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Retail

Rethinking retailing with SOA

New levels of flexibility, agility and cost-efficiency

Today's retail institutions obtain products from multiple sources across the globe. Getting the right quantity of these items on the right shelves to meet consumer demand involves a complex set of processes and extensive collaboration among retailers, suppliers and manufacturers. Yet in an industry that depends on innovation, many retailers wage constant and costly struggles to keep up with change. It's no wonder that a powerful technology model – service-oriented architecture (SOA) – is capturing the attention of both business and IT executives.

Retailers have always had to grapple with change – in customers' needs and preferences, product assortments, sourcing relationships and supply chain capabilities, and strategies for creating differentiation. The pace and complexity of the industry makes it exceedingly difficult to keep up with marketplace dynamics, much less capitalize on them. Yet, the penalties for those who fail to do so can be severe.

The challenges retailers face – including increasing competition from traditional competitors and new entrants, information transparency and heightened expectations from diverse, more informed customers – define the retail playing field.

Today's retailers source products from all corners of the globe. Typically, a number of manufacturers, suppliers and distributors are involved, creating the need to seamlessly integrate information and applications across internal and external networks. The IT systems a company relies on to support its business must keep pace. While this might seem daunting, it doesn't have to be. Service-oriented architecture (SOA) can help retail organizations simplify complexities and resolve incompatibilities that may inhibit data integrity, information integration and partner collaboration.

Three retail industry scenarios – discussed in detail in the full version of this paper – show how SOA can help overcome common retail challenges. Specifically, we will look at how SOA's remarkable flexibility can help retail organizations optimize vendor-managed programs, tighten cost controls in global sourcing, and improve inventory and order visibility.

- *Optimizing vendor-managed inventory programs.* While vendor-managed inventory programs have taken hold throughout retail, success demands high levels of integration among suppliers, vendors and their corresponding applications. Incongruities across partners' IT systems can create information backlogs, which typically translate into longer lead times, larger safety stocks, persistent demand-supply imbalances and drops in profitability – not to mention less customer satisfaction. Integration, coordination and collaboration can have dramatic and positive effects across the value chain – from inventory and logistics, to sales, service and overall business performance. SOA provides a way to build a single, reusable interface for multiple purposes that can reduce operational and implementation costs. By better aligning the timing of inventory delivery to in-store sales, expenditures for advertising, in-store displays and other promotional items can be better coordinated and more effective.

- *Tightening cost controls in global sourcing.* Differentiating with private-label products sourced from around the world has become a key retail strategy. To optimize profit margins, retailers are increasingly bypassing

intermediaries to handle sourcing and import logistics on their own. But it's a complex process involving many different entities and innumerable data transactions – often among different information systems and parties. SOA components use open standards and a "write once, deploy repeatedly" strategy. This reuse may lead to other benefits, such as reduced systems integration time and lower maintenance costs. As the need for new services inevitably arises, SOA permits targeting precise requirements and helps eliminate the delays, redundancies and expenditures that are traditionally associated with complete application replacement.

- *Improving inventory and order visibility.* Today's customers demand a seamless, coherent experience across channels. Visibility of inventory and customer orders across the retail chain is therefore critical to consumer satisfaction and multichannel selling opportunities. This increases the need for interoperability and integration among store systems, ecommerce systems and the retailer's back-office merchandising and inventory systems. An SOA solution can deliver numerous benefits, including programmatic and realtime access to inventory levels to help improve the order process in every channel – with wide-ranging advantages that can extend to replenishment, sourcing and purchasing systems, as well as to logistics management.

Conclusion

In many ways, retailing might be one of the most fertile grounds for reaping the benefits of SOA. Not surprisingly, major retailers are rapidly structuring their IT plans around SOA. For them, SOA is a practical path to transforming operations to respond better to highly dynamic marketplace demands.

There is virtually no limit to the number of connections and configurations, with benefits that promise to reshape not only a business or an industry, but a whole economy – even the global economy. In this way, IBM believes, SOA is potentially as transformative as the Internet.

Whether you build, buy or evolve to an SOA infrastructure, the time to start is now. Optimum results usually come from starting with a small project aimed at solving a real business problem, and progressing from there. This will establish a working SOA infrastructure and reusable services that subsequent projects can build upon – first within one part of your organization, then others, and externally to suppliers and partners.

Once you've established a foundation for SOA and created your first reusable services, you'll be ready to start adding new services. You might focus on areas where you could profit from instantaneous information about an aspect of your business, or make information available to multiple users – even beyond your firewall. The experiences and services you can gain there can prepare you to roll out the SOA approach – and its benefits – to your entire enterprise.

To request a full version of this paper, e-mail us at iibv@us.ibm.com

About the authors

Vish Ganapathy, Associate Partner and Chief Architect, Retail, IBM Global Business Services

Melody Badgett, Senior Managing Consultant, IBM Global Business Services, Institute for Business Value

Jay DiMare, Associate Partner, IBM Global Business Services, Institute for Business Value.