The**Bathwick**Group

Rethinking the Retail Technology Platform

Managing Cost, Innovation and Risk in the New Economy

Author: Gary Barnett
Published: April 2009

Executive Summary

The retail industry is set to face enormous challenges in the coming years, with a difficult economic climate, and a tough short-term outlook for retail sales, 2009 and 2010 will see some retailers that fail and some that prosper. The retailers that prosper will be the ones that manage to deliver the pace of change that intense competition demands while retaining an iron grip on cost.

This paper analyzes the responses from over 100 retail and distribution industry organizations that were surveyed as part of an independent survey of over 600 decision-makers across 7 geographies and 6 industries, commissioned by IBM and undertaken by the Bathwick Group.

The clear message from the research is that retailers need to deliver constant improvements to their processes and application platform in order to remain competitive. In many cases retailers are challenged to do this in an environment that is becoming increasingly inflexible and difficult to adapt.

In seeking to develop a strategy that will enable the organization to continually evolve, Industry Frameworks offer an extremely useful way to manage risk, focus investment, and standardize non-differentiating activities while retaining the ability to differentiate where it counts. The right framework should also provide an integration platform with support from a range of third-party packages and solution providers.

Introduction

The retail and distribution industry is one of the most complex, competitive and price sensitive industries on the planet. Retailers have to manage enormously complex business processes that can span the entire lifecycle of the products they sell while spanning multiple continents, languages, currencies and business models. Retailers have to get fresh milk from local suppliers into their stores within hours, while at the same time ensuring that consumer goods manufactured in China make it onto the shelves just in time. As if these challenges weren't big enough, retailers have to operate in a market that is also hugely competitive both in terms of price and consumer expectations.

The new challenge for IT in retail is "Do more with less, so that we can offer more, for less"

Retail and distribution organizations have to have a continual focus on cost reduction while at the same time offering what customers want in terms of price, product and customer experience. These challenges were present before the arrival of the new economy, now they are amplified.

To meet these challenges, retail and distribution organizations have to be able to thrive in an environment where the mandate is clearly "Do more with less" so that you can "offer more, for less".

This mandate means that IT has to be able to deliver continual incremental change to their business processes in order to:

- Drive yet more cost out of the supply chain

- Deliver the right shopping experience – retaining their customer base

- Optimize their merchandising process to create a lean, demand driven supply chain that is capable of responding to local customer demand

- Improve their operation to be more agile and adaptable to increasing rates of change

For many retailers 2009 will be a transformative year characterized by a willingness to look at customers and infrastructure differently and to learn from the multitude of data and experiences collected by the enterprise everyday across all channels.

The retailers that thrive will be those that manage to balance investment in activities and processes that help to differentiate them versus those activities and processes that are essential but non-differentiating.

The CIO agenda: Cost, Innovation and Risk

The "CIO agenda" can be described in a whole range of ways, but whatever words are used the CIO's job inevitably boils down to three key imperatives. First they have to help the business to manage cost effectively, second they have to provide a platform that supports the constant change that continuous improvement to business process demands, and thirdly they have to deliver the first two, sometimes conflicting, imperatives while managing their exposure to risk.

Figure 1.	The CIO's Dilemma
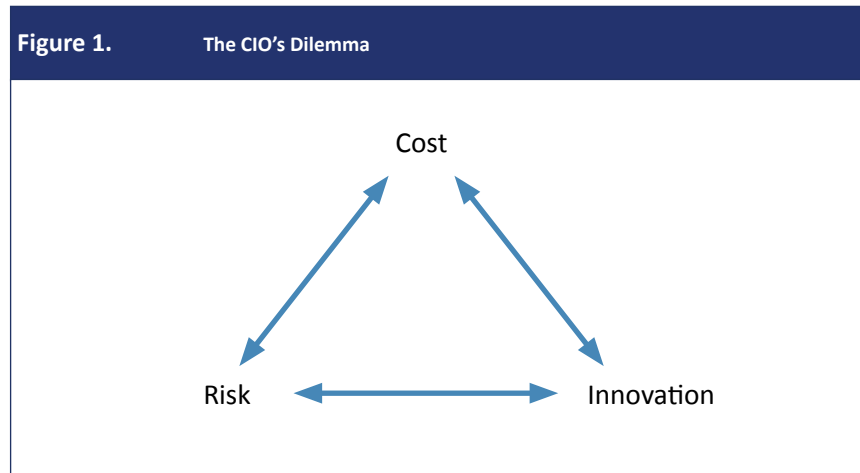
This creates an important dilemma, because all three of these imperatives are linked – It is easy to see how a dramatic increase in the rate of innovation, for example, is likely to have a significant impact on your cost-base or your level of risk, or how slashing internal cost can adversely affect your ability to deliver change.

A key goal for CIO's is to deliver solutions and services that balance these three factors.

Retail and the drive for innovation

As with other industries included in this survey, innovation has a high priority with the retail and distribution industry. 38% of retail and distribution industry respondents report that they need to deliver significant levels of innovation, regularly, in order to remain competitive. It is important to note that the current economic climate hasn't reduced the need for innovation; indeed in many cases demand for continual, incremental innovation has risen.

With cost and margins high on the CEO's agenda, the organization's core supply-chain processes have to be continually improved to ensure that costs are kept down, then there are the in-store processes that need to be continually enhanced to ensure that the retailer gets as much as it can from its stores and the employees who work in them, and thirdly there are the processes that surround customer insight, making sure that the retailer knows as much as possible about the customers' needs and wants.

This ever-present need to innovate inevitably puts pressure on the retail and distribution companies' existing application portfolios, creating a number of challenges around portfolio management, legacy modernization and enhancement and the delivery of management information.

63% of retailers report that their existing application landscape is reducing their organization's competitiveness

Bathwick Application Management Study

Organizations that will lead the market in terms of growth and profitability and take advantage of the opportunities offered by the new economic environment will be the ones that create the internal framework, processes, and culture that enable them to adapt rapidly to new opportunities and threats, by providing support for continuous improvement in the supply chain, the effective management of the retail outlet estates and improved customer insight.

The approach that retail and distribution companies take to their application portfolios, and the methods

they adopt to govern the way in which applications and business processes are enhanced is a key factor in supporting business flexibility and innovation.

There are three key drivers that determine the need to support constant innovation in the retail and distribution space; cost, supply chain optimization, and customer insight.

The drive for lower cost throughout the business

Margins in retail are traditionally slim, and a more challenging economic environment places even more pressure on them. Profitable retailing demands that costs are managed effectively so that savings can be passed on to customers in the form of price reductions or retained in the form of margin. Retailers need to ensure that their distribution costs are tightly managed, that losses through wastage are minimized and that IT costs are contained.

With spend on IT likely to be flat (at best) and revenues that will remain flat for some time, there is a growing incentive to apply the same rigor to IT costs as the retailers apply to distribution costs. Lowering the cost of application maintenance and enhancement can have a noticeable effect on margins, as well as helping the organization to evolve its technology portfolio into one that supports the level of innovation and change that the competitive environment demands.

Industry frameworks offer a valuable starting point, by providing a view of the organization as a whole, starting at a high level (identifying the core business processes and activities of the organization) and then making it possible to drill-down on to specific processes and activities in order to examine them in greater detail. In addition, a rich industry framework should help to lower implementation, integration and maintenance costs by providing pre-built integration components as well as templates and patterns that are designed to accelerate time to solution; it should also take account of the scale the organization, allowing it to make optimal use of licenses and volume discounts.

1 - Getting more out of the supply-chain

Supply chain efficiency has been a priority within retail for a long time. Over recent decades a number of key technologies have played a significant role in enabling retail to make dramatic improvements in the way they manage the supply and distribution of the products they sell. EDI in the 1970's, POS in the 1980's, real-time stock management in the 1990's. Over the same period, the supply-chains themselves have become longer and more complex both in terms of their length and in terms of the number of parties that participate in them.

While retail and distribution companies already have arguably the most efficient and effective supply chains of any industry, the pressure to continually improve is every bit as intense as it was before. Retailers need even more insight into the supply chain in order to ensure the smooth flow of products from the producer to the consumer. But this need for insight isn't solely driven by the demand for greater efficiency; consumers (and increasingly regulators) need to be satisfied that the retailer can vouch for the provenance of the products that it sells.

The ability to adapt supply chain processes in order to add new suppliers or to support new processes is a differentiator in terms not just of cost but also in terms of the retailer's ability to offer the same (or better) choices to its customers.

Business Process Management is rapidly becoming an approach that retailers are turning to as they focus on their supply network operations. It can help retailers achieve higher levels of productivity and improved margins by giving them deeper insight into the operation of the business. The ability to sense and respond to opportunities and threats in merchandise allocation, inventory, and vendor on-boarding is key to providing the right products, in the right way, to the right customers at the right time.

Supply chain visibility can be enhanced through the use of Sensor and Actuator Solutions that make it possible to manage the supply chain in real-time. Whether they are looking to create Smart Freezers, or getting hot items onto the shelves, with the help of RFID technology, retailers can use real-time information and

improved data visibility and accuracy to transform their supply chains and to enhance the in-store customer experience.

In both of the examples above, it is clear to most retailers that there are clear benefits, the issue lies in implementing BPM and sensor based supply-chain management in a way that addresses the CIO's dilemma – How do I implement BPM quickly, at low cost, and with a low risk of failure? When budgets are tight, CIO's can't afford to take risks with the budget they have.

By making use of an existing framework, retailers can avoid making the mistakes that their competitors have made, since the framework represents the cumulative "lessons learned" from a number of projects.

2 - Customer experience and insights

Today's customers want it all; they want to be able to choose from a vast array of products while at the same time expecting those products to be of high quality and low cost As the new economy is driving consumers to scrutinize each purchase decision customers are also more mobile and un-tethered than ever before. For the first time the channels not only need to work seamlessly as clients move between them, but now they need to work seamlessly, side-by-side, interactively and simultaneously. More and more self help and customer service options are being deployed in-store, on the web, and on mobility devices.

Social Interactions have become key to the customer experience. Today's customers are not only better informed and connected, but they expect the same experience from retailers as they do in their social interactions on the web. Ratings and reviews, blogs, micro-blogging and communities are driving buying decisions as customers seek out value.

Building a differentiated customer experience is all about putting the customer at the center of every interaction. In order to deliver this, the retailer needs a consistent view of the customer that spans the entire relationship across all business units and product families. It needs to be enriched with information which may be relevant to the interaction, such as buying preferences and customer lifecycle events. It needs to be available at every point of interaction, along with other relevant tools such as product reviews, forums and support. And the business then has to make the interaction a compelling experience.

Retailing has become a science that combines an understanding of the behavior of "crowds" with an ever deepening understanding of the behavior of individuals. Retailers are investing a growing amount of effort and money into systems that enable them to gain a better insight into the buying behaviors of their customers at both a general and specific level.

Integration Frameworks are designed to help retailers win in an environment like this. They will save implementation time, lower project costs and mitigate project risk. Customer insight requires information, and to be useful that information has to be gathered from a number of sources and properly integrated so that as near a complete picture of the consumer can be created.

The right industry framework Integration will be developed with integration capabilities at its core. A key test is the quality of the infrastructure component of the framework. Is it built on current architecture best-practice – is it based around SOA for example?

3 - Getting the foundations right

The right integration framework will provide the means to deliver Any-to-Any Links between multiple applications, and multiple channels. Most applications are based on proprietary technology and different architectures; this inevitably makes integrating them complex, costly and risk-prone. The right infrastructure layer provides the means to link and connect these self service devices to the infrastructure. It supports integration across heterogeneous environments to support all the ways in which the retailer and their customers interact and provides the data and protocol conversions for each self service device. An infrastructure framework based on SOA and open standards will make it significantly easier to support industry standards and to accommodate the challenges of industry-specific regulations and requirements. Within the context of retail, Information Integration and Master Data Management are essential in order to provide an accurate and trusted view of information at all control and customer touch-points in the process.

The net result: application management and architecture are key requirements in delivering business adaptability

Application management is about making the most of what you have

Application management describes the processes involved in delivering a portfolio of application services that support the organization's business processes. The way in which organizations manage their application portfolio, and the processes that govern how it is enhanced and modified will determine the extent to which the organization's key applications are an enabler or inhibitor of change. It is, therefore, essential that retail and distribution organizations examine and benchmark their application management processes in order to make the changes necessary to ensure that their application portfolio is managed in a way that adds to, rather than detracts from, their competitive edge.

Application management covers a range of activities:

- **Application portfolio management**

  The management of your application estate as a portfolio of business assets
- **Change management**

  The processes that govern how you initiate and manage change
- **Legacy modernization**

  The management of legacy assets so that they do not hinder change

Architecture is about providing a platform for change

If you adopt the right architectural principles; ideally learning from the experiences (and mistakes!) of others, you should be able to establish the foundations that will enable you to firstly make the most of what you have, and secondly take advantage of new applications and business processes as they come to the fore.

While all retailers naturally seek to differentiate, many of their core processes are very similar – In order to deliver value to the business, CIO's need to know that they're focusing on the elements that make a difference to the customer (or to the bottom line), while managing the cost of the non-differentiating or "Utility" activities downwards.

Industry frameworks and the CIO's dilemma

Industry frameworks provide a way to address the issues of cost, risk and innovation by drawing on the shared experiences of a number of organizations within the same industry sector. By providing a set of patterns and blueprints for retail, a retail industry framework highlights the key activities of a retailer, and identifies elements where standard offerings may represent the best solution as well as pointing out those areas where retail organizations will seek to be different.

From a vendor's perspective, an industry framework provides a way to demonstrate a level of experience and understanding in a given domain; so the quality of a given vendor's industry framework can serve as a useful indicator of the overall capability of the vendor itself.

Frameworks and Cost

Frameworks can offer significant benefits in terms of cost, but identifying activities or processes that can be treated as "utility" frameworks provide a way to ensure that effort and expense are focused on the things that will help the retailer to compete, rather than wasting time and effort on non-differentiating functions.

Frameworks and Risk

Risk is the enemy of change and cost management. Frameworks can significantly mitigate risk by consolidating the experiences of many organizations, enabling the user to identify areas of risk, and opportunities to simplify and consolidate.

Frameworks and Innovation

Frameworks support innovation by helping organizations to focus on those areas where innovation is required, and identifying those areas where simplification and standardization are necessary. By putting in place infrastructure that is well designed, stable and readily integrated with industry specific interfaces and third-party solutions retailers can "pave the way" for innovation further up the stack.

The Survey Results

In order to better understand how retail businesses are managing their applications and what areas need the most improvement, IBM commissioned The Bathwick Group to conduct a cross-industry survey of 600 decision-makers across 7 geographies and 6 industries. More than 100 retail executives participated, resulting in a number of retail industry-specific findings relating to their ability to manage applications including:

- Business alignment of applications and responsiveness;

- Application management innovation and time to value;

- Application development and management of portfolio including performance; and

- Application modernization and risk management.

All of these activities, which are essential to ensure that application assets are in a position to support change and deliver enhanced business value, were assessed in this study, concluded in December 2007. Following are the summary findings:

- *Inflexible applications mean higher cost and lower flexibility*

- *Legacy and redundant applications represent a continued challenge*

- *End-to-end information management is key to ensuring effective supply-chain management*

- *The drive towards packaged applications and BPO is continuing as retailers move to more standardized processes*

Inflexible applications mean higher cost and lower flexibility

Retail and distribution respondents were consistently concerned about the extent to which the complexity both of the existing applications landscape and the business process set creates challenges when it comes to delivering change. 59% of respondents report that the existing application portfolio leads to a reduction in the ability of the organization to respond to market change which in turn drives higher maintenance costs, and a general reduction in competitiveness. 39% of respondents reported that inflexible or non-integrated business processes represent a real threat to competitiveness.

Frameworks allow retailers to focus on what matters: changing key business processes, integrating required applications, leveraging the data and information available near real time, and delivering new IT enabled capability. The right framework will enable retailers to have a strategic approach that is both cost effective and addresses the IT-enabled capability necessary to winning in today's retail market: centering their strategy around their customer: the shopping experience, the merchandising and management of the supply chain to best meet the needs of customers, and overall efficiencies in retail operations.

Legacy and redundant applications represent a continued challenge

While the retail and distribution industry fares better than others in the survey, 34% of all respondents report that the inflexibility of existing legacy systems represents a significant challenge and 63% admit that the complexity of their applications landscape is having an adverse impact on their ability to cope with changing business demands.

The issues created by legacy or redundant applications are clearly having a major impact on retail company strategies: 48% report significant planned investment in reducing the number of applications in use, and 69%

report significant planned investment in aligning the current application environment with business objectives.

Many leading retailers are approaching transformation progressively, implementing solutions one project at a time. This makes sense from the perspective of managing change, but without a clear set of blueprints in place to ensure that the solutions fit together with the existing ones (and that they will readily integrate with future solutions) there's a real danger that the overall system will simply become more and more difficult to integrate.

38% of respondents report that their legacy systems are misaligned with business requirements

80% of respondents report that they will be making investments in replacing current applications with packaged applications

The right framework will provide support for integrating standard packaged applications, custom and legacy applications. Being able to capitalize on reusable assets and experience developed in similar projects, lowers the risk and increase the efficiency of the development process. The frameworks implement industry best practices and open standards, to support end-to-end processes and integration with third parties. By using the ARTS RTI standard for example, retailers can quickly integrate thousands of devices, such as electronic shelf labels, kiosks and POS self service devices from multiple vendors.

End-to-end information management is key to ensuring effective supply-chain management

Retailers must have insight into the working of their whole supply chain, and the effective management and integration of information is key.

Retail and distribution industry respondents reported a slightly lower than average level of confidence in their ability to provide management with the information it requires. 75% of respondents report that managers generally demand, and get, the information they need in a timely manner. This is reinforced by the fact that 54% of respondents report that it takes too long to get information out of their systems.

54% of respondents report that it takes too long to get information out of their systems

An industry framework should enable a retailer's information agenda, extracting more business value from their data while improving the efficiency of data management across the enterprise. For example, master data management capabilities enable them to propagate a consistent set of product, customer or sales information to just about any system that needs it.

The drive towards packaged applications and BPO continues

As supply chains become more complex, with a greater number of entities engaged within them, the need for process standardization is making the adoption of packaged applications and BPO more attractive. 63% of respondents report that they are moving towards increased BPO and 59% report a shift away from custom applications to more packaged applications (with only 18% reporting a move in the opposite direction). This trend has to be balanced, however, against the fact that for many retailers – their approach to supply-chain management represents a significant commercial differentiator – so the attraction of "standardization" has to be balanced against the potential rewards of differentiation.

Conclusion

The retail industry is facing the most challenging trading environment to be been seen for several decades, rather than shying away from innovation, the most successful retail organizations over the next few years will be the ones that focus their efforts on continual innovation in those areas where it counts, and on simplification and standardization everywhere else.

Of course, it is easy to say "This is how the ideal retail organization would work…", but no major retailer has the luxury of a green-field within which to operate. It is clear from our research that retailers need to establish a clear roadmap to help them move from today's "mess" to tomorrow's orderly platform.

To overcome application-related barriers that inhibit achievement of your company's business goals, we recommend you:

- Implement the business processes and technology platform that enables your organization to innovate, by better integrating people, processes, and information

- Leverage your existing assets and unlock your application potential, including assessing both internal and external applications

- Implement changes to your applications environment in an incremental, non-disruptive manner to meet business requirements

Industry frameworks offer significant benefits to retail organizations as they set out to adapt their infrastructure and applications to meet the challenges presented by competition and the current economic climate. Retailers taking advantage of frameworks will benefit from the combined experiences of many other organizations, reducing the time it takes to implement change and deliver innovation, while lowering the risk and cost associated with it.

About The Bathwick Group

The Bathwick Group researches how businesses actually buy and apply IT to their business, how they innovate using technology, and how IT is supporting changes in market and organizational models. Our research framework is split into four key domains, each focusing on a feature that client organizations aspire to be: Dynamic, Smart, Open, and Green.

Combining primary research with trend analysis in enterprise, mid-market and small business sectors, Bathwick provides research models, benchmarking tools, market analysis, and strategic consultancy services to a variety of IT, communications, government and media clients, and helps enterprise organizations plan for technology-driven change.

The Bathwick Group also includes:

- **Bathwick Consulting LLP,** which carries out consulting projects based on our research frameworks and insights from our benchmarking activity

- **Bathwick Press LLP,** which publishes books designed to help business leaders gain insight into how IT can help to change and drive value in their organizations

- **The Think*Again* Partnership LLP,** a global collaborative research network, which brings together academics, writers, business and political leaders to generate new insights into business productivity and performance, geo-political and environmental issues

BG-R-W-00018US-EN-00