



IBM Global Business Services

SOA Operations Management Implications

Johnny G. Barnes
IBM Global Business Services
Public Sector
Vice President and CTO

SOA – Business Value

- Generic Business Value for IBM Internal
 - **Increase responsiveness and flexibility:** to customer demand, market conditions, competitive landscape, mergers and acquisitions
 - **Reduce Costs:** Create business functions rapidly at reduced development costs through reuse – “build once and leverage”
 - **Improve partner interoperability:** by conducting B2B transactions based on open standards
 - **Enhance enterprise end-to-end integration:** with simpler inter-systems communications, ability to 'snap in' new applications, and ease migration between application releases
- IBM Internal Specific Business drivers for SOA
 - **Leverage older investments:** extend ROI of legacy applications until they can be fully sunset
 - **Reduce Costs:** IBM Enterprise Component reuse to eliminate redundant development and support costs
 - **IBM Value Network:** Extension of the IBM enterprise into a value network, whereby business partners can provide services to IBM operations, in addition to consuming IBM services.
 - **Simplify integration of 3rd party products:** Reduce proprietary technical dependency on 3rd party resources
 - **Unified IBM Enterprise Architecture:** based on component services interactions
 - **Meet business goals:** fuse business and IT designs to improve IT mapping to original business intent

SOA Implications – Primary IBM Internal Focus Areas

- **SOA Initiative** – the approach for Enterprise and Business Unit Components
- **Enterprise Architecture** – integrated services / component view across business unit architectures
- **Services / Component Identification** – common Enterprise and Business Unit services, with emphasis on component funding, ownership, & governance
- **Services Reuse** – requiring culture and governance changes
- **Skills** – education and retention for projects developing SOA+ content
- **Interoperability** standardization – emphasis due to the increasing number of interactions involving multiple services
- **Legacy Integration** – longer term use, enhancements, or incremental migration
- **3rd Party Packages** – reduce dependency on proprietary interfaces (
- **ESB** – Corporate-wide Enterprise Service Bus (ESB) strategy
 - **Complex Event Management** – especially for composite applications and inter-dependent services
 - **Sense and Respond** – instrumentation of services and processes for real-time feedback
- **Internal infrastructure (AHE)** - leverage of UMI (Universal Management Infrastructure)

SOA Implications – IBM Internal ‘Systems’ of Services

- **Composite Applications:** New IT functions resulting from the assembly of multiple services
- **Size and quantity:** Smaller and more independent service producing components, rather than larger, singular, monolithic applications
- **Life cycle management:** More complex life cycle mgmt for integrated sets of small services
- **Interoperability standardization:** for more interactions involving multiple services
- **Dependencies:** Resultant greater degree of inter-dependency among IT functions
- **SaR:** More sophisticated sense and respond instrumentation to monitor sets of services
- **Integrated logging:** Increased operations logging capabilities for an integrated view of a 'system' of inter-dependent services
- **Complex event management:** of interactions with a larger number of services involved in a single solution.
- **SLA effects:** Combined / integrated SLA (Service Level Agreement) view of a set of services used for a single business operation, and associated performance ramifications

SOA Implications – Internal Infrastructure Needs

- **Deployment:** Standardized and efficient provisioning / deployment mechanism
 - Rapid testing, deployment, and updates: of single services or sets of multiple services.
 - Complexities: single services reused by multiple IT projects, and single IT project dependent on multiple services
- **SLA and QoS:** Service Level Agreement and Quality of Service management for a single and coordinated sets of independent services
 - **Monitoring:** Common monitoring and automated response mgmt functions & status of a logical set of Web services and views of services operational usage
 - **Logging:** enhanced logging for integrated history of a 'system' of inter-dependent services
 - **PSA:** Uniform method of providing Performance, Scalability, and availability enhancements
- **Metering:** standardized usage metering functions to support pay per use billing models
- **Security:** threat management, entitlements, authentication, authorization
- **Boarding:** Common and simplified boarding processes to use services
- **ESB & Event Management:** Enterprise common Enterprise Service Bus and Event Management functions deployed & administered in the shared infrastructure
- **SOA Operational Platforms:** management of key platforms (e.g., WAS, WBI-SF, WBI Message Broker, WBI Monitor), and Autonomic Computing facilities
- **Standards:** Industry based (e.g., OASIS "Management Using Web Services" - MUWS)
- **Grid:** Grid Services support