

**Office of Aerospace Technology (OAT)**  
**Technical Services/Products**

**Description of Work**

**10.61 Office of Aerospace Technology Technical Services / Products**

**10.61.1 General**

The Contractor shall evaluate, demonstrate, design, develop, deploy, and maintain ~~maintain and evaluate~~ information technology, multimedia, electronic commerce and business process ~~products and services~~ solutions in support of the Aerospace Technology Enterprise (OAT) and its Agency, national and international partners. ~~responsibilities, objectives and programs.~~ The Contractor shall also provide demonstrations and training on the deployment and operation of advanced Internet applications to the OAT Chief Information Officer, program management executives, collaborators, national and international partners, support service providers, and/or other NASA offices as requested. ~~The contractor shall evaluate, design, acquire, and deploy servers to meet the requirements of the Enterprise and perform all related IT operations and maintenance functions, including account administration. The contractor shall provide end-to-end service management and customer support to facilitate end-user IT needs. Where feasible, the Contractor shall integrate information technology, electronic commerce methods and business/program management processes to enable increased productivity, efficiency and effectiveness. It is expected that the Contractor will work with OAT personnel and in coordination with personnel (as designated by OAT project leaders) in NASA and external organizations.~~

**10.61.2 Information Technology Products and Services, ~~Electronic Commerce and Multimedia~~—www**

#### **10.61.2.1 Project Life-Cycle Services**

The Contractor shall:

- A. Evaluate emerging technologies to recommend enhancements to the Aerospace Technology Enterprise business applications. Particular emphasis shall be placed on multi-media solutions, and other collaborative tools, knowledge management and communication. Training and attendance at new technology demonstrations and trade shows shall be required- is encouraged, to identify and conduct research into emerging technologies.
- B. Develop, maintain, and document the OAT IT architecture as it relates to the Agency IT architecture and to any locations hosting OAT servers/applications. Consult with OAT, the NASA Chief Information Officer, and designated technical consultant(s) to develop recommendations for improvements to the architecture, including cost and impact as primary elements of proposed solutions. Travel to Centers and national or international partner locations as required to support these activities. All travel will require OAT approval.  
Develop and exploit the latest web and information services and products for OAT; procure necessary hardware and software to support this effort.
- C. Provide technical support to OAT in adding to, changing existing, or publishing Web-related material and in editing and formatting this material for various media consistent with present and future Enterprise, Agency, and Federal policy (including section 508 of the Rehabilitation Act of 1972, et. al.)
- E. Perform continuing review and consultation on Agency wide IT security policies, procedures, and architecture standards. Particular emphasis will be placed on supporting collaborative security assessments, continuity of operations (COOP), disaster recovery, and IT security best practices.
- D. Develop and exploit the latest web and information services and products for OAT; procure necessary hardware and software to support this effort. Provide research, development, sustaining engineering, and maintenance for the following:
  - Aerospace Technology Enterprise Annual Progress Report

- OAT Homepage / One NASA portal / Enterprise Theme web pages
- NASA Commercial Technology Network (NCTN) Homepage.
- OAT Collaborative Environment and Infrastructure, e.g., media room
- OAT Education, Outreach and Communications support, as required
- Program support as required, PMAS upgrade, other databases
- Agency wide CIO Initiative
- Federal Enterprise Architecture
- One NASA and E-Government objectives

Integrate the data resources mentioned above as required to meet One NASA and E-Government objectives.

E. Devise and implement Enterprise information architecture.

F. Support the management of OAT advanced technology test environment, including system administration of multiple UNIX and Windows NT systems, and testing, development, and infusion of new technology.

G. Sustaining engineering and any related activities associated with core capabilities are covered under this task order.

The Contractor shall develop, enhance, implement and maintain services for the full life cycle of authorized projects including:

- ~~The research and assessment of applicable technologies, commercially available products, and information content to fulfill project requirements.~~
- ~~The holistic design, development and deployment of solutions, applications, systems and information content. (products and services)~~
- ~~The maintenance, evaluation and enhancement of deployed solutions, applications, systems, and information content. (products and services).~~

The Contractor shall also provide documentation, demonstrations and training to enable the effective utilization and performance of the developed/enhanced products and services.

#### **10.61.2.12 — Applications Development and Maintenance**

The Contractor shall perform software application development and maintenance for current and needed applications that are required by the Office of Aerospace Technology.

The systems/Web pages/services for which the Contractor shall develop, enhance, implement and maintain include:

- OAT Homepage.
- OAT Image Bank.
- Online Enterprise newsletter.
- NASA Commercial Technology Network (NCTN) Homepage support.
- Integrated usage analysis and electronic commerce assessments for the online NCTN.
- Collaborative Program Management Environment.

Application for Anticipating IT Service Capabilities searching, compiling, and integrating program management information.

- Knowledge Management.
- Intranet/extranet systems, e.g. the Knowledge Information Center and the Virtual Information Center.
- Multimedia products.
- OAT Education and Outreach.
- Content Management System.
- Aerospace Technology Enterprise Associate Administrator Briefing
- Support initiatives of the Aerospace Technology Enterprise, which will include travel to NASA field centers. (High Performance Work Environment)
- Procurement of necessary hardware and software to support Office of Aerospace Technology initiatives.
- Internal and external training in support of the Aerospace Enterprise initiatives.
- Web-based Project Status Review System (PSRS) task to combine reporting and accomplishment applications.

The Contractor shall work with the Aerospace Technology Enterprise to assess the physical and technical infrastructure as it currently exists, and as it might evolve. To best

support the dramatic changes in Enterprise program management at HQ, capacity planning assessments will be required to gauge and monitor local area and wide area network throughput, traffic peaks, and server demand, and to anticipate the potential impacts of OAT applications on the OAT unique and NASA infrastructure. The assessment will examine server architecture with the goal of providing feasible engineering recommendations as to server configuration (UNIX or other) and LAN/WAN configuration.

- ~~Enterprise Annual Progress Report Support.~~
- ~~Home & Home Web page support.~~
- ~~Turning Goals Into Reality Registration and Web page support.~~
- ~~Databases (such as ACS) on end-user Local Area Networks or stand-alone work stations.~~
- ~~Comprehensive microcomputer or mainframe-based applications networked across one or more NASA organizations.~~
- ~~Posting of updates to the Aerospace Homepage, as required by the application owner.~~
- ~~The study of COTS packages, as well as Headquarters baseline applications to provide Code RP with a Collaborative Internet Working Environment.~~

~~The Contractor shall perform life cycle services, as applicable, for the above projects as well as projects subsequently authorized by OAT and NASA.~~

#### **10.61.2.310.61.2.21 Infrastructure/Server Implementation and Maintenance**

When applicable, the Contractor shall support existing and needed UNIX and NT activities for OAT, including activities such as:

- A. Obtaining, analyzing and recommending HW/SW in support of system efficiency.
- B. Routine system administration.
- C. Establishing and maintaining HTTP, FTP and other server functions.
- D. Installing and initializing or compiling required software applications.

Also, the Contractor shall work with OAT to determine which UNIX or NT services (or individual boxes) can and should be migrated to an operational environment.

### ~~10.61.3~~ ~~Business Process/Information Services and Products~~

~~The Contractor shall perform the assessment, definition and documentation of business processes. The Contractor shall develop and exploit WWW information services and products for OAT by providing assistance by way of adding to or changing existing Web-related material, and in editing and formatting this material. These activities include:~~

- ~~• Obtain, evaluate and incorporate emerging technologies, such as, Java (Java Server Pages), ActiveX, XML, VRML, WML, etc., to enhance graphical and structural elements of OAT Web pages and Web-based applications.~~
- ~~• Web-enabled front-end systems associated with database back-end systems.~~
- ~~• Interactive Web applications.~~
- ~~• Investigate and demonstrate existing and future Internet-based collaborative tools.~~

~~Further, the Contractor shall establish controlled WWW page versions including the citation of the URL and the date of the last page update and other parameters consistent with both existing Internet practice and present and future NASA policy. The Contractor shall also provide technical assistance/ recommendations with the purchase of HW/SW to improve OAT productivity.~~

~~The Contractor shall work with OAT personnel to assess the physical and technical infrastructure of the OAT network and server environment, both as it currently exists and as it might evolve. This assessment will take the form of an engineering task to gauge and monitor local area and wide area network throughput, traffic peaks, and server demand. The assessment will be undertaken with the goal of advising the OAT as to the impact on OAT unique and Headquarters infrastructure of anticipated higher use of Internet and Web-based applications. The assessment will also take an engineering~~

approach to examining server architecture with a goal of providing solid engineering recommendations as to server configuration (UNIX or other) and LAN/WAN configuration.

#### **10.61.4 Training**

The Contractor shall provide demonstrations and training on the deployment and operation of these advanced Internet applications to NASA programs, NASA collaborators as required, and NASA Headquarters ADP\T support service providers as appropriate. The Contractor shall engage wide area networking (WAN) expertise to maximize access to NASA information resources by both external groups (to NASA) and other internal groups (components of Program Offices located at Field Centers, for instance).

#### **~~10.61.5~~ 10.61.3 ~~D~~ Deliverables**

Deliverables shall include the following:

- a. Investigations and demonstrations of existing and emerging technologies. The result of the research will be delivered in the form of Whitepapers.
- b. Evaluation and recommendations concerning emerging technologies with particular emphasis on collaborative tools, knowledge management, and communicating knowledge.
- c. Documented evaluation and development of prototype solutions, based on the research and incorporation of emerging technologies.
- d. Recommendations concerning OAT IT architecture as required.
- e. Continual Ongoing enhancements to approved prototypes.
- f. Aerospace Technology Enterprise Annual Progress Report (Web-based)
- g. Enhancements to the OAT Website(s)
- h. Enhancements to Program Management Accomplishments System (PMAS)
- i. OAT Collaborative Environment and Infrastructure
- j. XML Conversion\Content repurposing

k. Monthly deliverables, to include: a budget status chart; a list of work accomplishments (what, by whom, how many hours); and anticipated work for the next month.

**10.61.4 — Estimated Hours**

~~The Contractor shall deliver 10,933 estimated technical support hours for Information Technology Products and Services and Infrastructure/Server Implementation and Maintenance and Deliverables.~~

**10.61.56      Metrics**

The performance standards specified in paragraphs 10.3.1, 10.3.2, 10.3.3 and 10.3.4 are applicable to this task order.