

# SCENARIO 1: FOREIGN AGRICULTURAL SERVICE SUPPORT

## STATEMENT OF WORK

### GENERAL INFORMATION

#### Objective

The objective of this Statement of Work (SOW) is to provide Foreign Agricultural Service (FAS) with support services, to include requirements analysis, develop test plans, develop and maintain system and user documentation, maintenance support, software development, business intelligence, user support and enterprise architecture.

Services shall also include ongoing evaluation of current technology, platforms and operations to continually seek improvement and best possible functionality of FAS business processes. The contractor shall identify and recommend best practices, best technology and methodology for FAS needs and responsibilities.

The Government intends to award a fixed price performance-based contract that will be described by this SOW and subject to the referenced Quality Assurance Surveillance Plan (QASP).

#### Background

The FAS of the U.S. Department of Agriculture (USDA) works to improve foreign market access for U.S. products, build new markets, improve the competitive position of U.S. agriculture in the global marketplace, and provide food aid and technical assistance to foreign countries.

The office of Field Technology Support Services (FTSS) is responsible for organizing, implementing, maintaining, and managing an integrated Information Technology (IT) program to support FAS and its personnel including headquarters and international operations support; applications development; IT program management; network engineering; systems and network security; and enterprise architecture. Although FAS is a worldwide organization that requires a global information infrastructure to effectively carry out its mission, all customized computer applications are developed and housed at headquarters in Washington, DC. The goal of the Washington based IT staff is to provide reliable, timely, comprehensive, and user-friendly software support for the Foreign Agricultural Service.

FAS' current technical and application architecture environments contain a wide range of client-server, web-based, database and commercial off-the-shelf (COTS) software systems. Some of these systems will be maintained and enhanced; others will be gradually replaced as FAS migrates to an enterprise wide architecture.

### SCOPE

#### System Development, Maintenance, and Enhancement

The Contractor shall provide application development and maintenance support to FAS applications as specified in the Supported Applications Section below. These include both database and non-database systems residing on minicomputers and PCs, and implemented in interactive, batch, client-server, and web-based modes of operation.

#### Enterprise Architecture (EA)

The Contractor shall provide consulting services to FTSS in developing the enterprise architecture for FAS by aligning the Agency's organizational mission and strategic goals with IT investments and projects. The EA will capture facts not only about technology, but more importantly, about the FAS mission, functions and business foundations. FAS' organizational structure, mission and strategic goals are in the process of being redefined as a result of an organizational review. The Contractor shall define the "As-Is," or current state of enterprise; the "To-be," or future state of enterprise; and develop a migration plan from current to future.

## DEVELOPMENT ENVIRONMENT

Operating systems: Windows 2000, Windows XP, and Compaq Tru64 UNIX

Database: Sybase Adaptive Server Enterprise Version 12.5, Microsoft SQL Server 2005, Net 2005, Microsoft Reporting Services

Development Tools: Microsoft Visual Studio .NET 2003 and 2005, (Visual Basic, C#), Microsoft Visual Studio 6.0 (Visual Basic, Visual C++), Sybase PowerBuilder 8.0 & 9.0, Sybase Power++ 2.5, Sybase SQL, Sybase Open Client, Compaq C, Compaq C++, Microsoft Active Server Pages (ASP), Infragistics NetAdvantage, HTML, and XML.

Reporting Tools: Crystal Reports, Hyperion SQR, Business Objects

Web Service Technologies: SOAP

## REQUIREMENTS

### 1. General

1.1 The contractor shall execute all tasks at the Capability Maturity Model Integration (CMMI) II level, which demonstrates the ability to produce high-quality products with repeatable and predictable results.

1.2 The contractor shall implement and maintain a quality assurance system to ensure the product integrity of all deliverables that meets or exceeds the requirements established in this SOW. The contractor is responsible for providing all test and inspection resources required to review the quality of deliverables throughout all areas of contract performance. Standards include:

Quality Assurance (QA) Plan	<ul style="list-style-type: none"><li>➤ Define scope and approach for project quality assurance on requested tasks,</li><li>➤ Define the QA organization, resources, roles, and responsibilities,</li><li>➤ Define procedure reviews, process audits, work product and deliverable review, and QA reporting.</li></ul>
Test Plans	<ul style="list-style-type: none"><li>➤ Describe the overall strategy and approach to testing through the project life cycle,</li><li>➤ Identify test cycles and system baselines,</li><li>➤ Define roles and responsibilities of contractor and Government participants in each test cycle.</li><li>➤ Describe test environment for each test cycle,</li><li>➤ Documents are free of spelling and clerical errors, data is accurate,</li><li>➤ Documents are delivered on schedule.</li></ul>
Test Results	<ul style="list-style-type: none"><li>➤ Document test performance, results, and resolution,</li><li>➤ Documents are free of spelling and clerical errors, data is accurate,</li><li>➤ Documents are delivered on schedule.</li></ul>

### 2. Development Functions

2.1 The contractor shall identify opportunities for business process improvement across FAS program areas by facilitating collaboration among all activities to improve FAS business practices and services. The contractor shall make recommendations for improvements in efficiency, interoperability and integration among USDA and/or FAS processes and/or systems. Recommendations shall maximize the use of COTS software solutions, emerging technologies, and best practices to continuously enhance FAS' operations and services while ensuring alignment with over-arching Enterprise Architecture guidelines. Furthermore, where applicable, recommendations shall identify FAS program area-wide technology gaps and/or functional system duplications. Standards include:

Gap Analysis	<ul style="list-style-type: none"> <li>➤ Define old system and new system,</li> <li>➤ Define gap assessment,</li> <li>➤ Perform cost-benefit analysis using three options,</li> <li>➤ Identify system impact analysis,</li> <li>➤ Documents are free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>
Living Searchable Models of FAS' "As-is" and "To-be" Environment	<ul style="list-style-type: none"> <li>➤ The Models should be accessible by web browser,</li> <li>➤ Need to include all key systems,</li> <li>➤ FAS version of the Business Reference Model (BRM), Service Reference Model (SRM) and Technical Reference Model (TRM) should be included,</li> <li>➤ Searchable by criteria to be specified,</li> <li>➤ Models will be available in both textual and graphical form,</li> <li>➤ Allow users to conduct complex what-if analysis.</li> </ul>
Static Paper Model of EA Components	<ul style="list-style-type: none"> <li>➤ Define all key systems,</li> <li>➤ FAS version of the Business Reference Model (BRM), Service Reference Model (SRM) and Technical Reference Model (TRM) should be included,</li> <li>➤ Models will be updatable via connection to the Enterprise Architecture Repository (EAR)</li> </ul>
Summary EA Document "Modernization Blueprint"	<ul style="list-style-type: none"> <li>➤ Define stakeholder vision of the EA</li> <li>➤ The above-mentioned static models</li> <li>➤ Gap analysis of parts and whole of the EA</li> <li>➤ Descriptions of opportunities and solutions</li> <li>➤ Migration plan to the "To-be" EA.</li> </ul>
Business Intelligence (BI) System Set-Up, Design and Maintenance Support	<ul style="list-style-type: none"> <li>➤ The BI System will be configured and maintained to deliver reports efficiently with required availability,</li> <li>➤ Enterprise reporting needs are met with appropriate tools and products,</li> <li>➤ Routine support and maintenance required by any reporting implementations will be documented and performed,</li> <li>➤ Establish standards for recording calls/support and resolutions,</li> <li>➤ If the implementation requires it, provide full administrative backup coverage for a BI System,</li> <li>➤ The reporting infrastructure is maintainable and scalable and meets the enterprise needs of FAS,</li> <li>➤ Impact analysis will be done on system changes that affect reports.</li> </ul>
BI System Requirements	<ul style="list-style-type: none"> <li>➤ Establish standards for capturing all elements of the enterprise reporting needs,</li> <li>➤ Define stakeholders and stakeholder groups,</li> <li>➤ Document existing business process,</li> <li>➤ Document stakeholder needs and requirements,</li> <li>➤ Requirements include business scenarios,</li> <li>➤ Define assumptions and constraints,</li> <li>➤ All interviews are captured and delivered in a document,</li> <li>➤ Documents are free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>
BI System Documentation	<ul style="list-style-type: none"> <li>➤ Describe overall strategy for the BI implementation,</li> <li>➤ The system architecture and operating environment will be documented, including configuration of COTS products, physical environment (network, operating systems, database platforms, application platforms), security environment, external system interfaces and logistical environment (reliability, availability, maintainability) and scheduled maintenance,</li> <li>➤ Abstraction layers will be documented,</li> <li>➤ Standards will be established for documenting and performing impact analysis on system changes that will affect reports.</li> <li>➤ Documents are free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>
BI Reports	<ul style="list-style-type: none"> <li>➤ Create ad-hoc and pre-built reports,</li> <li>➤ Provide expertise with embedding reporting functionality in custom applications,</li> <li>➤ Reports are delivered on schedule and meet the stated requirements.</li> </ul>

2.2 The contractor shall utilize a standardized requirements gathering and analysis process to produce requirement specifications for all development tasks under this contract. Furthermore, the contractor shall identify related architectural, regulatory, security, interoperability and integration requirements. All requirement specifications shall be at sufficient detail to perform system design and include quantifiable baseline business process operating metrics where appropriate. Standards include:

Requirements Document	<ul style="list-style-type: none"> <li>➤ Define stakeholders and stakeholder groups,</li> <li>➤ Document existing business process,</li> <li>➤ Document stakeholder needs and requirements,</li> <li>➤ All interviews are captured and delivered in a document,</li> <li>➤ Requirements include business scenarios,</li> <li>➤ Define assumptions and constraints,</li> <li>➤ Documents are free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>
Training Documentation	<ul style="list-style-type: none"> <li>➤ Describe system overview and business process,</li> <li>➤ Define course objective and course outline,</li> <li>➤ Provide self assessment and course evaluation,</li> <li>➤ Provide user support contact information,</li> <li>➤ Documents are free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>
Training	<ul style="list-style-type: none"> <li>➤ Develop training document, review Support Log to assist in preparation,</li> </ul>

2.3 The contractor shall design, and develop and deploy component-based solutions implement Government approved recommendations in accordance with the approved requirement specifications. The contractor shall ensure that any contractor-developed enhancements related to legacy or new developments for future systems include user interfaces that are intuitive, user friendly, conforms to usability guidelines and meets congressionally-mandated requirements concerning access to federal information technology by members of the public and federal employees with disabilities (Section 508 of the Rehabilitation Act). Standards include:

System Design Document	<ul style="list-style-type: none"> <li>➤ Specify designed system operating environment, including: physical environment (network, operating systems, database application platform), security environment, external system interfaces, and logistical environment (reliability, availability, maintainability),</li> <li>➤ Describe system architecture design, including: high-level data flow and control flow, configuration of COTS or GOTS components,</li> <li>➤ Specify database design, including: logical data model, physical data model, database dictionary,</li> <li>➤ Specify high-level application design and detailed component design, including: component purpose, navigation, user interaction, .NET services' purpose and logic, database interactions, web page templates/formats, and web page design details (entry/exit criteria, database interactions, screen layout, data entry and other validations),</li> <li>➤ Contain traceability from design elements to requirements baseline,</li> <li>➤ Documents are free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>
Other Business/System Documents	<ul style="list-style-type: none"> <li>➤ Specify designed system operating environment, including: physical environment (network, operating systems, database application platform), security environment, external system interfaces, and logistical environment (reliability, availability, maintainability),</li> <li>➤ Documents are free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>

2.4 The contractor shall provide risk analysis and management for all tasks performed under this contract. Standards include:

Project Management Plan	<ul style="list-style-type: none"> <li>➤ Address planning, tracking, and reporting, on requested tasks,</li> <li>➤ Create complete detailed schedule of tasks, activities, and deliverables,</li> <li>➤ Identifies project team, roles and responsibilities,</li> <li>➤ Develop communication plan, which includes all stakeholders,</li> <li>➤ Define project status reporting and approach to action item tracking (project internal, contractor management, and Government),</li> <li>➤ Describe approach to decision analysis and resolution,</li> <li>➤ Develop risk management plan.</li> </ul>
Configuration Management (CM) Plan	<ul style="list-style-type: none"> <li>➤ Define configuration baselines to be managed on requested tasks,</li> <li>➤ Define the CM organization, resources, roles, and responsibilities,</li> <li>➤ Define configuration change control, status reporting.</li> </ul>

Risk Analysis	<ul style="list-style-type: none"> <li>➤ Identify and analyze risks,</li> <li>➤ Develop a risk mitigation plan,</li> <li>➤ Define Risk Assessment Matrix,</li> <li>➤ Provide quantifiable and qualitative analysis.</li> </ul>
---------------	--

### 3. Maintenance Functions

3.1 The contractor shall provide recurring monthly user support for all FAS applications during core business hours. Standards include:

Support Log	<ul style="list-style-type: none"> <li>➤ Establish standards for recording user calls or mail messages,</li> <li>➤ Track all help requests, log should include user name, application name, description of problem, date and time of call, date and time closed, resolution,</li> <li>➤ Response time should be within the same day,</li> <li>➤ Inform Government on issues that need immediate attention,</li> <li>➤ Document is free of spelling and clerical errors, data is accurate,</li> <li>➤ Documents are delivered on schedule.</li> </ul>
-------------	--

### SUPPORTED APPLICATIONS

The following applications will need to be supported to varying degrees based on changing requirements, and new applications will be added as the need arises. Although the existing applications utilize a wide variety of development tools, the current standard for new development is the Microsoft.NET environment for both client-server and web-based applications.

For the table below, the designations of complexity are defined as follows:

- High – The application has many branching paths, and many modules making debugging and comprehensibility difficult. The database contains at least 50 tables with a high percentage of interdependencies. Most transactions involve multiple tables being updated or queried. The user interface and reports are extremely detailed.
- Medium – The application has branching paths and multiple modules that make comprehensibility difficult. The database contains at least 25 tables with a high percentage of interdependencies. Some transactions involve multiple tables being updated or queried. The user interface and reports are moderately detailed.
- Low – The application few branching paths and logic that is easy to understand. The database contains less than 25 tables. Some transactions involve multiple tables being updated or queried. The user interface and reports are minimally detailed.

Application	Complexity	Software Technology
Agricultural Trade Issues Collaboration (Briefing Papers, BSE, Biotech)	Medium	Sybase, ASP, .NET
Contacts Database (AgExport)	Medium	Sybase, ASP, PowerBuilder, XML
Export Enhancement Program (EEP)	Medium	Sybase, Microsoft Visual C++
Dairy Export Incentive Program (DEIP)	High	Sybase, Microsoft Visual C++
Dairy Import License System	High	Sybase, ASP, PowerBuilder, .NET, HTML
Export Sales Reporting	High	Sybase, ASP, PowerBuilder, .NET, Crystal Reports, Infragistics NetAdvantage, HTML
Food Aid Information Systems (FAIS)	High	Sybase, ASP, PowerBuilder, VisualBasic
Global Agricultural Information Network (GAIN)	Medium	Sybase, ASP, PowerBuilder, VisualBasic
International Funds Control Reporting System (IFCRS)	High	Sybase, PowerBuilder
International Cable (INCA)	Medium	Sybase, .NET (Windows C#, ASP, VB)
International Passport / Visa Request System	Medium	Sybase, ASP, PowerBuilder, Scanner Software
International Operations Planning System	Medium	Sybase, .NET (ASP,VB), ASP

<b>Application</b>	<b>Complexity</b>	<b>Software Technology</b>
OA Systems (PAIDS, GPRA, Skills Checklist)	Low	Sybase, PowerBuilder
Overseas Administrative Support Info. System	Medium	Sybase, ASP, PowerBuilder, SQL Server
Project Tracking System	High	Sybase, MS Access
Production, Supply & Distribution	High	Sybase, .NET (ASP, VB), XML
Snapback	Low	Sybase, PowerBuilder
STAR	Medium	Sybase, PowerBuilder
SUGARS	High	Sybase, .NET
UN Trade	High	Sybase, Power++
Unified Export Strategy	High	Sybase, ASP, Visual Basic, SQL Server, .NET
US Trade	High	Sybase, Visual C++, Compaq C, Compaq C++, ASP, C#
Web Presence	Medium	ASP, HTML, XML

**TASK DESCRIPTION**

Date: (1) 5-5-06	Task Number: (2) Sample Task Order 1
FAS/FTSS Technical Contact: (3) Mr. S	Priority: (4) High
FAS/FTSS Technical Contact Phone: (5) 202-555-5555	
<p><b>Task Description: (6)</b> Modify Budget cable process including the following changes:</p> <ul style="list-style-type: none"> <li>1 - Fix incorrect calculations for annual budget cables</li> <li>2 - Add budget cable process to web application</li> <li>3 - Provide ability to delete budget cables that have not been transmitted</li> <li>4 - Add ability to create mid-year and third quarter budget cables</li> <li>5 - Add ability to send cable base on selected org group</li> <li>6 - Test all new and updated pages for Section 508 compliance</li> </ul> <p>Maintain versioning of all changes in SourceSafe. Thoroughly comment all changes in source code. Perform a thorough and complete testing (QA) of all coding changes. Notify technical contact when code changes are ready for review.</p> <p>Maintain and update user and system documentation if maintenance and/or development coding changes alter functionality. If nonexistent, create user and system documentation as changes are implemented.</p>	
Type of task (7) Firm Fixed Price	
Estimated hours and cost (8)	
Implementation Action: (9)	Actual Hours: (10)
	Date Completed: (11)
	Reviewed By: (12)
COTR Approval: (13)	Close Out Date: (14)

**TASK DESCRIPTION**

Date: (1) 5-30-06	Task Number: (2) Sample Task Order 2
FAS/FTSS Technical Contact: (3) Ms. X	Priority: (4) Medium
FAS/FTSS Technical Contact Phone: (5) 202-555-5555	
<p><b>Task Description: (6)</b></p> <p>Production support of FAS Online and FASTnet:</p> <ol style="list-style-type: none"> <li>1. Log and respond to all e-mails and phone calls about problems on FAS Online and FASTnet. Perform analysis to identify solution to reported problems. Take required action to resolve problems. Maintain a status report for technical contact that details the results of all actions taken.</li> <li>2. Perform all coding changes to FAS Online and FASTnet on development server or local machine. Maintain versioning of all changes in SourceSafe. Thoroughly comment all changes in source code. Perform a thorough and complete testing (QA) of all coding changes. Notify technical contact when code changes are ready for review.</li> <li>3. Maintain and update user and system documentation if maintenance and/or development coding changes alter functionality. If nonexistent, create user and system documentation as changes are implemented.</li> <li>4. Test all new and updated pages for Section 508 compliance.</li> <li>5. Send status report to Ms. X by COB each Monday.</li> </ol>	
Type of task (7) Firm Fixed Price	
Estimated hours and cost (8)	
Implementation Action: (9)	Actual Hours: (10)
	Date Completed: (11)
	Reviewed By: (12)
COTR Approval: (13)	Close Out Date: (14)