Strategy Review

A Peek into The Future

By Jim Balderston

We believe both market forces impacting customers and technological developments within the IT market are driving the coming of Service Computing. LOB managers/IT customers have their backs to the wall. They have watched a wide range of IT investments purchased and deployed without substantial gains in efficiency in most cases. They have found that their IT environment does not allow for quick response to changing needs, while the market around changes and becomes more hostile with each passing day. We believe that many enterprises are going to seek new computing environments because they have no choice – they must evolve or wither and die.

Given these realities, we see the ongoing development of existing technologies as providing a possible solution to much of the slack found in the dialectic between LOB staff and enterprise IT. Web Services, XML, .NET, Sun ONE among others, offer — even in their relatively immature stages – the opportunity to tighten up the slack between existing and new IT deployments and business critical needs. Shorter development and deployment cycles will, we believe, provide that tension. The technologies and development environments to make Service Computing a reality are already here.

The Sageza Group, Inc.
900 Veterans Blvd, Suite 500
Redwood City, CA 94063-1743
650·366·0700 fax 650·649·2302
Europe (London) 44·020·7900·2819

sageza.com
info@sageza.com

Introduction

All of our memories are filled with images of the future. Whether the source is the Jetsons cartoons, World's Fair exhibits, science fiction, television or the promotional material from any number of industrial sectors, we have all periodically wondered at images of flying scooters, tele-transporters, instant cuisine to order and the like. In this Strategy Review, we will take a glimpse into the future of the office, and specifically the future of application development and deployment within both the enterprise and in small-to-medium businesses.

The crystal ball gazing we engage in differs from the more fantastic imagery of science fiction and cartoons, as first, it is grounded in the reality already emerging in the market and second, it will be the product of irresistible forces now in play and well-noted by the industry at large. This is a forward-looking view of the impacts of what Sageza has termed "Service Computing." We expect Service Computing will bring wholesale changes to IT vendors, their customers, and those employees interacting with technology whether they are IT professionals or line of business (LOB) staff.

While in many ways the effects of Service Computing will be invisible to the end user, those involved in and around IT functions will be impacted by significant changes over the course of the next two to five years that will fundamentally enhance the ability to add business value within the IT environment. This Strategy Review will examine one element of the Service Computing environment and its impacts on specific elements of the IT infrastructure by focusing on the business user, the LOB staff, and its interactions with the first levels of the enterprise IT managers. Later we will address the entire scope of the impacts and consequences of Service Computing within the enterprise and the market as a whole.

The Office Of Tomorrow

As a tool to explore these new opportunities, let's ponder how an LOB manager in an office with a Service Computing infrastructure in place would go about a routine request of IT:

A departmental or LOB manager in our fictional enterprise decides that his business would benefit from a new function in the company's CRM software. In addition, the manager would like to make newly available some portion of CRM information to others within the enterprise.

Within the SC environment, the department head seeks out the appropriate IT contact to describe the needed addition. The IT department then investigates which in-house or external software modules are available to provide the requested functions. There may be a wide variety of modules that could fit the needs of LOB, different versions — built on the same standard module — that have different functions added by different developers all within a common architecture. The IT department determines which has all the necessary functions at the best price and in the most reliable form.

Once the best set of modules are located, they can be delivered to desktops in a number of ways. They can be cached on individual desktops, or called upon through the network from servers residing inside or outside the firewall. Financial arrangements are made and the new feature of the application is deployed within days or weeks.

Sound too good to be true? Perhaps this overview may be simplistic, but we believe that the Service Computing environment will provide substantially shorter turn-round for the delivery of new applications or features within these applications. One of the main reasons for a reduction in the response time will be the dispersed nature of the value added to the components of the application. Standardization of modules – and the environment in which they are built

– will allow developers to tweak pre-certified components in a myriad of different ways depending on market needs. A final tweak may – or may not – happen within the organization itself.

Rapid time to market, high customization, timely deployment and guaranteed interoperability are all in place in this IT environment of the future. So why is it going to happen? What makes it so?

Today's Realities

Service Computing will be the product of irresistible forces now affecting the market. These forces break into two major categories – market realities and technology drivers – and provide the fuel for the adoption of Service Computing over the course of the next two to five years. Market forces impact all companies, regardless of their market sector, including technology companies. Technology drivers are more specific to the IT industry vendors, and work in conjunction with market realities to create this inexorable move toward Service Computing. We will discuss both forces in turn.

Market forces

Market forces affect both the IT vendor community as well as their customers. All industries are facing growing pressure to meet ever-increasing efficiency and productivity goals that are motivating LOB staff to find new solutions or approaches to meet these goals. While these goals are always important to industry, the realities of the 3Rs Recession, Reduced budgets, and Redundancies (layoffs), have made the need acute. In short, many maturing markets (e.g. financial services, automotive, etc.) are facing the following:

◇ Consolidation including closures, mergers and reduced revenues;

◇ Increased commoditization of offerings making product differentiation difficult;

◇ Decreased margins — an outgrowth of overall increases in unemployment and uncertainty across virtually all industries and geographies.

Furthermore, all verticals are struggling though a recessionary environment that is forcing companies to do more with less: less money, fewer people; but with the same business objectives.

For LOB staff, the present IT environment in most organizations does not provide many solutions to the problems they face today. Recent studies indicate that most organizations have not received the ROI that they had hoped for out of their IT investments of the past few years, leaving the organization with lots of techno wiz stuff but with few objective results. In some cases, the work done in recent years will act as an impediment to new application development/enhancements. In others, absent external issues, the current environment provides a stepping-stone to Service Computing.

As new demands are placed upon LOB managers, they seek IT assistance to help them meet these goals. But in most environments, requests for modifications to business-critical applications can take more time than the business can afford:

◇ As expected, a request for a new or modified application is made to IT. This request would go under review, decision makers would assess its technical and financial impacts, and then, if approved, the request would enter the implementation cycle. This is a hugely time-consuming and expensive process due in large part to the nature of most business critical applications, many having been built on historically vertically integrated foundations, often without the benefit of the developers on hand. Integrating new features is usually a highly risky proposition forcing IT to

evaluate every request against the potential for disruption of other processes.

◇ IT would begin development (eventually) and testing, seeking ways to make the request fit into the larger whole of the computing environment. The testing and modeling effort here is higher than desirable, due in large part to the potential increased risk to legacy environments and new security threats.

◇ This time-consuming cycle, while necessary, is long enough that circumstances demanding the new operations may have already changed. Given the dynamics of the market, this is hardly a timely response and provides little or no relief to the LOB problem while expending considerable effort on many people's parts.

◇ Once tested and approved, the new software would be deployed and placed into general use.

Depending on where an organization is in its technological evolution, and the complexity of the request, this cycle can take months or even years to complete. Organizations that have already deployed basic infrastructures using Web based applications and integration with their primary legacy systems will fare better than those who are just starting the transition.

Technological forces

Service Computing is not a single piece of technology, but rather the combination of many existing technologies and some new development and deployment capabilities to create a new computing infrastructure and new business opportunities for IT vendors of all ilks. There are a number of technological and market factors driving this inevitable march toward Service Computing that are specific to the technology industry:

◇ Standards-Based Computing is a foregone conclusion. Few IT vendors fail to recognize the advantage of interoperability and more importantly customer and the market are demanding this approach. While vendors still attempt to dominate parts of the IT landscape, even the largest know that they are deploying in heterogeneous environments. Standards inevitably shorten product development cycles and ultimately expand market opportunities.

◇ Commoditization in hardware is the moral equivalent of "Standards-Based Computing." While industry, regulatory, and ad-hoc committees drive standards, commoditization is driven solely by market leaders and the market itself. While Intel probably would love to be declared a standards-based architecture, it really is a de-facto standard driven solely by the market. Almost all the system vendors, for example, are planning current or next generation platforms based on Intel architecture(s). This should result in major negative shifts in costs and prices of systems. This is usually a natural and desirable affect of commoditization as it impacts maturing industries. The challenge inherent in commoditization for IT vendors is to find their distinctive advantage when everyone produces products with the same OS and Chipset. IT vendors are going to have to find new ways to capture value add, and new ways to the same provide opportunity to others in the value chain.

◇ The Internet (or Internet technologies) connects everything to everything else. The Internet provides a heterogeneous distributed computing environment that now allows for "harvesting" information from a variety of sources but will shortly be the roadway used to deliver services from

disparate sources that act like the modules or subroutines of complex applications.

◇ XML has become a necessary building block of the bridge to the future by providing a portable, interoperable, extensible and platform agnostic capability that delivers customized and industry vertical behavior to virtually any accessing system. While it has been around for a number of years, we are just beginning to see the affects of deployment and support of XML by virtually all Web application servers.

◇ Web Application Servers provide the processing foundation for all Web services, acting as the traffic cop, visualization tool and system coordinator stitching together users, legacy systems and new, easy to build applications.

◇ Service Computing specific technologies that are undergoing development by major vendors including .NET from Microsoft and Sun ONE will form future development and deployment environments. When used in conjunction with XML and Web Application Servers, we are seeing what may be thought of as early stages of a Web-based operating system that is both system and access agnostic.

When viewed together, these technologies and the support they have received from the technology vendors and the growing desire of LOB managers to accelerate their ability to enhance their business through technology comprise the inevitability of Service Computing. Of course, we are very early in this process. Still to come will be new application development tools that are targeted at creating both complete service computing applications and the components that will be used by others to create their own applications. In addition, the pricing and use models have yet to be proven or even well understood.

What Will Come of All of This?

We believe the Service Computing environment will create changes throughout the IT sector for system vendors, ISVs, VARs and their customers. Perhaps most notable will be the dispersion of the value-add function up and down the value chain. At each point of handling, there is the opportunity for additional value adds while still retaining the supportability of pre-written and tested components.

These will likely result in major changes in the business models of both VARs and in-house application developers as they focus their attention away from the system environment and focus on specific value added desired by LOB managers. For VARs this will be especially important as they are the primary vehicle for delivery of technology to SMB and their business models will continue to be negatively affected by slowly evaporating hardware margins. Providing new, specific business functionality quickly with assured reliability may create a whole new way for VARs to profitably do the chores that business has always demanded of them.

This dispersion of the value-add function among a greater number of developers over a longer period of time creates a smaller increment of value-add at each step. At the final stage, when the real application is developed or enhanced, the modification made by the last developer represents the most specific value-add for the business environment. By taking advantage of Service Computing, the risks will be lower, testing time minimal, and development time relatively small. If a developer can use a component that does most of the desired function, why would he or she re-invent the wheel?

Finally, as a result of the factors driving Service Computing, we believe that the holy grail of IT investments, increased efficiencies with smaller capital outlays,

actually has a chance to be realized. Simply stated, the ability to use stand-ardized components in a distributed computing environment will allow enterprises to extend the access to new and legacy data to increasing numbers and different types of access devices. End users will be able to gain access to the information they need with whichever device provides the greatest convenience and efficiency.

Summary

We believe both market forces impacting customers and technological developments within the IT market are driving the coming of Service Computing. LOB managers/IT customers have their backs to the wall. They have watched a wide range of IT investments purchased and deployed without substantial gains in efficiency in most cases. They have found that their IT environment does not allow for quick response to changing needs, while the market around changes and becomes more hostile with each passing day. We believe that many enterprises are going to seek new computing environments because they have no choice – they must evolve or wither and die.

Given these realities, we see the ongoing development of existing technologies as providing a possible solution to much of the slack found in the dialectic between LOB staff and enterprise IT. Web Services, XML, .NET, Sun ONE among others, offer — even in their relatively immature stages – the opportunity to tighten up the slack between existing and new IT deployments and business critical needs. Shorter development and deployment cycles will, we believe, provide that tension. The technologies and development environ-ments to make Service Computing a reality are already here.