



# International Systems Group, Inc.



U.S. General Services Administration

**Federal Supply Service**

**Authorized Federal Supply Schedule Pricelist**

## **Schedule 70 - General Purpose Commercial Information Technology Equipment, Software, and Services**

**SIN 132-50 - TRAINING COURSES FOR INFORMATION TECHNOLOGY EQUIPMENT AND SOFTWARE (FPDS Code U012)**

### **SIN 132-51 - INFORMATION TECHNOLOGY (IT) PROFESSIONAL SERVICES**

FPDS Code D302	IT Systems Development Services
FPDS Code D306	IT Systems Analysis Services
FPDS Code D307	Automated Information Systems Design and Integration Services
FPDS Code D308	Programming Services

**Contract Number:** GS-35F-0014W  
**Contract Period:** Oct. 5<sup>th</sup>, 2009 – Oct. 4<sup>th</sup>, 2014  
**Contractor Name:** International Systems Group, Inc.  
**Address:** 7 West 96 Street, Suite 17C, New York, NY 10025  
**Telephone:** 212-489-0400  
**Fax:** 212-489-1125  
**Web Site:** [www.isg-inc.com](http://www.isg-inc.com)  
**Contact:** Max Dolgicer  
**Email:** [mdolgicer@isg-inc.com](mailto:mdolgicer@isg-inc.com)  
**Business Size:** Small

Products and ordering information in this Authorized FSS Information Technology Schedule Pricelist are also available on the GSA Advantage! System. Agencies can browse GSA Advantage! by accessing the Federal Acquisition Service's Home Page via the Internet at <http://www.fss.gsa.gov/>

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## Company Overview

International Systems Group (ISG), Inc (www.isg-inc.com) is a provider of strategic consulting, project management, architecture, and development/integration services to Fortune 2000 companies and government agencies. ISG helps organizations with development and implementation of large-scale distributed applications, enterprise application integration, and the migration to Service Oriented Architectures (SOA).

ISG has been serving its clients for over 17 years and has extensive public- and private-sector experience. Requirements, technologies, and solutions keep changing, but one constant keeps proving itself: *there is no substitute for experience*. We are proud to look back on a long track record of successful projects, and we are looking forward to assist our government clients to navigate the challenges they are facing today. Every new project we engage in builds on the best practices established in past projects, and at the same time we strive to remain a thought leader in IT – our key personnel is well published and regularly speaks at major industry events.

Over the years we have assisted our clients through the evolution of approaches and technologies to build and integrate IT systems, and we now focus on helping organizations realize the promise that enterprise Service Oriented Architecture (eSOA) holds. We provide a comprehensive range of services to ensure success with SOA and build strong, lasting partnerships with our clients. Together we achieve:

- A transformation of IT to exploit the potential of eSOA.
- Improved alignment of IT with the goals of the business.
- Increased efficiency of business system development.
- Seamless integration of existing systems.

## What Sets Us Apart:

We believe there are three factors that set us apart from other consulting firms in our domain:

### 1. *Breadth of expertise*

We have often been involved in projects that focused either on the integration of existing systems or the development of new applications. However, we have long proposed that these two disciplines need to be addressed in a synergistic way. The recent advances of Service Oriented Architectures have greatly facilitated this approach of developing “integratable” software assets, or integrating systems through a composition of assets that is more than the sum of its parts. To exploit the potential of SOA in this regard, it is mandatory to be able to draw from a broad range of experience in both the development and integration domain. We believe that our company offers a unique combination of skills and expertise based on our long standing involvement and leadership in the industry.

### 2. *The A-team approach*

The relatively small size of ISG allows us to maintain a very flat hierarchy. There aren't several layers of decision making – any one of our consultants has direct access to our management. Furthermore, our teams have been working together for many years and there are no junior level team members, which translates into very low communication overhead. We do not employ teams that rely on the experience of a few senior people and “training on the job” for the rest. As a result, our approach always yields substantial savings to the customer in terms of the number of consultants required for the project, streamlined execution and shortened time to market.

### 3. *Delivering lasting value*

ISG's clients are looking for more than a solution to their immediate needs. They don't want a consulting firm to allocate resources to a project, “fix the problem”, and then leave the client without the proper expertise. We deliver lasting value through methodology, structured knowledge transfer, and by building reusable assets. We achieve knowledge transfer through seminars, mentoring services, and competence

centers. We build architectures and frameworks that are not narrowly focused on the immediate project requirements, but rather ensure ROI through reuse across multiple projects.

## How We Can Help

ISG offers a progressive range of services that provide the perfect fit for our clients: the right level of assistance at the right time. In order to deliver the best value we first identify how a project maps into the SOA maturity continuum, given the current state of the client's SOA maturity. Based on this assessment we propose a phased approach that is optimized for our client's needs and capabilities.

We have the resources to satisfy a wide range of requirements, from the first steps into SOA to highly advanced solutions. Here is a quick overview of how we can help:

### 1. Business and IT Alignment

We can help you formalize a clear vision on how IT provides value through alignment with business demands, achieve consensus on how to employ SOA across a multitude of initiatives, maximizing efficiency and synergy, optimizing organizational structures and technology strategies.

### 2. Roadmap Development

The goal of an eSOA Roadmap is to optimize the implementation of service based applications across current and planned projects and to guide the evolution of an IT organization through the stages of increasing eSOA maturity.

### 3. Program Management & Governance

In order to truly benefit from SOA it has to be managed in the context of more than one application or project. We establish an eSOA program that will let you capitalize on the promises of SOA by scaling it to an enterprise level.

### 4. Mentoring

Our eSOA Mentoring offering is structured as a program that lets you tap into the knowledge and hands-on expertise of our consultants on demand. Whenever you are facing critical decisions in your project or your staff is overloaded and cannot meet project milestones on time, we will be ready to assist you.

### 5. Architecture Development

ISG's eSOA Architecture Practice provides your organization with assistance and guidance for the development of an enterprise Service Oriented Architecture (eSOA) that is optimized for your particular needs.

### 6. Service Modeling, Design & Coding

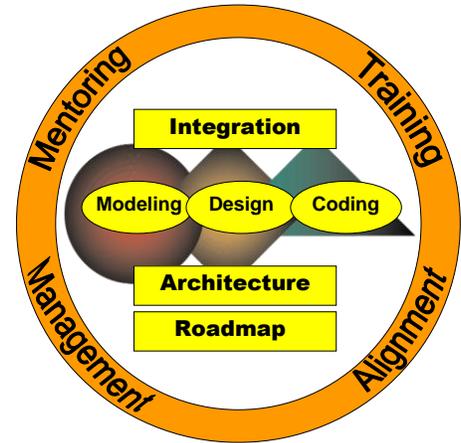
ISG's eSOA Modeling, Design, and Coding practice provides your organization with assistance, guidance and highly skilled development resources for the successful implementation of new business systems – from conception to rollout.

### 7. Service Oriented Integration (SOI) Practice

Too often companies end up with silos of services that are too difficult to integrate and manage. We provide a best practice based approach that is rooted in experience with SOI projects, so that you can reap the benefits that SOI promises.

### 8. Training

ISG provides comprehensive seminars that have educated thousands of IT professionals in every aspect of SOA standards, technologies, and best practices.



## Pricing

### Pricing for Special Item Number 132-50: Training Courses

ISG's seminar pricing is based on a tiered, per seat schedule that provides progressive discounts when the number of students increases. In order to ensure that all attendees derive the most benefit from the class the size is limited to a maximum of 30 students. Please see page 8 for descriptions of the seminars.

Seminar code	Class duration	Price per attendee		
		First 10	Next 10	Last 10
SOA-G	3 days	826	769	712
SOA-I	3 days	826	769	712
SOA-M	1 day	503	475	446
SOA-D	2 days	636	598	560
EAI-G	3 days	636	598	560

Table 1 Pricing Structure for Training Courses

### Pricing for Special Item Number 132-51: IT Professional Services

ISG's services are based on an hourly rate structure.. The labor categories required to perform each service were listed at the end of each service description above. Please see page 18 for descriptions of the professional services we offer, and page 26 for a description of the labor categories.

Labor Category	GSA Hourly Rate
Technical Manager / Lead Architect	\$175
Enterprise Architect	\$170
Senior Architect	\$141
J2EE Software Engineer	\$141
J2EE Front-end Specialist	\$141

Table 2 Rate Structure for IT Professional Services

## **Customer Ordering Information**

**1. Geographic scope**

Domestic and overseas delivery

**2. Ordering and payment address**

International Systems Group, Inc., 7 West 96 Street, Suite 17C, New York, NY 10025

**3. Acceptance of Government purchase cards**

Credit cards are accepted for payments equal to or less than the micro-purchase threshold. Credit cards will not be acceptable for payment above the micro-purchase threshold.

**4. Data Universal Numbering System (DUNS) Number**

621883818

**5. Notification regarding registration in Central Contractor Registration (CCR) database**

Active; renewed annually. CAGE Code is 3T4T9.

**6. Type of Contractor**

Small Business

**7. Taxpayer Identification Number (TIN)**

13-3158774

**8. FOB point**

Destination

**9. Time of delivery**

As agreed between ISG and agency.

**10. Place of performance**

Services and training will be provided at ISG's facility and/or at the ordering activity's location, as agreed to by ISG and the ordering activity.

**11. Urgent requirements**

Contact Contractor for special needs.

**12. Minimum order**

\$500

**13. Maximum order**

Special Item Number (SIN) 132-51: \$500,000.

Special Item Number (SIN) 132-50: \$25,000.

**14. Ordering procedures**

Ordering activities shall use the ordering procedures of Federal Acquisition Regulation (FAR) 8.405 when placing an order or establishing a BPA for services.

**15. Prompt payment terms**

Payment terms are Net 30 days.

**16. Installation, deinstallation, reinstallation**

Not applicable.

**17. Section 508 compliance**

Not applicable.

## **Description of training courses (Special Item Number 132-50)**

ISG provides comprehensive seminars that have educated thousands of IT professionals in every aspect of SOA standards, technologies, and best practices. In addition to the seminars listed below ISG also provides customized training in order to address the specific needs of a particular client.

ISG's classroom lectures are priced at a per-seat structure and depend on the type of class. The pricing structure for each class can be found on page **Error! Bookmark not defined.**

Our seminar offerings include:

- 1. Service Oriented Architectures (SOA) – Architecture, Governance, Standards and Technologies**
- 2. SOA - An IT Manager's Guide**
- 3. Modeling, Designing and Implementing Service Based Applications**
- 4. Service Oriented Integration (SOI) - Concepts, Technologies, and Best Practices**
- 5. Enterprise Application Integration (EAI) – Architectures, Technologies, and Best Practices**

## **1. Service Oriented Architectures (SOA) – Architecture, Governance, Standards and Technologies**

(Seminar code: SOA-G; Duration: 3 days)

### Give Your Business the Competitive Edge

SOA has rapidly seized the momentum and center stage because it is seen as the key for enterprises to achieve business agility, improved quality of service, lowered total cost of ownership and to align business with technology. For many SOA is seen as an enabler for rapid creation of new IT capabilities, making companies more agile in an always changing market place. Over the recent years, many Fortune companies have started to embrace a SOA approach for development and integration projects. Now they are embarking on the next step – a more systematic adoption of service-oriented practices. However, simply buying into middleware technologies like Enterprise Service Bus and the latest generation of development tools is not sufficient for successful implementation of an enterprise SOA.

SOA represents a unique and rare opportunity to bring IT and Business together. However, this opportunity often necessitates organizational changes in IT and how IT and the stakeholders on the business side work together. The current IT culture must evolve, looking beyond the scope of project centric goals. We must consider requirements that span projects, lines of business, or the enterprise as a whole. This evolution drives the need for a new focus on governance that is aimed to exploit the benefits of service orientation on a large scale.

XML, Web Services and other standards play important roles when implementing a Service Oriented Architecture, but it should not be overlooked that core business functionality still has to be implemented behind the interfaces of the services. This requires a development methodology that extends component development into a service oriented Software Development Lifecycle (SDLC), as well as a comprehensive platform for service development, runtime, and management.

### Putting Together the Pieces of the SOA Puzzle

This seminar starts with examples of key business strategies that drive SOA and explains how SOA can enable them, fostering a better alignment between business requirements and IT deliverables. The seminar then outlines the important aspects that have to be addressed when defining an architecture blueprint, which is the cornerstone of a successful SOA. This includes defining a loosely coupled architecture and proper separation into service layers (i.e. orchestration, application, and infrastructure services), as well as a comparison of traditional Web Services based and RESTful architectures. The seminar also shows how SOA enables new types of clients and discusses the key standards that one should consider when implementing services.

Next, the seminar gives you insight into the organizational challenges that IT managers face with the adoption of SOA. It emphasizes the role of governance for IT organizations that need to increase their maturity level in order to evolve SOA to a large (enterprise) scale. It shows how to master the full service lifecycle – including design, implementation, deployment, and management - through efficient governance.

Furthermore, the seminar will help you understand how SOA can be applied to integration initiatives within your company and introduces the concept of the Enterprise Service Bus (ESB). The seminar then examines open source tools in terms of their support for SOA and concludes with a case study that highlights how the concepts taught in the seminar have been applied in a real world project.

## Benefits of Attending

- Learn how SOA can facilitate the alignment of IT with your business.
- Identify the challenges and benefits of developing an Enterprise Architecture.
- Define a roadmap for creating an application architecture that conforms to SOA best practices.
- Learn how IT culture has to change to successfully adopt the new style of architecture.
- Understand how Web Services and other standards can be used to implement a SOA.
- Discover the role of open source tools in a Service Oriented Architecture.
- Learn how Enterprise Service Buses (ESB) can enable and facilitate integration of applications within your enterprise and across a B2B value chain
- Understand the key elements of a service oriented Software Development Life Cycle.

## Who Should Attend

- Architects who want to adopt a Service Oriented Architecture.
- IT professionals who need to see how SOA can be applied to development as well as integration projects.
- IT Managers and IT Strategists selecting new standards and products for enterprise architecture
- IT Managers and IT Strategists evaluating feasible strategies for application development and integration.
- Architects and Application Developers who want a detailed look at the different technologies that can be used to implement SOA.
- Architects and Developers who want to know how these technologies can be applied to both, EAI and B2B application integration.
- Consultants who need to recommend and use different implementation strategies for building a SOA.

**Prerequisite:** This class requires attendees to have a high level understanding of middleware, component technologies, distributed computing, and application integration.

## 2. SOA - An IT Manager's Guide

(Seminar code: SOA-M; Duration: 1 day)

### SOA Essentials

This seminar discusses the most important challenges IT managers have to face when adopting a Service Oriented Architecture. It starts with a high-level overview of what SOA is, how it contrasts to an Event-Driven Architecture (EDA), and describes solution scenarios where SOA is typically applied. Next, the seminar outlines key business strategies that drive SOA and explains how SOA can enable them, fostering a better alignment between business requirements and IT deliverables.

The seminar then discusses the impact that the adoption of a SOA has on the IT organization and how to address it, for example by establishing a Center of Excellence. It explains the important role of SOA governance that is key for evolving SOA to a large scale and to increase the maturity of the IT organization. Furthermore, the challenges of migrating from previous architectures will be addressed. The seminar concludes with a description of a real world project that exemplifies the issues that most IT managers face and how they were solved.

### Benefits of Attending

- Learn how to use SOA for facilitating the alignment of IT with your Business.
- Identify the benefits and challenges of developing an Enterprise Architecture for SOA.
- Learn how a typical IT organization has to change to successfully adopt the new style of architecture, including the importance of governance, the role of a Center Of Excellence, etc.
- Be able to define a roadmap for creating a Service Oriented Architecture for development and integration of your application portfolio.

### Who Should Attend

- IT Managers and IT Strategists evaluating feasible strategies for application development and integration.
- Architects who want to adopt a Service Oriented Architecture.
- IT professionals who need to see how SOA can be applied to development as well as integration projects.
- Consultants who need to recommend and use different implementation strategies for building a SOA.

**Prerequisite:** This class requires attendees to have a conceptual understanding of middleware, component technologies, distributed computing, and application integration.

### **3. Modeling, Designing and Implementing Service Based Applications**

(Seminar code: SOA-D; Duration: 2 days)

#### Give Your Business the Competitive Edge

SOA has gained momentum because it is seen as the key for enterprises to achieve business agility, improved quality of service and lowered total cost of ownership. Over the recent years, many Fortune companies have started to embrace a SOA for initial development and integration projects. However, just utilizing technologies like Web Services and the latest generation of development tools are not sufficient for successful implementation of an enterprise SOA.

What is required is a consistent approach to architecture, modeling and design that takes a cross-project view on services, providing guidance to critical concepts like service layering and design for reusability. At the same time, traditional object oriented development methodologies such as Rational Unified Process (RUP) need to be significantly adapted, making sure your services are more than just objects with a Web Services interface.

#### A Service Oriented Software Development Lifecycle

Following a brief introduction the seminar first discusses key architectural guidelines for service oriented design. It covers the important characteristics of loosely coupled architectures and compares today's two mainstream approaches to SOA, namely traditional Web Services based architectures and RESTful architectures. It also outlines the options for moving processing from the server to the Web Services client.

The seminar then addresses how a typical object oriented application development methodology can be modified and adapted such that is suitable for implementing services. This is followed by an illustration of a layered services model, which fosters the separation of services into three distinct layers (orchestration, application, and infrastructure services layer). This separation is key to designing loosely coupled services and to ensure reusability of services across applications or business processes.

A case study is used for a detailed illustration of the modeling and design of a SOA-based B2B gateway. It includes the design of service interfaces, the encapsulation of a legacy system, the definition of XML Schemas that are broken down into reusable components, the development of business processes, and a walk-through of the complete B2B gateway architecture.

#### Benefits of Attending

- Learn the key aspects of modeling, designing and implementing services in a SOA
- Understand how a service oriented software development lifecycle is different from its object oriented predecessors.
- Be able to define practical guidelines that can help different project teams make the best architecture, design and implementation choices for SOA.
- Learn about proper service layering and service design for reusability.
- Gain insight into how Data Architecture relates to SOA
- Learn how to design XML Schemas for componentization and reuse.

## Who Should Attend

- Architects who want to adopt a Service Oriented Architecture.
- IT professionals who need to see how SOA can be applied to development projects.
- IT Managers who want to adopt a service oriented software development lifecycle.
- Consultants who need to recommend and use different implementation strategies for building a SOA.

**Prerequisite:** This class requires attendees to have an architectural understanding of Service Oriented Applications and core Web Services standards like XML Schema, SOAP, WSDL, etc.

## **4. Service Oriented Integration (SOI) - Concepts, Technologies, and Best Practices**

(Seminar code: SOA-I; Duration: 3 days)

### From Integration Infrastructure to Business Value

IT managers have been under increasing pressure to migrate a portfolio of independent “stovepipe” applications to an integrated set of business services. The complexity of application portfolios has to be reduced by eliminating functional redundancies. The mandate is to support new business processes faster, with reduced cost, and to improve the alignment of IT with business requirements. How to integrate applications in a predictable, consistent and repeatable fashion is a challenge that has consistently been among the top priorities of most CIOs.

This seminar starts with examples of integration projects that are typical for the problems and challenges that companies are trying to address today. For example, how to reduce the latency in a pipeline of batch processes by migrating to (near) real-time messaging, or how to integrate newly developed services and legacy systems into a Composite Application. The seminar then provides an overview of the concepts of SOA and its relationship to Event Driven Architecture (EDA). It outlines the key issues and guidelines that architects should consider when defining a Service Oriented Integration Architecture. The seminar will then provide you with an understanding of a complete integration “stack”, i.e. a set of techniques for implementing all aspects of integration. This stack is mapped to the relevant standards (including Web Services) and technologies that can support SOI architectures.

One of the highlights of the seminar is a case study that illustrates how the concepts and best practices taught in the seminar have been applied in a real project implementation. Without best practices based approach companies often end up with silos of redundant services that are too difficult to integrate and manage. The case study explains the key architectural and design decisions that have resulted in the implementation of a set of services that were reused beyond one particular project.

### Benefits of Attending

- Understand how to employ a Service-Oriented Architecture to integrate your application portfolio.
- Learn how to define an Enterprise SOA for Integration and how to apply it to integrate your application portfolio
- Learn how services can be used to integrate applications within your enterprise and across a B2B value chain.
- Distinguish between hype and reality so that you can put the technology to its optimal use in your organization.

### Who Should Attend

- IT Managers that need to understand what Service Oriented Integration comprises and how the SOI technologies and standards stack up.
- Architects who want to define a Service Oriented Integration architecture to facilitate successful integration projects.
- IT professionals who need to see when and how SOI can be applied to application integration.
- IT Managers and IT Strategists selecting new standards and technologies.
- Consultants who need to recommend different strategies for defining and implementing SOI solutions.

**Prerequisite:** This class does not require attendees to possess detailed knowledge in any specific technology; however, an understanding of distributed application architectures and middleware technologies will be beneficial

## 5. **Enterprise Application Integration (EAI) – Architectures, Technologies, and Best Practices**

(Seminar code: EAI-G; Duration: 3 days)

### Give Your Business the Competitive Edge

IT managers have been under increasing pressure to migrate a portfolio of independent “stovepipe” applications to an integrated set of business services that can be aligned with changing business requirements and support new business processes faster and with reduced cost. Today, corporations have to choose from a number of integration products such as Enterprise Service Bus, Java EE Application Servers, Web Services management tools, repositories, etc. – that have quite different capabilities, never mind different architectures and standards. However, these tools address only partially the challenges that corporate IT is facing: how to systematically and efficiently build and integrate applications using a unified approach, unified architecture and - where feasible – a single platform for application development and integration.

While new e-Business applications cannot operate as standalone entities and always require integration with existing systems, application integration almost always results in the development of new business logic, i.e. development of a new code. This explains the strong trend towards development of Composite Applications, which combine integration of existing application with development of new business functions to implement the new processes that the business requires.

### From Technology to Business Solutions

Large scale EAI projects are different from most projects that organizations have undertaken in the past. They don't introduce change that is isolated to individual application areas or business areas. Instead, EAI projects force change upon many application and business areas and require a coordinated approach among groups in an enterprise that used to deal with their application and infrastructure needs in a mostly independent way.

This seminar will give you insight into approaches to Enterprise Architecture including Service Oriented Architecture (SOA) and Event Driven Architecture (EDA). It will bring you up to date on the standards and technologies that play a key role in today's EAI projects, such as Web Services, Integration Brokers and Enterprise Service Buses.

This seminar moves beyond just the technology discussion –our instructors will share their experience with setting up processes across an organization that provide lasting value and guarantee the long term success of large scale EAI initiatives.

## Benefits of Attending

- Understand key EAI, B2B and Web Services standards and technologies.
- Define requirements, goals and organizational approaches for building and integrating Enterprise Applications.
- Identify the challenges and benefits of developing an Enterprise Architecture.
- Learn how to put a large scale EAI initiative on the right track by utilizing proven methodology and well-defined process.
- How to define practical guidelines on an enterprise level that can help different project teams make the best architecture and technology choices
- How to define models for Return on Investment (ROI) for integration technologies
- The rationale behind building or avoiding a Center of Excellence (COE) for integration
- How to define a process that promotes faster adoption of integration technology and foster re-use across different projects.
- Review examples of Fortune 500 companies that have benefited from the implementation of a common EAI architecture and unified approach to application development and integration.

## Who Should Attend

- IT Managers that need to understand the management dynamics of EAI projects and how the EAI technologies, standards and products stack up
- Architects who want to define an Integration Architecture to facilitate successful integration projects
- IT professionals who need to see how Service Oriented Architecture can be applied to development as well as integration projects
- IT Managers and IT Strategists selecting new standards and products for enterprise integration architecture
- Architects and Application Developers and Integrators who want a detailed look at the different EAI technologies and platforms that can be used to implement EAI architecture and want to know how these technologies and platforms can be applied to both, A2A and B2B integration.
- Architects and Application Developers who need quickly to develop composite applications to support new business processes and initiatives
- Consultants who need to recommend different strategies for defining and implementing EAI architectures
- Anyone who is faced with the daunting task of integrating applications throughout the enterprise and across business partner organizations.

**Prerequisite:** This class does not require attendees to possess detailed knowledge in any specific technology; however, an understanding of distributed applications and technologies will be beneficial

## **Description of IT Professional Services (Special Item Number 132-51)**

ISG provides a comprehensive range of services that cover all aspects of an eSOA initiative. ISG's professional services are priced based on an hourly rate structure.. The labor categories required to perform each service are listed at the end of each service description. A detailed description of each labor category can be found on page 26. The GSA hourly rate structure for each labor category is found on page **Error! Bookmark not defined.**. The total price of any one service will vary contingent on the estimated time and scope of the engagement.

Our service offerings include:

- 1. Business and IT Alignment**
- 2. Roadmap Development**
- 3. Program Management & Governance**
- 4. Mentoring**
- 5. Architecture Development**
- 6. Service Modeling, Design & Coding**
- 7. Service Oriented Integration Practice**

## 1. **Business and IT Alignment**

Is your business adopting new strategies and are you struggling to ensure that IT is aligned properly? Do you have a multitude of IT initiatives that are moving into different directions?

We have experience with the issues that the adoption of SOA introduces into an IT organization, including organizational dynamics, redefining roles & responsibilities, establishing governance and performance measurement. We can help you formalize a clear vision on how IT provides value through alignment with business demands, achieve consensus on how to employ SOA across a multitude of initiatives, maximizing efficiency and synergy, optimizing organizational structures and technology strategies. We put special emphasis on applying SOA industry best practices and striking a perfect balance between exploiting new technologies while preserving existing assets.

### **Business / IT Summit**

Our eSOA Alignment offering is structured as a 3-day Business / IT summit that brings together your key business stakeholders and top level IT executives representing different lines of business.

We use an agenda template and a set of pre-defined deliverables that will be customized for your particular requirements. We act as the facilitators in a collaborative effort to capitalize on eSOA for further alignment of your business and IT:

- We educate on SOA industry best practices, current SOA technology choices and the impact on your IT organization.
- We facilitate fact finding discussion and consensus building between business and IT executives.
- We analyze your business and technical requirements, effectively mediating between business and IT.
- We help you establish an high level IT roadmap towards SOA, distinguishing between tactical and strategic goals.
- We provide an unbiased view, independent of vendor agendas and company politics.
- We provide a well-defined set of deliverables, customized to your environment, so that you derive actionable results.

### **Business Case Development and ROI Modeling**

We provide the following services for putting together a solid business case for a SOA initiative:

- Analyze business processes to determine the potential for service reuse
- Recommend changes in business processes in order to increase efficiency
- Assess redundancies in the application portfolio and estimate potential savings that can be achieved by reducing the overlap in functionality
- Determine what improvements of business process quality can be achieved by centralizing each particular business function in one “service of record”
- Apply a proven software ROI model to the proposed SOA based on service reuse factors

**Labor categories:** Technical Manager / Lead Architect, Enterprise Architect, Senior Architect.

## 2. **Roadmap Development**

The maturity of an IT organization in terms of SOA obviously doesn't just happen over night; it is rather the product of a transformation that follows the key principles of SOA. The goal of an eSOA Roadmap is to optimize the implementation of service based applications across current and planned projects and to guide the evolution of an IT organization through the stages of increasing eSOA maturity.

eSOA maturity needs to be looked at in multiple dimensions: the capability to reuse existing assets (e.g. services), efficient use of service intermediation, the comprehensiveness of enterprise wide security measures, the efficiency that comes with improving governance, maintaining SLAs through operational control, balancing adherence to standards with performance and scalability, etc.

Our services that can help you to establish an eSOA Roadmap typically include:

- Assessment of
  - Business strategies
  - Current and planned IT projects
  - Current and potential future state architecture
  - Technology investments
  - Staff skills
  - Program management plans
- Definition of the scope and the goals of your enterprise SOA and prioritization of the projects that would further these goals.
- Optimization of cross-project dependencies in terms of the projects contribution to and exploitation of the eSOA in order to maximize ROI.
- Developing a strategy to reduce redundancies and streamline the application portfolio.
- Definition of a migration strategy for legacy systems.
- Determining the requirements and benefits of establishing an eSOA Center of Excellence.
- Definition of a program management plan.

**Labor categories:** Technical Manager / Lead Architect, Enterprise Architect.

### **3. Program Management & Governance**

In order to truly benefit from SOA it has to be managed in the context of more than one application or project. We establish an eSOA program that will let you capitalize on the promises of SOA by scaling it to an enterprise level.

Our services typically include:

- Determining the required skill sets
- Managing the migration of organizational structures in IT to align with the eSOA strategy
- Establishing a plan for governance
- Managing the full eSOA lifecycle, including deliverables, documentation, and communication
- Establishing a SOA Center of Excellence
- Facilitating the assimilation of new technologies
- Defining and monitoring metrics to measure the success rate and ROI
- Facilitating the transition from development to deployment and operational management

#### **Governance**

Once a company has completed initial SOA projects, the number of deployed services increases such that the key question is no longer how to build services, but rather how to efficiently govern the development and operation of services on a large scale. At this point companies reach a SOA maturity level where they want to take a systematic approach to achieving better ROI as well as improve business agility.

To ensure our client's SOA is progressing along a path of increasing maturity and positive ROI, we include governance best practices in our eSOA Program Management offering. We typically help our clients with:

- Define and implement the complete service life cycle governance, covering all aspects including service design time and run time
- Assist with the selection of technologies for implementing SOA governance
- Help establish a SOA governance practice as part of a SOA Center of Excellence
- Analyze existing and planned projects in terms of the governance guidelines that will be defined and assess the impact on these projects

**Labor categories:** Technical Manager / Lead Architect, Enterprise Architect.

#### 4. **Mentoring**

You are in the early stages of the development of a new mission critical application. You are committed to a service oriented approach, including standards like Web Services. However, your experience with the current technologies and SOA best practices is limited. You need to reduce the number of unknown variables, because failure is not an option.

Our experts can mentor your staff throughout your entire eSOA project:

- We know the common mistakes – and how to avoid them
- We have expertise in mapping business requirements to the design of complex applications, applying SOA best practices
- We understand how to make your services and business processes highly scalable, available, reliable, and secure
- We have experience in design and development of a layered SOA that facilitates cross-project reuse
- We possess a broad range of skills to design a Service Oriented Integration Architecture that leverages your legacy systems
- Our hands-on knowledge of technologies typically used for SOA implementations will save you time and making costly mistakes

##### **Assistance on demand**

Our eSOA Mentoring offering is structured as a program that let's you tap into the knowledge and hands-on expertise of our consultants on demand. Whenever you are facing critical decisions in your project or you staff is overloaded and cannot meet project milestones on time, we will be ready to assist you. We act as mentors that back you up at any stage throughout your entire eSOA project:

- We analyze your business and technical requirements
- We evaluate and refine the system and integration architecture
- We assist in the evaluation and selection of commercial products
- We evaluate and refine your services model
- We validate your development strategy and scope a pilot project
- We review the project plan, aligning required skills with available resources
- We assist in the design and delivery of application architectures that are consistent across projects
- We fill the gaps where your resources fall short
- We support your staff through all project phases, transferring essential skills and expertise

**Labor categories:** Technical Manager / Lead Architect, Enterprise Architect, Senior Architect, J2EE Software Engineer, J2EE Front-end Specialist.

## 5. **Architecture Development**

ISG's eSOA Architecture Practice provides your organization with assistance and guidance for the development of an enterprise Service Oriented Architecture (eSOA) that is optimized for your particular needs.

- Following our methodology, we will first assess the key business characteristics that drive your IT efforts and determine how IT is aligned with business
- Depending on the approach chosen, we will proceed with a combination of assessing the existing application and infrastructure environment, business and technical requirements analysis, and definition of essential use cases

The deliverables produced in an eSOA architecture definition effort depend on the overall scope of the enterprise architecture project, but typically include:

- Reference architecture that forms the blueprint for all service oriented application projects.
- Recommended usage patterns and guidelines targeted at application architects who will use these artifacts within their projects.
- Technology selection guides that foster a standardization of your commercial software portfolio (e.g. middleware).
- Migration plan from current-state to future-state architecture.
- Architecture adoption plan that establishes a timeline for different projects to adhere to the principles of the eSOA blueprint.

**Labor categories:** Technical Manager / Lead Architect, Enterprise Architect, Senior Architect.

## 6. Service Modeling, Design & Coding

ISG's eSOA Modeling, Design, and Coding practice provides your organization with assistance, guidance and highly skilled development resources for the successful implementation of new business systems – from conception to rollout.

- Based on a customer's project requirements and in-house expertise, ISG assigns a team with the most appropriate skills to deliver a timely, successful solution
- While determining the needs and developing the entire project, ISG works with the clients' staff all the way through to final implementation
- ISG consultants assess the business and technical requirements of the client, develop the best service oriented application architecture, and implement orchestration, application, and infrastructure services using a proven design and development process.

### **The evolutionary path to an eSOA methodology**

Building a successful SOA requires an appropriate development methodology. The major software development project tasks are the same as in traditional projects. They can, for example, be governed by a Rational Unified Process (RUP) approach such that your team does not have to abandon the expertise they have gained in projects that pre-date your migration to SOA.

However, the traditional methodologies need to be extended in order to address the SOA specific issues. A service oriented development methodology must combine Object oriented Analysis & Design (OOAD) with Service Oriented Analysis & Design (SOAD), since services and components need to be combined for a complete solution implementation.

We have successfully employed this approach for our clients, and our expertise can help you to migrate your development methodology into a SOA methodology in a way that is customized to your particular development environment.

### **Consulting service offerings for customized engagements**

The consulting services we provide to our clients typically have the highest impact on the success of their projects when we get involved in a partnership across the entire development life cycle.

However, we do have the flexibility to customize our engagements such that we only assist you during select phases of your project.



**Labor categories:** Technical Manager / Lead Architect, Senior Architect, J2EE Software Engineer, J2EE Front-end Specialist.

## 7. **Service Oriented Integration Practice**

The question how to deal with existing systems often seems easy to answer – at least in high level analyst presentations and glossy vendor brochures: just build a wrapper and make it look like a service

Of course, the reality that we face in our client projects is usually quite different:

- Keeping a “wrapped” legacy system alive does not end the maintenance burden that it has become over the years.
- A “rip and replace” approach, i.e. an immediate, complete rewrite is often too costly and has a questionable ROI.
- Partial migration is a complicated task, since enterprises usually operate a portfolio of applications and would require integration solutions for a multitude of interdependencies.

Without a best practices based approach that is rooted in experience with SOI projects companies can not reap the benefits that service oriented integration promises. Too often companies end up with silos of services that are too difficult to integrate and manage.

To ensure your SOI is successful in the long term, we offer the following services through our eSOA Integration Practice:

- Define a Service Oriented Integration architecture (SOI) that is based on the principles of SOA and EDA.
- Develop a strategy to reduce redundancies and streamline the application portfolio.
- Restructure legacy applications into modules that can be aligned with the service model.
- Build custom adapters for legacy and packaged systems.
- Analyze legacy systems in order to rationalize and consolidate master data.
- Select and deploy an Enterprise Service Bus (ESB).
- Develop data transformation logic, routing rules, and orchestration logic (i.e. business processes).
- Design and implement Composite Applications.

**Labor categories:** Technical Manager / Lead Architect, Enterprise Architect, Senior Architect, J2EE Software Engineer.

## ***Labor categories (Special Item Number 132-51)***

### **Technical Manager / Lead Architect**

#### Responsibilities:

Responsible for the project co-management and all ISG deliverables. Review project plans and align required skills with available resources. Assist in establishing a eSOA Center of Excellence. Help implementing a ROI model for service reuse and develop a business case for introducing or enhancing an eSOA. Active participant in all project activities including business and technical assessment, aligning business and IT strategies, definition of scope and goals including prioritization of planned projects, definition of the new architecture, migration planning to future state architecture, definition of plans to increase eSOA adoption rate, and overall project directions. Also responsible for interfacing with customer personnel and is accountable for the timeliness and quality of all deliverables within defined budgets.

#### Skill requirements:

- A minimum of twelve (12) years industry experience with architecture definition, program management, and overseeing the full lifecycle of distributed applications in a large-scale enterprise based on a variety of technologies.
- Up to date understanding of industry trends and best practices.
- At least five years experience at an IT management level.
- Strong ability to facilitate consensus building among stakeholders from different disciplines (i.e. different lines of business and IT departments).
- Experience collaborating with C-level executives (i.e. CEO, CFO, CIO, CTO).

#### Minimum education:

- Masters degree in Computer Science or equivalent degree.

### **Enterprise Architect**

#### Responsibilities:

Active participant during analysis of business strategies and technical requirements, overall architecture definition, and in the preparation of deliverables. Key contributor to the migration planning from current state to target state architecture and design of key services. Assists with the development of a strategy to reduce functional redundancies and streamline the application portfolio. Validates the customer's development strategy and is one of the contributors to development of best practices and standards. Helps establishing governance plans and leads a eSOA Center of Excellence. Assists in the evaluation and selection of commercial products. Provides mentoring to customer's staff.

#### Skill requirements:

- A minimum of twelve (12) years industry experience with architecture and high level design of distributed computing applications in a large-scale enterprise using a variety of technologies.
- Understanding of Service Oriented Architecture (SOA), Event-Driven Architecture (EDA), as well as Java EE or .NET.
- At least a conceptual understanding of middleware, for example Enterprise Service Bus (ESB), Java EE Application Server, application development frameworks, object/relational mapping.
- Understanding of Web Services standards (e.g. XML, SOAP, WSDL, UDDI, BPEL, etc.).
- Up to date understanding of industry trends and best practices.
- Full lifecycle implementation experience including requirements, design, implementation, integration and testing.
- At least five years experience at an architect level.
- Prior management experience with excellent communication and presentation skills.

#### Minimum education:

- Masters degree in Computer Science or equivalent degree.

### **Senior Architect**

#### Responsibilities:

Key contributor to the requirement gathering, assessment, definition of SOA, the actual migration to future state architecture, as well as detailed design and implementation of services. Analyses legacy systems and develops strategy to restructure them to function in an eSOA. Active participant in developing best practices and standards. Assists in the evaluation and selection of commercial products and scope a pilot project. Provides mentoring to customer's staff. Key contributor to the preparation of deliverables.

#### Skill requirements:

- A minimum of ten (10) years industry experience with architecture and high level design of distributed computing applications in a large-scale enterprise using a variety of technologies.
- Understanding of Service Oriented Architecture (SOA), Event-Driven Architecture (EDA), as well as Java EE or .NET.
- At least a conceptual understanding of middleware, for example Enterprise Service Bus (ESB), Java EE Application Server, application development frameworks, object/relational mapping.
- Understanding of Web Services standards (e.g. XML, SOAP, WSDL, UDDI, BPEL, etc.).
- Up to date understanding of industry trends and best practices.
- At least three years experience at an architect level.
- Understanding of Software Development Lifecycle methodologies (e.g. Rational Unified Process).
- Experience leading a team to perform product evaluations.
- Prior management experience with excellent communication and presentation skills.

#### Minimum education:

- Bachelor degree in Computer Science or equivalent degree.

## **J2EE Software Engineer**

### **Responsibilities:**

Key contributor to the detailed design and implementation of the services. Assists with the deployment of an Enterprise Service Bus (ESB) and other eSOA middleware. Provides mentoring to customer's staff.

### **Skill requirements:**

- A minimum of eight (8) years industry experience developing, deploying, and supporting distributed computing applications in a large-scale enterprise using a variety of technologies.
- Proven record in delivery of complex service-oriented applications and middleware frameworks.
- Experience with delivery of high performance, high availability, and high bandwidth enterprise applications as well as XML and Web Services based technologies
- Has hands-on experience of middleware, for example Enterprise Service Bus (commercial or Open Source), Java EE Application Server (e.g. WebSphere, WebLogic, Open Source), JMS, application development frameworks (e.g. Spring), object/relational mapping (e.g. Hibernate).
- Experience with distributed transactions and database modeling and design.
- Experience performing product evaluations.
- Proven knowledge and significant experience using major design patterns and best practices.
- Proficiency in designing and integrating large-scale distributed systems in which multiple operating systems, languages and middleware interoperate (a minimum of five years developing software infrastructure components).
- At least five years experience using C++ or Java.
- Strong client interaction and communication skills (verbal and written).

### **Minimum education:**

- Bachelor degree in Computer Science or equivalent degree.

## **Front-end Specialist**

### **Responsibilities:**

Key contributor to the detailed design and implementation of new client and client -related services (i.e. services within the presentation layer).

### **Skill requirements:**

- A minimum of eight (8) years industry experience developing, deploying, and supporting distributed applications
- Proven track record in the design and development of complex presentation layers for mission-critical SOA applications.
- Minimum of 5 years of experience in front-end development.
- Hands-on experience with technologies including Macromedia Flex and/or JSP/Struts/HTML/JavaScript, as well as Swing.
- Strong design and development of Rich Internet Applications (RIAs).
- Understanding of the "human factors engineering" paradigm.
- Strong client interaction and communication skills (verbal and written).

Minimum education:

- Bachelor degree in Computer Science or equivalent degree.