



**Australian retailer focuses on  
business processes as the entry point  
to service-oriented computing.**

*Spotlight turns around IT with business process-based SOA*

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**Contents**

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- 3 *The challenge: an IT infrastructure at risk of imminent failure***
- 4 *The strategy for change: start with understanding the business processes***
- 6 *Developing a roadmap for implementation***
- 7 *Integrating legacy and new systems with a services-based approach***
- 7 *Selecting the right tools for end-to-end process control***
- 10 *Where is Spotlight today?***
- 11 *Taking the transformation to the next level***
- 13 *Lesson learned: bring in the right help at the right time***
- 14 *The final analysis: it begins and ends with process management***

**Introduction**

Founded in 1973 by two brothers, Spotlight Proprietary Limited is a privately owned crafts and soft furnishings retailer based in Australia, with 106 stores located across Australia, New Zealand, Singapore and Hong Kong. In addition, it has 12 Anaconda superstores in Australia, selling outdoor adventure goods, clothes and equipment.

Spotlight is a very large business, with more than 6,000 employees. Stores and catalogs generate approximately one million sales transactions a day, with annual sales approaching A\$1B in 2008. The product mix is highly seasonal and rotates quickly throughout the year. At any one time, some 250,000 out of 500,000 SKUs are active. A mission-critical loyalty program is another measure of Spotlight's success, with five million registered customers.

Anne McDiarmid is the Chief Information Officer for Spotlight Proprietary Limited. Her responsibility is to provide the technology to support both the Spotlight and Anaconda brands, plus provision back-office IT. When she arrived at Spotlight, IT was at a breaking point.

In this DeepView, Ms. McDiarmid discusses how she and KAZ Group, an IBM Business Partner, introduced process- and service-based computing to support the Spotlight business. KAZ Group, located in Australia, focuses predominantly on applications development and systems integration.

Solution components
<b>Software</b>
<ul style="list-style-type: none"><li>• IBM WebSphere® Process Server</li><li>• IBM WebSphere Commerce Server</li><li>• IBM WebSphere Portal</li></ul>

*Insufficient investment in IT infrastructure had left Spotlight without a way to provide the business with accurate sales, product or price information.*

**The challenge: an IT infrastructure at risk of imminent failure**

When I joined Spotlight in late 2006, the company had enjoyed 35 years of highly successful retailing and continual growth. As a result, Spotlight was heavily invested in property – the bricks-and-mortar side of the business.

However, the company had only made information technology an investment priority for the previous seven or so years – and that was without sufficient strategic dimension or vision. For example, the point-of-sale (POS) system had only been in our stores for some seven years—and even it was 10 releases behind the current version. We also had several homegrown legacy systems, plus one commercial financial package that had been hacked beyond recognition. It might originally have been “out-of-the-box,” but this was now impossible to tell. And we had middleware connecting to middleware (Figure 1).

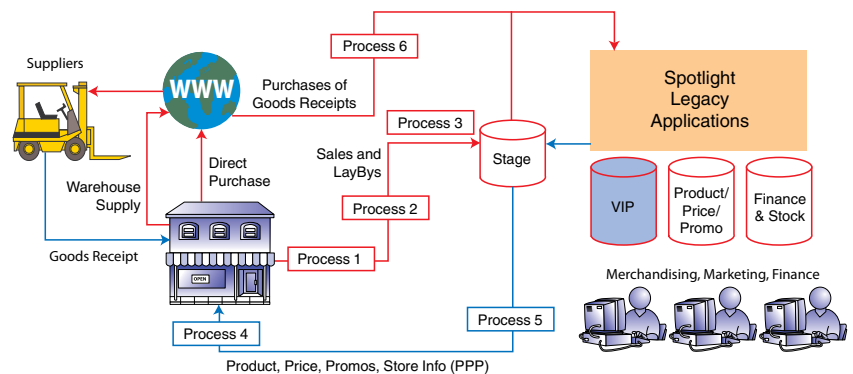


Figure 1. Before the start of its IT transformation initiatives, Spotlight's infrastructure had not kept pace with the needs of the rapidly growing retail operations.

We had no parallel processing. Everything was performed overnight, sequentially. Even basic sales information was lacking, or so out of date as to be largely worthless. Instead of daily sales summaries, we were waiting until Thursday each following week to find out the previous week's sales. And, depending on where you went, you could get a different version of what sales were.

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Highlights

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***The retailer's continued growth resulted in new stores, which put more stress on already overloaded legacy systems.***

***With the in-house IT team spending most of its resources fighting fires, Spotlight looked to IBM Business Partner KAZ Group for assistance in addressing the IT shortcomings.***

To make matters worse, we could not guarantee product and price. We could not tell you what inventory was in the business, nor did we have any means of knowing what we had sold. Instead, we had a simple “system” that replenished what we sold—whether it was old stock or new stock. Furthermore, we did not run on traditional min-maxes. We had no visibility across the chain of how our product sales were being achieved in terms of growth.

What we had, therefore, was a failure in terms of delivery to our stores, and therefore to our customers. Yet we continued to be highly successful. We kept adding stores. Unfortunately, that meant we kept adding load to our already-stressed legacy systems. We had failures in products and pricing every day, just basically because we had no message queuing or even automatic restart capability. In short, the business may have been growing, but the IT infrastructure was simply not keeping up.

**The strategy for change: start with understanding the business processes**

From soon after my appointment, it was clear that my priority was to address these shortcomings. The imperative had become finding an escape from what all too easily might become a business threatening trap. Once I understood the scale of the issues we were facing and the resources I had to work with, I realized we needed additional help.

Spotlight had a team of about 55 IT professionals who had been working without the benefit of defined processes or basic disciplines. They were willing and conscientious in terms of supporting our customers in the business. But most of their time was spent fighting fires.

KAZ Group, under Senior Solution Architect Vicki Redwood's leadership, brought in a team of analysts to help us develop a strategy for building an IT infrastructure that could support our business and enable continued growth. The KAZ team took us back to square one—understanding our business processes.

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**Highlights**

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*Before Spotlight could transform its IT operations, it needed to understand the business processes IT supports.*

*An end-to-end process mapping helped the IT team see how applications and data related to the needs of the business.*

We call this effort the “process flow saga,” because it took three long months to arrive at accurate diagrams of what our systems did and what our process flows were (Figure 2). At the time, this process flow analysis seemed endless. From talking with other organizations, we now know that our experience was neither unique nor all that lengthy. But at the time, it felt like we were not making much overt progress.

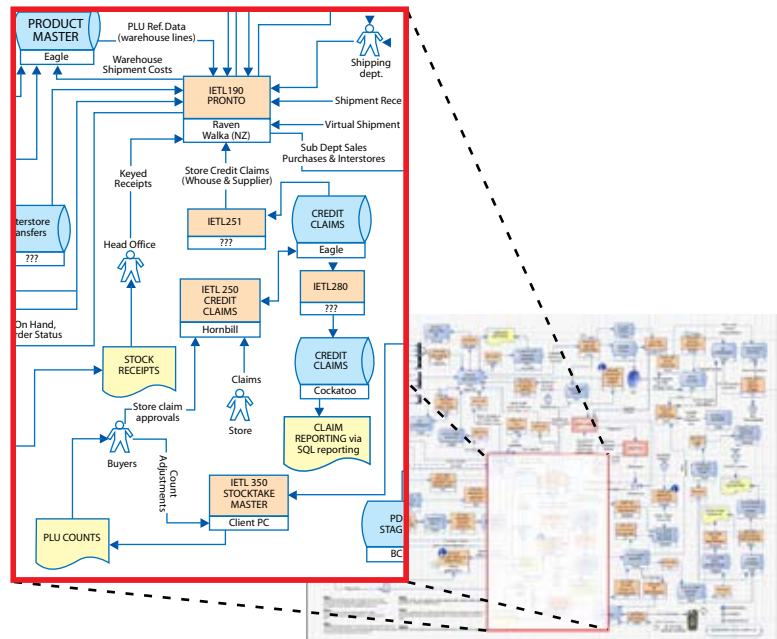


Figure 2. Spotlight's IT transformation began with a detailed mapping of the processes behind the retailer's core business.

Nevertheless, this represented a watershed for many on my team. Until we went through this exercise, they did not understand how, by tweaking this or adding that, they had all too effectively inhibited the use of what IT and applications we did have.

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**Highlights**

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***The next step was to identify which legacy systems to retain and which to retire—and to develop a phased implementation plan that would support ongoing business operations.***

Another eye-opener for us all was the process mapping. Spotlight is a retailer. We buy and we sell. Everything is about products and price. It should be simple, but in many cases it is not. So what we focused on was the end-to-end process for a sales transaction: How did we buy a product and receive it into stock? How did we move a product from stock to the store? How did we record the sale and capture the transaction data in our systems? Where did the sales data end up in the legacy systems?

At the end of the “saga,” the IT team understood what the business was about. And once we understood how many different versions of the truth we had in circulation, we could begin to rationalize.

**Developing a roadmap for implementation**

Once we thoroughly understood our “as is” situation—from both a business process and a technology perspective—it was time to change. We needed a roadmap to new, replacement, systems while keeping the old systems going. At the same time, we were plagued with systems instability. Our legacy systems were failing. In order to keep the business running, we just hoped we had the time to make replacements before something irrevocably broke.

We had to identify priorities—what we could live with for the long term, and what needed addressing sooner. We also needed the control to selectively turn off some parts while leaving others on. That meant thinking about how we might run some elements in parallel, at least until the new parts were proven.

For example, we decided early on that we had to replace our point-of-sale system immediately in one country. Yet this could not happen overnight; it had to occur gradually over some six months. We also decided to add enterprise resource planning (ERP) capability, so we chose both a new point-of-sale system and SAP Retail for ERP.

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Highlights

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***Spotlight began to look at applications in terms of the business functions they performed, which were defined as services.***

***Introducing a services layer enabled Spotlight to integrate business functions in new ways and readily add new capabilities.***

***The one missing component was a way to control business processes end-to-end.***

**Integrating legacy and new systems with a services-based approach**

We decided, with KAZ's encouragement, to break the old systems into what we now refer to as services, or small components. The advantage was that the business could understand what each part was doing and then could choose when to turn on (or off) selected business functionality.

This also enabled us to combine parts (services) that previously could not have been combined, as well as introduce new services and functions that could work with old ones. For example, we could create a mixture of old point-of-sale and new point-of-sale systems feeding old and new applications – all of which was automatically achieved by putting the service layer in between.

Even with this phase completed, and with a rationalization of the middleware that connected everything, we still needed end-to-end control. Our architectural solution, suggested by KAZ, was to add a process service layer on top so that we would apply automated coordination and control from start to finish. A further benefit of this was that we were then able to introduce a degree of parallel processing without having to change the old systems. The important aspect to remember, however, is that this process service layer could only work because we were breaking functions up into services and placing the service architecture at the center.

**Selecting the right tools for end-to-end process control**

The next question we addressed was tool selection. As a dynamic retail business with continuous events, we could not afford any loss of business capability. We could not contemplate turning off the point-of-sale system for a week to install a new one, nor could we shut down the business for three weeks to introduce ERP. We needed to migrate slowly across different stores in different locations, from legacy to new, and perform this seamlessly so there would be no significant impact on the business. These were the most critical factors for us.

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**Highlights**

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***The company selected IBM WebSphere Process Server to provide a single process control point over multiple disparate systems.***

***The process control layer coordinates business events across five applications, handling errors and generating alerts.***

With this in mind, Vicki's team proposed IBM WebSphere® Process Server. The attraction was that it provides the basis for end-to-end control over at least five disparate systems. With one process control point, we could see and manage everything, from goods going to the store through to sales being recognized in the head office (Figure 3).

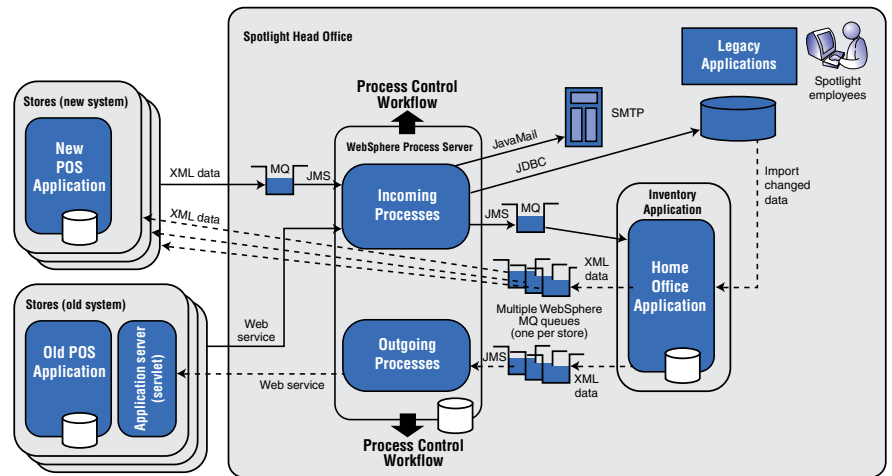


Figure 3. WebSphere Process Server provides a central point of control over business events while integrating the flow of business processes across multiple applications.

WebSphere Process Server is now being used as our virtual process control. It coordinates business events across our five main applications as well as performing error handling and generating alerts. Now we can see what is happening, which is good. Yet we also discovered we could see errors that we did not even know were occurring. Nevertheless, we now have consistent process flows and process monitoring across many asynchronous steps, which are being performed in a mix of old and new applications.



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**Highlights**

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***A common set of definitions—developed during the business process analysis phase—helps ensure that business and IT speak the same language.***

This is a huge improvement. Before, we looked like a monolithic IT shop with the business having minimal control and no responsibility. Now the business has information and must take responsibility. It is a fundamental change that has been achieved by using services and process management. The business and IT work more closely together than ever before.

Part of what has helped here is a set of common definitions that work for both business and IT (Figure 4). While it may seem a statement of the obvious, having a common understanding of what constitutes a sale or a trend or a product is critical. Now, when business and IT people talk, we know we are talking about the same thing. That has already proved to be an incredible winning situation for the business and for my developers, and we consider it to be a best practice for any services-based transformation.

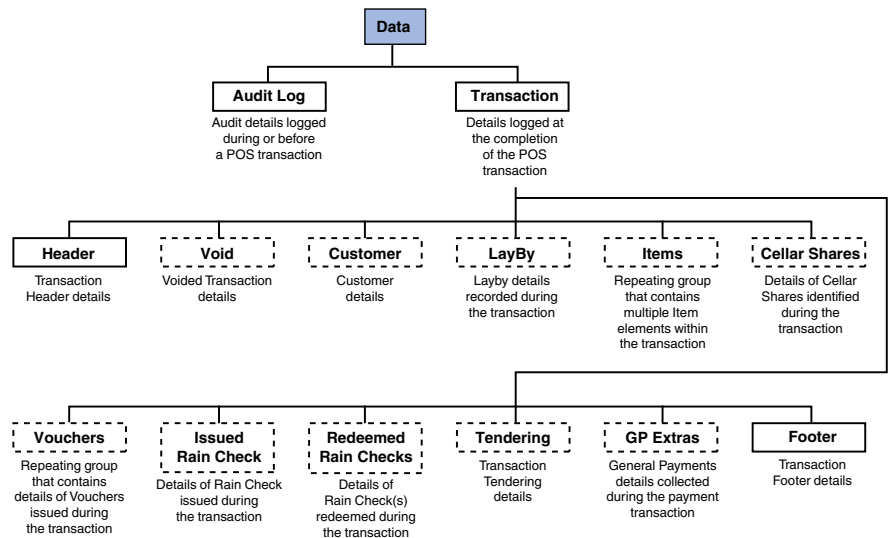


Figure 4. Business and IT agreed on a set of definitions that provides a common vocabulary for describing business functions.

**Highlights**

*A phased rollout of new POS systems to stores was implemented in parallel with bringing a new ERP solution online.*

**Where is Spotlight today?**

At the time of this writing, we have made incredible inroads into reshaping how Spotlight delivers and exploits IT. We are 20 months into our transformation, and we are about one-third of the way through our plan. We have implemented WebSphere Process Server—it is live and running. We are in the final stages of testing SAP for Retail, and that will shortly be going live (Figure 5).

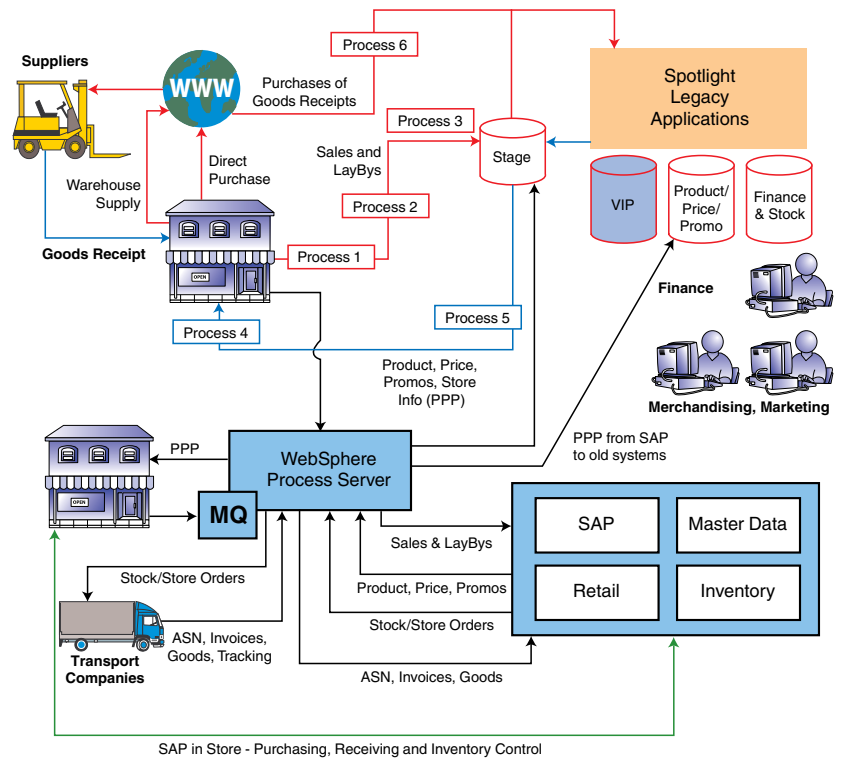


Figure 5. This diagram illustrates the progress of Spotlight's IT transformation at the time of this writing.

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**Highlights**

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***The services-based approach enabled Spotlight to combine data across the new and old point-of-sale systems, legacy applications and the new SAP system.***

Already we are more than halfway through introducing the new point-of-sale systems. We have about 120 stores to do over a four-month period, at a rate of about 8–10 per week. Now that we have the installation process refined, these are going in smoothly. In the interim before SAP goes live, they are fed by the services at the front end of our legacy systems.

Using the services-based approach, we are already combining product hierarchies across the new SAP system and the legacy systems. Similarly, we have started to create orders on the new ERP system regardless of whether they point to the new point-of-sale or old point-of-sale system. To us these are all enormous wins.

The feedback from stores has been amazing. I received yet another e-mail recently saying how much a staff member likes the new system – not least because it enables her to support her customers much better. Furthermore, the rollout has not impeded our catalog business and its related sales.

**Taking the transformation to the next level**

Next on our agenda is a retooling of our Web site. We have selected IBM WebSphere Commerce Server to be our new Web store. After that there are additional systems we will update, change or reuse (Figure 6). But thanks to the services approach and the way that WebSphere Process Server can be used, we have a flexibility of choice. This is highly attractive, especially now that we have mapped our processes and understand our data.

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Highlights

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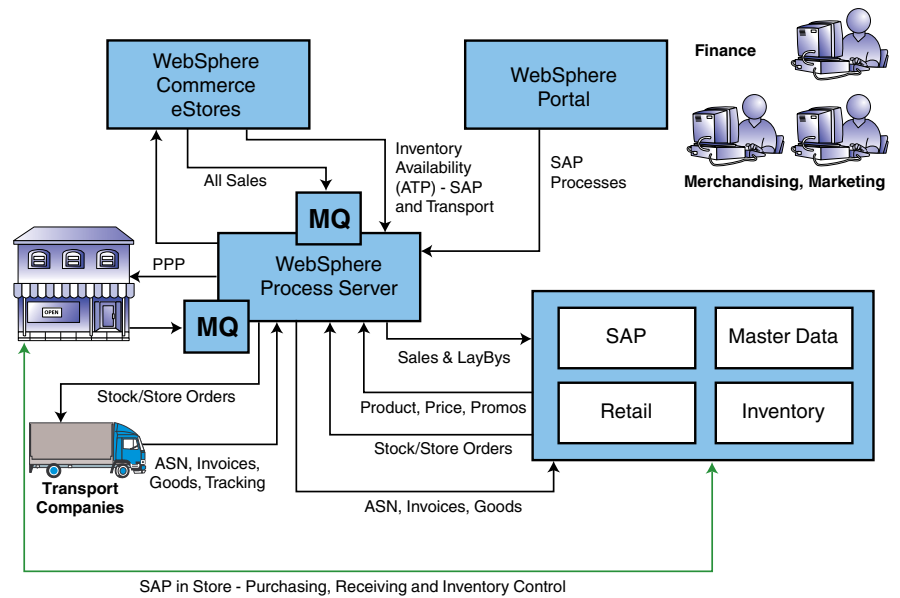


Figure 6. Future plans call for implementing a new infrastructure for Web retailing and a portal-based intranet.

**The next steps in Spotlight's IT transformation will be to retool the Web site and implement an employee portal.**

We also plan to implement IBM WebSphere Portal as our new internal communications mechanism. With 6,000 employees, some of them short-term or even temporary contractors, effective communications and easy access to training materials are additional business imperatives. The portal will allow us to do training locally, at the store level, while ensuring consistency by keeping documentation updated and available centrally.

WebSphere Portal also offers us the option for expanding our marketing initiatives on the Web. With five million registered members in our loyalty program, we see tremendous potential in using WebSphere Portal to create a powerful social networking community with our customers.

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**Highlights**

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***The knowledge and resources provided by KAZ—plus that team’s objective point of view—were critical to the success of the project.***

***With the new skills they acquired, Spotlight’s IT staff is now focused on understanding and meeting the needs of the business.***

**Lesson learned: bring in the right help at the right time**

The single most important lesson I have learned from what we went through is that you should never underestimate the size of the task. Spotlight needed help to achieve what we have done. We needed the KAZ team to come in and show us what was in front of us and to have that extra level of knowledge and experience that our IT team, however well motivated, simply lacked.

If we had tried to do everything ourselves we would have been slower and more error prone, as well as less imaginative. One does not always have objective thinking when one is on the inside. For us this lesson learned is all about finding the best people to help understand the business together and then to achieve a gradual skills transfer.

The result has been to change how IT supports the business. We now have a coherent IT operation and an expanded, more skilled IT team that aims to understand and fulfill the business requirements. We can now use services because everything we do is oriented around the business processes.

From a CIO viewpoint, perhaps the biggest value has been that my IT department now understands our business processes. We are not “techies” anymore. We are Business Process Retail Technicians. Furthermore, the obverse is true: the business also understands the drivers and levers that affect IT. The business is both more realistic and imaginative, now that it understands the layers and the services as well as the complexity of what we have developed.

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Highlights

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*While the project did not begin with a formal decision to take advantage of SOA, it was immediately evident that the initiative would benefit greatly by adhering to SOA design principles.*

**The final analysis: it begins and ends with process management**

Looking back, I do not think we had even heard of the term “SOA” until comparatively recently. Rather, we adopted the approach that KAZ brought to us as a way of reaching our objectives. They convinced us that the process management approach would enable us to move from A to Z without significant negative effects on the business. There was never any discussion of SOA principles that I can recall.

Instead, the focus was on what WebSphere Process Server would allow us to do—on the function and effect, not the architectural principles. I remember thinking that it all sounded really good, almost too good. Ours was a business-driven decision. It was not a conceptually driven conclusion.

That is not, however, to downplay SOA. We did not know we were delivering according to SOA principles. We did not know that others had arrived at the sorts of conclusions we had. Now I can see that we “did” SOA without knowing about SOA—and this confirms to me just how effective SOA is and continues to be for the business.

#### **About IBM**

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#### **About KAZ**

KAZ Group, an IBM Premier Business Partner, is the largest Australian-owned IT services company, providing innovative and flexible IT solutions that help clients simplify, optimize and transform the way clients do business. As a separately managed subsidiary of Telstra, KAZ combines a 30-year heritage in IT with the networks and connectivity options of Australia's leading telecommunications and information services company.

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October-08  
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