



Service Oriented Architecture

OVERVIEW

The pressure on enterprises to improve operational efficiency and response times to new competitive threats and market opportunities has never been greater. This pressure is forcing businesses to reevaluate the way they operate, the way IT supports their existing operations and the opportunities for current IT systems to be adapted to support longer term business evolution

In order for a business to achieve this state of *true business agility*, the organization needs to leverage existing IT systems as much as possible, while optimally aligning the relationship between Business and IT. The most important development is that the traditional gap that exists between Business and IT needs to be bridged. This allows IT to better understand and cater to the needs of the business, while business executives are able to respond more quickly and effectively to changing business needs.

The alignment will enable the business to re-use existing system and business knowledge; to reduce duplication of systems, applications and business processes of the organizations; and to market in faster time resulting in overall customer satisfaction.

OmniSolve Inc. (OmniSolve) helps you to identify and align your IT capabilities and services with your cross-functional business processes in order to deliver the intended value. We assist you in understanding opportunities required to identify IT capabilities and expose them as services aligned with the business processes. We bring best practices, years of experience, lessons learned, and the right resources to focus on the problems at hand.

Our Service Oriented Architecture (SOA) Team specializes in creating practical service oriented solutions for complex business process challenges.

CHALLENGES

We recognize the fact that there are direct benefits of SOA but they are gradual in nature and become visible once the architecture becomes stable in an organization.

In fact, there are multiple challenges that an organization faces when implementing SOA. These challenges are summarized below:

- **Managing evolutionary path to successful SOA environment.**
 - Strategy
 - Architecture
- **Implementing SOA Governance**
 - Service policy and security
 - Service ownership
 - Infrastructure
- **Leverage the existing IT infrastructure and investments in SOA environment.**
- **Upfront cost of SOA infrastructure**
- **Guaranteeing quality of Service**
- **SOA performance scalability from pilot to production.**

APPROACH

We will work with your business/technology leaders and staff at all levels to provide a truly independent and unfettered perspective about how and where to focus our business agility improvement efforts. Specifically, we will address the following SOA areas:

- **SOA Business Architecture**
- **SOA Solution Architecture**
- **SOA Service Infrastructure**

OmniSolve's approach incorporates elements of Model Driven Architecture (MDA), Business Process Management (BPM) and Service Oriented Application Development (SOAD) tools to address the entire SDLC.

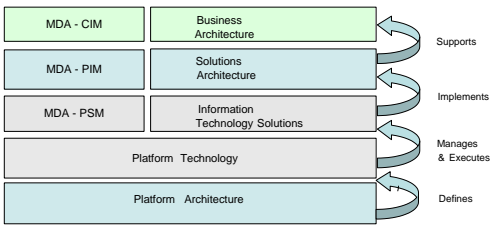
OMNISOLVE OFFERS...

- **Talented, experienced, highly trained SOA expert consultants**
- **In-depth experience in service oriented requirements gathering and analysis to ensure solutions conform to customer needs**
- **Experience in working with business lines and providing practical SOA solutions to solving business problems**
- **A results oriented approach as demonstrated by successful past performances**
- **The Enterprise Architecture can be used to document the "As-Is" and "To-Be" Enterprise's Systems, Organization and Processes. A SOA framework may provide an enterprise architecture modeling framework to identify the collaborative view of the Enterprise Architecture.**
- **In addition, a SOA framework supported by Model Driven Approach can provide an architectural traceability from business view to the implementation view.**

APPROACH – Continued

In order to provide the best SOA solution strategy for your organization, we will educate ourselves on your operational processes to better understand the business environment and challenges you face.

MDA & SOA Reference Architecture Views



Based on that input and in close consultation with the customer, OmniSolve will employ one or combination of the following strategies:

Top-Down

This approach requires analysis of business processes, and associated roles. The business processes provide the basis for identifying the collaborations and role interactions.

The interactions in turn provide the basis for identifying the business services. The business services, in turn, are used to identify and design application specific and utility services for the implementation. This approach has the following characteristics:

- Can be applied across the entire Enterprise – involving more than one business line and/or unit
- May apply a business discipline area such as Accounting, Acquisition, etc. to normalize collaborations and interactions for a To-Be architecture.
- Has significant up-front analysis
- Identifies business coarse grained, high quality services
- Is candidate for maximum reusability
- Establishes a framework for standardized and federated enterprise
- Maintains service adaptability.

Bottom-Up

This approach requires the analysis of the applications or systems supporting a business process. Often times, the integration points of the application provides the basis for identifying application specific services which may not have the granularity required to provide business agility but can be considered as a base iteration to eventual identification and design of more granular business services. This approach has the following characteristics:

- Application Integration is primary motivator
- May lead to point to point type of integration
- Web services are built on an “as-needed” basis to encapsulate application logic

Middle-Ground

This approach utilizes the combination of top-down and bottom-up approaches in iterative and “small chunks” fashion. It requires the analysis of the application(s) supporting the business unit as well as chunks of the business process.

EXPERIENCE

OmniSolve has participated in a multitude of SOA projects, ranging from relatively simple solutions to highly complex. The follow reflects some of our past experience...

• DOJ Enterprise Service Bus (ESB)

OmniSolve developed information sharing platform for Joint Automated Booking System (JABS) program based on an enterprise service bus using Oracle Service Bus (OSB) and Oracle SOA Suite technology. The platform was developed based on latest WS-* standards and utilized BPEL as workflow engine, SCA (Service Component Architecture) as composite application. Prior to the implementation, OmniSolve conducted a bottom up analysis and applied Rational Unified Process (RUP) methodology to manage the project and produce the relevant artifacts. The requirements were gathered using the use cases and the message and information models were developed based on Law Enforcement Exchange Specification(LEXS) and National Information Exchange Model (NIEM) respectively.

- GSA Contract Writing Enterprise Architecture (CWEA)
OmniSolve developed the business and solution model for GSA Acquisition Contract Writing utilizing the OMG EDOC collaboration framework. The collaborative business model spanned the PBS and FAS acquisition across GSA enterprise. The model included the service protocols, roles and information elements in contract writing.
- GSA Financial Management Enterprise Architecture (FMEA)
OmniSolve developed implementing an open source based SOA platform for Asset Accounting for GSA OCIO. The FMEA business model and service model was extended into platform specific SOA infrastructure.
- GSA Human Resource Enterprise Architecture (HREA)

OmniSolve modeled the core and and it is in the process of modeling the non-core GSA HRLoB across all 11 regions as well as the PBS, FAS and Staff Office Services utilizing the OMG SoaML framework. The framework identified the shared business services required across the entire GSA. The GSA HREA business model is prerequisite requirement and analysis stages of SOA implementation.

COMPLEMENTARY SERVICE OFFERINGS

Other services offered by OmniSolve that complement this offering:

- Program Management Office
- Project Management
- Application Development
- Application Integration
- Enterprise Architecture
- Solutions Strategy
- Performance Management

For further information about the material presented in this document, or to arrange a consultation, please contact:

APPROACH HIGHLIGHTS

- **Business agility – ability to respond quickly to environment with minimal impact to IT systems.**
- **Tight oversight and control to ensure projects remain on schedule, on budget, and deliverables are high quality and to the customer’s satisfaction**
- **Conduct high level meetings with senior management to understand SOA goals and priorities of the organization**
- **Develop Standard SOA Operating Procedures and Governance**
- **Experience in evaluating, configuring, and implementing SOA Application Development tools**



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