad ideas on how to best create a desirable, open, and flexible IT environment, and there are many emerging technologies and trends that executives are actively evaluating today to achieve this goal. Virtualization, SOA, software as a service (SaaS), Web 2.0 services, and social networking are just some of the technologies that executives expect will have a big impact on the business in the short term.

To complete the picture, executives were asked which emerging technologies and trends they expect will have the greatest impact on their business in the next 12 to 18 months (see Figure 3).

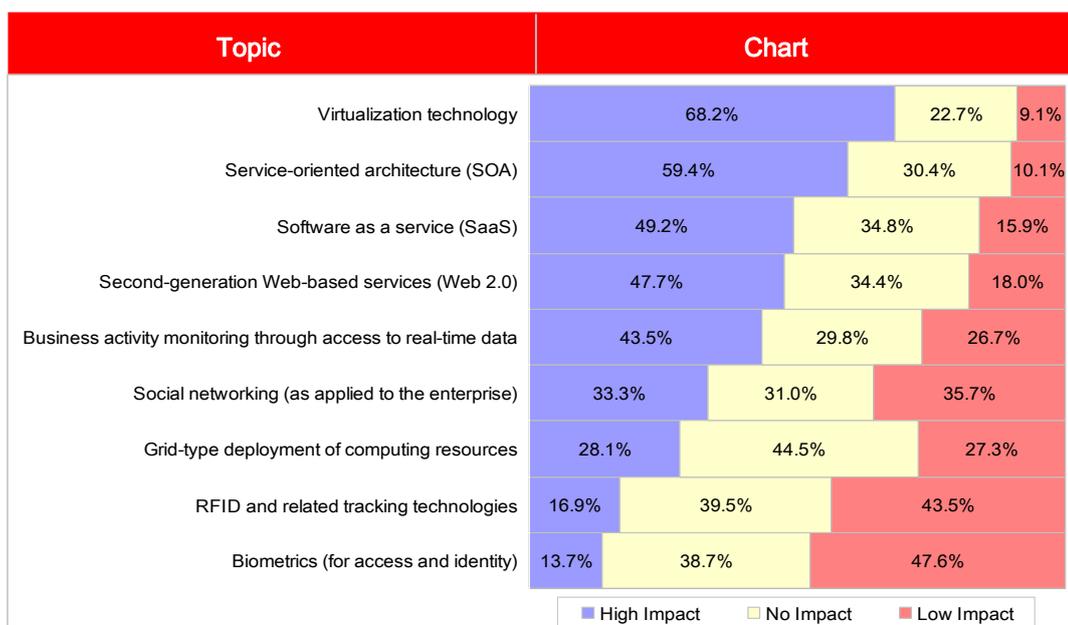


Figure 3: Emerging Technologies and Trends

Almost 70 percent of all executives surveyed, including CIOs, believe that virtualization technology is most likely to impact their organizations. Virtualization can enable technology to run in a variety of environments (hardware and operating systems). Machine virtualization is the implementation of software that executes programs that *behave* like a physical computer; application virtualization enables individual applications to work regardless of the hardware/software used as the host. Platform virtualization permits the separation of an operating system from the underlying platform resources. The current best practices for virtualization technology is to attempt to minimize the number of servers and lower costs. However, the heart of of virtualization is flexibility and convenience. The next practice for virtualization will be to resolve the choice between running IT in-house, outsourcing IT, or running IT as a service. In a virtualized IT world, this should be nothing more than a dynamic resource allocation process based on desired performance and required capacity.

Almost half of the executives recognized SaaS as a technology that will have a significant impact on their business. SaaS makes it possible for organizations to free themselves

from owning licences of certain software, paying instead for the use of the software, on demand. In some cases, organizations will host the software in-house, on their own hardware for an agreed upon term. In other cases the software could be licensed for use from an external host, freeing the organization from having to own the hardware and infrastructure, and often, from hiring the personnel needed to support the software. In either case, SaaS provides choices and flexibility to organizations about how to use software. It can be cost-effective and a flexible way to do business. However, the next practice will be to combine SaaS with virtualization so that what runs within the organization—and what runs outside the firewall—is on a sliding scale.

SOA was recognized by almost 60 percent of the surveyed executives as likely to have a large impact. SOA enables individual software services to be constructed and reconstructed almost at will. The next practice of application implementation is to move away from fixed processes that can only be changed through intensive IT effort. SOA-based applications facilitate the stringing together of preconstructed services, each executing a piece of functionality, that together form an application. The benefits of using SOA are the speed at which applications can be orchestrated, the flexibility provided by using and reusing services to suit changing needs, and the low cost associated with using this method of architecture.

Web 2.0 services were ranked by 48 percent of the executives as likely to have a strong impact. Web 2.0 applications enable a variety of interactive (rather than passive) internet activities. Users not only utilize these applications (often for free), but they add value while participating. Examples include blogs, wikis, mashups, social networking, video sharing, and crowdsourcing. In each of these, information can be distributed and retrieved very quickly and very cheaply, and the possibilities for expanding business networks are mind-boggling. Web 2.0 applications provide a great deal of flexibility in an extremely cost-effective manner, and they provide a platform for distributing and retrieving information and marketing literature in a fun way.

Two particular results for this area of the survey were most surprising. Although Web 2.0 technologies are recognized as likely to have a high impact by almost half of the respondents, social networking is not. Social networking is currently sweeping consumer communities—Facebook has more than 400 million¹ active users and Twitter has 75 million². Yet it seems the executives in the survey are divided on how to use social networking in the enterprise. Approximately a third of the executives felt social networking would have a high impact on their business, another third said it would have no impact at all, and the last third said it would have little impact on their business. Most of the other technologies had a much more definitive result—either they were expected to have an impact or they were not. Considering the explosive rate of growth for social networking, this result seems to be awry. In an age when social networking is taking off and rumors can break a company in record time, this survey shows that the executives are quite divided on its usefulness. But as a younger generation enters the workforce, those new workers will expect social networking and other Web 2.0 technologies to be part of their arsenal of tools with which to do business.

Also surprising was that nearly half the executives surveyed felt that a grid-type deployment of computing resources (the optimizing platform and infrastructure for cloud computing) would have no impact on their business. Technology journals and the World Wide Web have an abundance of enthusiasm about the use of grid and cloud computing for small and midsized businesses. It is possible that grid computing, along with virtualization and SaaS, are simply not yet recognized as essential components for creating the next practice of dynamic IT resource allocation.

Each of these technologies has the potential to transform a business. One way of looking at business transformation is through Oracle's business transformation model³, which outlines three different process stages: Building a lean business, shaping an agile

¹ <http://mashable.com/2010/02/04/facebook-400-million/>

² <http://www.rotorblog.com/2010/01/29/twitter-statistics-of-user-engagemeta>

³ Continuous Business Transformation, A CIO's Perspective., Thomas Oestreich, February 2010, <http://www.oracle.com/solutions/thoughtleadership/business-it-alignment-white-paper.pdf>

business, and IT-led business innovation. During the last 10 to 15 years, organizations have had to work hard on trimming resources to become lean. The CIOs' expectation that virtualization, SOA, SaaS, and Web 2.0 technologies will have a high impact may be a sign that organizations are moving into the second stage of continuous business transformation—shaping an agile business.

Conspicuously missing was the executives' focus on employees or sustainability. Although there were no predefined options provided for these priorities, only one executive thought to add an employee business improvement priority and rank it. The executive, from a U.K.-based contract marketing and design services company, commented that his company would be focusing on “gaining and maintaining great employees!”

Due to the economic downturn, a significant amount of workforce talent has been pushed out onto the street through workforce reductions and business closures. Because most organizations are now so focused on getting back on their feet fiscally, there appears to be little regard for a major asset of the company—intellectual capital. As companies slowly continue to recover, top employee talent will likely become restless if they are not actively engaged and happy; and they may begin to look around for other options. Sustainability, on the other hand, is not only a good environmental practice, but in many cases can be cost-effective and a creative marketing differentiator as well. Hopefully, the next survey will show an improvement on these fronts.

Summary

Today, there is a lot of pressure on executives, and, in particular, on CIOs to perform during this time of economic recovery. Oracle's survey results show that the best defense from the downed economy is an aggressive offensive of current and future revenue generation. It is also clear, however, that this is a short-term strategy. By actively evaluating and experimenting with newer technologies, CIOs are building a foundation for a much more agile business that holds the potential for working in a more flexible way and enabling faster innovation. Not only will this give their organizations a competitive advantage, but it may also shield them from future economic woes.



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