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Representative Task Order # 1

For purposes of proposing solutions to each of the Representative Task Orders, the Offerors shall assume the current state of the HQ IT environment regardless of the start date of each RTO.

Title: Establish a Library for NASA Studies

Period of Performance: January 1, 2012 – June 30, 2012

Task Background:

NASA analysts are often required to perform studies that range from analyzing the impact of funding shifts to analyzing what changes or new capabilities are required when new programmatic or institutional missions are identified. These studies often cover several domains, are at different levels of detail, involve input from distributed teams, and are pre-decisional.

Between 2005 and 2010 the organization previously known as the Office of Program Analysis and Evaluation (PA&E) lead several dozen Agency studies. Many of these studies were highly detailed and supported by analysis that came from other parts of the agency. Many studies were in support of pending senior management decisions and presented options to NASA leadership. Some recommendations were accepted, in other cases some secondary or tertiary options were pursued, and some recommendations were either rejected or not pursued. Currently summary or presentation materials from these studies are stored on a file server and occupy approximately 30 GB, but the actual supporting analysis, documentation, or artifacts of the resulting decisions are scattered and stored on numerous servers.

The problem is that without a simple way to find analysis products and the resulting decisions of the past, analysts and leaders either rely on institutional knowledge or recreate analysis activities from scratch. What is needed is a system that lets people retrieve the results of prior analysis to see if a new study assignment is similar to one that was previously performed.

Task Requirements:

Build a library to store PA&E's studies and provide the capability to incrementally add relevant or related data (e.g. Senior Management Council meeting minutes, backup charts, actions, and decisions. The library shall be capable of establishing and maintaining the affiliation of supporting data, be searchable by decision, study name, author, purpose, and date. The library shall allow customers to search, develop adhoc queries, and have a mechanism to upload new studies or affiliated products and easily place them in the appropriate categories. Edits and versioning

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of the artifacts is neither required nor allowed; however the library shall allow for new tags and instances of metadata.

It is important to note that many studies were pre-decisional and some contain information subject to International Traffic in Arms Regulations. Access to the library and visibility to the affiliated materials shall be restricted to a total of approximately 200 customers. More generalized access to study's index of summary descriptions shall be restricted to NASA address space. For the 200 privileged users, access to the library shall be provisioned through the NASA Account Management System (NAMS). E-Authentication to the library shall be through the NASA Launchpad that utilizes a unique Agency User ID and password for each user. The entire service shall require secure storage and retrieval at the appropriate level of sensitivity.

Activities:

- Develop library and identify hosting and storage requirements
- Collect materials
- Organize and categorize materials
- Use the HQ Project Tailoring Checklist to determine SDLC (Checklist and Work Instruction available in the Bidders Library)
- Conduct customer review and modification of interfaces as required
- Conduct ITS review
- Prepare hosting environment
- Test with participants from other centers
- Develop and conduct training
- Deploy System
- Perform System Operations

Deliverables:

No.	Product or Service	Performance Standard
1	Project Plan and Schedule	Provide project plan to include the work products and schedule to accomplish the project
2	Project Tailing Checklist	Perform analysis and provide SDLC approach utilizing the HQ Project Tailing Checklist
3	Configuration Management Milestones	Conduct the following milestones: SRR, PDR, CDR, TRR, ORR
4	SDLC Documentation	Provide as required by CM Process
5	IT Security Plan	Provide as required by IT Security

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6	Communications and Training Plan	Provide documentation that identifies the communications and training methodology
7	Status Reviews, Progress Reports	Support weekly and monthly reviews that address progress of all aspects of the project, including, but not limited to, cost, technical accomplishments, status of deliverables and quantitative descriptive of overall progress, risks, risk mitigations and problems, and identify corrective actions, and projected work activities for following month

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Representative Task Order # 2

For purposes of proposing solutions to each of the Representative Task Orders, the Offerors shall assume the current state of the HQ IT environment regardless of the start date of each RTO.

Title: Exploration Systems Mission Directorate data access mapping analysis

Period of Performance: January 1, 2012 – June 30, 2012

Task Background:

The Exploration Systems Mission Directorate has an Integrated Collaborative Environment (ICE) that is managed and maintained at MSFC. The portal and web interfaces are currently developed at HQ. ICE consists of services for PLM/PDM, Requirements Management, Risk Management, Scheduling, WIKI, and Decision Analysis. ESMD has a requirement to expand the search capability across the entire service environment to provide a collective and integrated view of data.

Currently there are non-standard naming conventions that limit the utility of the ICE search engines. This challenge extends to documents contained in ICE that might be extremely helpful in knowledge transfer or are critical for compliance with our records retention obligations. ESMD needs a way to find the right files among a large collection of mixed data types.

Task Requirements:

Provide options for being able to conduct global search and query of the system through the ICE Portal and if that service can be available for more generalized access that provides views into the data based on access permissions. Part of that analysis shall include determining if current categorization attributes such as authorship, dates, and file locations are sufficient to assist finding data products.

Provide recommendations sufficient for NASA to understand the risks and benefits of automating access to the data products for integration into knowledge management and lessons learned systems while maintaining the integrity of the data access permissions.

Activities:

- Develop approach for how best to conduct the analysis for providing a global search capability across ICE
- Develop approach of how best to assure currency and validity of the data

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- Develop an approach and offer options of how best to assure data files would not be negatively impacted
- Deliver options for how best to automate search, identification, and validation services

Deliverables:

No.	Product or Service	Performance Standard
1	Project Plan and Schedule	Provide project plan to include the work products and schedule to accomplish the project
2	ICE Portal Search Capability Analysis	Provide document to include approach, findings and options to accomplish the project
3	Status Reviews, Progress Reports	Support weekly and monthly reviews covering cost, technical accomplishments, status of deliverables and quantitative descriptive of overall progress, risks problems and identify corrective actions, and projected work activities for following month

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Representative Task Order # 3

For purposes of proposing solutions to each of the Representative Task Orders, the Offerors shall assume the current state of the HQ IT environment regardless of the start date of each RTO. Offerors shall not assume efficiencies between the contract start date and the start date of this RTO.

Title: Provide Project Management & Coordination to the OCE and OCIO

Period of Performance: January 1, 2012 – January 1, 2013

Task Background:

NASA's engineering teams assigned to design and evaluate vehicle components and subsystems are often distributed between Centers and use different forms of Product Data Management / Product Lifecycle Management (PDM/PLM) capabilities. Without a common reference for parts, names, or nomenclatures and without a common performance and capability across the various instances of the tool, moving critical information along the design pipeline or performing overall system integration requires steps that insert risk and time into the process.

The Office of the Chief Engineer (OCE) has baselined a new NASA Procedural Requirement (NPR) to facilitate interoperability of PDM/PLM services across all NASA Center's Engineering directorates. The OCE has requested support from the Office of the Chief Information Officer (OCIO) to provide support in the system design, build, and implementation of an agency interoperable PDM/PLM services.

The challenge is to develop an unbiased and trusted leadership team that understands the technical issues required for a successful high performing build of the new system, the requirements for information transfer and customer expectations from the current versions, and the right level of logistic, outreach, training, project support and insight to the OCE and OCIO leadership.

Task Requirements:

Support the Office of the Chief Engineer (OCE) and the Office of the Chief Information Officer (OCIO) in the planning and execution of migrating to an agency wide interoperable PDM/PLM capability. Serve as the centralized authority for documenting tasks, risks, issues, and schedule for the migration. Serve as the OCE and OCIO's integration planning managers and consultants and provide insight and offer approaches to managing Center issues of schedule, performance, data migration, controlled vocabularies and use cases. Develop and maintain an integrated project plan and master schedule for the implementation of a new

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standard PDM/PLM system. Organize, schedule, conduct and support meetings directly with PDM/PLM users and with customers. Coordinate, document, track, Center PDM/PLM migration requirements and document, elevate and discuss conflicts between Center and Agency OCE requirements and those of the OCIO. Organize, support and develop Workshop materials. Develop, deploy and maintain outreach materials to engineering directorate offices and to mission customers. Document discussions with external industry partners who may require interfaces to and from the NASA PDM/PLM system. Document interfaces and exchange requirements and deliver them to system implementers. Collect, document and publish relevant training, interface and configuration materials.

Activities:

- Capture requirements and expectations from Center engineering directorates, customers and OCE/OCIO leadership. It is estimated that the following trips would be required: two trips each to Marshall Space Flight and Johnson Space Center and one trip to Kennedy Space Center.
- Develop, maintain and publish an integrated master schedule.
- Establish or adopt a procedure to capture new status, security reviews, design reviews, cost projects and similar data that will be organized in a fashion to inform leadership and provide insight to project health.
- Collect and document Center and customer use cases to determine overall goals and capabilities of the new service.
- Document risks and associated mitigations.
- Generate and maintain a consolidated action list that will facilitate prioritization by policy, procedure, and funding.
- Develop alternative summary views that provide goals and status of the PDM/PLM migration to a wider community and to external partners.
- Develop and conduct training for data migration, access, procedures and standards required by the agency capability.
- Conduct 2 workshops (1 Marshall Space Flight Center and 1 Johnson Space Center) and develop workshop materials.
- Provide expertise that will support in standardization of controlled vocabularies (e.g. naming, nomenclature, numbering), interfaces, access, performance and similar services that are cross cutting and require uniformity across all PDM/PLM nodes.
- Provide technical consulting to project leaders regarding gaps in expectations and capabilities.

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Deliverables:

No.	Product or Service	Performance Standard
1	Project Plan and Schedule	Provide and maintain a project plan to include the work products, strategy and schedule to accomplish the project
2	Conduct Configuration Management Milestones	Develop appropriate CM processes to ensure successful project planning and consulting support
3	Participate in PDM/PLM CM Milestones	Capture and publish the following milestones: SRR, PDR, CDR, TRR, ORR
4	Configuration and Functional Drawings	Capture or create, vet and publish drawings depicting relevant views of the PDM/PLM system and interface subsystems
5	Requirements Matrix	Capture, vet and publish level one and level two requirements.
6	Design and System Description Documents	Capture or co-create, vet and publish relevant documentation of the PDM/PLM system
7	Publish action item list	Capture and maintain action items that are global or significant to the success of the project
8	Communications and Training	Develop and publish required communication outreach and training in support of the OCE and OCIO's communities
9	Status Reviews, Progress Reports	Support regular meetings, telecons and requirement reviews