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# zNext — a huge announcement but puzzlingly focused and incomplete?

Charles Brett, C3B Consulting

## Management introduction

On July 22 IBM introduced its zEnterprise 196 mainframe within a broader and massive hardware and software set of announcements that it calls zNext. The scope of what is coming (over the next 12 months and beyond) is mind-boggling (and selected elements are briefly described below).

Even though the advances being made within zNext are many and varied, two areas strike C3B Consulting (C3BC) as missing or incomplete or at least not obviously addressed. These are elaborated upon below.

## What is coming in zNext – selected highlights

The base element of the announcement comprises:

- the new zEnterprise 196, the next generation of mainframe (and still capable of running zOS, zVM, zVSE, zTPF and zLinux)
- the ability to add a tightly coupled zEnterprise BladeCenter Extension (zBX) (capable of running Red Hat and Suze Linuxes and/or AIXes on standard blades or on purpose-specific appliance-like systems)
- a dedicated Smart Analytic Optimizer (which is a workload optimized appliance that accelerates select queries with significantly improved response times).

The hardware includes:

- the potential to go up to 50 Billion Instructions Per Second (BIPS)
- 5.2 GHz superscalar processor (available to zLinux at this speed)
- up to 96 Cores, with up to 80 configurable for client use
- Up to 3 TB RAIM memory
- 100+ new instructions
- 1.5MB L2 Cache per core and 24MB L3 Cache per processor chip
- cryptographic enhancements.

The software announcements, besides multiple

improvements in the new zOS Version 1 Release 12, are as equally varied and vast and include:

- new Java instructions
- WebSphere performance optimization
- enhancements to CICS
- improved workload management
- new compilers (the result of 5+ years of development and improvement)
- DB2 Version 10 with the capability to support 10 times more concurrent users plus save up to 20% on DB2 batch and OLTP with on-the-fly data compression, temporal data support and skip-level migration
- continuous batch processing: the traditional nightly batch window is not suited to modern 24x7 processing and service offerings; with zNext batch processing will be able to continue all the time and be simpler
- a Unified Resource Manager that extends what is typically found in the mainframe environment out to the AIX and the Linux/86 environments that run in the zBX .

On the cost and performance side IBM is claiming major operational efficiencies as it positions the zEnterprise 196 as a central point of control for data processing. For example IBM claims that the weighted average labor cost to manage a zEnterprise 196 will fall by some 70%+. In addition, environmental and energy costs will also fall dramatically (by up to 90% in some instances). As memorably IBM suggests that 1.5BIPS processing needs only the power of a toaster.

In all IBM believes it has created the 'system of systems' that can be the central point of control in a data center and able to run anything and everything from zOS through to Linux/86 and AIX. While Windows environments are explicitly not included in this announcement, C3BC presumes IBM could bring Windows within zNext (albeit at some later yet-to-be-specified date).

## Analysis (a first pass)

In all, this announcement is a major one ... for zSeries

users. If you are a zSeries customer, it promises much -- including greater and better control over not only the mainframe environment but also IBM's preferred Linux and AIX flavors.

Yet, in trying to 'get our collective head' around so much that is being introduced, two specific dimensions occur where we wonder if there have been omissions (or commissions) in IBM's desire to perpetuate its superannuated (but no less successful for that) mainframe environments. zNext's focus is on zSeries plus bringing much of the IBM Software Group broad family of software (that has not already been ported) to Linux. This is understandable.

In the case of the Unified Resource Manager (URM) we are gradually coming to the conclusion that IBM may have missed a trick (or maybe it is only postponing it, though we would not count on this). The concept of the URM being centered on the zSeries makes perfect mainframe sense; after all IBM has a long and deservedly robust reputation for superior systems and resource management capabilities on the mainframe (one explanation for how and why the zOS has been immune from the virus and other security-breaching attacks common to Windows, Linux and other 'lesser' operating systems).

Nevertheless, most enterprises — from largest to smaller ones — are almost all hugely increasing their numbers of x86 systems (be these in a cloud or in blade farms or approximate equivalents). Though IBM may not wish to admit it, the x86 world dominates and will likely continue to dominate the server environment for the medium future (if you do not believe how enterprises are doing this, see the March 2010 **INSIGHT-SPECTRA**, page 11).

This raises the question: would it have been better to locate the URM function on the zBX so that it (the zBX) became the host or manager for zSeries systems? In C3BC's analysis this would have been a decidedly more attractive, in the long term, approach — and opening up myriad new opportunities for IBM. IBM will, of course and with justification, argue that the zSeries is the superior place today to locate the management of all systems. But the increasingly common challenge C3BC finds when talking with customers is that they (the customers) would often prefer to regard the zSeries as the specialty platform which they would prefer to manage from a general platform (and it is not that there is power lacking on today's x86 systems).

The second area where nothing was said (but this does not necessarily mean that nothing will emerge) is about messaging. MQ is a venerable and dependable piece of middleware that runs on a wide range of platforms. Yet its design point is that from an era (the late 1980s) when possessing and connecting 10 mainframes was regarded as extreme. As the zNext announcement emphasizes, enterprise IT now routinely deals with 1000s of cores and way more virtualized images.

MQ has never scaled well. Yet the systems environment that zNext embraces and perpetuates is one where MQ is not designed to excel. This is not to say that MQ is irrelevant; in TP environments with assured delivery between small numbers of end points, MQ is still wholly valid. But, when huge numbers of connections need to be made across multiple platforms — from zOS and its z-brethren to AIX, Linux, Solaris, Windows, etc., a high speed messaging mechanism, with differing levels of reliability is becoming a necessity. Here we believe the zNext announcement is puzzlingly quiet, in an arena where a solution is desperately required (and not only by the IBM community) in order to make sense of all levels and flavors for connecting so many virtual and real systems.

### Management conclusion

Unless there is something hidden in so big and announcement, C3B Consulting remains:

- convinced that the zNext announcement is a major step forwards — for zSeries owners or would-be owners
- unconvinced that the URM has been placed in the most appropriate location
- uncertain whether the 'whole environment' that zNext introduces can really work for customers without a universal high speed messaging mechanism that can readily connect everything from applications through to systems level constructs.

There is much to like in what IBM has announced. But it does not go far enough (unless you are a zSeries user or IT systems person — in which case you should be delighted).

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# Dull name change continues to mask genuine IBM gems

Charles Brett, C3B Consulting

## Management introduction

*In February, C3B Consulting (C3BC) wrote about IBM's OPAL and how, in our analysis, it possessed an already impressive number of available integrations, which should be the highlight, the focus of the product. After all, simplifying integration issues is what IT users look for. "With the increasing importance and arrival of the need to integrate technologies to support a smarter planet, a greener earth, OPAL could become still more significant."*

*The question in our mind, then, was whether IBM would understand OPAL's potential and move to capitalize on what it already possessed, thereby taking OPAL further and faster for the benefit of what could be an ever-wider customer audience — and the company itself. Or would it keep its jewel, as we thought of OPAL, hidden from all but a constrained IBM Tivoli audience?*

## Starting to answer the questions

In May, IBM shows definite signs that its appreciation of OPAL is changing for the better. These positive developments, however, are masked by a somewhat dull name change — the Open Process Automation Library (with its succinct OPAL acronym) now becomes the ISM Library (where ISM stands for Integrated Service Management).

While this may be more accurate, what is more important in our view is that this change comes with some of the many and varied developments plus enhancements that C3BC hoped IBM would make. These include:

- greater clarity — gone is the less-than-unhelpful 'integration' moniker and, instead, the new focus is on 'solution accelerators' which customers identify and then apply (often at no or minimal cost) as part of speeding up the integration of different systems, applications and service management products
- increased involvement and awareness of partner (non-IBM) participation

- better searchability: this comes in multiple dimensions and includes use of improved indexing, so that public search tools (like Google or Bing) produce results
- extensions to searching that support more complex query combinations
- improved organization: for example, applicability to and by different industries now exists
- a start on a sense of community: for example, ratings of individual accelerators are now welcomed so users can provide assessments of offerings, their applicability and relevance to addressing common integration issues.

IBM's objective appears to consist of a refocusing on improving customers' own abilities to move faster and simplify integration so that Service Management brings together IT, as well as, asset and other services management. In an IT systems environment that is growing ever more complex, globally, as well as with the increasing number of potentially unique solutions — from iPhones or iPads to clouds to conventional computing — users need to integrate a greater whole from an ever more disparate collection of parts. Once you add in intelligent devices (automated meters, intelligent machines, etc.), the scale of the challenge only expands.

## Analysis

Perhaps the best way to understand how and why IBM's newly re-christened ISM Library is attractive is briefly to describe how a couple of customers are already using these accelerators.

For example, one cell phone provider has introduced some 60 Netcool integrations already. It updates and enhances its probe configurations according to the specific needs in its environment and says it routinely checks the ISM Library for existing probes and integrations (before undertaking any more of its own). In effect, real-time updates of integrations in the ISM Library reduce the overall time for deployment, as well as avoid the cost and resource commitment of

having to start integration developments from scratch.

Similarly, a consumer products company exploits the new search features introduced into the ISM Library. This has enabled the company to broaden its categorization of problems when looking for potential solutions that match its needs. It now finds the ISM Library more relevant in identifying what type of solution integrations already exist for a particular Tivoli product and what it can expect to leverage and to extend when addressing its system management needs. Furthermore, it uses the ISM Library as a base reference point for both integration and integration documentation because it views the ISM Library as a means for sorting out what integrations are possible and what products to include with what they have in use already.

To C3BC, this is all worthwhile progress. The Web site that supports ISM Library ([www.ibm.com/software/ismlibrary](http://www.ibm.com/software/ismlibrary)) can become the focal point that C3BC originally envisioned.

### **Management conclusion**

*Of course, we would like to see IBM go much further. We want to see the reach of the ISM Library extend beyond Tivoli and its products. Even more potently, we want to see IBM actively encouraging the enablement of community-agreed-upon standards applicable to a greener planet — which users will support with their acceptance and input. This should, in our view, enable a deeper community commitment that stretches its reach beyond IBM (and we believe IBM will still benefit).*

*IBM does indicate that there will be more to come. C3BC looks forward to this. Despite its less-than-glittering new name, ISM Library could become a gem of precious value and genuine importance to enterprise customers.*

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# The changing cloud computing market

## Amy Wohl, Wohl Associates

### Management introduction

*Clouds are the center of IT discussions nearly everywhere. From a geeky Internet thought for cheap environments to provide product development and testing, especially attractive to startups and small firms, cloud computing has entered the mainstream. The early complaints that clouds were not able to provide dependable performance, safely store corporate data, or provide a secure and reliable computing environment for transactional computing are being erased, one by one.*

*Organizations of every size are considering some version of cloud computing for at least part of their computing needs. The whole computer hardware, software and services market is changing to accommodate this demand. Given the potential size of the overall market — Gartner estimates global cloud services as being worth \$148.8 billion by 2014, up from \$58.6 billion in 2009 — no one (vendor or customer) wants to be left out.*

*In this analysis, Amy Wohl focuses on what has changed and the implications.*

### What is cloud computing — one more time?

To discuss how cloud computing is changing, first we need to understand what it is, and is not. Cloud computing offers a remote computing facility, accessed via the Internet, where computing users can buy compute power and storage (and perhaps management and development tools or access to applications and services) in an on-demand fashion.

The cloud computing provider offers a large and highly elastic environment where an individual user can purchase as much or as little computing as he needs at any moment in time. The whole concept rests on the economics of a shared platform, highly virtualized hardware with self-provisioning and automated management.

Of course, that is the simplest view. Already we have seen many variations on this model emerge and you

are likely to see still more in the future including, for example:

- cloud computing was originally viewed as a shared activity on a public service, rather like a utility; it quickly became clear that some customers (especially larger organizations) would demand more privacy and control than a public cloud offered and so a cloud architecture -- based on self-provisioning virtualization -- was offered to individual organizations as a 'Private Cloud'
- not to be outdone, a number of public cloud providers began offering 'Virtual Private Clouds' -- private enclaves within a larger public cloud
- then there arose a great deal of interest in the 'Hybrid Cloud', by which most organizations seem to mean the possibility of interoperability that would permit cloud users to employ multiple public and private clouds, with the ability to move data and processes between them in a reliable and secure way
- finally, there are new classes of clouds — 'Community Clouds' which are actually private clouds whose owners offer access to a limited set of eligible users (this might be a government, providing services to start-ups or small companies, or a group of affiliates with special needs — such as in a regulated industry).

As Figure 1 shows, the boundaries around clouds and between clouds are constantly changing and growing. Today we have the notion of 'Private Clouds' (largely owned by IT and the Data Center), 'Public Clouds' (which provide access to their offerings to anyone who will pay their price and accept their terms), 'Virtual Private Clouds' (which offer Private Clouds within a Public Cloud) and 'Community Clouds' (which are Private Clouds which offer access to members of a group). All are relevant even if — when we discuss 'Hybrid Clouds' — the current meaning seems mostly to refer to interoperability between clouds rather than the delivery of a separate 'Hybrid Cloud' type.



Only one thing is certain. We shall have as many different kinds of clouds as user organizations will pay for and vendors believe they can sell. The game of differentiation is not so much over as scarcely started.

### **These changes in cloud computing affect all the players**

As more vendors and more users enter the market for more kinds of cloud computing offerings, the market and each of its players are experiencing the effects of change. Established cloud vendors are finding they have lots more competition. Much of it is from existing vendors, with existing customer relationships, moving into the cloud space. When major vendors — like IBM, HP and Oracle — are all entering the enterprise cloud space and Microsoft has now opened its own public cloud, Azure, the early-to-market advantage of some cloud players, especially the smaller ones, is hard to maintain.

Even vendors like Amazon and Google can be threatened when established hosting players like The Planet offer enterprise class service at much lower prices. As predicted, cloud computing is nearing commodity pricing — the money now comes not just from volume usage but rather from the services provided beyond access to computer power and storage. With the big, familiar vendors, reputations for enterprise know-how and reliability count, too. The big vendors are all over the place — both in terms of their ability to address global markets and also in the laundry list of cloud computing options they offer. Their emphasis so far is on helping customers to plan and build private clouds (which, given their big enterprise customer lists should not be surprising).

On the other hand, lots of other offerings are available. IBM, for example has public clouds for development and for particular vertical markets. The vertical market, though, is in its infancy; we expect lots of specialty public clouds, especially for regulated industries who need to share the same often-changing rules and information, to appear.

Smaller cloud vendors often go after a particular market. That might be geographic (we are seeing lots of regional clouds in both the Far East and Europe). Although access to clouds is not limited by geography and, theoretically, a single cloud could service customers all over the world, issues like latency plus rules about trans-border data flows (especially in Europe), and just the immediacy of a local vendor count.

Furthermore, the role of business partners is changing in the cloud market. Initially, a business partner was most likely to be an ISV, hosting a SaaS version of his software on someone else's cloud infrastructure. (Be aware, at Wohl Associates, we seem to have stopped thinking of SaaS as a separate market and now think of it as an application delivery method within the greater notion of cloud computing.)

Today, business partners may have a much wider role; they may:

- be part of the sales process, offering cloud-based services to existing and new customers
- provide a market expertise or an application with cloud delivery
- offer solutions to their own customers that are cloud-based.

In all of these cases, cloud partners of these business partners must find a way to compensate themselves which is different than the commissions and fees for services they formerly received up front. The objective is in the long run to provide themselves with a healthy annuity revenue stream as customers deploy ever more cloud-based services. Even more striking is the way that customers, in every organization type and size, have changed the most.

Small customers, especially those without formal internal IT, are flocking to cloud based computing, especially SaaS. It allows them to use applications that were formerly available only to large firms with significant IT departments, yet at minimal expense. To do this, they must choose between using SaaS applications with the feature set they offer or (new to the SaaS concept) buy them in association with partners with the latter's ability to customize SaaS applications via plug-ins and custom code.

Larger customers are in a strong position to take advantage of cloud computing in many ways;

- purchasing compute power and storage on-demand both for managing ad hoc projects and to avoid the expense of supporting internal infrastructure used only at peak load periods
- using cloud computing for creating and testing new applications, avoiding the use of maintaining this infrastructure internally that is only occasionally used

- extending cloud support projects that stretch beyond the immediate 'home organization' out to customers, contractors, suppliers and others — without the need to expose the data center to unneeded vulnerability
- considering the cloud for new projects, including projects which include mission critical work, such as transaction or work flow processing
- building their own private clouds.

The last is still controversial. Hard-line cloud analysts (and some vendors) insist that a private cloud cannot be a 'real' cloud because it cannot take advantage of the on-demand, elastic nature of public clouds. The private cloud builder must build to some size (and own what he builds). Whether this cloud will be adequate for his needs — or excessive — can make the investment less attractive than contemplated.

However, private cloud proponents argue that every cloud, however large, is of finite size and with private clouds, their owner (presumably the IT department) can offer out their resource in accordance with their own internal priorities and needs. Also, there is the control issue. Many organizations who feel their critical data could not be adequately safeguarded on a public cloud are more comfortable with using a cloud architecture that is wholly within their own environment.

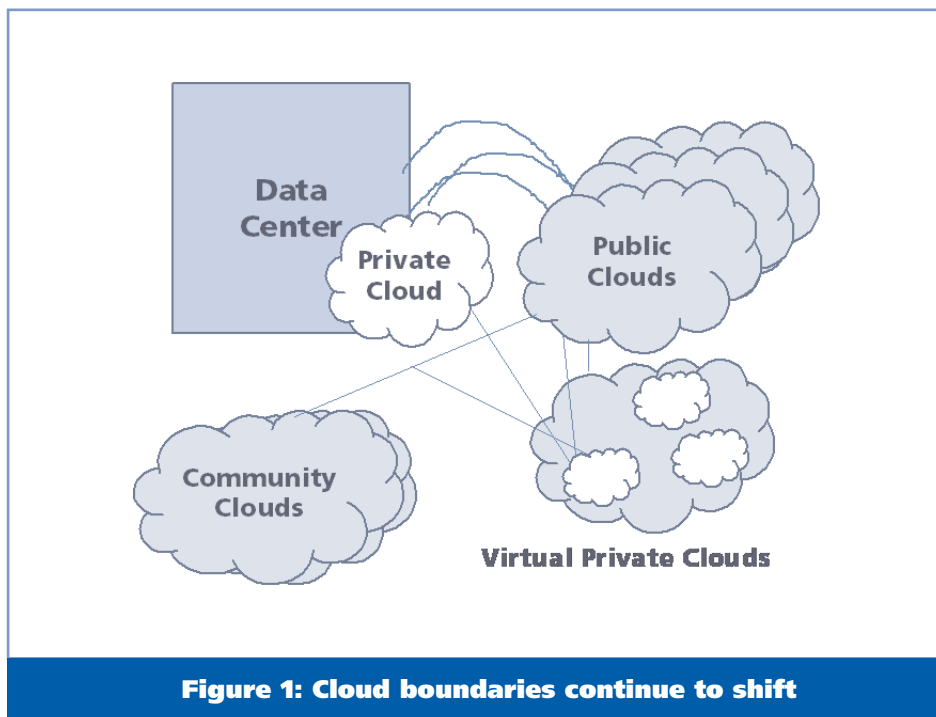
We thought building private clouds would be a job for enterprise vendors, on behalf of their customers. However, a number of customers have decided to roll their own, convinced they can more economically interesting (often by using open source software and commodity hardware – q.v. p4 of **INSIGHT-SPECTRA**, September 2009) or better suited to their own needs.

### Next steps and likely outcomes

In computing, as in other endeavors, it is a good idea to remember history. Even when a new concept is important and enduring it doesn't necessarily wipe away everything that went before or last forever.

Think about mainframe computers. They have been with us for more than fifty years. Each new wave of computing technology is heralded as an end to the mainframe, but this never happens. In part, this is because so much of big business and government runs on software that was made for mainframes. Replicating it in another computing environment is a job so daunting that even services vendors seeking lucrative employment shrink from it. Many customers believe that they could not obtain the scale, reliability, or performance their mission critical tasks need except with mainframes and this may be right.

Instead, new technology is used mainly for new pro-



**Figure 1: Cloud boundaries continue to shift**



jects or to work incrementally with existing hardware and software. As waves of new technology work themselves through the computing universe they can (and do) replace some of the existing technology — but never all of it. We still have minicomputers and client/server computing living next to web-server/Internet-based schemes. All of them will continue to live with, be next to and linked to cloud computing.

Of course, the needs of the existing (and not replaced) technology influences what the new technology will look like and the interesting capabilities of the new technologies are often built into succeeding generations of older technologies. (This will be obvious in the next iteration of mainframes, where many web concepts including integration across heterogeneous environments, will surface.)

Recently, Gartner has stated that SaaS may be dead in the enterprise, since its growth in that market seems very slow. Again, to remember 'history', it was firms like Gartner and Forrester that originally declared that much of new software in the future would be on the SaaS platform.

Enterprises are always slow to move to new ideas since it takes a long time to change the direction of a big ship. Moreover, many analysts (myself included) never thought this would be an 'all-in' move: enterprises employ a great deal of legacy software which

they have neither the ability nor the desire to replace. Within that context, SaaS has been subsumed into the Cloud (where it always existed) and remains a vibrant market for software targeted to both the SMB and the Enterprise market.

### **Management conclusion**

*Cloud computing is unlikely ever to be the only solution. Yet it is a compelling alternative to what was available in the past. This is especially true in a time period where economic pressures have made even the largest enterprises look to ways to use their funds more carefully and seek to preserve their most valuable IT resources for projects where they can clearly differentiate their organization and keep it competitive.*

*Expect cloud computing to continue to grow, both in its range of offerings and the vendors who provide them. In addition, expect cloud computing customers to grow in numbers and degree of usage as the limits of cloud computing continue to be rolled back and the best ways to exploit its capabilities become better understood.*

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# Microsoft murky on cloud licensing

Laura DiDio, ITIC

## Management introduction

*Microsoft did a very credible job at its TechEd conference in New Orleans in June. It laid out the technology roadmap and strategy for a smooth transition from premises-based networks/services to its emerging Azure cloud infrastructure and software + services model.*

*One of the biggest challenges facing Microsoft and its customers — as it stands on the cusp of what Bob Muglia, president of Microsoft's Server & Tools Business (STB) unit characterized as a "major transformation in the industry called cloud computing" is how the Redmond, Wash. software giant will license its cloud offerings. In this analysis, Laura DiDio explores what was said, and not said and the implications for customers.*

## Licensing programs and more

Licensing programs and plans — even those that involve seemingly straightforward and mature software, PC- and server-based product offerings — are challenging and complex in the best of circumstances. This is something Microsoft knows only too well from experience.

Constructing an equitable, easy-to-understand licensing model for cloud-based services could prove to be one of the most daunting tasks on Microsoft's Azure roadmap. It is imperative that Microsoft proactively address the cloud licensing issues now, and Microsoft executives are well aware of this. During the Q&A portion of one cloud-related TechEd session, Robert Wahbe, corporate vice president, STB Marketing was asked, "What about licensing?" He took a sip from his water bottle and replied, "That's a big question."

That is an understatement.

Microsoft has continually grappled with simplifying and refining its licensing strategy since it made a major misstep with Licensing 6.0 in May, 2001, where the initial offering was complex, convoluted and potentially very expensive. It immediately met with a huge vocal outcry and backlash. The company was

compelled to postpone the Licensing 6.0 launch while it re-tooled the program to make it more user-friendly from both the technical and cost perspectives.

Over the last nine years, Microsoft's licensing program and strategy has become one of the best in the high-technology industry. It offers simplified terms and conditions (T&Cs), greater discounts for even the smallest micro SMBs and a variety of add-on tools (for example, licensing compliance and assessment utilities), as well as access to freebies (such as online and onsite technical service and training for customers who purchase the company's Software Assurance (SA) maintenance and upgrade agreement along with their Volume Licensing Deals).

## Licensing moves from premises to the Cloud

Microsoft's cloud strategy is a multi-pronged approach that incorporates a wide array of offerings, including Windows Azure, SQL Azure and Microsoft Online Services (MOS). MOS consists of hosted versions of Microsoft's most popular and widely deployed server applications, such as Exchange Server, PowerPoint and SharePoint.

Microsoft's cloud strategy encompasses consumer products like Windows Live, Xbox Live and MSN. Microsoft is delivering a hybrid cloud infrastructure that will enable organizations to combine premises-based with hosted cloud solutions. If achieved, this will indisputably provide Microsoft customers with flexibility and choice as they transition from a fixed-premises computing model to a hosted cloud model. In addition, it will allow them to migrate to the cloud at their own pace as their budgets and business needs dictate.

However, the very flexibility, breadth and depth of offerings that make Microsoft products so appealing to customers — ironically — are the very issues that increase the complexity and challenges of creating an easily accessible, straightforward licensing model for those customers.

## Dueling Microsoft Clouds: Azure vs. BPOS

Complicating matters is the fact that Microsoft has dueling cloud offerings — the Business Productivity-Online Suite (BPOS) and the Windows Azure Platform. As a result, Microsoft must develop, delineate and differentiate its strategy, pricing and provisions for Azure and for BPOS.

At this point it is unclear (at least to this analyst) as to how (or when) a customer will choose one or the other or even to mix and match BPOS and Azure offerings. Both are currently works in progress.

BPOS is a licensing suite and a set of collaborative end-user services that run on Windows Server, Exchange Server and SQL Server. Microsoft offers the BPOS Standard Suite: this incorporates Exchange Online, SharePoint Online, Office Live Meeting and Office Communications (OCS) Online. The availability of the latter two offerings is a key differentiator that distinguishes Microsoft's BPOS and rival offerings from Google.

Microsoft also sells the BPOS Business Productivity Online Deskless Worker Suite. This consists of Exchange Online Deskless Worker, SharePoint Online Deskless Worker and Outlook Web Access Light. As such this BPOS package is targeted at SMBs, small branch offices or companies that want basic, entry-level messaging and document collaboration functions.

In contrast, Azure is a cloud platform offering that contains all the elements of a traditional application stack — from the operating system up to the applications and the development framework. It includes the Windows Azure Platform AppFabric (formerly .NET Services for Azure) as well as the SQL Azure Database service.

While BPOS is aimed squarely at end users and IT managers, Azure targets third-party ISVs and internal corporate developers. Customers that build applications for Azure will host it in the cloud.

However, Azure is not a multi-tenant architecture meant to host your entire infrastructure. With Azure, businesses will rent resources that will reside in Microsoft datacenters. The costs are based on a per-usage model. This gives customers the flexibility to rent fewer or more resources, depending on their business needs.

## Cloud Licensing Questions

Any cloud licensing or hybrid cloud licensing program that Microsoft develops must include all of the elements of its current fixed premises and virtualization models. These include consideration of:

- volume licensing: as the technology advances from fixed premises software and hardware offerings to private and public clouds, Microsoft must find ways to translate the elements of its current Open, Select and Enterprise agreements to address the broad spectrum of users from small and midsized (SMBs) companies to the largest enterprises with the associated discounts for volume purchases
- term length: the majority of volume license agreements are based on a three-year product lifecycle but, during the protracted economic downturn many companies could not afford to upgrade; a hosted cloud model, in contrast, will be based on usage and consumption, so the terms should and most likely will vary
- software assurance: organizations will still need upgrade and maintenance plans regardless of where their data resides and whether or not they have traditional subscription licensing or the newer consumption/usage model
- service and support: provisions for after-market technical services, support and maintenance will be crucial for Microsoft plus its users, resellers and OEM channel partners; ITIC survey data indicates that the breadth and depth of after-market technical service and support is among the top four items that make or break a purchasing deal
- defined areas of responsibility and indemnification: this will require careful planning on Microsoft's part because existing premises-based licensing models differ according to whether or not the customer purchases their products directly from Microsoft, a reseller or an OEM hardware manufacturer (organizations that adopt a hybrid premises/cloud offering and those that opt for an entirely hosted cloud offering will be looking more than ever before to Microsoft for guidance).

Microsoft must be explicit as to what it will cover and what will be covered by OEM partners and/or host providers. Complicating the cloud licensing models

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even further is the nature of the cloud itself. There is no singular cloud model. There may be multiple clouds, and there may be a mixture of public and private clouds that also link to fixed premises and mobile networks.

Among the cloud licensing questions that Microsoft must address and specifically answer in the coming months are:

- what specific pricing models and tiers for SMBs, midsize and enterprises will be based on hybrid and full cloud infrastructures?
- what specific guarantees if any, will it provide for securing sensitive data?
- what level of guaranteed response time will it provide for service and support?
- what is the minimum acceptable latency/response time for its cloud services?
- will it provide multiple access points to and from the cloud infrastructure?
- what specific provisions will apply to Service Level Agreements (SLAs)?
- how will financial remuneration for SLA violations be determined?
- what are the capacity ceilings for the service infrastructure?
- what provisions will there be for service failures and disruptions?

- how are upgrade and maintenance provisions defined?

### **Management conclusion**

*From the keynote speeches and throughout the STB Summit and TechEd conference, Microsoft's Muglia and Wahbe both emphasized and promoted the idea that there is no singular cloud. Instead, Microsoft's vision is a world of multiple private, public and hybrid clouds that are built to individual organizations' specific needs. That is all well and good. But in order for this strategy to succeed, Microsoft will have to take the lead on both the technology and the licensing fronts. The BPOS and Azure product managers and marketers should actively engage with the Worldwide Licensing Program (WWLP) managers and construct a simplified, straightforward licensing model.*

*We recognize that this is much easier said than done. But customers need and will demand transparency in licensing pricing, models and T&Cs before committing to the Microsoft cloud.*

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## BMC: how three rights do not make a wrong

Charles Brett, C3B Consulting

### Management introduction

*In 2009 BMC bought MQSoftware, a relatively small Minneapolis company that had developed and was selling two principle high profile products — Q Pasa! (now snappily called BMC Middleware Management - Performance and Availability) and Q Nami! (equally snappily called BMC Middleware Management - Transaction Monitoring).*

*These added considerable capabilities to BMC's already strong mainframe and systems management capabilities, but most especially in the distributed arena. They have also added capabilities that C3BC believes BMC may be undervaluing.*

### A moving middleware world

In the middleware world — that of software connecting applications together within and across systems — there is a flood of data which must be sorted and sieved if the information needed is to be derived and then used to cause actions. IT organizations need to know what is happening on and between their systems in order to keep those systems (and, more importantly, the applications) running. Necessarily, however, the focus of what is often referred to as 'systems management' has in the past acted more to aggregate low level systems and network data (rather than focus on application-oriented data). In effect many of the system events that happen are aggregated and summarized in order to create an overview of what is occurring across the IT infrastructure.

From an overall management of IT facilities point of view this is exactly what is required. System administrators and managers can see the big picture and take the requisite actions as and when necessary. There has always been, however, a 'weakness in this overall approach for some audiences — in particular applications owners and business managers.

Consider a simple example. Application A might send a message to Application B using Middleware C as the transport medium. A, B and C might appear to be working in aggregate, yet transactions Y and Z might go 'missing' (not lost but failing to proceed through

the application chain as expected). Transaction Y might be worth (say) \$10K and therefore be relatively unimportant; in contrast transaction Z might be worth \$10M and be business critical.

In traditional systems management, it has always been difficult to nail down individual transactions (never mind find when and where they went AWOL). More importantly, it is almost impossible to differentiate by the content in each transaction — even when understanding that finding transaction Z is much more important than Y (from a business and financial viewpoint).

One of the strengths that BMC Middleware Management – Transaction Monitoring (aka MQSoftware's Q Nami!) has added to BMC, which has extended BMC's capabilities, is the understanding the contents of a message or transaction matter. By enabling key players to view transactions and payload across the enterprise BMC adds the capability to see and to sort by content, and then enabling the appropriate people (or systems) to act.

### Analysis

In C3BC's analysis, BMC has recognized that systems or IT management is not the whole game. But has BMC gone far enough or gotten enough out of with what it manifestly possesses?

In our view, there is much more potential than has been realized to date. Indeed, the broader approach that is possible encompasses three parallel and coincident — in that all are derived from essentially the same raw data — views:

- the IT/systems manager view
- the transaction view
- the business manager view – which in different circumstances can be referred to as business process management (BPM), business activity management (BAM) and/or service level agreement (SLA) management.

C3BC knows that BMC understands the IT/systems

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view; the same applies for SLA management. In contrast the 'business user dimension' encompassed by BAM and BPM occupy, in the analysis of C3BC, a lesser priority for BMC. Though many have played with BAM, the results to date have largely been either so overwhelming (or underwhelming) as to be near useless — but this can change. And, to be fair, BMC does not proffer BMC Middleware Management – Transaction Monitoring as a BAM or even BPM solution, even if it probably has the capability.

Of these three views the transaction view is, to C3BC, the most important in the short term. Why? In the past (see page 7 of the May 2010 **INSIGHT-SPECTRA**), C3BC has discussed how transactions can go AWOL within SAP systems and require expensive skills to resolve problems; and that is within one vendor's applications only. The same scenario basically applies whenever applications are integrated together — which today is all the time, from humble Intel servers to mighty IBM mainframes. There is no escape from the fact that, with ever more complex systems and application combinations, the chances of 'losing' transactions becomes more likely and the need to be able to search and resolve what is not proceeding normally becomes ever more acute.

This is why BMC Middleware Management – Transaction Monitoring (which builds on technologies in BMC Middleware Management – Performance and Availability) should be so interesting to enterprises. Its approach, of placing agents in common technologies (TIBCO, IBM and other messaging, databases, HTTP, web servers, application servers and many more), means that these agents generate data (including about payload contents) which can then be published to a topic host (the BMC Middleware Management – Transaction Monitoring 'server'), where:

- IT/systems professionals can query for the data they need (e.g., transaction latency, service level agreements, etc.)
- business people can see what transactions are moving through or find those that seem to have stopped (or gone AWOL)

- business managers possess the potential to have reports (or create queries) to see what is going on at the business level.

In effect the BMC Middleware Management – Transaction Monitoring 'server' is the aggregation point which will support all three needed levels of insight into what is happening in the enterprise. It is where application users can ask: 'show the processing status of all orders over \$50K today?' Or where business managers can see daily or weekly cumulative sales or production results while processing is underway. Interestingly, in the context of this last point, BMC typically does not sell to the business user, preferring to focus on IT infrastructure contacts: C3B finds this strange given what the BMC Middleware Management — Transaction Monitoring can and could do for so many enterprises.

### **Management conclusion**

*This is why, in C3BC's analysis, BMC has advanced with BMC Middleware Management – Transaction Monitoring. It has understood that these are 'three rights which do not make a wrong' – for all are needed in most enterprises (even if BMC thus far has concentrated on the first two 'rights').*

*This contrasts with those (and many of these are in IT) who have preferred to see the three 'views' as being distinct and requiring different solutions. To C3BC, this is an unusual instance where bigger is better (where bigger means using a more comprehensive tool to provide more detailed information focused for a variety of appropriate audiences).*

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# Thoughts on BI buying and on evaluation frameworks

Ray Wang, Altimeter Group

## Management introduction

*Ray Wang is a noted commentator and analyst about IT. He writes copiously and refreshingly (see <http://blog.softwareinsider.org>) about what IT users should do.*

*In this INSIGHT-SPECTRA he discusses two distinct issues:*

- *Business Intelligence (BI) and how this must change within the context of the information management matrix*
- *evaluation frameworks and how these must evolve.*

## 1. BI solutions must address the information management matrix

A confluence of changing business requirements and on-going vendor consolidation is leading many organizations to rethink their BI strategies. Many buyers face decisions about how to move beyond departmental solutions or to stay with an integrated applications-based BI solution. Meanwhile, other buyers must decide whether or not an integrated platform provides the right balance between business impact and cost of technology. Additionally, most organizations seek support for new data types and new deployment options.

As BI continues to evolve from fragmented and historical reporting to pervasive, predictive, and real-time decision support, an organization's success increasingly depends on the support for an expanding information matrix (see Figure 1) which contains:

- new and traditional data types plus a proliferation of data types — from social, machine to machine and mobile sources — which together add new data types to traditional transactional data; examples include content, geo-spatial, hardware data points, location based, machine data, metrics, mobile, physical data points, process, RFID's, search, sentiment, streaming data, social, text and the Web

- visualization and reporting paradigms: users expect more than traditional charts, gauges, dials, and Web 2.0 innovations have shown how Rich Internet Applications (delivered through tools such as AJAX, Adobe Flash and Microsoft Silverlight) can create interactive BI experiences; new and old paradigms include ad-hoc query builders, business performance management (BPM) systems, dashboards, production reports, scorecards, and advanced visualizations while new visualization types include matrix charts, network diagrams, bubble charts, tree maps, word trees, tag clouds, phrase nets and others
- different approaches and styles, because analytical techniques continue to improve as data volumes explode; new and traditional approaches include advanced analytics, business activity monitoring (BAM), BI workspace, decision support systems, low latency BI, meta data generated BI apps, non-modeled exploration and in-memory analytics, scenario analysis and OLAP
- varied deployment options where data comes from so many different sources that users are seeking new deployment options; common solutions in the BI portfolio include BI appliances, BI in the Cloud, BI specific DBMS, Mobile BI, open source BI, on-premises packaged BI apps, private BI clouds and SaaS-based BI.

## Exploding semi- and un-structured data challenges existing solutions

Along with new business requirements, the old world of structured data must make way for a plethora of new unstructured data types. More importantly, solutions must support a growing number of industry vertical standards in semi-structured data. Unfortunately, no single vendor so far can support all the data types that fit into the following three categories :

- structured data, which remains the most understood type of data; traditional sources

comprise data in transactional systems (such as ERP, CRM, SCM and other database management systems) and solutions conduct analysis (via OLAP and traditional application-centric and database-centric BI systems)

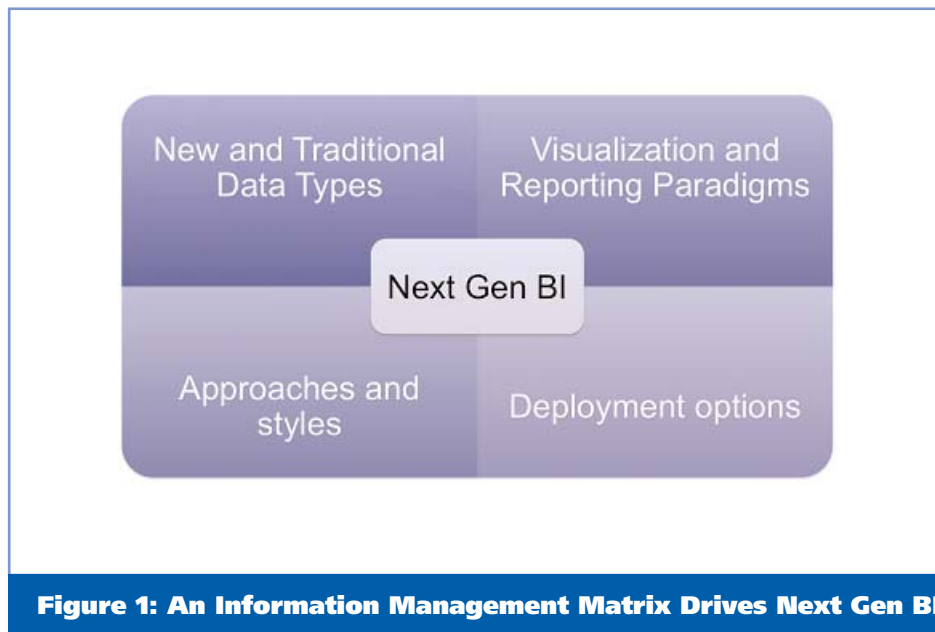
- semi-structured data where already common examples include flat files in record format, RSS feeds, XML documents and data in spreadsheets; industry-specific XML data standards and cross-enterprise data-exchange standards — such as ACORD, EDI, HL7, NACHA and SWIFT — will continue to grow as BI goes vertical while, on the document printstream front, new systems will need to support ASP, Met code and PCL
- unstructured data, where sources include natural-language text from e-mail, blogs, SMS, social networking sites, text fields, audio, video and images; with unstructured data representing up to 80% of today's data sources, enterprises are challenged to discover and organize such unstructured data for the real-time delivery of the right information to the right user.

evolving next generation BI requirements. These must span dynamic user experiences, business process focus and community connectedness and should:

- support role based designs: information enables actionable insight by role; dashboards, reports, alerts, notifications and filtered activity streams must deliver relevant information at the right time to the right person; *BI must tailor to the needs of a role and should be self-service*
- deliver consistent experience across channels and deployment options: information enforces consistency across deployment models, devices and data sources where users create, read, use, delete and share information in a consistent user experience; *BI must deliver information any and everywhere*
- enable contextual, timely and relevant delivery of information: this must 'sense' (in a business process) where users receive activity streams of information and base this on preferences; *BI must understand relationship history and how to deliver to the right person at the right time with the right authority*
- align with configurable and adaptive business processes: information aligns with business processes so that users are easily able to modify processes to meet changing conditions; *BI must provide user driven ad-hoc reporting and configuration*

### Next generation BI must reflect evolving requirements

As market hype increases and sellers (i.e. vendors) rush to meet new requirements, buyers (i.e. users) should focus on the following 10 emerging and



**Figure 1: An Information Management Matrix Drives Next Gen BI**

- facilitate outcome-focus and results-orientation: information ties back to goals and instills accountability for results with users gaining transparency and insight in data; *as such BI must track key performance indicators (KPIs) and related actionable key performance drivers (KPDs) across an end to end process*
- foster proactive, predictive and actionable insights: information identifies patterns and trends including intent and forecast projections so that users can respond with speed and accuracy to requests and apply new techniques such as key performance predictors (KPPs); *BI must anticipate requests and supports decision making*
- empower all types of stakeholders: information and results should be shared with internal and external stakeholders with users establishing relationships and participating in communities and social networks (such solutions open up systems to new types of users, collaborators, networks and communities); *BI must be easy to use by everyone making decisions (not just business analyst gurus) and solutions should also take into consideration accessible outputs for the visually or otherwise impaired*
- provide pervasive and natural collaboration: information should be shared and socialized with key stakeholders so that users can collaborate with internal and external stakeholders to review results, modify plans, add understanding and communicate changes; *as such, collaboration should support decision making with BI embedding knowledge worker skills into existing work flows*
- engage self-learning and self-awareness: information supports decision support, presence, and learning where users build a history of interactions that drive preferences and identify patterns; *BI should apply presence and location information to offer relevant actions and remembers patterns and behaviors*
- permit security, scalability and safety: information supports role base security, data masking, partitioning, archiving, disaster recovery, and other security requirements with users shielded from cumbersome security measures; *BI must meet regulatory requirements and disaster recovery thresholds.*

### **BI strategies must support a multi-disciplinary integrated approach**

Organizations should expect BI solutions to be embedded in a growing number of business solutions. With actionable insights into a scarce resource, expect natural integration points with other information management and orthogonal disciplines to emerge covering:

- business process management
- content management
- data governance
- master data management
- social technologies.

### **The bottom line for BI buyers ...**

Buyers of BI should compare and contrast BI strategies in order to match business impact as well as technology value. As with all IT solutions, organizations must balance the business impact with the cost of technology. Given the three major vendor approaches to BI, organizations must rethink which approach best suits their near and long term strategy (see Figure 2).

When evaluating next gen BI strategies, consider the following best practices imperatives for vendor selection:

- enable all types of users so that solutions enable anyone from a front line employee to a power user to view reports, build ad-hoc reports, collaborate and improve decision making; designing for roles could eventually result in BI activity streams filtered by key information needs and change management should be budgeted for solution development, training and ongoing education
- support highly differentiated processes which take advantage of industry specific solutions that meet critical vertical requirements and reduce time to market; over time, expect BI to continue to specialize by vertical industries and certain of these will require different levels of information optimization (for example an emergency dispatch, may prioritize optimization of certain data types over others or regulations may require a certain standard of delivery)
- stay flexible to ensure systems support multi-channel heterogeneous data sources: do not remain dependent on ERP systems for

primary sources of data — expect a rapidly changing business environment that rewards flexibility

- avoid vendor lock-in to any one set of technologies by seeking different approaches and styles which reflect the business requirements; be open to best of breed solutions as needed and keep in mind support of specialized scenarios or cross-enterprise requirements that may deliver best of breed (application independent vendors will tend to be more focused on supporting heterogeneity)
- move beyond the departmental (organizations will want to replicate successful deployments in departments across the enterprise which means that you should choose technology approaches and styles that can scale across different business functions, data types, reporting paradigms and deployment options)
- factor in existing infrastructures; consider when it may make sense to invest in or throw out existing systems (astute next generation enterprises will find ways simultaneously to leverage existing investments and to innovate which means that you should plan replacement projects in phases)
- apply selection tools to save time; use independent vendor selection short list and check list tools to map business requirements such as organization and team structure, business and process maturity,

technology strategy and technology solution ecosystems.

## 2. Today's evaluation frameworks miss the point

Business leaders seek clarity in understanding which technology solutions drive the most business value. Today's frameworks often focus on a combination of:

- features, including the ability to execute, current offering, product depth, etc.
- direction, the vision, strategy, corporate leadership, etc.

Unfortunately, the intersection of features and direction only addresses potential. Altimeter Group's clients continue to express how 'potential' alone no longer provides enough justification in determining vendor selection or understanding what an overall adoption strategy should be.

## Next generation evaluation frameworks must start with business value

Business leaders seek returns on investment. IT leaders strive to reduce cost of delivery. Yet ROI alone may not answer the question as business value needs to be expressed and compared. Business impact remains the goal in building out new frameworks. In addition, the cost of technologies must be factored.

As a result, key selection questions should include:

Criteria	Application/ Process Centric	Pure Play Best of Breed	Strategic BI Platforms
Business impact	Mostly departmental to cross enterprise	Mostly departmental to cross enterprise	Cross enterprise to business value chain
Data sources	Homogeneous	Heterogeneous	Heterogeneous
Data type support	Mostly structured and some semi-structured	Depends on type of vendor	Structured, semi-structured, and unstructured
Vertical expertise	Mostly horizontally focused	Deep vertical industry focus across a few industries	Moderate vertical orientation across many industries

**Figure 2: For comparing BI vendor strategies**

- will this product provide an adequate ROI?
- where will the organization realize the business impact?
- how do various solutions compare in delivering business value?

Organizations must balance business impact and the cost of technology delivery. Based on conversations with 113 end user clients and vendors (Figure 3), there appears to be a market demand for building out a new framework that compares how:

- business impact extends across the value chain: business impact extends into 3 levels of maturity, from internal to external (i.e. department, cross enterprise and business value chain); the greater the penetration of the solution, the greater the business value
- cost of technology delivery measures against percentage of revenue: both scaling and return on investment reduce the cost of delivery; reference data provided via customer references and case studies can provide key data points by industry, size and geography.

models, rapid adoption and obsolescence of technologies — plus the demand for business value data — all drive the need for this new model. Expect next generation business and technology leaders as well as research firms and technology consultants to start thinking this way from today. This will produce changes to past practices.

On the buy-side, I have spoken with over 100 end user customers who remain frustrated with existing evaluation models. They are ready to embrace models that measure business value.

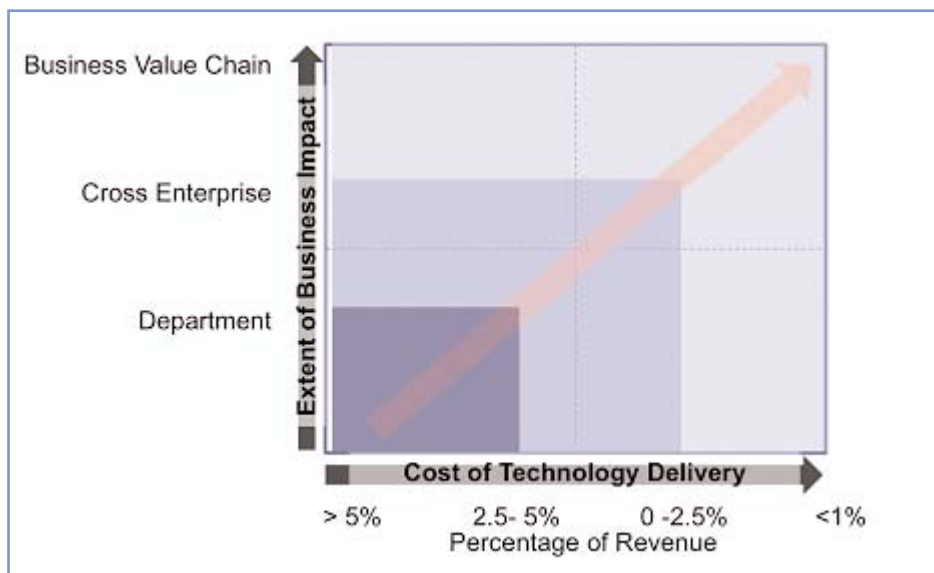
On the sell-side, I recently met with SAP a few weeks back to discuss its new industry strategy, launched at SAPPHIRE. When talking about what customers really need, we rekindled this concept of business value and IT value. In fact SAP is aiming its new industry strategy at providing a healthy balance between the two. Conversations with other vendors suggest that this concept will catch on.

To prove the point: look for some new evaluation frameworks to emerge from Altimeter this year. We intend to build against these core principles.

**The bottom line — it is time to apply a new model**

Evaluation frameworks of the future must begin the process of identifying the key criteria required for end users to be successful with both their business and IT stakeholders. A confluence of disruptive business

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**Figure 3: Business impact and technology cost drive impact**

## **INSIGHT-SPECTRA**

**is published and distributed  
worldwide by:**

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