

City of Philadelphia
Office of Innovation and Technology (OIT)
and the Philadelphia Water Department (PWD)
1101 Market St.
Philadelphia, PA 19104



REQUEST FOR INFORMATION (RFI)

This document contains a Request for Information for solution providers to implement an enterprise project management information management solution in support of PWDs project planning, budgeting, design and construction processes. The information obtained from this RFI will be used by the City as a basis for further discussion and for preparation of a subsequent Request for Proposals (RFP) to be released in the first or second quarter of fiscal year 2014. Solution providers wishing to respond to this RFI should read this document carefully and follow the guidance for responding.

Implementation of an Enterprise Project Management Information System

Posted: Friday, June 14, 2013

Response Due:

Friday, July 12, 2013@ 05:00 p.m. (Local Philadelphia Time)

ATTENTION: Geoffrey L. Brock, Information Technology Director for PWD

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Request for Information

1. Administrative Information

1.1. Request for Information (RFI)

The Philadelphia Water Department (PWD) is seeking a comprehensive capital planning information solution to support its capital planning, budgeting, design and construction processes. This solution will be a replacement for an existing system called CAPIT, which was custom developed more than a decade ago. PWD has a strong preference for a commercial, off-the-shelf solution and has been evaluating enterprise portfolio management (EPM, EPPM or PMIS) applications. It is PWD's intention to contract with an EPPM implementation vendor experienced with this class of software to implement PWD's selected solution. PWD is looking for established solutions, which are comparable in scope, complexity and environment to the requirements described herein. The purpose of this RFI inquiry is to give eligible entities within this market space an opportunity to inform the City about such projects, including their scope, development platform and environment, cost and schedule. Information about core competencies, latest available technology trends and solutions, associated costs and any additional technical information that may be relevant to this effort is also requested. The City expects, but cannot guarantee, that it will later issue one or more subsequent Request for Proposals (RFPs) for replacement and enhancement of CAPIT. Information received in response to this RFI may assist the City in refining the requirements for the RFP.

OIT and Water encourage all entities that may be interested in submitting proposals in response to any subsequent RFP to prepare a response to this RFI in order for the City to plan and identify sufficient resources for such a project. Responses to this RFI are considered non-binding proposals and are only used to assist the City perform its due diligence and gather information for planning and specification preparation purposes.

1.2. Philadelphia Office of Innovation and Technology

The Philadelphia Office of Innovation and Technology (OIT) is the central IT organization that oversees the technology infrastructure for the City. OIT works with the city's IT Community to develop a comprehensive portfolio of online services and technology solutions that meet the needs of the city's diverse residents, businesses, government entities, and employees.

1.3. Philadelphia Water Department

The Philadelphia Water Department is the agency responsible for managing the water, wastewater and storm water infrastructure for the City of Philadelphia. As such, it is responsible for the planning, design, programming and construction work processes necessary for development of new and the rehabilitation or replacement of existing infrastructure.

1.4. Enterprise Project Management (EPM) Information System Steering Committee

The EPM Steering is a coordinating committee representing all PWD Divisions and Units which advise PWD on supporting the development and maintenance of its water, wastewater and stormwater infrastructure. The goals of the Committee are to:

- Identify business requirements for work processes that the EPM system must support;
- Identify work flows and data requirements
- Identify policies and standard procedures to insure the smooth adoption of a new EPM system

The Committee is chaired by the General Manager of PWD's Engineering Division and the project is managed through PWD's OIT organization.

2. Business requirements and technical specifications

PWD has over the past year evaluated its business requirements and is in the process of developing technical specifications for the implementation. Once the RFI process is completed the technical specifications will be finalized, an RFP will be released. A high-level view of PWDs business requirements include:

2.1. Portfolio and Program Management

The portfolio needs require the ability to view projects by a variety of characteristics (such as dollar value, work type, funding, program, cash flow, etc) and apply budgeting, funding and cost controls for the selection, prioritization and balancing of project portfolios.

PWD also needs the ability to manage program investments that require more than one contract to complete, such as plant expansions, development initiatives, and grants. The overall budget and schedule should be set at the program level where individual project costs and schedules rollup to the program to track progress. Shared documentation must be maintained at the program level so that every project has access to them. Programs need to have work numbers of mixed asset project types – ie. Plants and facilities, location based projects, and/or studies.

2.2. Project Management

2.2.1. Project Type

Workflow, tracking and data management requirements are dependent upon the type of asset being developed by the project. For convenience the assets are grouped into three project types as follows:

- Water/sewer/stormwater conveyance projects that are built within street right of way, easements, on public properties or along stream reaches that require coordination with other utilities and property owners
- plant and facilities projects that are built on PWD property and do not require the same level of coordination, with other utilities and property owners
- studies that are required to evaluate the situation, define alternatives and identify subsequent projects that will be built

The first project type above, water, sewer or stormwater conveyance projects, requires an interface with PWD's geographic information system (GIS) to identify and display projects built on street segments, easements, parcels, and stream reaches.

2.2.2. Workflows

The workflow for each type of project varies based upon the asset type being investigated and whether internal or outsourced professional design services are used.

During the planning process, potential projects are identified and may be aggregated as they are designed or contracted as shown in the **Figure 1**. Costs are identified at the project level and need to be aggregated or split as projects advance. Likewise critical project information needs to persist at the work number level.

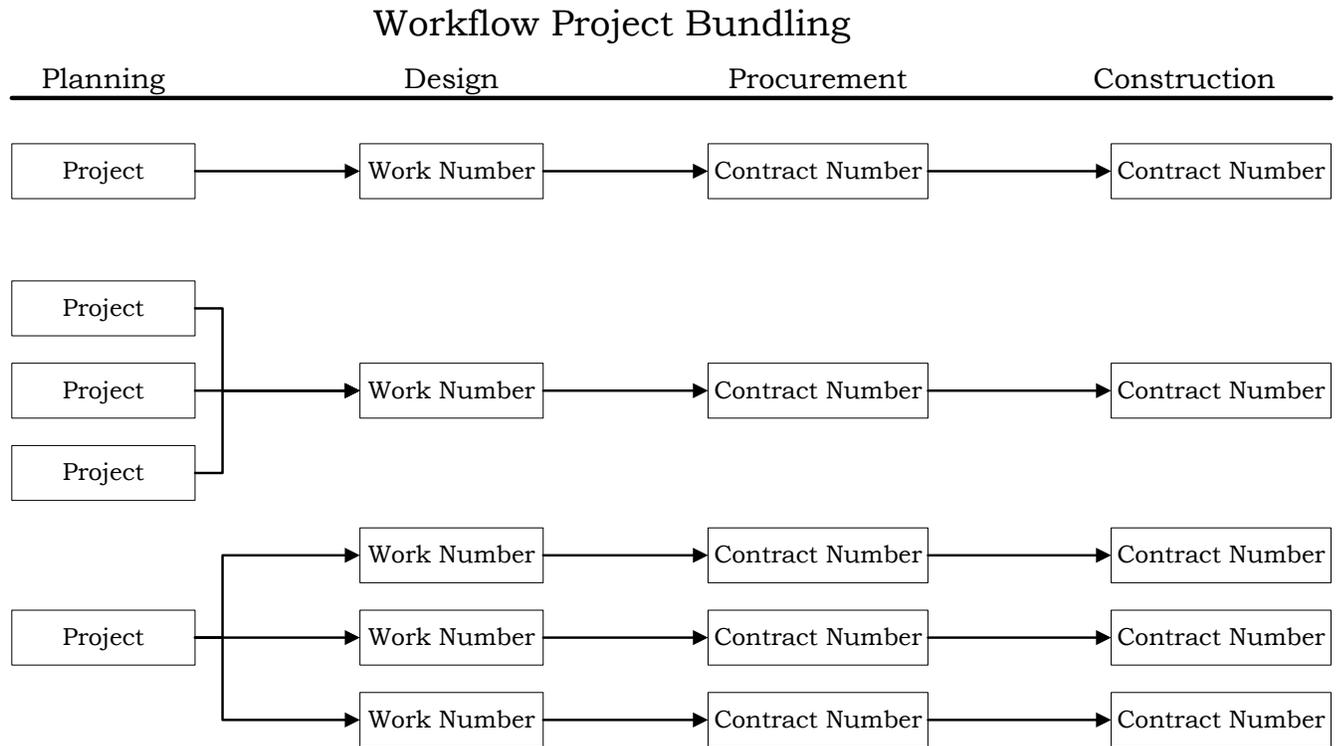


Figure 1 - workflow project bundling

2.3. Resource Management

The resources are assigned to each project and need to be tracked and managed. They include:

- Staff assignments
- Professional service contracts
- Construction contracts

2.3.1. Cost Management

PWD captures costs for staff time, professional services and construction contracts at the project, work number and/or contract level. An important component of the EPPM is to continue to capture total costs for each project. In addition to tracking the cost of each project, the system must be capable of identifying one or more funding sources for each project.

Both the professional service and construction contracts are managed in the current CAPIT. Users can encumber funds, issue task orders, prepare engineers estimates, and support payment of invoices. Different workflows are required based upon whether funds are from capital or operating funds.

2.3.2. Schedule Management

The EPPM software should provide increased visibility of project schedules through the use of project scheduling software. The status of work will be tracked at the milestone level. PWD has established the targeted construction date as a key milestone and uses this date to reverse schedule the project – i.e. to meet the expected construction date, design must start two years prior.

It is not the intent of PWD to support detailed construction schedules, but rather the schedule of activities that must be completed by PWD staff during the four phases of a project; planning, design, procurement and construction. PWD will develop project templates for the various project types that, once selected, apply average durations for the templates activities. Users must also have the ability to upload and manage project schedules for projects that are not predefined.

2.3.3. Time Management

The tracking of labor time is very important. Currently PWD uses LaborX, an in-house developed application for tracking employee time on projects. This system is presently being re-developed in a Microsoft environment (SQL, SharePoint) and will be used with the new project management system software to track staff time. It is expected that the time usage data will be uploaded to the EPM system every two weeks once the timesheets have been approved. It is expected that the system will, using employee data, calculate the labor costs for the projects. Users assign their time to project phases and tasks, e.g. Projects Control: Funding Initiated.

2.3.4. Record Management

The EPPM software must support SharePoint for record management. All document types will need to be managed. Through the use of metadata, documents will be stored in the SharePoint database and retrieved based on a variety of criteria, such as work number, work type, program, etc. PWD presently uses ProjectWise by Bentley Systems that is a SharePoint repository for project related documents.

2.4. Reporting

PWD currently uses over 60 reports in support of its capital planning process. The existing reports are being reviewed to determine their adequacy and to identify additional reporting requirements. PWD recognizes that some reports may be eliminated through the use of dashboards, views and alerts.

2.5. Tracking and Controlling

Tracking support is needed as projects move through the capital planning process. PWD is currently re-evaluating what it needs to measure and monitor. PWD will also require the use of dashboards to provide some of this function.

Individual tools are required for some processes, such as portfolio review needs, change management and issue tracking.

2.6. Integration and General Collaboration Needs

The EPPM software solution will be required to integrate or exchange information with several department or city-wide applications including:

- Outlook\Exchange for emails and calendaring
- Microsoft Office products
- GreenIT – green infrastructure metrics
- The HUB – LTCP reporting
- Labor rates
- FAMIS – contractor payments
- ACIS
- GIS – asset location
- ProjectWise - SharePoint repository for engineering records developed by Bentley Systems

3. PWD's Architecture and Development Environment

PWD has predominantly a Microsoft architecture and development environment. It currently has two installations that require Oracle databases. One of these was developed in-house using Oracle forms.

3.1. EPPM System Architecture

PWD currently develops and maintains applications for the Microsoft web environment. Although this is preferred system architecture, PWD is open to entertaining other architecture variants to meet the needs of an enterprise project management system.

For discussion purposes the selected EPM solution would be a web based application in a typical Microsoft web environment as shown in **Figure 2**. Users will browse through web services to the EPPM web application. The web application will write and exchange data with SQL, SharePoint, and the GIS databases.

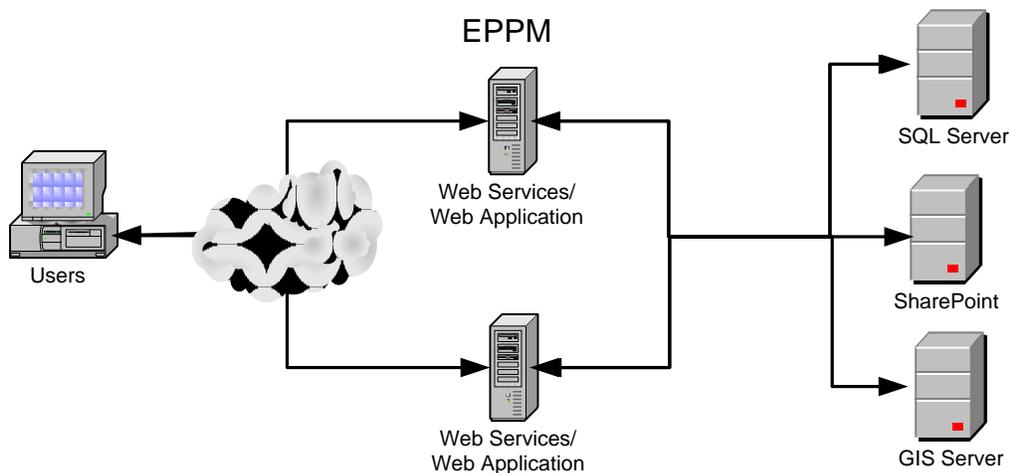


FIGURE 2 - EPPM ENVIRONMENT

3.2. Development Environment

Due to City policy and the level of interface with other PWD and City systems, the EPPM will most likely be housed on site. Subscription based solutions will be entertained, but would require a proof of concept for further consideration. The key components of PWD's supported development environment are discussed below.

3.2.1. .Net Framework

Applications currently being developed in house take advantage of the current .Net Framework that runs primarily on Microsoft Windows.

3.2.2. Visual Studio

Microsoft Visual Studio is used for the development environment. Visual Studio is an integrated development environment (IDE) used to develop console and graphical user interface applications along with Windows Forms applications, web sites, web applications, and web services. The Visual Basic programming language is used for triggers and code development so that PWD can maintain any customizations.

3.2.3. SharePoint

Microsoft SharePoint is currently being used to manage all project related engineering records and project documents. SharePoint is a content management system and, through a SharePoint API, allows documents to be stored and retrieved as requested by software applications. Users should be able to add or update documents directly in SharePoint as well.

PWD currently has two SharePoint servers one for documents and the other for engineering drawings. Engineering drawings are currently stored using ProjectWise, Bentley's SharePoint solution for engineering drawing management.

SharePoint is also portal software that allows for managing and provisioning of intranet, extranets, and websites. Using PWD's SharePoint portal users are able to access the applications; a critical item as PWD applications needs to be accessed through the internet for field operations.

3.2.4. GIS

EPPM will have access to PWD's geodatabase that will allow users to spatially locate and query location based projects. PWD uses a combination of ESRI and AutoDesk GIS and mapping software.

3.2.5. SQL

Completing the picture, SQL is a relational database whose primary function is to store and retrieve data as requested by software applications. PWD is currently running MSSQL 2008 R2 on most applications and is presently testing the latest version for upgrades.

3.3. Approximate User Base for EPM

Users: 300 log-ins

Normal access: 10 to 20 simultaneous users

3.4. System Implementation Requirements

- 1) Support Windows Active Directory Log-ins for internal City users
- 2) Configuration tools for users, drop downs, GIS reference layers, labels, etc.
- 3) Support for custom fields

4. Vendor Requirements

The purpose of this RFI inquiry is to give eligible entities within this market space an opportunity to inform PWD on core competencies, latest available technology trends and solutions, associated costs and any additional technical information that may be relevant to this effort. PWD is looking for established solutions, which are comparable in scope, complexity and environment to the requirements described herein. Vendors are asked to provide information in the following areas and, if the experience or projects are relevant will be invited to meet with the Steering Committee.

- Vendor background and history
- EPPM experience – demonstrated experience implementing EPPM systems.
 - Nature of the projects – demonstrated knowledge of the planning and implementation of infrastructure projects
- Platform experience
- Staffing – Availability and adequacy of staffing to perform the necessary tasks
- Customer satisfaction – Recommendations from existing customer base
- Billing rates – Billing rates by job categories should be included

Each of these requirements and acceptable criteria for demonstration will be discussed.

4.1. Vendor Background

Vendor is required to provide information about its organization, client base, history, etc.

4.2. EPPM Experience

Vendor is required to provide descriptions of at least three projects where it was responsible for the implementation of a planning and project information management system of similar requirements as PWD. Type of software products, platform, and implementation costs should be noted. Experience does not have to be with a utility, which is a plus, but any industry where the focus is on the planning and implementation of infrastructure projects.

4.3. Platform Experience

Vendor is required to show at least three projects where it was responsible for developing or implementing software in the discussed Microsoft platform. For each project the components of the platform that were used should be identified. At least two of the projects should be using SharePoint.

4.4. Customer Satisfaction

Vendor is required to identify three references, ideally for projects listed in section 4.2 or 4.3.

4.5. Staffing

Vendor is required to identify the availability and adequacy of staffing to perform the necessary tasks. For each staff resource listed, their skill set or job title, availability and office locations need to be

identified. PWD is only interested in staff who would be assigned to the project and does not require, or need, a listing of all employees in the vendor's organization. Availability should indicate a high, medium, or low probability for their being assigned to this work effort should it be awarded to the vendor during fiscal year 2014 (July 1, 2013 to June 30, 2014).

The person who would most likely be the project manager should be identified as well as other key project members. For these people, detailed resumes are required.

4.6. Billing Rates

Vendor should provide rate schedules showing billing rates by job categories that would be used in a project of this type – e.g. project manager, SharePoint developer, document management specialist, etc.

5. Instructions for Responding to this RFI

5.1. Who May Respond

Responses should be entities with experience developing solutions that support the planning, design and construction of infrastructure. Response to this RFI will not preclude a responding entity from submitting a response to any subsequent RFP on this topic that PWD may issue.

5.2. Due Date

All responses to this RFI are due Friday, July 12, 2013.

The City will schedule a **webinar** to give vendors an opportunity to discuss the city's requirements. Send request for details to Karen.a.scott@phila.gov.

5.3. RFI Format

Vendors should submit a response that addresses the vendor qualifications in Section 4. Response should not exceed 20 pages. Any marketing and advertising material should be included in a separate appendix and is not required. Electronic submissions can be made to geoffrey.brock@phila.gov.

5.4. Selection

All vendors' responses will be reviewed and, for selected projects, associated vendors will be asked to meet with the Steering Committee. All qualified firms will be invited to give a presentation and to discuss potential solutions for PWD. Typical areas to be discussed during the presentation include, but are not limited to:

Your company's approach to Enterprise Project Management solutions.
Your company's involvement in other projects to support enterprise project management.
How would your solution meet the requirements specified in this RFI?
Time lines for the completion of projects of this type
Past successes you've had in delivering similar solutions.
What you view as the City's responsibilities versus what your company would do for the PWD.
Based on your understanding of the scope of this project, what challenges or areas of concern do you have?
A sample staffing model including level of expertise.
Successful ways PWD can transition from our current system to the new system?

5.5. RFI Response Contact, Review and Clarification Process

This RFI is issued with the intent to survey industry to obtain information that provides guidance, which may be used in the preparation of RFP. Based on those responses, the Steering Committee will augment its roadmap which may result in one or more RFPs. To fully comprehend the information contained within a response to this RFI, the Steering Committee may request further clarification in the form of brief verbal communication by telephone, written communication, electronic communication, or site visits to existing customers of EPM solutions. Companies responding to this RFI shall designate a single contact within that company for receipt of all subsequent information regarding this RFI. The name of this contact will be made available to the Steering Committee.

5.6. Distribution of RFI Responses and Copyrighted Material

Copies of all documentation submitted in response to this RFI will be available to the Steering Committee for review purposes. According to the City's Policies and Procedures, proprietary and confidential material shall not be included in any response to the OIT. If copyrighted material is sent in response to this RFI then a statement waiving that copyright for use by the OIT is required and a limited waiver of copyright that allows the Steering Committee to make up to twenty-five (25) copies for review purposes as required.

5.7. City Requirements for Contracting

Although not required for an RFI, please be advised that the city of Philadelphia has requirements that are mandatory for a vendor entering into a contract with a City department. These requirements will impact whether a response to the follow on RFP is responsive. Items of concern include:

- Local business entity registration
- Mandatory Terms and Conditions
- Disadvantage business requirements (Office of Economic Opportunity)

Information about the City of Philadelphia's professional services contracting processes and requirements can be found at the City of Philadelphia E-Contracts Site at <http://www.phila.gov/contracts/>