

The Mainstream

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Getting SOA right from the start: Business process modeling and assembly

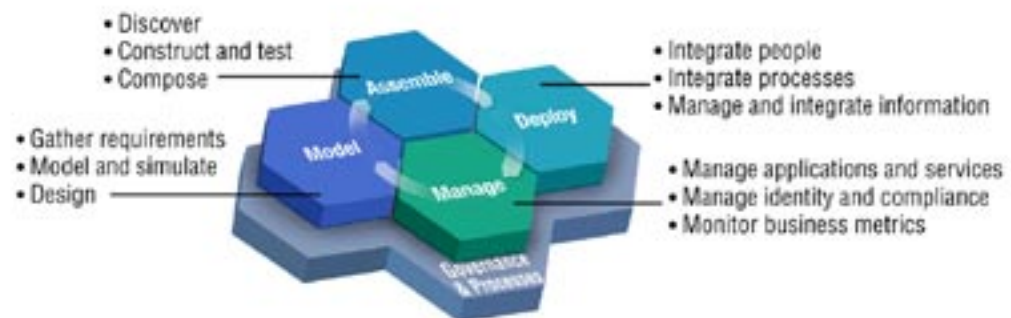
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A medium-sized business employed a talented systems architect who had spent 15 years in the CICS® side of IT. She moved out of that group, but when it came time to analyze and document business processes for CICS applications, she was the only one who understood the processes and how the systems were put together. Fortunately for the company, she still worked there.

Storing process knowledge in the minds of employees is unwise. Few companies realize the risks they're running when they lack well-defined and well-documented business processes until an unplanned event hits. This is one of many risks mitigated by implementing a service oriented architecture (SOA).

In the last issue of Mainstream we published a comprehensive [overview of SOA](#), its drivers and the role of the mainframe in its successful implementation via a life cycle approach.

In this article, we'll explore the first phases of the SOA life cycle: business process modeling and assembly.



The IBM SOA foundation is an integrated, open set of software, best practices and methodologies that extend the value of new and existing resources.

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Understanding business objectives and collecting metrics

The SOA life cycle approach is considered best practices in achieving the business flexibility required to be an On Demand business – from modeling and assembling, to deploying and monitoring. The Model phase of the IT process starts with discovering which program assets you already have that you can reuse in new applications. And good business process modeling is always based on good results definitions.

The importance of these definitions is clear when you later monitor your SOA-based applications (preferably before they're in production). You're monitoring them according to critical success factors (CSFs) and those are measured by key performance indicators (KPIs). KPI metrics reflect and are used to assess the present state of business, measure progress toward organizational goals and to prescribe the course of action. The KPIs differ depending on the nature of the organization, but they are always established during modeling.

This is how it begins:

- *Identify your business objectives, and their critical success factors*
- *Determine which set of key performance indicators (KPIs) will accurately measure how well you're meeting your business objectives*
- *Model your business processes in line with the KPIs*

But here at the very beginning is where some companies go wrong, that is, modeling a business process designed for business results that are not what the company needs to achieve. For example, let's say a goal is set to drive a certain amount of revenue. This may lead to a KPI that IT drive a specific number of transactions through the system in a specific timeframe.

To validate whether this is the right KPI for the business objective, you need a business process in place that's well-understood at a granular level. Otherwise, you risk relying on an efficient process that may deliver the results (driving more transactions), but the wrong kind – not the target market, or not the right type of transaction.

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If you discover later that you're not meeting KPIs, return to the modeling phase, analyze the business processes that aren't achieving their KPIs and make adjustments. This closed loop life cycle of SOA, with its ongoing process improvements, makes it extremely valuable for improving the efficiency of your business.

SOA tools: Role-based or one-size-fits-all?

When KPIs are established, many businesses use special tools to help model and build their SOA services. Unfortunately, some companies try to save money by purchasing a "one size fits all" software product. For an enterprise embarking on the SOA journey, that can sound the death knell. Let's say that to get started on business process modeling, you purchase one tool claiming to support the entire life cycle. You purchase the product and give it to whom? The development group?

It takes a range of skills and tools to implement an SOA, and business process modeling generally requires business skills up front. "Business analysts usually have the broadest view of the business, or the customer view, and a clear understanding of why a person is a potential customer," says Rick Thomas, program director for IBM enterprise software. "Line of business managers have that understanding, and systems and application architects can help to bridge the gap between how IT systems fit with the business result."

That's why IBM recommends using role-based products throughout the SOA life cycle, such as the [IBM WebSphere Business Modeler](#). Designed for business analysts or system and application architects, it helps them model, simulate, and analyze complex business processes quickly and effectively. Once the process models are defined and documented, they are used by system and application architects to determine which software services to develop and drive through the rest of the development cycle.

While IBM WebSphere® Business Modeler models the business processes and identifies the services, the [IBM Rational Software Architect](#) designs the services architecture by helping software architects visually model and design service-oriented applications, and then assemble them.

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[IBM WebSphere Integration Developer](#) simplifies process integration and enables true business-driven development by importing models for rapid implementation.

Integration between these products enables teams to transform business models to software models that will automate business activities. The integration automatically maps business notation to software notation (UML), relieving designers of that conversion burden and ensuring that the software model does not inadvertently make changes to the business process.

The direct link between business processes and software services, and the inherent modularity of service-oriented applications, means that both current and future business requirements will be met.

Putting it all together: Assembling an SOA

Manually creating Web services, or developing systems that use existing Web services, requires time-consuming, tedious and error-prone work. In an SOA environment, many tasks can be automated. For COBOL, PL/I, CICS®, IMS™, and composite developers, [IBM WebSphere Developer for zSeries®](#) is the recommended solution for supporting Web, SOA and traditional product development.

It lets you automate common tasks, such as defining and generating Model View Controller based application infrastructures (including supporting Web Service and connector-based frameworks linking WebSphere with CICS and IMS transactional environments). It also offers specific extensions to the IBM Rational Application Developer supporting the COBOL and PL/I business-focused languages. Large scale development teams can support maintenance, new development, and application modernization tasks from a common single environment.

[IBM Rational Application Developer](#) is a comprehensive integrated service-oriented development environment that automates many of the tasks commonly performed in the construction and use of Web services. It frees developers to focus on writing business logic code while it automates other development tasks.

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Conclusion

Why is SOA on everyone's mind? Because SOA makes it easier to link core systems to new applications – no matter what the next wave of technology brings. It facilitates the improvement of internal business processes by analyzing, improving, automating or creating new business. And it enhances shared business processes with its platform-independence. Learn all you can about the SOA life cycle and methodology before undertaking business process modeling, and you will save valuable time, money and resources.

In the next issue of Mainstream we'll look at deployment of applications in an SOA environment and how to ensure an efficient, seamless transition to the new model.

For more information:

[SOA overview](#)

[SOA design and development](#)

[SOA flexibility in action: New product announcements](#)

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