

Staff Report

for the Special Meeting of the Board of Directors July 31, 2019

TO: Board of Directors

FROM: Marvin Davis, MBA, CPA, Finance Manager/Treasurer
Keane Sommers, PE, Hydroelectric Manager

DATE: July 24, 2019

SUBJECT: Financial Management Systems Migration (FATR #2295)

FINANCE & HYDROELECTRIC

RECOMMENDATION:

Adopt Resolution 2019-25 - ERP & CMMS Project Implementation.

BACKGROUND:

The District is seeking to replace the current Financial Management System (FMS) (Pentamation) and Computerized Maintenance Management System (CMMS) (Lucity) with a new Enterprise Resource Planning (ERP) and Asset Management CMMS. The District's goal is to gain efficiencies and update existing processes, focusing on improving the timeliness, accuracy, safeguarding, and consistency of information. This will improve decision making while strengthening internal controls. These are major projects for the District requiring implementation over the next two years. Thus, staff acquired outside expertise (Panorama and Zanjero Consultants) to assist the District in managing this project.

Enterprise Resource Planning (ERP) System: Tyler Munis

Panorama and District staff (Management & Implementation Team) collaborated to develop a Request for Information (RFI). This document clearly articulates the software and business processing requirements of the District. Staff issued the RFI to the following firms to determine which providers would receive the formal Request for Proposal (RFP). To migrate an FMS, it is best practice to initiate the process with an RFI prior to sending the RFP.

- Microsoft D365 – Avanade, Sopris
- Infor Public Sector
- NetSuite
- Tyler Technologies Munis
- Edmunds & Associates
- Harris Innoprise Suite – Innoprise, Cogsdale
- Ramco
- Cogsdale
- Caselle Software

In addition, the implementation team considered the following vendors. However, due to costs, functionality or software historical reliability, these vendors were eliminated: SAP, Oracle, IFS, Epicor, Sage, Deltek, Unit4, BS&A, Superior, and Springbrook/Accela

The implementation team evaluated responders to the RFI, developed an RFP, and sent it to the following three vendors. These vendors presented their products to the team through onsite demonstrations. The implementation team participated through note-taking and directed specific questions to the vendors. This activity proved extremely helpful in the final recommendation.

- Harris Innoprise Suite
- Tyler Technologies Munis
- Edmunds & Associates

After collaboration among the implementation team and District management staff, Tyler's product emerged as the best fit for the District. Significant price concessions were given by Tyler prior to reaching the final contract amounts. Software and cybersecurity issues were fully vetted, and the District's standard Cybersecurity Addendum is included within the agreement.

Computerized Maintenance Management System (CMMS): Sedaru

The District is seeking to replace the current Computerized Maintenance Management System (Lucity) with a new system (Sedaru). The District's unique infrastructure inventory consisting of watershed, hydropower, fleet, raw water, and treated water assets is not fully supported by the existing software. The Hydroelectric Department led the process to identify and select a new software system to support all of the District's assets. A steering team consisting of each operational Department Managers, IT, and consultants met on a regular basis to review processes and develop requirements.

Zanjero and District staff collaborated to develop the functional requirements for a CMMS. This document clearly articulates the software and business processing requirements of the District. These functional requirements were utilized by Zanjero to conduct a cross-industry search and review of potential CMMS software packages. The initial list of potential software packages included the following:

- CityWorks
- Maintenance Connection
- VueWorks
- Maximo
- Dematic Sprocket
- Emaint
- Lucity
- iMaint
- Hippo
- Pulse

Advantages and disadvantages of each package were reviewed and discussed by the Steering Team to develop a short list of vendors for the presentation process. The below short list of vendors demonstrated their products.

- CityWorks
- Sedaru
- VueWorks
- Maximo
- Maintenance Connection

Based on a review of product details, user interface, functionality, and pricing terms, the Steering Team selected Sedaru to enter licensing and implementation negotiations.

The District entered into negotiations with Sedaru to confirm number of users, pricing terms, coordination with NID IT needs, and implementation services. Similar to the ERP vendor, cybersecurity requirements and data ownership were a significant effort and resulted in compliance with all NID requirements. Significant price concessions were given by Sedaru prior to reaching the final contract amount.

Implementation Team:

Implementation of both products is a complex management effort that is necessary to achieve full benefits of the two-product integration. There will be multiple steering teams, workflow teams, and user groups consisting of NID staff and other team members in order to support the required effort. As such, each respective software package implementation will include a program management role to both oversee the software implementation, and coordinate the two concurrent implementations with each other.

Both Panorama and Zanjero will continue in the next phase of their current project management roles as the project managers for the FMS implementation. Both consultants will also participate in the ERP/CMMS Steering Team to coordinate the two implementations as both consultants have gained valuable proprietary knowledge of the District's business processes. Throughout the project, a

SharePoint site (project management space) will facilitate project implementation by providing a shared information repository.

When approaching projects of this magnitude, obstacles and delays are expected. The District will run many processes in a parallel state as payroll, billing, vendor payments, etc. must continue. Finally, the implementation team anticipates a 22 month-long project reaching fruition around June 2021. The project's lifecycle is segmented in phases with some timelines overlapping.

CMMS Development

Content development is critical to a successful CMMS implementation. Asset hierarchy and attributes, operations and maintenance tasks, asset analysis needs, and regulatory reporting requirements must be planned, designed, and pre-configured to maximize the CMMS benefits. NID identified the need for CMMS and asset management experts to assist in the development of asset hierarchy, attributes, and workflow needs.

Recognizing the time-intensive nature of data collection and proper categorization of all NID's assets, NID sought outside assistance to provide these services. An RFP was developed requesting proposals to develop the content needs, collection of asset data, and workflow development. The RFP was sent to 14 consultants, covering large, medium, and small firms with potential interest and expertise. Submitted proposals ranged in cost from approximately \$750,000 to \$980,000. These proposals were rejected, and an alternative approach was developed to reduce costs through a phased approach.

A workshop-based approach to explain and train NID staff to organize asset hierarchies, identify asset attributes, and develop workflows was developed. Those firms interested in the initial RFP were contacted and asked to submit a new proposal following the workshop approach. Proposals were received from GHD and HDR. The GHD proposal was selected based on their understanding of the workshop approach.

Temporary Help Backfill

Implementation will consume a significant amount of time of those NID employees assigned to the project. There will be insufficient time for team members to fully support their implementation role assignments and complete all of their existing responsibilities. The budget includes a line item for temporary staffing costs to backfill these job requirements. Costs and requirements will vary across departments and job titles of those team members selected for implementation. As such, actual backfill methods will be determined on a case-by-case basis as the need is presented.

Stakeholder Efficiencies:

The District and stakeholders will reap many efficiencies far into the future. Below are improvements to the more heavily used business processes:

- Electronic Workflows
 - Internal invoice processing
 - Vendor self-service application
 - Procurement processing
 - Inventory requisitioning
 - Elimination of duplicate data entry
- Employee Onboarding
 - Applicant tracking
 - Employee processing
 - Employee career development
- Employee Self Service
 - Automated timecards
 - Online access to historical pay
 - Online benefit request changes
 - Net paycheck cash forecasting
- Customer Online Billing
 - Water usage monitoring
 - Automatic payment
- Asset Management
 - Field portable functionality
 - Standardized maintenance and operation procedures support information transfer
 - Proactive maintenance scheduling
 - Streamlined regulatory reporting
 - Asset data and life cycle analysis
 - Improved resource and capital utilization
- Financial Reporting
 - Dynamic monthly budget vs. actual reporting dashboard
 - Fixed asset capitalization
 - Improved reconciliations (cash and receivables)
 - Improved Human Resource management
 - Elimination of shadow databases and spreadsheets (standardization)
 - Improved year-end closure (CAFR)

This expenditure is consistent with Goal No. 4 of the District's Strategic Plan, as implementation of these software packages allows the District to improve current processes by using the latest technologies and enhancing efficiency and reliability throughout the District.

BUDGETARY IMPACT:

Migration of these financial and asset management systems (Tyler and Sedaru) includes the purchase of the software, installation, historical data migration, interfacing development, staff training, and temporary help backfill. These capital projects are budgeted in 10118 – 52915 for \$2,750,000. Specific payment on the contract is governed by terms and typically occurs at the beginning of the respective module installation.

Implementation Costs

Project Component	Contract Vendor	Contract Amount
ERP Software	Tyler Munis	\$ 612,206
ERP Implementation	Tyler Technologies	655,610
ERP Implementation Management	Panorama	178,964
CMMS Software Configuration	Sedaru	311,150
CMMS Content Development	GHD	252,023
CMMS Implementation Management	Zanjero	111,190
NID Internal Resources	Backfill	627,373
Total		\$ 2,748,537

This leaves a balance of \$1,463 in the budget.

Annual Maintenance & Services

Project Component	Contract Vendor	Contract Amount
ERP Software Licensing and Support	Tyler Munis	\$29,301 Year 1 \$140,507 Year 2 5% per year increase Year 3 on
CMMS Software Licensing and Support	Sedaru	\$117,600 for Years 1 and 2. \$117,600 annually for Years 3-5.

Attachment:

- Resolution 2019-25 – ERP & CMMS Project Implementation
- PowerPoint Presentation



RESOLUTION NO. 2019-25
OF THE BOARD OF DIRECTORS OF THE NEVADA IRRIGATION DISTRICT

ERP & CMMS PROJECT IMPLEMENTATION

WHEREAS, Nevada Irrigation District (NID) is an irrigation district formed and existing under the provisions of Division 11 of the Water Code of the State of California; and

WHEREAS, NID owns and maintains a system of reservoirs, canals, pipelines, treatment facilities, storage tanks, recreation facilities, land, and related assets to deliver treated and untreated water to NID customers in Nevada, Placer, and Yuba Counties; and

WHEREAS, NID intends to enhance its financial management, analysis, planning, reporting, and regulatory compliance capabilities; and

WHEREAS, NID intends to enhance its financial reporting, asset management, analysis, renewal and replacement, planning, reporting, and regulatory compliance capabilities; and

WHEREAS, NID conducted two parallel efforts to identify functional requirements, workflow needs, potential software packages, software review, and software selection for the financial management system and the asset maintenance management system, respectively; and

WHEREAS, the two software packages are dependent upon each other and share and transfer data between their respective systems in order for proper system operation; and

WHEREAS, NID identified the importance of a well-planned and coordinated effort between two concurrent parallel software implementations.

NOW, THEREFORE BE IT RESOLVED, NID will implement both the financial management system and the asset maintenance management system software packages with Tyler Munis and Sedaru in a parallel, concurrent effort.

BE IT FURTHER RESOLVED, an implementation team for both software packages consisting of NID staff, outside services for project management, and outside services for specialty content development training will be organized.

BE IT FURTHER RESOLVED, that the General Manager is authorized to procure and contract the respective software system licensing agreements, implementation services, project management services, and specialty consultant services with the following organizations in the following amounts:

Project Component	Contract Vendor	Contract Amount
ERP Software	Tyler Munis	\$ 612,206
ERP Implementation	Tyler Technologies	655,610
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CMMS Software Configuration	Sedaru	311,150
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PASSED AND ADOPTED by the Board of Directors of the Nevada Irrigation District at a regular meeting held on the 31st day of July 2019, by the following vote:

AYES: Directors:
NOES: Directors:
ABSENT: Directors:
ABSTAINS: Directors:

 President of the Board of Directors

Attest:

 Secretary to the Board of Directors

NID BOARD OF DIRECTORS

ERP & CMMS IMPLEMENTATION PROJECT



July 2019

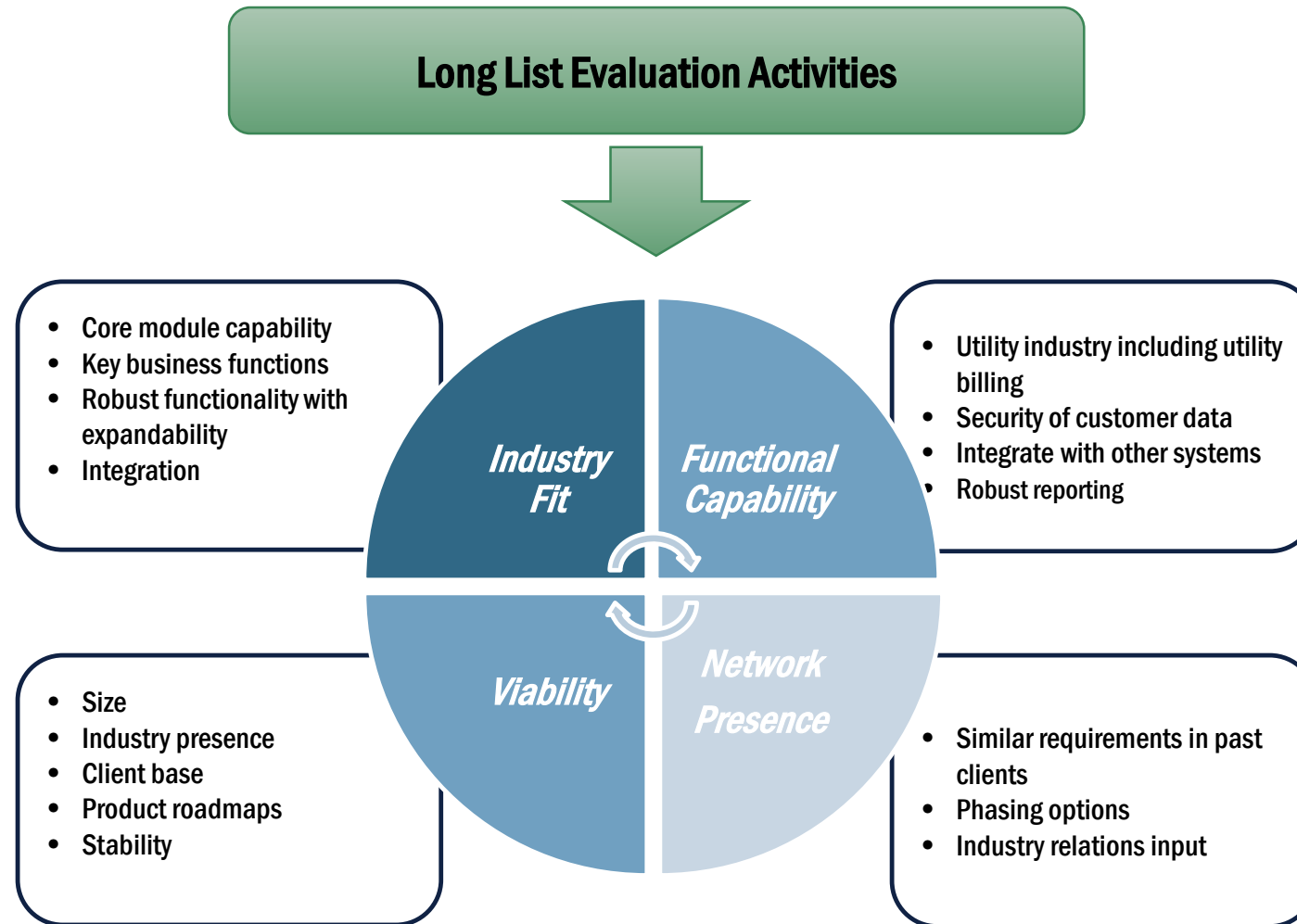
ZANJERO

FINANCIAL MANAGEMENT SYSTEM MIGRATION PROJECT

- 1. Enterprise Resource Planning (ERP) Development
- 2. Computerized Maintenance Management System (CMMS) Development
- 3. ERP & CMMS Implementation Team
- 4. Implementation Process
- 5. Project Budget
- 6. District & Stakeholder Efficiencies



1. ERP DEVELOPMENT: REQUIREMENTS ANALYSIS



NID Functional Requirements

- ✓ Budgeting & Forecasting
- ✓ Capital & Fixed Assets
- ✓ Cash Receipts & Recreation
- ✓ Cross-Functional Request
- ✓ Finance
- ✓ Human Resources
- ✓ Payroll
- ✓ Procurement
- ✓ Warehouse
- ✓ Utility Billing

1. ERP DEVELOPMENT: VENDOR ELIMINATION PROCESS



2. CMMS/ASSET MANAGEMENT

- Asset management is the proactive approach to life-cycle asset costs.
- Pre-schedule and pre-budget maintenance costs over asset life.
- Collect data on assets over time to predict maintenance requirements.
- Planned maintenance always cheaper than emergency maintenance.
- Computerized Maintenance Management System (CMMS) plans, collects, and tracks maintenance and asset data over time.
- CMMS allows total work management analysis and projecting capabilities – workload by class, maintenance performance, predictive scheduling, and job costing.



2. CMMS DEVELOPMENT: REQUIREMENTS ANALYSIS

- Process to develop NID needs and identify, review, and select a CMMS package.
- Steering Team of Department managers to review process and select package.
- Functional descriptions from each Department compiled into a needs spec sheet.
- Functional requirements compared to CMMS options and list of vendors narrowed.
- Deep dive of each CMMS including input of sample NID dataset and demonstration of NID functional needs.
- Steering Team selected Sedaru.



3. ERP & CMMS IMPLEMENTATION TEAM

Implementation Team includes:

1. ERP Steering Team – NID Management and project managers tasked with discussing and resolving ERP Districtwide implementation issues.
2. CMMS Steering Team – NID Management and project managers tasked with discussing and resolving CMMS Districtwide implementation issues.
3. NID Project Teams – NID staff representing specific functional areas to provide subject matter expertise, content development, workflow process, and participate in configuration, training, acceptance testing, and roll out.
4. Backfill Teams – Temporary staffing support to backfill NID staff who are assigned to ERP & CMMS implementation teams.



3. ERP & CMMS IMPLEMENTATION TEAM: EXTERNAL ROLES

ERP Implementation vendor & consultant:

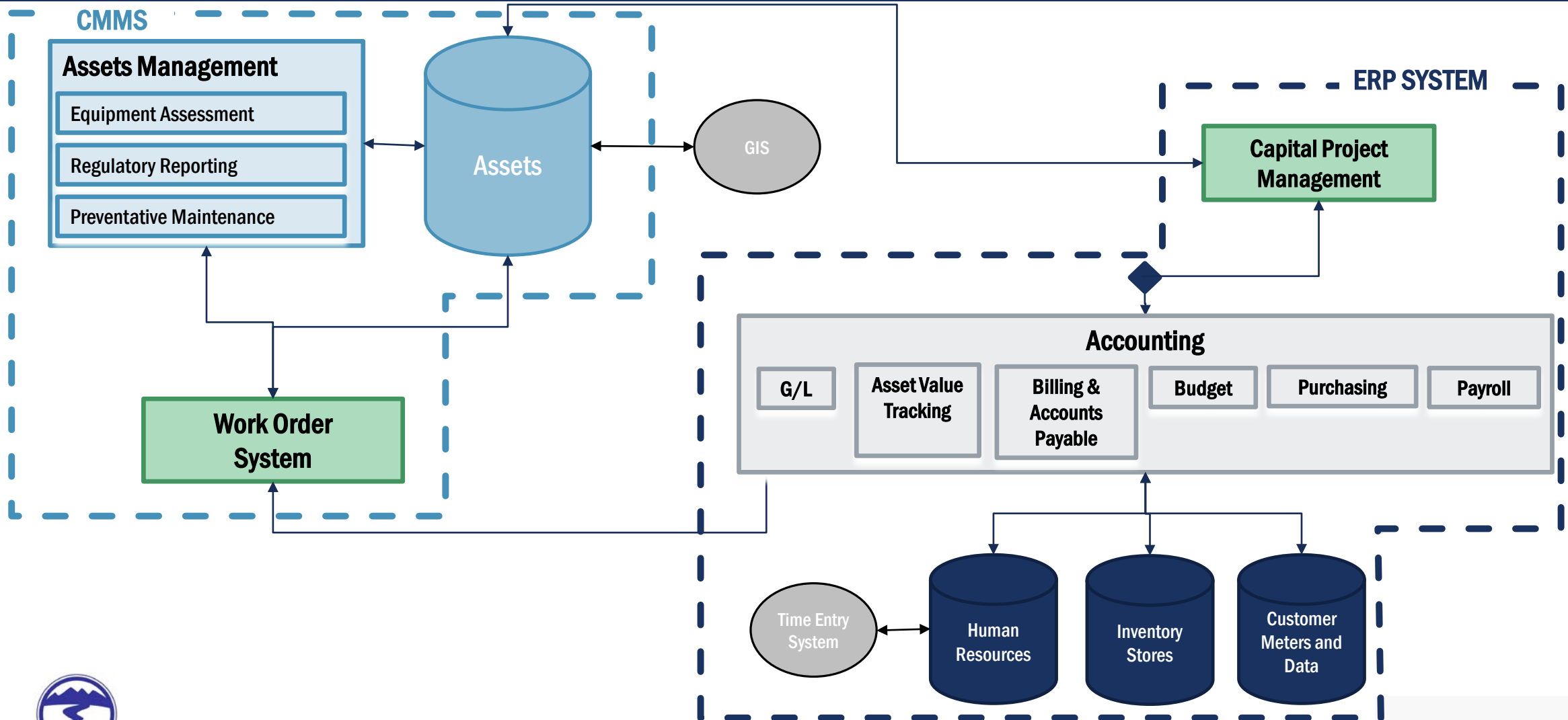
1. ERP vendor. License agreement and software development implementation services, including project management (Tyler).
2. Project Oversight and Advisory Management. Panorama Oversight Manager will provide project oversight and advice. Based on its extended relationship with NID, the role will bring insights and context for many business and technical matters. As requested by Nevada Irrigation District, the Oversight Manager will participate in design sessions, stage and document reviews, core team and steering committee meetings.

CMMS Implementation vendor & consultant:

1. CMMS vendor. License agreement and software development implementation services (Sedaru).
2. Content Workshops. Asset data and workflow development training workshops (GHD).
3. Project management. Design and coordinate CMMS and ERP implementation plans, manage CMMS implementation design up to and including content workshops (Zanjero).
4. Develop CMMS content. Collect all asset data and define workflows and procedures for input into Sedaru. Responsibility for this role is not yet decided, it could be completed by NID staff or outside assistance.

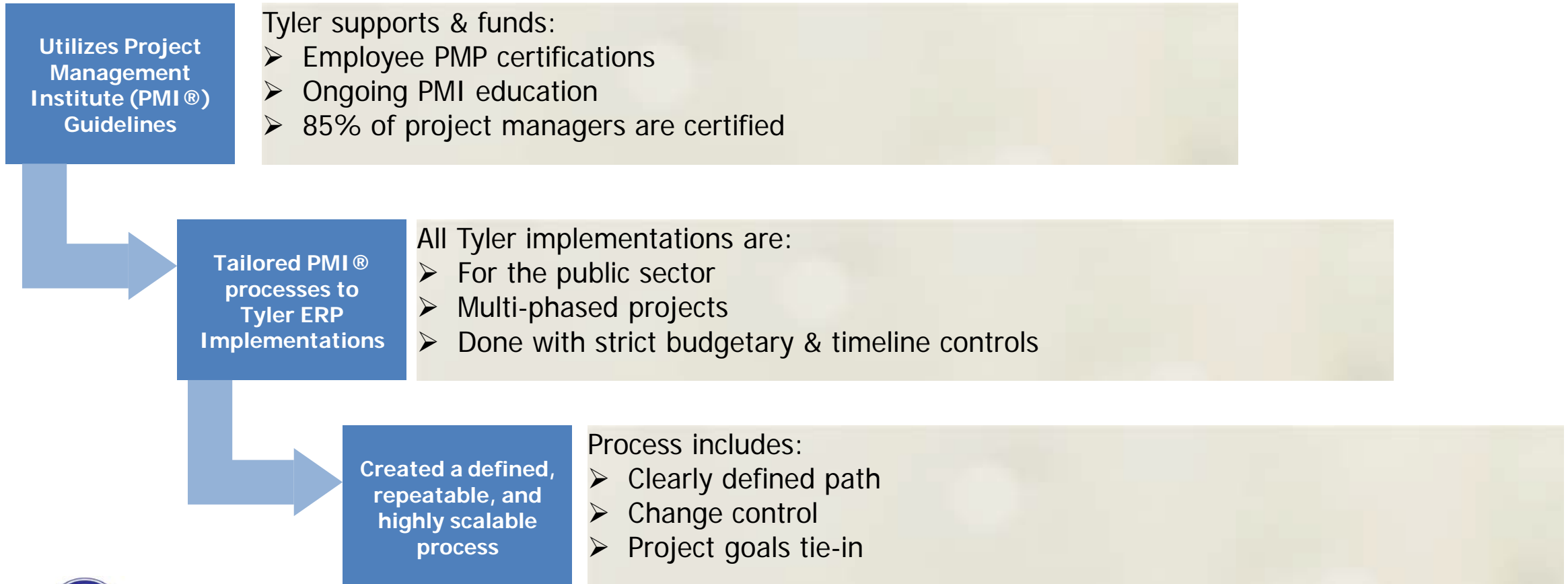


4. IMPLEMENTATION PROCESS: DISTRICT WIDE DATA FLOW



4. IMPLEMENTATION PROCESS: TYLER PROJECT MANAGEMENT STRENGTH

PMI-BASED METHODOLOGY



4. IMPLEMENTATION PROCESS: PHASED APPROACH

Phase		2019		2020				2021	
		19-Q3	19-Q4	20-Q1	20-Q2	20-Q3	20-Q4	21-Q1	21-Q2
ERP	Implementation Program Design	█							
	Finance Configuration	█	█	█	█				
	Finance Training, Acceptance Testing and Rollout					█			
	HR/Payroll Configuration				█	█	█		
	HR/Payroll Training, Acceptance Testing and Rollout							█	
	Utility Billing Configuration					█	█	█	
	Utility Billing Training, Acceptance Testing and Rollout								█
CMMS	Implementation Program Design	█							
	Workflow/Content Development (Phase 1/2)	█	█	█	█	█			
	Software Configuration		█	█	█	█	█	█	
	Acceptance Testing							█	
	Training and Rollout								█

4. IMPLEMENTATION PROCESS: PROJECT RISKS

Risk	Mitigation
Security	Provide robust management of user access authority. Data stored behind NID firewall. Meet NID cyber security requirements.
Loss of service/revenue	Reference calls experienced minimal down time and interruptions. Tyler provides elevated level of support for new customers.
Getting people to accept the system	Users who participated in demos were enthusiastic about the change. Implementation process includes user training and workforce transition management. Staff involved in implementation creates ownership.
Interfaces to other NID systems	Tyler has a rich set of APIs to interface to other systems. Interface to Sedaru is being developed for City of Victorville, CA.
Complicated implementation and integration between two systems	Implementation plan designed to include coordination and constant communication through multiple subject-specific teams between the two integrations.



5. PROJECT BUDGET

Project Component	Contract Vendor	Contract Amount
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NID Internal Resources	Backfill	\$627,373
	Total:	\$2,748,537
Description	Payee	Annual Costs
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CMMS Software Licensing and Support	Sedaru	\$117,600 for Years 1 and 2 \$117,600 annually for Years 3-5



6. DISTRICT & STAKEHOLDER EFFICIENCIES

- **Electronic Workflows**
 - Internal invoice processing
 - Vendor self-service portal
 - Procurement processing
 - Inventory requisitioning
- **Employee Onboarding**
 - Applicant tracking
 - Employee processing
 - Employee career development
- **Customer Online Billing**
 - Automatic payment, customer self management
 - Customer self-service portal
- **Employee Self-Service**
 - Automated timecards
 - Online access to historical paychecks, W2s
 - Online benefit request changes
- **Financial Reporting**
 - Dynamic monthly budget vs actual dashboard
 - Improved capital asset management (ERP & CMMS)
 - Improved reconciliations (cash, receivables, payables)
 - Elimination of shadow databases and spreadsheets
 - Improved year end closure (CAFR)





QUESTIONS