Santa Clara Valley Water District

File No.: 17-0339

Agenda Date: 6/27/2017
Item No.: 9.1.

BOARD AGENDA MEMORANDUM

SUBJECT:

2017 Information Systems Master Plan (ISMP) Update.

RECOMMENDATION:

Receive an update on the District's Information Systems Master Plan (ISMP) implementation.

SUMMARY:

Information Technology (IT) refers to the following Board Governance Policies to guide the management, development, and maintenance of software systems, technology infrastructure, and storage, and access to records and reference materials for the District:

E-2.1 Current and future water supply for municipalities, industries, agriculture, and the environment is reliable.

E-3 Healthy and safe environment for residents, businesses, and visitors, as well as for future generations.

EL-2 The BAOs shall promote conditions, procedures, and decisions that fulfill reasonable customer expectations for good service, are safe, dignified, and non-intrusive.

EL-4 Financial planning for any fiscal year shall be aligned with the Board's Ends, not risk fiscal jeopardy, and be derived from a multi-year plan.

EL-6 The BAOs shall protect and adequately maintain corporate assets.
    6.3   Prepare the organization to respond and recover from an emergency or disaster
    6.4.1   Keep commercial off-the-shelf software in supported versions

BACKGROUND:

In July 2012, the Information Systems Master Plan (ISMP) was produced in recognition of the vital role IT plays in supporting the District's mission and to provide rigor to software systems and technology infrastructure lifecycle planning.

The ISMP provided six goals for the Information Technology Division. They are as follows:

1. Accountable IT governance to ensure the District has the right technology, in the right place, and at the right cost to support strategic business priorities

2. Transparent customer service

3. Business continuity through effective IT disaster recovery plans

4. Workforce efficiency to enhance the way employees work together, improve operational efficiency, and lower costs

5. Asset management which leverage Maximo as District's core asset management solution

6. Proactive IT service, which is customer-oriented and professionally managed

These goals were designed to achieve the following outcomes in four areas:

1. **Applications:** Simplify the application portfolio.
2. **Technical Infrastructure**: Increase the reliability of technical infrastructure.
3. **Service Delivery:** Enhance IT service delivery to achieve great IT cost and service efficiencies.
4. **Decision Making:** Improve the effectiveness of IT asset management and governance for district-wide information technology decision making.

ISMP PROGRESS SUMMARY

To accomplish the outcomes in the four areas, a total of 32 projects were identified. Of those 32 projects, IT Division has completed 12 projects. Of the remaining 20, 14 projects are in progress, 3 are planned, and 3 are under evaluation to ensure they are still applicable to Districts' needs. The IT Division expects to complete implementation of these projects by December 2021.

The following chart summarizes the project status for each of the four content areas.
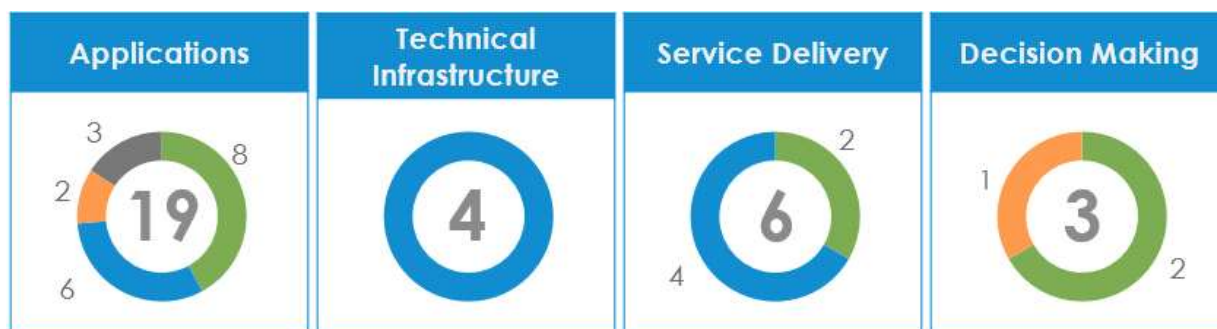
COMPLETED PROJECTS

Applications:

1. *Enhance customer self-service through the District's website and customer relationship management:* IT has developed several GIS-based self-service applications so members of the public can look up information quickly. Examples of applications developed include:

    *   Local Information: a web application for the public to enter an address and see District-related information in the area.
    *   Groundwater Elevations: a web application that allows the public to obtain data from groundwater monitoring wells.
    *   National River Cleanup Day 2017: a web application that the public can use to get information about cleanup sites, including driving directions.
    *   One Water Plan: web applications for the community to explore the Integrated Water Resources Master Plan and provide input on their concerns.
    *   Benchmarks: a web application that provides access to vertical control benchmark information. This application allows the District to qualify for FEMA's Community Rating System (CRS) points.
    *   Webcams: a web application for viewing the District's web cameras.
    *   IT is also working with Communications to launch a newly re-designed website that will be designed to work on a mobile device, and be search friendly. The website will also be interactive by providing several self-serving applications and will leverage the use of the latest social media technologies and platforms.

2. *Enhance the water use efficiency rebate program database:* IT has assisted in the selection and implementation of a commercial-off-the-shelf software used by Water Supply Planning and Conservation for the landscape rebate program. Additionally, WaterWise house call (2013), and high efficiency toilet (2014), Commercial Washer (2015), were also developed and implemented to support drought efforts.

3. *Implement districtwide intranet portal:* IT has deployed a new intranet portal, based on the same open source Drupal platform. The new external website of the District will also be developed on the same open source platform. Additionally, IT has also implemented Okta, a single sign-on identity management system and application portal that greatly facilitates user access to core applications.

4. *Create a unified asset registry:* Asset registries are in place for Watersheds, Water Utility, and Administration. API provision is not applicable.

5. *Implement a future funding analysis application:* Asset Management Program Tool (AMPT) was deployed in 2015 to analyze all asset management-related investments for the District.

CARA (Condition Assessment and Risk Assessment) and ICAM (Infrastructure Capital Assets Management) applications were retired in 2016.

6. *Implement fee and easement:* Fee and Easement system was completed in 2012 and integrated with the Real Estate Services Unit Database (RESUDB) in 2015

7. *Deploy the in-house developed mobile solution for asset inventory and condition assessment:* Mobile solution to inventory data has been deployed in Watersheds, Water Utility, and Water Supply.

8. *Replace fuel management system:* New fuel management system (Fuel Master) has been implemented.

Service Delivery:

1. *Select preferred long-term application development platform(s):* Application development platform was standardized using the following toolset:

   - Application Development: APEX
   - DBMS: Oracle
   - Reporting Tool: APEX Interactive Reports, OBIEE
   - GIS: ESRI

   Training on the above development tools has been provided to staff. Staff have started to use the new tools since late 2015 for development work. Per ISMP recommendations, IT will only develop new applications if COTS solutions are deemed not suitable.

2. *Adopt targeted training plans for IT staff:* The IT division adopted a 5-year targeted training plan for IT staff. Annual training budgets were developed out of the 5-year target training plan for IT staff.

Decision Making

1. *Develop a GIS master plan:* IT has completed the development of the GIS Roadmap. The roadmap consists of plans and steps to develop an Enterprise GIS portal that meets the needs of the District. The plan provides a phased implementation approach, that consists of system setup and configuration; centralized location for all GIS data; implement a pilot project to demonstrate the value add; implement integrations with other core enterprise applications such as Maximo to improve workflow efficiencies; make use of the cloud platform to improve business continuity and support Disaster Recovery.

2. *Implement mobile communication and computing strategy and policies:* In 2014, the District transitioned away from company issued phones to an employee stipend program. Policy, procedure, and work instructions were developed for the stipend program. A wireless communications policy was developed setting the criteria for requesting mobile technologies

and the control mechanism to limit the behavior of employees and help the security posture of the District computing assets and resources

IT staff has been working diligently to complete the list of projects recommended in the ISMP with the intent of completing all the projects by December 2021. However, they have also been working to address some of the more urgent business needs of the District including:

1. Replacement of the water revenue collection system with a cloud based system
2. Selection and deployment of an application portfolio management software to inventory all District applications, ownerships, and dependencies to improve IT project implementation and strategic planning.
3. Replacement of the Budget, Capital Planning, and Forecasting system.
4. Replacement of the Boardroom Audio Visual System.
5. Cyber Security penetration testing and remediation

The attachments provide progress details of projects and their planned completion dates.

FINANCIAL IMPACT:
There is no financial impact associated with this item.

CEQA:
The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

ATTACHMENTS:
Attachment 1: Applications Projects Detail
Attachment 2: Technical Infrastructure Projects Detail
Attachment 3: Service Delivery Projects Detail
Attachment 4: Decision Making Projects Detail
Attachment 5: PowerPoint

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