

THE RIGHT INFRASTRUCTURE FOR SOA

A practical path to success and ROI

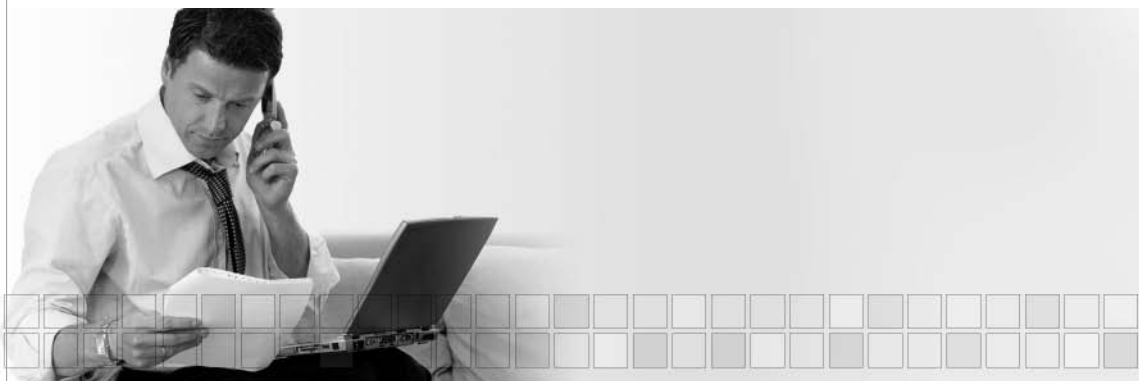




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SOA ROI: FASTER, PROVEN—WITH THE RIGHT TECHNOLOGY

Few executives and their IT leaders dispute the necessity of service-oriented architecture (SOA) as they seek the holy grail of business agility. In fact, businesses that have adopted the right SOA infrastructure and started their SOA with the right business-change projects are experiencing significant business agility breakthroughs: returns on their SOA projects in weeks or months rather than the traditional enterprise initiative timeframe, measured in years.

For example:

Starwood Hotels achieved dramatic improvements in its “look-to-book” ratio—the relationship between room availability inquiries (look) and room reservations (book). The company developed an SOA infrastructure to ensure that Web site visitors known to be more likely to book rooms at individual hotel Web sites were serviced with higher priority than those shopping for price at aggregation sites like hotels.com. As a result, the company increased the number of full-price reservations by 10%, reduced IT costs by 35%, and raised satisfaction ratings from its most important customers.

Using an SOA, Axfood, a retail company with 1300 stores across Europe, reduced its replenishment cycle time (the time it takes to replace an item purchased in a retail store from supplier to store shelf) from three days to two, decreasing its annual costs by \$10-to-\$15 million.

Pacific Blue Cross dramatically improved its business performance in two key process areas: payments and member enrollment. Pre-SOA, payments processing took three-to-four days, and enrollment took five. Now, payments are processed within a day, and new member enrollment takes less than three days to complete. Customer service levels have also improved because of visibility into process bottlenecks and automatic problem remediation.

THE “RIGHT STUFF” FOR FASTER SOA ROI

Clearly, the right SOA technologies are the fuel accelerating visible and strategic business change projects within the enterprise. In fact, this repeated proof of near-term return on investment is driving the move to SOA.

But the key to receiving optimal—and faster—breakthroughs is making the right choices about infrastructure to support a new SOA design center. How can you start on an SOA now, begin to get the benefits, and build a solid foundation for future SOA growth and escalating benefits?

The right SOA technologies are the fuel accelerating visible and strategic business-change projects within the enterprise.



DISTRIBUTED BUSINESS PROCESSES, HETEROGENEOUS SYSTEMS

Getting an SOA right isn't obvious or easy. Today's extended enterprises are distributed. Business processes execute across functions, organizations, and geographies and involve suppliers, partners, and customers. In the middle of these enterprises are numerous heterogeneous platforms, systems, applications, databases, and networks.

The challenge is to connect the people, processes, and technology: to keep them working together, yet make them flexible and responsive to changing business needs. In other words, you need optimal integration and interoperability—to be able to integrate functionality from the existing IT environment, including silo'd legacy systems, and to be open to business and IT evolution tomorrow. Since business change is now the norm, and adapting to change is critical to winning, you need IT agility to support business agility.

WEB SERVICES AND SOA INFRASTRUCTURE: THE FLEXIBLE CONNECTION

Web services or business services and the SOA infrastructure that manages them promise to provide this new level of integration and agility. Services are coarse-grained units of business logic, developed on a wide variety of development platforms and deployed throughout the extended enterprise. They are ready to be orchestrated in real time, dynamically reconfigured, and artfully managed through lifecycles involving an unprecedented frequency of changes.

However, companies need the right SOA infrastructure to truly support the business and deliver on the SOA promise of business agility and lower IT costs. This infrastructure should be able to support a high-change environment—as well as the broadest possible service deployment for enterprise-wide SOA adoption. That means that it must fundamentally be integration-centric: to make fast, seamless, reliable connections across heterogeneous systems (including legacy computing resources) and link people, functions, and computing resources distributed across and, often, beyond enterprise boundaries.

As a result, as you develop plans for an SOA within the enterprise and decide on a strategic technology partner, you need to focus on several critical issues related to the flexible, fast-changing, cross-boundary nature of SOAs—to realize the full potential of your SOA.

You need optimal integration and interoperability to be able to integrate functionality from the existing IT environment.



CHOOSING THE RIGHT SOA

In choosing an SOA infrastructure provider, you need to start by looking for a vendor whose SOA vision you share. This is a prerequisite for aligning the technology with your business goals.

THE PROGRESS VISION

In our vision, the architecture of business applications and the infrastructure that supports them no longer create rigid business systems and change-resistant processes, but, instead, are able to support the timely execution of business decisions. In this world, based on agile technology, agile businesses respond more quickly to market changes and customer demands, adjust their business practices in real time, and deliver new products and services faster than their competition.


Many Progress customers share this vision, as, in fact, do many of our competitors. However, three key considerations crucial to making the right SOA decision help to set the Progress product portfolio and SOA approach apart from the multitude of vendor stories being told in the marketplace today. Here are some guidelines for thinking about these issues in the course of making the right SOA decision.

DECISION FRAMEWORK

Anticipate cross-cutting concerns.

First, as you look forward in time to an environment in which SOA and business services have been broadly adopted, you need to anticipate the cross-cutting concerns—the connections that link distributed enterprises and heterogeneous systems together—that the infrastructure supporting SOA must address and manage. Ask yourself “How do I”:

- > Support integration of new and existing business applications across **organizational boundaries** and to **remote sites**.
- > Guarantee low **latency**, high **reliability**, and continuous **availability**?
- > Enforce **security, compliance, and business policy** across multiple services?
- > Know customers are receiving the **performance levels** I've agreed to?
- > Address the expanding problem of **data format and semantic inconsistency** across my SOA?



Progress products are designed specifically to address these cross-cutting issues at the heart of a successful SOA. They are built for optimal integration and interoperability and are modular, for scalable SOA adoption. As a result, they provide the foundation for managing loosely coupled business processes so that these processes can seamlessly bridge computing, organizational, geographic, and semantic boundaries. Progress products also allow companies to deploy a practical SOA that includes today's existing systems and can scale, by stages:

> **The Progress® Sonic ESB® Product Family:** Built from the ground up for SOA, the Sonic product family—consisting of Sonic ESB and a comprehensive set of compatible products—provides a cohesive, standards-based solution to the challenge of broad-scale business integration. Sonic ESB is robust infrastructure software that integrates large, physically distributed deployments—addressing SOA cross-cutting concerns with complex service orchestration, operational data management, and seamless interoperability with third-party relational data sources, packaged applications, and technologies. Other Sonic family products simplify application integration within an SOA.

Unlike traditional EAI technologies, these products are modular and service-oriented, allowing you to dynamically deploy just the functionality you need, where and when you need it. As a result, you can have an SOA and its business benefits now, while you are building a foundation for the long term.

> **Progress® Actional® SOA Management Product Family:** Actional provides a comprehensive management solution that gives you visibility, security, and control of the activities of services and end-to-end business processes that execute in heterogeneous, distributed environments. In tracking these business processes across the boundaries of diverse applications, data sources, and systems, Actional correlates IT metrics with their business context to actively align SOA operations with business criteria (for example, with service-level agreements). It also enforces a single set of security, compliance, and business policies across all enterprise activities and business and ensures that IT serves business goals. And only Actional can detect the activities of uncontrolled, rogue services, thereby eliminating the security and compliance risks of unexpected service use and deployment.

> **Progress® DataXtend™ Product Family:** Connecting services from diverse applications isn't enough. They need to be able to talk to each other. The DataXtend product line provides data integration across the boundaries of heterogeneous, distributed applications, delivering real-time views of shared data in the form that applications need. It offers a unique approach to data management problems, employing a common semantic data model to create sophisticated data transformations, enabling organizations to integrate heterogeneous data sources with no disruption to existing applications.



DataXtend Semantic Integrator addresses the semantic data integration challenges in SOA by simplifying common data model lifecycle management, transformation and validation. This newest addition to the Progress DataXtend family of products enables systems to be integrated quickly and easily, ensuring the agility and reuse made possible by emerging SOAs.

Consider the differences between application platform and best-in-class vendors.

A second critical consideration is whether to acquire SOA infrastructure capability from an application platform vendor as part of a broader offering or to partner with a **best-in-class** vendor whose design center and strategic focus are on the SOA capabilities required “in the middle,” at the points of intersection between platforms, departments, and organizations.

J2EE application servers and large enterprise application platforms have significant capabilities and address certain business application challenges very well. Their J2EE environment is excellent for developing applications for large-scale generation of complex Web pages. Their tooling support is strong. Within the context of the specific application server in question, be that BEA WebLogic or IBM WebSphere, these stacks have functionality that is important to many enterprises.

However, a variety of challenges emerge “beyond the tipping point” of SOA adoption—discussed previously as the “cross-cutting concerns” of SOA, which these platforms do not address particularly well.

The key differences are summarized here:

Platform vendors define your IT infrastructure around their application platform. They provide limited interoperability with systems beyond their own except through standards support.

As a consequence, performance at platform boundaries suffers when the platform vendor is providing the communication infrastructure. Reliability degrades. Platform vendors also typically avoid the issue of continuous availability if an application or process has an execution step or dependency beyond their proprietary stack.

For similar reasons, the platform vendors provide only second-order monitoring and management capabilities over services that are deployed outside their platform. Enforcing business or IT policy outside their proprietary container and platform is labor-intensive and requires significant customization and, therefore, high maintenance.

But, perhaps most important, the platform, be it J2EE or an enterprise application like ERP, imposes considerable, costly, and complex software footprint requirements. Frequently, when any



component of SOA infrastructure capability is needed, all components of the integrated stack need to be installed, configured, and managed. This architecture becomes costly very quickly when software, hardware, and staff and services costs are considered *in toto*.

By contrast, Progress is a best-in-class SOA infrastructure vendor and, as such, focuses exclusively on the requirements that emerge at the platform, department, or organization boundaries typical of SOA. Progress Sonic ESB delivers unmatched performance and reliability for messaging and service interactions across distributed, heterogeneous environments. Progress Actional products meet the management challenges SOA presents via SOA operations, continuous service optimization, and active policy enforcement capabilities. Progress DataXtend Semantic Integrator addresses the compelling challenge of ensuring consistency in the meaning and representation of data in an SOA world, where information crosses multiple schema and system-of-record boundaries.

And Progress offerings are architected to enable customers to deploy the set of capabilities needed, where they are needed. As opposed to a second-order concern, Progress places the challenges of the diverse, heterogeneous, and distributed world defined by SOA at the design center.

Third and last, an SOA infrastructure vendor's **experience**, manifest in the intellectual property it can bring to SOA projects, should be a critical factor in your choice of a strategic SOA partner. Robust support and service offerings, replete with best practices and methodologies derived from hundreds of SOA engagements, transform technology into a "whole product" offering that delivers the business benefits available in SOA.

*Look for experience.
It counts.*

Progress has worked with customers to deploy hundreds of projects and, based on lessons learned from this experience, defined an SOA Maturity Model to help you structure a successful path from the development of initial reusable Web services to a fully formed, enterprise-wide SOA that can transform the business and optimize business processes. The details of this model, which provides a practical roadmap for getting started on an SOA **now** and receiving an escalating series of benefits as you extend the SOA in key stages, are available at www.progress.com/sonic/soa-maturity.

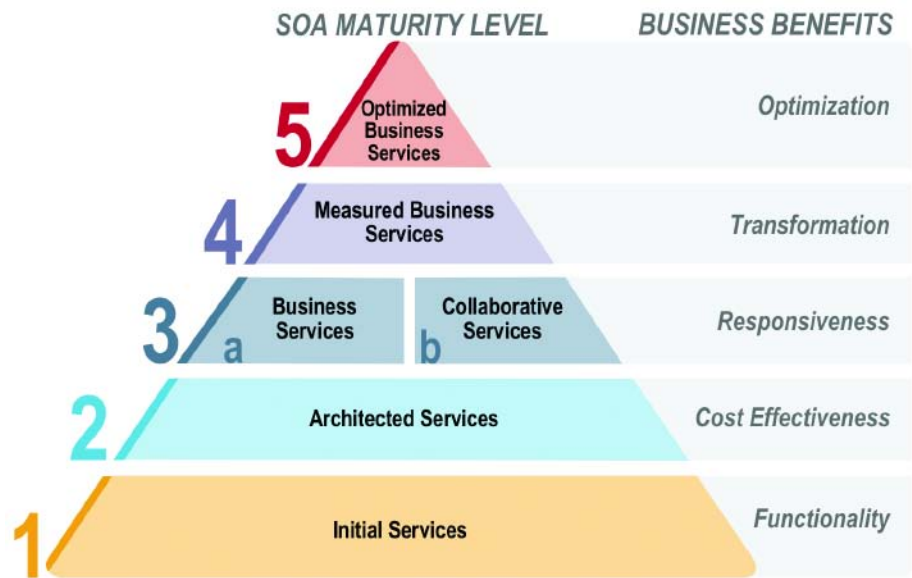


Figure 1: Progress SOA Maturity Model

SUMMARY

To deliver the business agility promised by SOA requires technology that can truly cross boundaries and connect today's distributed organizations and heterogeneous systems, quickly, seamlessly, and reliably. Progress focuses, as no platform vendor can, on the cross-cutting concerns in SOA. Progress also has the hands-on implementation experience to reduce the risk of SOA projects while delivering the available business benefits, as outlined in the SOA Maturity Model. And this practical SOA approach enables companies to get started on SOA today and break it down into achievable projects that progressively deliver greater and greater business benefits. A practical path to SOA success and ROI—that's Progress.

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Prod. Code 8095



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