**EAST BAY
MUNICIPAL UTILITY DISTRICT**

Interactive Water Use Portal and Consumption Notifications
Software System

Request for Information

February 27, 2024

Table of Contents

ATTACHMENTS

      ATTACHMENT A – FUNCTIONAL REQUIREMENTS
      ATTACHMENT A1 – FUNCTIONAL REQUIREMENTS RESPONSE FORM (EXCEL VERSION)

General Information

1.1 Overview of EBMUD

East Bay Municipal Utility District (EBMUD) supplies water and provides wastewater treatment for parts of Alameda and Contra Costa counties on the eastern side of San Francisco Bay in Northern California. EBMUD provides high-quality drinking water for 1.4 million customers. The wastewater system serves 740,000 customers in an 88-square-mile area.

EBMUD is a publicly owned utility formed under the Municipal Utility District Act passed by the California Legislature in 1921. EBMUD has a seven-member Board of Directors publicly elected from wards within EBMUD's service area. The Board of Directors and management believe that EBMUD has a public responsibility to preserve the region's resources and set industry standards for the way water and wastewater utilities conduct themselves. EBMUD is a customer-oriented and environmentally sensitive public agency, firmly committed to serving people and the environment.

1.2 Overview of Water Conservation

As a water utility, the District provides a wide variety of water conservation and customer services. These services rely on collecting, processing, and analyzing many forms of data that are made available to end users through web portals, emails, and various other communication channels. The portals and communication channels are an important means to share water consumption information, leak alerts, water budgets, conservation messaging and tools for staff and customers. The District needs a software system that provides access to this data, analytic tools, alerts, and reports that support our water conservation and customer service objectives. The ideal product will be a user-friendly, flexible application that supports backend data processing and front-end data presentment needs.

The District has nearly 400,000 meters, of which currently 5% have hourly AMI interval data, and the remaining are read manually on a bimonthly, or less frequently monthly, billing interval. The District plans to convert an additional 10% of its manually read meters to AMI over the next five years.

Project Overview

1.3 Introduction of Project

The District uses several solutions to provide customer service functionality including EBMUD.com, online account portal, informational water budgets, AMI data presentment, leak notifications, and an internal Water Conservation Rebate and Audit Application. The main objectives of this project are to understand services vendors can currently provide that support Water Conservation services related online Customer Portal functionality. Key functionality includes:

- Presentment of Billing and AMI water use data
- Water consumption-based communications, notifications
- Development and distribution of water budgets
- Multi-channel communications
- Conservation tools
- Reports and Analytics

Additionally, there is interest to understand the full suite of other customer portal services that vendors can provide along with the above conservation services. These include:

- Online Customer Portal that integrates customer facing functionality
- Start/Stop Service
- View Statements
- Online Payments
- Request Various District Services
- Single Sign on Support

It is expected that this project will require integration with other District applications as described in the requirements documents.

1.4 Request for Information (RFI)

EBMUD is seeking a new software system to replace the existing online conservation services to address its current and future needs. This Request for Information (RFI) is intended to inform EBMUD about the functionality and services available in the marketplace for managing this type of information. This RFI is a vehicle for information discovery of existing deployed solutions and should not be construed as a solicitation.

The RFI is intended for companies that develop solutions, as well as companies that implement a developer's solution. The RFI contains a general overview of EBMUD and an overview of our current environment.

Included in the package is an attachment (Attachment 1 – Vendor Response Form) in Excel format that contains tabs for Technical, Vendor and functional requirements. Please submit your responses on the spreadsheet and then return the spreadsheet to EBMUD.

Vendors are encouraged to respond whether they offer technical solutions for all or some of the business areas documented below. If you provide solutions to some of the business areas, it is critical for you to document how your system would interface with other business areas and existing systems. Select vendors will be asked to demonstrate their solutions to EBMUD stakeholders. Project requirements may be revised over the course of this discovery process based on any additional information acquired.

(**NOTE**: A response to this RFI does <u>not</u> constitute a bid; however, any information or demonstration provided in a response to this RFI may be considered as historical data by EBMUD if EBMUD decides to issue a Request for Proposal (RFP).)

Current Business Environment

1.5 Business Environment

Currently the District is using a cloud-based WaterSmart application to provide water consumption information to District Customers. Our 10-year contract with the Vendor is coming to an end. District would like to assess the current landscape of cloud-based technology solutions to help inform a potential RFP to upgrade or replace the current system .

Functional Business Requirements

1.6 Functional Requirements

Please find the functional requirements for the various business units in Attachment A – Functional Requirements.

1. Please use the attached spreadsheet to provide your responses for the Functional Business Requirements.

2. For each item, please provide the following information:
   a. In the Solution Type column, indicate how the business needs will be met i.e., whether it is out-of-the-box (base package), an extra add-on package, a customized solution, future release or if it is not supported.
   b. In the response column, please provide the following information.
      i. A description of the functional capabilities of your solutions.
      ii. Information that EBMUD needs to provide to your solution to accomplish the business need and how that information can be supplied.
      iii. Description of how users can interact with your system to accomplish the business needs (web, tablet, other mobile device, etc.)

Technical Requirements

1.7 Security and Compliance

Technical solutions must be designed to protect EBMUD from unauthorized access (especially any financial or personally identifiable information) from internal or external parties.

1. Provide your network and system architecture details of your solution. Please include any underlying technology components required by your solution.

2. Describe the security features of your product. Identify features at the user, application, transaction, and data levels.

3. Discuss how your solution adheres to Open Web Application Security Project (OWASP) security principles.

4. Describe any cryptographic technologies used by your solution in support of data privacy.

5. Describe your audit logging capability of your solution. Can we ship the audit logs to an external log management system?

6. What type of intrusion detection and prevention capability does your system provide?

7. Discuss how your solution uses role-based access control and how to manage the roles and privileges.

8. Describe how your system authenticates users. Do you support single sign on using Azure Active Directory, Central Authentication Service (CAS) or Security Assertion Markup Language (SAML)?

9. If your application allows for external access (mobile, external customer, vendors, etc.), describe the security features associated with it.

10. If our data is to be hosted remotely, please specify location(s). Are there any international locations? If yes, identify where the facilities are located.

11. Do you support provisioning and de-provisioning of user or end-user accounts using System for Cross-domain Identity Management (SCIM)?

12. What security requirements are required for your employees?

13. Is your software Compliant with ISO 17025 and NELAC (TNI 2016) standards?

1.8   Accessibility

1. Is your system accessible from current versions of Edge, Chrome, Firefox, Safari, and any other commonly used web browser?

2. Do your System compliant with Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, and any other applicable law and regulation?

3. Do your System support internationalization (I18N)?

1.9   Risk Management

EBMUD plans to run its Interactive Water Use Portal and Consumption Notifications Software System for at least the next 20 years. There are events, however, that could happen that would pose a risk to the support of a system for that long.

1. Will the source code base of the vendor's solution be made fully accessible to EBMUD? Will it be readily available to be built or modified by competent EBMUD programmers should EBMUD choose to support the solution in-house? If so, please describe the application development environment and any tools required for enhance the source code?

2. Are clients required to upgrade to new versions of your system?
   a. Can EBMUD decide to stay on one version of your system? Are you going to continue providing support in case EBMUD chooses to go off the upgrade path? Is there additional cost if this happens?
   b. Do you publish end-of-life support dates? Are there paid options for continuing support on non-current software releases?
   c. If function features require customization, what will happen in case of upgrade? Do you continue to provide support?
   d. Describe upgrade process in high level. Will system need to be offline during? If so, how long?

1.10 Interfaces

1. The EBMUD software environment consists of numerous applications with varying integration requirements. This includes Customer Information System (on-premise Java-based Application), CRM (on-premise Ruby-on-Rails), EBMUD.com (Cloud, Concrete), Water Budget Information System (on-premise ColdFusion), GIS (Esri) and AMI System (Sensus). How does your solution interface with other software systems both on-premises and in the cloud?
   a. Describe the technical architecture of your solution and what type of protocols are used to transfer information, both real-time and as needed.
   b. Describe how data is secured while in transit from one system to another.
   c. Does your solution utilize protocols to verify sender and recipients?
   d. Describe data flow when interfacing with other systems? Is it two-way communication or just one direction? What's are any limitations.
   e. Is your software compliant with MS Office 365 to edit document in MS Word and Excel?

f.   Describe how bulk transfer of documents can be automated on a nightly, weekly, or monthly basis.
g.   Describe how data can be pulled into a document from an external system such as XLIMS (AWS cloud-based software)?

2.   Describe what mechanism you use to manage time-sensitive data transmissions.

3.   Describe any audit features associated with your interface architecture.

4.   Describe any important standards that your solution implements that promote interoperability with other systems.

5.   Describe how your system handles electronic documents, i.e., what security does it use, what backup / restore mechanism is employed, what APIs are available. Describe any electronic documents generated by your system e.g., SOP, Analytical Reports, Training Records.

6.   Describe how your system handles electronic signatures.

7.   Describe the performance for data transition between systems including but not limited to Web Service API or automated process for bulk transfer etc.

8.   For web applications, describe which browsers and standards your product supports.

9.   Describe archive functionality and how archived documents can be retrieved.

10. Could you please share your Standard Integration Specification document for Data transfer.

1.11 Reporting Infrastructure
1.   Provide a description on how reporting works in your system. In particular:
   a.   What reports are standard with your system?
   b.   What reporting software is standard with your system?
   c.   What mechanisms are available for EBMUD to generate custom reports, ad-hoc, analytical and personalize reports? Are there additional costs associated with this? If so, please describe the fee structure.
   d.   What tools are available to schedule report generation?
   e.   What options are available for internal report distribution?
   f.   What options are available for pre-built dashboards/portals?
   g.   What options are available for real time queries?
   h.   Does your system provide interface allowing user to run SQL query directly?   What are other tools available for ad hoc query and what are the limitations of these tools? Are there performance constrains?
   i.   Can data be exported into CSV or Excel from your system?
   j.   Does your system provide canned/standard reports? What are they? Is there additional cost for these?
   k.   Can reports be generated in PDF format?
   l.   Describe how your system maintains template versions and renditions

       m. Describe how your system allows the user to mark a report as Draft, Reviewed and Approved.

2. Describe the types of users who can run queries and reports?

1.12 Data Conversion

1. What is your data conversion strategy for transitioning to your solution with minimal business interruption to EBMUD?
   a. Describe the advantages and disadvantages of your strategy.
   b. Describe your experience in data conversion or migration activities including staffing requirements and duration.
   c. What tools do you utilize for the data mapping phase?
   d. Does your solution provide a Data Dictionary that explains the meaning of your data elements to be used in mapping data from one system to another?
   e. How do you ensure data integrity during the transition?
   f. What tool do you use to migrate documents from other software system, network drive or hard copy?   Is there additional cost or any limitation?

2. Do you provide database documentation to your customers including a copy of the customer's database as needed?

1.13 Mobile Options

EBMUD is seeking solutions which take advantage of current technologies to provide real-time access to critical business functionality and mobile solutions to customers for scheduling and to EBMUD staff for entering inspection information EBMUD is interested in tools to improve productivity, ensure compliance, and provide flexibility.

1. Describe the extent to which your solution supports mobile access.
   a. What technology platforms are compatible with your solution (e.g., tablets, smartphones, etc.)?

2. Describe any additional hardware and software that would be required to implement mobile access to business functionality.
   a. Please describe any additional fees associated with your mobile options.
   b. Describe what additional maintenance and support activities are associated with your mobile features.
   c. Describe what can be accessed and any limitations/restrictions.

3. Describe your application standard response time.

4. Is your application capable of adding photos from a mobile phones or tablets, sending photo location, and allowing annotation of the photos? Any additional hardware or software required? Is there an additional cost associated with this functionality?

Vendor Requirements

1.14 Vendor Information and Experience

EBMUD is especially interested in partnering with a vendor who has demonstrated a successful track record for permitting system implementations. Successful implementations are defined as on-time, at or under budget, meeting all functional and technical requirements and helping the customer take full advantage of the efficiencies provided by the solution for end users and their business units.

1. Provide a brief history of your company, its products, and its strategic focus.

2. Provide a brief history of your experience working with governmental agencies within the past five years.

3. Provide a list of all government clients where you have implemented this solution, including the following information:
   a. Date of implementation
   b. Length of engagement
   c. Contact information for each client (name, email, and phone)

4. What makes your company uniquely qualified to provide and implement the solution? Please include a description of the qualifications of your staff, effectiveness of your methodologies and depth of your experience.

5. What is the size and financial stability of your company? Provide copies of your annual reports for the last three years. Provide any additional information that you feel would be significant in evaluating the financial soundness of your company.

6. State the nature of any pending litigation, liens or claims involving your organization. Has your company filed Chapter 7 or 11 bankruptcies in the last ten years?

1.15 Product Information and Hosting Options

EBMUD is open to exploring all hosting options available by our responding vendors.

1. If you provide an on-premises solution (a solution hosted in the EBMUD data center), please address the statements below.
   a. Describe the technical architecture of your application: presentation tier, application tier, databases supported, operating systems supported, etc.
   b. List the hardware specifications required for each tier in your architecture.
   c. List the software specifications required for each tier in your architecture: database versions, middleware versions, etc.
   d. Describe whether all user-facing functionality provided by your solution is fully accessible via standards-compliant web browsers or whether there is a need to install desktop or mobile client software.
   e. Does your solution support load balanced, high-availability architecture?

   f. Describe how your solutions handle failover or disaster recovery scenarios. Does this require any additional licenses?

   g. Describe any system tools included in your solutions that assists in monitoring application performance and stability.

2. If you provide a cloud-based solution (a solution not hosted in the EBMUD data center), please address the statements below.
   a. State where your data centers are located.
   b. State whether you own and/or lease these data centers. If you do not own this center, describe your contingency plan in the event your hosting partner goes out of business.
   c. Describe any hardware or software components of your solution that EBMUD would be expected to install or host on our own systems.
   d. Describe whether all user-facing functionality provided by your solution is fully accessible via standards-compliant web browsers or whether there is a need to install desktop or mobile client software.
   e. Describe the size and structure of your information security organization.
   f. Describe the physical security associated with your data centers and who is responsible for it.
   g. Describe your disaster recovery and business continuity plan.
   h. Describe the various methods by which EBMUD can access its data. What costs or fees are associated with accessing our data?
   i. Describe the process and timeframe required to export all EBMUD data should we decide to change hosting option or vendor.
   j. How does your organization log and monitor system performance?
   k. Describe your organization's data backup strategy.
   l. Describe your application, middleware and operating system patching strategy including frequency.
   m. Describe your organization's privacy program.
   n. Describe your incident management program.

3. Please describe your product roadmap. What features or strategic goals are incorporated within it?

1.16 Pricing Information

1. Describe the pricing structure of your solution. If you offer different hosting options, please clearly distinguish the difference between each option.
   a. Itemize the fees for each component.
   b. Does your product offer a perpetual license?
   c. Itemize all recurring costs over the first 5 years.
   d. Pricing for the different environments like staging, development etc.

2. Describe your implementation fee structure. Please itemize all fees associated with the installation, configuration, data migration, functional, regression and integration testing of your solution.

1.17 Product Implementation

Product implementation will require the completion of numerous tasks, including but not limited to testing (functional, regression, integration, acceptance), training (users, administrators) and go-live through post-go-live technical support.

1. Describe your implementation methodology.

2. Provide a high-level schedule for the implementation of your solution.

3. Describe your approach to implementation. Include staff engagement, training, collaboration, timing, and strategy.

4. Describe the number and skill set of EBMUD employees you need to assist in the implementation of your solution. Please state the time (person hours/weeks/etc.) you would require from each.

5. Describe the support and years of experience your staff would be dedicated to this project. Describe the percent of time each of your staff would be dedicated to the implementation.

6. Describe your planned testing strategy (functional, regression, integration, parallel and acceptance, structural, and performance testing).

7. What environments are to be delivered (test, user acceptance test, staging, prod)?

8. Describe strategies for increasing user adoption of the new tools and systems.

9. Describe best practices you use for monitoring the system to ensure it stays up to date and to understand how staff are using the tools.

10. Describe best practices for administration support for the product.

1.18 Training

1. Please describe the training you would recommend for your solution.
   a. Describe the different training methods you provide (e.g., online, in-person, etc.).
   b. Provide your training fee structure (if not included in solution).
   c. Describe how many hours of training would be optimal for your solution.
   d. Describe what training resources you provide (e.g., manual, reference guides, user groups, etc.)

2. Describe the components of your training plan.

3. Do you conduct a needs assessment before recommending your training options?

4. What type of post-implementation or ongoing training do you provide or recommend?

1.19 Ongoing Production Support

1. Provide a summary of your on-going customer service and support programs.
   a. What levels of customer support are available? What are the main service level agreement (SLA) components of each? What hours/days is support available? What is the cost associated with the support? Is there a toll-free number that can be utilized to access support staff?
   b. Describe the escalation procedure in the event the SLA is not met.

2. Describe what is involved in a typical software upgrade (e.g., is any system down-time required, and if so, how long do you typically need)
   a. Please identify the typical tasks required for a software upgrade.
   b. What would be a standard timeline for an upgrade?
   c. How frequently do you release product upgrades?
   d. Describe how disruptions to business processes are minimized during software upgrades.
   e. Are release notes included with all your upgrades? Briefly describe the content and structure.
   f. What is the process for evaluating and incorporating specific enhancements into your system?
   g. What is the process for evaluating and incorporating high priority bug fixes into your system?
   h. How often have you released major software upgrades to clients in the last 5 years?
   i. Can EBMUD decide to not implement upgrade? Can the upgrade be reviewed by EBMUD staff before it is implemented?

3. Describe what is involved in an emergency software upgrade?
   a. What is the notification process for an emergency software upgrade?
   b. How often have you released emergency software patches in the past 5 years?

4. In the event an upgrade impacts the existing database schema, describe how data conversion activities will be coordinated.

5. Describe the process of adding additional users to the system including any additional costs.

Vendor Information

1.20 Terms and Conditions

- This RFI requests information regarding potential product and services and no contractual obligations on behalf of EBMUD whatsoever shall arise from this RFI process.
- The Respondent shall be solely and fully responsible for all costs associated with the development, preparation, transmittal, and submission of any material in response to this RFI.
- Responses to this RFI become the exclusive property of EBMUD upon receipt.
- Responses received in response to this RFI may be subject to the California Public Records Act.
- The Respondent may designate elements in the response which are defined as business or trade secrets and plainly marked as "Confidential," "Trade Secret," or "Proprietary."

1.21 Schedule and Contact Information

The schedule is shown below. Submit your responses to the address below. Email (electronic documents) and/or hard copies are acceptable. To ensure all vendors have equal access to information regarding this RFI, please submit any questions or requests for clarification to Suma Popat, IT Project Manager, via email at suma.popat@ebmud.com with subject header: Questions for Interactive Water Use Portal and Consumption Notification Software System, to ensure all vendors have equal access to information regarding this RFI.

Event	Dates
RFI Release	Tuesday, February 27, 2024
Questions Due By	Tuesday, March 5, 2024
Answers Posted By	Tuesday, March 12, 2024
Responses Due By	Tuesday, March 26, 2024
Product Demonstration	April 15, 2024, Onwards

Thank you in advance for your interest in this information request.

Email responses to: suma.popat@ebmud.com
Subject Header: RFI for Interactive Water Use Portal and Consumption Notifications Solution