



A PROPOSAL FOR

Enterprise Asset Management Needs Assessment #989

FOR THE CITY OF ST. PAUL



February 10, 2021

25 W 4th Street, Unit 200
Saint Paul, MN 55102

Re: Proposal for Enterprise Asset Management Needs Assessment and RFP #989

Dear Selection Committee

On behalf of WSB, thank you for this opportunity to submit our proposal to develop an Enterprise Asset Management Needs Assessment and RFP. This plan will set the strategic vision and provide a road map for the city to implement an Enterprise Asset Management System (EAMS) that supports sustainable, data driven asset management that is aligned with other divisions/departments throughout the city. WSB is the team of choice for the following reasons:

Experience: Our broad experience as both a consultant and an asset owner will efficiently guide the city through this process and provide a clear path to successfully implementing an EAMS. Our team includes asset management experts, public works operations leaders, technologists, and business analysts who will provide the perspective and depth needed to successfully complete this challenging and exciting project.

Broad Background in Technology: Our vendor agnostic team has worked with numerous Enterprise Asset Management Systems (EAMS) in a diverse set of large organizations. This means that the actions we will take in this project are done with a clear understanding of the city's next steps, streamlining implementation and reducing risk. Our team also includes technologists who understand the perspective of the OTC and how this can fit into the city's larger technology goals.

Local Firm, National Expertise: WSB works with a national client base from our Twin Cities headquarters. We have deep ties to the MN asset management and public works communities that we will leverage throughout this project. Our team also includes national asset management experts with an extensive resume of large AM needs assessments and implementations.

Please contact me at 651.295.9290 or jmackiewicz@wsbeng.com with any questions about our qualifications or availability.

Sincerely, WSB

A handwritten signature in black ink, appearing to read "John Mackiewicz", with a stylized flourish at the end.

John Mackiewicz

Project Manager/Vice President



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Firm Overviews



Forge ahead.

WSB is a design and consulting firm specializing in engineering, community planning, environmental, and construction services. Together, our staff improves the way people engage with communities, transportation, infrastructure, energy and our environment. We offer services that seamlessly integrate planning, design and implementation.

We share a vision to connect your dreams for tomorrow to the needs of today—the future is ours for the making.

500+
STAFF

30
SERVICE AREAS

14
OFFICES

4
STATES

Asset Management | Alternative Project Delivery | Biogas | Bridges & Structures | City Engineering | Community Planning | Constructability Review | Construction Materials Testing & Inspection | Contractor Modeling | Drinking Water | Economic Development | Environmental Compliance | Geohazard Risk Management | Geospatial | Geotechnical Engineering | GIS Services | Grants & Funding | Health & Safety Compliance | Intelligent Transportation Systems | Investigation & Remediation | Land Development | Landscape Architecture | Managed Services | Natural Resources | Pavement Management | Pipeline | Project Management & Construction Administration | Public Engagement | Public Works Management | Right of Way | Roadway Design | Smart Cities | Survey | Technology Solutions | Traffic Engineering | Transit Planning | Transportation Planning | Urban Design | Vibration Monitoring | Visualizations | Water Resources | Water Reuse | Wind

Teaming Partner



Cultivate Geospatial Solutions (CGS) is an asset management centric GIS, EAM, and CMMS advisory services firm. We simplify and make asset management best practices accessible through the selection, implementation, and use of GIS and EAM software systems with our clients. Our team represents decades of transportation, utility, and municipal asset management and GIS industry experience that speaks through the success of our clients.

CGS is focused on providing expert innovation, development, and advisory services to organizations that seek to bring ISO 55000 best practice into their 'business as usual' usage of GIS and EAM/CMMS tools. Our intimate team has worked with state DOTs, the largest transit authorities in North America, and literally dozens of city and county highway and roads departments across the USA.

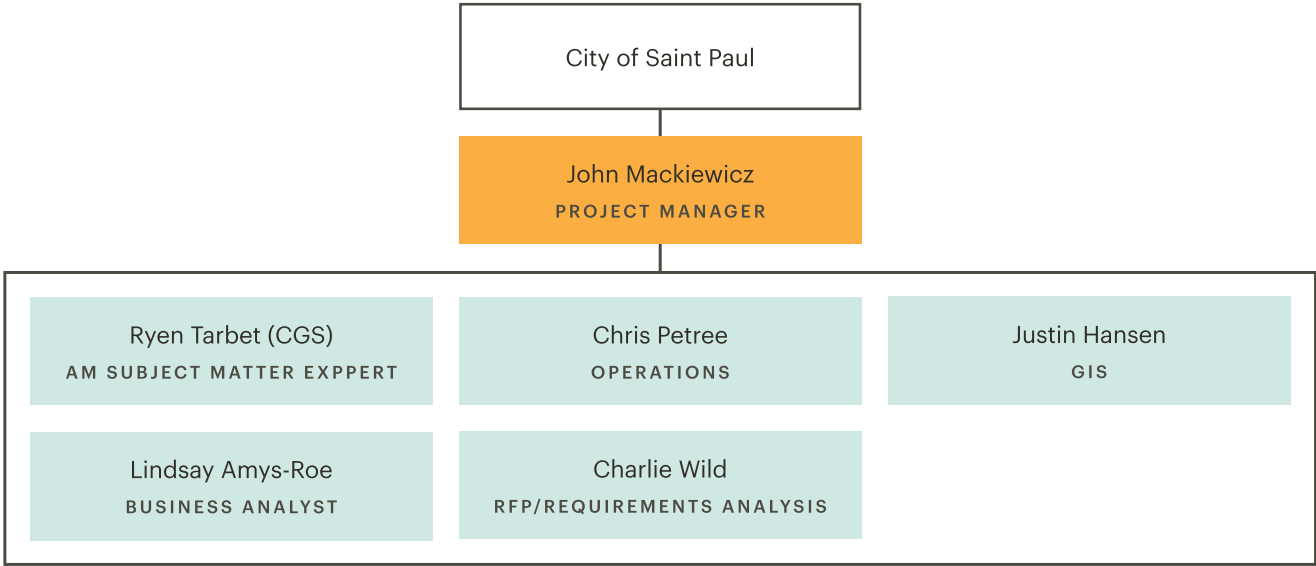
The CGS Team is uniquely capable of supporting the City of Saint Paul at a level of service, peer engagement, and collegial expertise unlike any other firm.



Project Team

For this project we have assembled a cohesive team of experts in Public Works (PW) operations, asset management technology and requirements gathering. Many of the members of our team have worked together at WSB, or with WSB as asset management clients for over 20 years. Our team understands the technology, processes, standards, and how public works organizations operate as well as how to engage, empower, and educate staff about asset management. We have handpicked Ryen Tarbet of Cultivate Geospatial for this project to expedite gathering requirements aligned with ISO 55000 guidelines.

Our team is built to minimize risk and help Saint Paul cover all the bases in this critical, time sensitive project.





John Mackiewicz

PROJECT MANAGER



John is a Vice President at WSB and leads WSB's technology related teams in the analysis, design, and implementation of cutting-edge solutions. John has 20 years of experience in strategy, process improvement, application development, and database development. John's focus is on helping organizations develop and execute strategies that drive organizational innovation and change. John is currently on the Steering Committee for the Minnesota Chapter of the Institute of Asset Management and has served on the Statewide Geospatial Advisory Commission. John has broad experience helping cities develop EAM strategy, document requirements, develop RFP's and implement EAM systems. This breadth of experience is essential when helping clients build their EAM ambition. John also has experience integrating AMS and GIS with permitting, Enterprise Resource Planning (ERP), content management, CRM, reporting, Business Intelligence (BI), Capital Improvement Planning (CIP), and project management solutions.

DIVISION: Technology

EDUCATION: MBA, Carlson School of Management, 2013

Master of Geographic
Information Science,
University of Minnesota,
2005

Bachelor of Science in
Natural Resources and
Environmental Studies,
Emphasis in Hydrology
and GIS, University of
Minnesota, 2000

MEMBERSHIPS + RECOGNITIONS: Minnesota High Tech Association (MHTA)

Project Management

CLIENT: MNDOT CULTURAL RESOURCES UNIT, MNDOT RTMC, SAN ANTONIO RIVER AUTHORITY

John has managed numerous complex technology projects including the Cultural Resource Information System (CRIS) Phase 2 and Intelligent Fiber Asset Management System (IFAMS) projects both of which received outstanding technical reviews by MnIT/MnDOT staff (34/36 and 35/36 respectively). John has managed strategic and technical projects that included engaging with stakeholders and understanding project needs in complex environments.

Risk Management

CLIENT: MNDOT, CITY OF BLOOMINGTON, CITY OF BROOKLYN PARK, CITY OF EAGAN, CITY OF WOODBURY

John has worked with a number of clients to identify and mitigate risk to technology project success. John has also worked with multiple clients on modeling and mitigating risk to public infrastructure.

Strategic Asset Management Plan | Eagan, MN

CLIENT: CITY OF EAGAN

PROJECT DURATION: 2017 - PRESENT

John was the project lead for the City of Eagan's (Pop. 66,500) Strategic Asset Management Plan. Eagan was an early adopter of Asset Management technology and had assembled a number of Asset Management silos that met departmental needs but did not provide actionable information across the city. Working with Public Works, GIS staff, and IT staff, John developed a strategy to implement Esri based tools to achieve city-wide asset management objectives. This included developing a five-year budget, implementation plan, and recommending technology to meet the city's goals. WSB continues to assist Eagan with implementing best practices for GIS application development, asset management, and Capital Improvement Planning.

Strategic Asset Management Plan | Brooklyn Park, MN

CLIENT: CITY OF BROOKLYN PARK

PROJECT DURATION: 2018 - 2019

John was the project lead for the City of Brooklyn Park's (Pop. 80,500) Strategic Asset Management Plan. Brooklyn Park had a strong GIS and asset information spread between legacy systems and spreadsheets. Working with Public Works, GIS, and IT staff, John developed a three-year plan to implement an enterprise Asset Management (EAM) solution for the city. Brooklyn Park's EAM needs included facilities, fleet, signs, golf course, pavement, signals, water, sewer, storm, signals, parks,



Ryen Tarbet

AM SUBJECT MATTER EXPERT



Ryen is an asset management subject matter expert and senior consultant. Recently, Ryen was the asset management principle for Atkins Global leading a major asset management software implementation at the Port of Long Beach, CA. In this role, Ryen provided subject matter expertise across all levels of management to ensure EAM software was implemented consistent with the forward looking business goals of the overall Port and not in a silo'd fashion that recreated old ways of doing the same things. Ryen lead the development of an enterprise asset management program for the Office of the Architect (U.S. Capital Facilities Campus in Washington D.C.). He has extensive EAM selection and implementation experience with Cities, having worked across the US and Canada advising Cities on their EAM implementation approaches. Currently, Ryen specializes in helping organizations procure, implement, and re-implement GIS and CMMS/EAM systems to meet the asset management goals of executive management and the stakeholders to which they answer.

REGISTRATIONS:

Fellow, The Institute for Asset Management, Cert No. 1025972

EDUCATION:

Bachelor of Science, Environmental Biology and Management, UC Davis

Master of Arts, Geographic Information Systems, UC Davis

MEMBERSHIPS &

RECOGNITIONS:

USA delegation to the International Standards Organization Technical Committee 251 Chair

Asset Management Lecturer at University of Wisconsin-Madison, College of Engineering; Lamar Univ. Port & Marine Management Graduate Program

Institute for Asset Management, Fellow

ASCE Coasts, Oceans, Ports and River Institute – Asset Management Committee Exec. Board Member

APWA Asset Management Committee Member

URISA, Member, Asset Management SME

Asset Management Subject Matter Expertise and Outreach

- Chair (former Head) of US Delegation to ISO TC 251, the body responsible for the ISO 55000 Asset Management Standard—International
- American National Standards Institute (ANSI) Technical Advisory Group 251
- Citywide Asset Management Co-Instructor, University of Wisconsin-Madison College of Engineering
- Co-author of Asset Management Primer, Infrastructure for Jobs and Prosperity Act, Province of Ontario, Canada

Enterprise Asset Management Projects

- Asset Management Program Design and Development - Architect of the Capitol, Washington DC
- Asset Management Principle Consultant, EAM Implementation - Port of Long Beach, CA
- Asset Management Principle Consultant & Capital Investment Modeling - New York Metro. Transit Authority
- EAM Asset Management Software Implementation - City of Santa Ana, CA
- EAM Asset Management Software Implementation - City of Mercer Island, WA
- Cityworks AMS Upgrade & ERP Integration, Woolpert Inc. - City of San Luis Obispo, CA
- EAM Business Process and Asset Management Software Implementation - Northstar CSD, CA
- EAM Business Process and Asset Management Software Implementation - City of Olympia, WA
- EAM Asset Management Software Implementation - Thurston County, WA
- EAM Asset Management Software Implementation - Washington County, OR
- EAM Asset Management Software Implementation - Lyon County, NV
- EAM Asset Management Software Implementation - Rhode Island DOT, RI
- EAM Asset Management Software Implementation - City of Brentwood, TN



Chris Petree

OPERATIONS



Chris has served as a Director of Public Works in three communities and has been in the public works profession for 25 years. Chris brings a unique perspective to WSB clients as a public works asset owner who has implemented and used EAMS at multiple organizations. Currently, Chris serves as the Director of Rochester Operations for WSB and leads a team of talented individuals in that office. Prior to working at WSB, Chris served as Director of Public Works for the City of Rochester from 2018-2019, the City of Lakeville from 2008-2018, the City of Hugo from 1999-2008 and worked for the City of Apple Valley prior to 1999. Chris holds a Class A Water Supply System Operators License from the MDH and a Class A Collection System Operators License from the MPCA.

SERVICE GROUP:

Municipal

REGISTRATIONS:

Class A Water Operator

SA Wastewater Treatment Facility

Certified Tree Inspector

EDUCATION:

Bachelors in Business Management, College of St. Scholastica

MEMBERSHIPS +

RECOGNITIONS:

APWA: Chapter President (2017) & Current Alternate Delegate

AWWA: 20-year member

MSSA

Director of Public Works | Rochester, MN

CLIENT: CITY OF ROCHESTER

DURATION: JUN 2018 - DEC 2019

As the 3rd largest city in Minnesota, Chris was responsible for the supervision, management, planning, and coordination of all activities of the physical development (traffic, transit, parking, engineering, GIS, land development), environmental services (wastewater, stormwater), infrastructure maintenance, facilities, and fleet divisions of the Public Works Department including a staff of approximately 160 FTE's. Budget responsibilities in this position include an annual operating budget of over \$35 million and an annual significant capital budget that ranged from \$50-\$100 million. Chris directed and planned all operations for the department.

Director of Public Works | Lakeville, MN

CLIENT: CITY OF LAKEVILLE

DURATION: AUG 2008 - JUN 2018

Lakeville was the fastest growing suburb in the Minneapolis/St. Paul area during Chris' tenure. Chris was responsible for the supervision, management, planning, and coordination of all activities of the utilities, streets, construction services, forestry, engineering, environmental resources, GIS, facilities, and fleet divisions of the Public Works Department including a staff of 58 FTE's. Budget responsibilities in this position include an annual operating budget of approximately \$15 million and an annual capital budget in excess of \$30 million. While at Lakeville, Chris implemented the City's first asset management program and a comprehensive street reconstruction program for the City's 350 miles of roadway. Chris also worked closely with the parks department on maintaining the City's infrastructure.

Director of Public Works and Parks & Recreation Director | Hugo, MN

CLIENT: CITY OF HUGO

DURATION: JUN 1999 - AUG 2008

During Chris' time in Hugo, the City expanded considerably as did its infrastructure. Chris's group was responsible for the supervision, management, planning, and coordination of all activities of the parks, utilities, streets, parks, engineering, environmental, facilities, and fleet divisions of the Public Works & Parks Department including a staff of 15 FTE's. Budget responsibilities in this position included an annual operating budget of approximately \$5 million and an annual capital budget in excess of \$8 million. During this time, Chris was the staff liaison to the Parks Commission and successfully developed 10 neighborhood parks and 2 community parks.



Justin Hansen

GIS/SYSTEM ANALYST



Justin is the Director of GIS Services and leads WSB's Geographic Information Systems (GIS) Group. He has a combined 14 years of GIS experience with a broad subject matter and technical expertise in GIS and asset management technology. He specializes in GIS and asset management for governments and has worked with over 60 communities, including a number of Counties and state organizations on a wide range of GIS and asset management projects. Justin has worked with a number of asset management solutions and this brings needed depth to this project. His background in GIS, asset management, IT systems, and experience with government operations of all types makes him uniquely suited to provide a high-level of technical leadership for the City of St. Paul.

SERVICE GROUP:

GIS

EDUCATION:

Master of Geographic Information Science, University of Minnesota, 2008

Bachelor of Science in Geography, Emphasis in GIS, University of Wisconsin-Oshkosh, 2006

Transportation Asset Management | Minneapolis, MN

CLIENT: CITY OF MINNEAPOLIS

PROJECT DURATION:

Justin has worked with the City of Minneapolis' Traffic Division for over eight years to provide strategic asset management support. The City initially sought Justin's guidance on streamlining field operations in support of its sign replacement program. This grew to Justin supporting the department's overall traffic asset management strategy as staff built upon successes with their Cartegraph Navigator system. As technology matured, Justin worked with the Division leaders to perform an asset management system review and ultimately supported the Division's decision to implement Cartegraph OMS. Throughout the OMS implementation, Justin supported the City by working with Cartegraph and City staff to understand the City's operations, requirements, and GIS integration. Justin managed WSB's support for migrating the City's GIS data into data models compatible with Cartegraph. Since adoption the City has implemented four additional transportation assets and is fully embracing using OMS in the field to manage operations.

Public Works Asset Management | Burnsville, MN

CLIENT: CITY OF BURNSVILLE

PROJECT DURATION: 2016 - CURRENT

Justin provides the City of Burnsville's Public Works and Engineering departments with annual Asset Management and GIS consulting services. These services include strategic support for annual asset management programs, support for the implementation of new technologies and integrations with other City systems. In addition, Justin manages Burnsville's cloud-hosted asset management environment. Justin assisted the City with planning, sizing and deploying all infrastructure required to host the City's VUEWorks platform. This enables the City to provide a higher-level of service to its staff and ultimately its residents. The City performs annual reviews of its VUEWorks platform to determine the effectiveness and efficiency of the program. This includes comparisons with other asset management solutions to ensure the system meets all the City's needs. For 2021, the City has determined to invest in the latest version of VUEWorks within a WSB-managed cloud which represents a significant upgrade and change to their platform to keep the City up to date on the latest enterprise AMS technology.



Lindsay Amys-Roe

BUSINESS ANALYST



Lindsay is an expert in business analysis and project management with focus on software development, process discovery, and workflow automation. Her five years of experience encompasses taking projects from concept through implementation while ensuring deadlines, quality standards, and functional requirements are being met. Lindsay's ability to implement automation within existing complex tools helps to streamline processes for clients that can be used today, and in the future.

SERVICE GROUP:

Information Technology

EDUCATION:

Associates, Lake Superior
College, 2009

MEMBERSHIPS &

RECOGNITIONS:

Smartsheet Product
Certified

COVID Testing and Vaccination Program | MN

CLIENT: MINNESOTA DEPARTMENT OF HEALTH

PROJECT DURATION: SEP 2020 - MAR 2021

Working with multiple stakeholders, Lindsay established the fiscal and inventory management systems for the State of Minnesota COVID-19 testing and vaccination program. This was achieved through detailed process mapping, requirements gathering, and analysis for each of the systems involved. The results of these efforts created a real-time operational platform for the deployment and management of new testing and vaccinations sites. It also increased coordination of inventory and financial data to make better informed, data-driven decisions for all stakeholders.

Employee Training Program | MN

CLIENT: WENGER

PROJECT DURATION: FEB 2019 - MAY 2019

Lindsay coordinated with cross-functional teams including business unit leaders, manufacturing personnel, and third-party contractors to create a comprehensive new hire training program that focused on driving results. This was achieved by analyzing requirements both already included in the program as well as those that were needed but not addressed. This culminated in a plan that utilized automations in training, allowing work time to be more efficient, increased understanding of products, and ultimately a reduction in errors.

Order Fulfillment System | MN

CLIENT: WENGER

PROJECT DURATION: NOV 2018 - FEB 2019

Lindsay identified and led the initiative to automate the product fulfillment process from immediate post sale through manufacturing, shipment, and post install service warranties. This reduced first customer contact and project initiation from 7-10 days to under 24 hours. This dramatic reduction in time was the result of requirements gathering, process mapping, identifying gaps, and seeking feedback. This allowed for the reduction in time for manufacturing start and overall project completion. This project saved time by utilizing existing technologies, created synergy between teams spanning the organization, and created electronic records and communication updates. Through Lindsay's leadership, the end result was a time and financial impact for the entire organization, an increased ability to serve customers faster, and create engagement throughout the organization.



Charlie Wild

RFP/REQUIREMENTS ANALYST



Charlie has been an Application Administrator and Analyst in Information Technology for nearly 20 years. Charlie has led numerous project that have modernized and redefined existing and non-existent processes. Throughout Charlie's career, he has successfully worked with everyone from organizational leaders to field workers including cross-functional teams and interdepartmental teams. Having this ability to work with a variety of staff members, Charlie can identify immediate business needs and then implement platforms/systems to improve workflows and facilitate desired outcomes.

SERVICE GROUP:
Information Systems

EDUCATION:
Management and
Information Technology,
Crown College, 2007

MEMBERSHIPS &
RECOGNITIONS:
American Public Works
Association & Minnesota
High Tech Association

Asset & Work Order Management | Bloomington, MN

CLIENT: CITY OF BLOOMINGTON, PUBLIC WORKS
PROJECT DURATION: MAY 2015 - SEP 2016

Lead division wide initiative to implement a comprehensive Asset & Work Order Management system with division-wide native GIS integration. The planning phases of this project involved a detailed needs and requirements gathering process including risk analysis and mitigation, pre-selection vendor evaluations, RFP writing, proposal analysis and scoring, final selection and contract negotiations. Charlie also managed the implementation phases of the project including, project teams, schedules, deliverables and go-live adoption.

MyLink Client Portal | WSB

CLIENT: WSB
PROJECT DURATION: JAN 2017 - DEC 2017

Working with a cross-functional team of business leaders, Charlie defined the project scope and requirements for the development and delivery of a comprehensive client facing collaboration portal. This project has allowed WSB to engage with clients through a modern and interactive platform to improve relationship, increase transparency, and drive project success.

Minnehaha Creek Watershed District IT Consulting | WSB

CLIENT: WSB
PROJECT DURATION: JUN 2019 - JUN 2020 (ONGOING THRU 2020)

Leading the Minnehaha Creek Watershed District's initiatives, Charlie was able to update and improve their use of information technology to gain insights, streamline process, and improve overall data quality and accessibility throughout the organization. Charlie worked closely with representatives across the District to elicit system and functional requirements which ultimately led to improvements of their stated business outcomes. Throughout the project, Charlie also conducted vendor reviews, led evaluations and selections, assisted with implementation and system integrations, and handled all aspects of the project management.

Project Understanding



The City of Saint Paul is seeking a qualified firm that has a deep understanding of asset management as well as technical and operational experience to conduct a needs assessment and inform the development of an RFP for Enterprise Asset Management System (EAMS). Saint Paul Regional Water Services (SPRWS) and Public Works (PW) currently rely on an Oracle EAMS to provide asset and work management services that will no longer be supported after 2021. There are several other EAMS throughout the city supporting different business lines. However, the city does not have an enterprise approach to asset management.

Through this project the city will:

- Document requirements for the SPRWS and PW for Oracle EAMS replacement
- Document high-level requirements to other lines of business to align city-wide asset management
- Develop a plan to implement an enterprise approach to asset management
- Describe the future EAMS
- Develop a roadmap for implementing an EAMS for SPRWS and PW
- Identify and rank relevant software solutions
- Develop requirements, scoring, scripts, the SOW and other documents for the RFP



Alignment between city-wide objectives, departmental goals and functional requirements will be a key part of this project. The city's stated objectives are:

- Procuring a solution that supports the city's long-term vision for enterprise asset management.
- Enhancing the city's ability to be stewards of the assets for which they are responsible.
- Promoting resiliency, sustainability, and equity in city operations and services.
- Ensuring compliance with all federal, state, and local regulatory mandates.
- Supporting the city's asset management and capital planning programs.
- Consolidating systems currently used to manage and track the city's assets, where applicable.
- Enhancing field (mobile) investigations, inspections, and work capabilities.
- Strengthening financial planning capabilities by capturing costs and developing budget forecasts.
- Streamlining the process of receiving customer service requests and issuing work orders to resolve the issue, where applicable.
- Achieving greater alignment across lines of business

Project Approach



For this project we will leverage our multi-disciplinary team of Asset Management experts, Public Works leaders, technologists and Business Analysts (BAs) as well as our experience working with government in MN. This will provide St. Paul Regional Water Services (SPRWS), Public Works (PW), the Office of Technology and Communications (OTC), and other stakeholders a 360-degree view of Enterprise Asset Management (EAM) and Enterprise Asset Management Systems (EAMS).

Our multi-disciplinary team will accelerate implementation, reduce risk, minimize errors, and speed adoption for SPRWS, PW, and OTC as well as align EAM with other stakeholders.

We will begin by developing and/or solidifying the city's vision for Work Order (WO) and Asset Management (AM). This will help our team understand St. Paul current vision, refine the vision as needed and focus the requirements gathering portion of this project to the vision.

We will then use our proven BA process across lines of business at the city to develop requirements and identify strategies to gain greater alignment through EAM. The information from the requirements analysis will then be analyzed, reviewed with the leadership team, and benchmarked to identify the asset management maturity and readiness of business lines for EAM.

We will leverage ISO 55001 to make this a more efficient process for the City of Saint Paul that clearly maps business requirements to EAMS solutions.

We will tap into our experience working with numerous cities and asset management vendors to describe the future EAMS, research vendors, rank vendors and finalize the vendor RFP.

WSB is not a partner of any Asset Management software vendors and currently works with clients of all sizes who leverage different vendors. This will provide the city with an informed, impartial and comprehensive review of EAM system.

Streamlined Delivery:



This project will gather and analyze a significant amount of detailed information. This information will be delivered to the city so that it:

- Provides requirements that flow directly into the RFP
- Provides clear direction on future direction and EAM systems to consider
- Identifies budgets and timelines
- Rank Potential Vendors
- Finalize the vendor RFP
- Provide a roadmap for actionable next steps

In the sections below you will find specifics about how we will complete this project and how we will successfully help the City of St. Paul achieve the goals stated in the RFP.

TASK 1:

Project Management

Our proven, flexible approach to requirements gathering is integrated with a project management process built to provide effective day-to-day management of the overall work program, facilitate effective communication, and provide project coordination to ensure that the project is successfully completed on time, within budget and with high quality.

We will kick off the project by meeting with the City of St. Paul's project leadership team to identify project communication channels, adjust the requirements gathering plan, and develop a risk management plan for the project. We will also review the city's EAM vision and develop an action plan for Task 2.

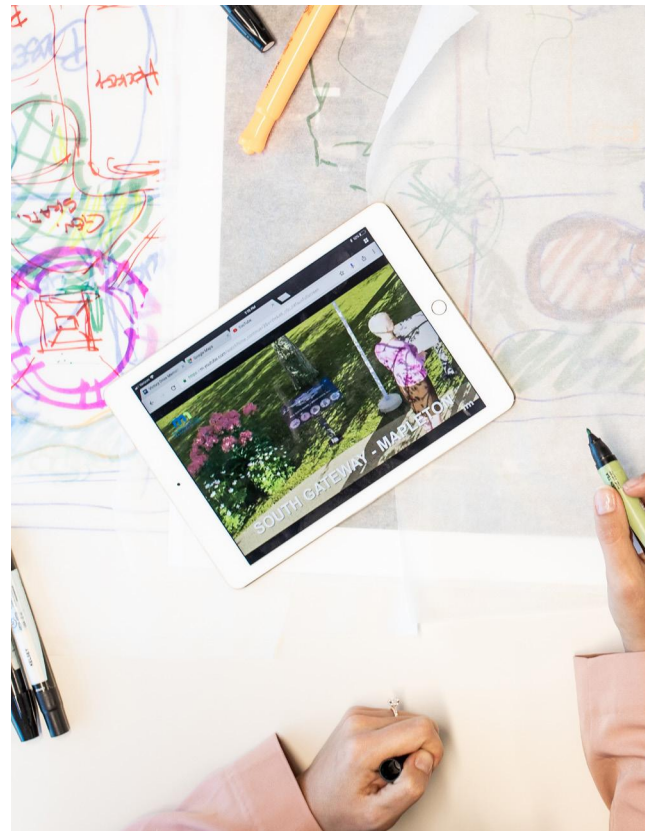
As the project progresses our project management team will facilitate quality reviews and prepare monthly project progress reports and invoices. WSB stresses the following key factors for successful project management and will apply them to this project:

- Clear and open communications
- Effective issue resolution
- Scope management
- Budget and schedule management
- Facilitation of decisions/approvals
- Quality control
- Risk assessment
- Thorough documentation

Our approach includes complying with any reporting, invoicing or communication standards that exist at the city.

DELIVERABLES:

- Project Plan
- Risk Management Plan



TASK 2:

Develop Strategic EAM Vision and Objectives

Our project process focuses on aligning line of business objectives and metrics with overall enterprise vision. To achieve top to bottom alignment we will begin by working with the city project leadership team to understand the city's EAM vision. If there is a need to develop or refine the vision, we will lead line of business leaders through a visioning exercise to develop an EAM vision for St. Paul. During this task we will work with key departmental stakeholders, define strategic enterprise goals, objectives, needs, and the metrics that will be used to define success. Techniques will include brainstorming, white boarding, demonstrations, and risk management exercises.

TASK 3:

Assess Current System

Effectively developing an Asset Management Plan requires experience in IT, Asset Management, GIS, and Business Analysis. For this project, WSB staff will follow the industry standard frameworks such as ISO 55000 and the Business Analysis Book of Knowledge (BABOK Guide) to effectively develop a plan for the City of St. Paul.

WSB will employ a top-down approach to requirements gathering and process documentation with an initial focus on developing detailed requirements for SPRWS, PW and OTC. Then we will complete a high-level overview of other EAM and WO functions in Parks, Facilities Management, Libraries, Public Safety, and Fire with a focus on providing recommendations about how to achieve greater alignment through the replacement of the Oracle EAMS. To achieve this, we will complete the following subtasks:

3.1 Elicitation/requirement Gathering

Using the requirements gathering plan developed in Tasks 1 and 2, we will identify key staff in each function and provide an overview of the city's EAM vision where necessary.

Based on discussions in the early stages of the project, WSB will leverage our experience to determine the business analysis techniques and activities are necessary to complete the requirements gathering. We will work with the project leadership team to determine the appropriate depth of analysis for functions outside

of SPRWS, PW and OTC. If the City of St. Paul has existing business analysis standards WSB will follow these standards.

WSB will likely employ readiness surveys and asset assessment surveys at this point to gauge the readiness and status of lines of business for EAM.

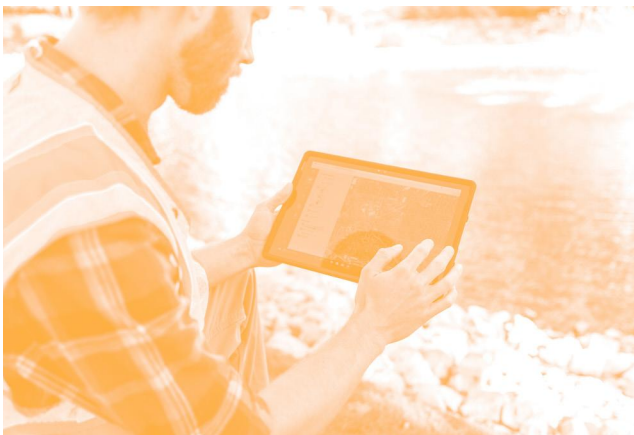
WSB will leverage ISO 55000 guidelines, our existing templates and practical experience to accelerate the requirement gathering process creating efficiencies that will save St. Paul staff time.

This will be followed by one to two workshops with staff from each function to gather business, stakeholder, solution, and transition requirements. These workshops are interactive and leverage information from the surveys, demonstrations from other organizations as well as interviews, brainstorming, and prototyping.

The end results of this task will be incorporated with additional information gathered below to produce asset FACT sheets for each asset that document requirements, identify gaps and map processes. WSB will also identify where regulatory requirements exist and where standards such as ISO 55000 and PAS 55 can provide aspirational guidance.

3.2 Requirements management and Capacity Tools

Requirement gathering is an ongoing process, so it will be essential that requirements be recorded using a tool so they can be efficiently updated, managed, traced, and analyzed. This task includes documenting requirements for final presentation in a clear, complete, consistent, and understandable format with the end goal of integrating the requirements into an effective RFP to select a vendor.



The tools developed in this task will track the number of users for each function and asset as well as the anticipated number of transactions and the Service Level Agreement (SLA) required for each asset. The tool will classify user type, location, mobile requirements, and assess the need for publicly accessible tools for each asset.

3.3 Gap Analysis

Our Team will meet with city staff to review available inventories, processes, software modules, staff, performance measures, and systems to identify gaps that exist. In this task we will leverage our GIS and AMS experience to measure the completeness and accuracy of the information, practices, staff and systems against standards - resulting in a “benchmarking” comparison of current EAM maturity against leading practice and the city’s vision.

DELIVERABLES:

Using the information gathered above WSB will deliver a System Assessment that includes the following deliverables:

- Current System Summary Report: Summarizing the discovery in this task and providing high level goals and objectives. The summary will also provide enterprise-wide capacity requirements and recommendations for Steering Committee members and responsibilities.
- Asset FACT sheets: Identifying gaps, system usage, applicable GIS/AMS standards, mapping of departments/division to assets, benchmarking, maturity, and any data migration tasks that will be required.
- Capacity tool

TASK 4:

Describe the Future EAMS

This task includes describing the future EAMS, identifying risks to successfully implementing EAM and describing the benefit St. Paul will realize through EAM.

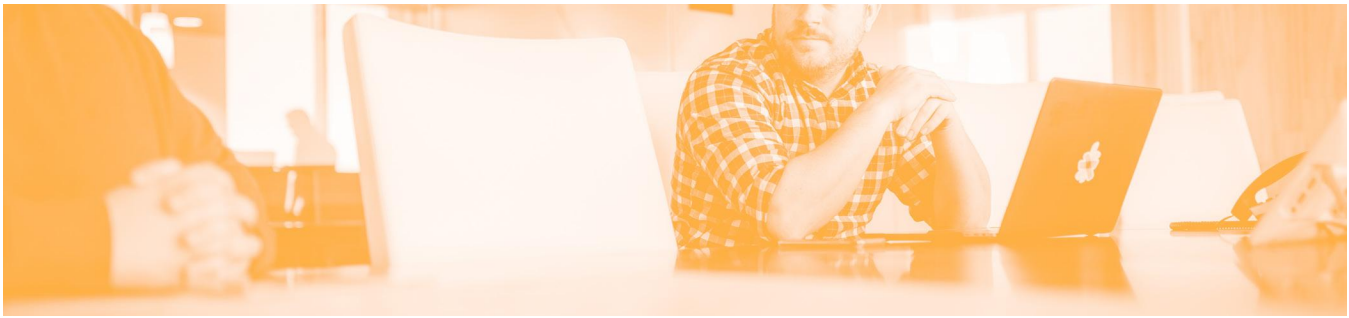
Task 4.1 Prioritization

WSB will begin by prioritizing the current and future requirements identified in Task 3.

To accomplish this, we will rely on Asset management best practices and leverage our:

- Experience working with EAM
- Operational expertise in public infrastructure
- Deep technical expertise with Asset Management technology
- Knowledge of legal and regulatory requirements





This prioritization will include identifying enhancements to the EAMS and determining the Return on Investment (ROI) the enhancements will provide the city.

Task 4.2 Risk Management Workshop

Given the strict timeline constraints from the EAMS EOL, WSB recommends we develop a Risk Management Plan for the implementation of the EAMS. WSB staff will hold two risk management workshops that include key staff from each department/division. In this task we will:

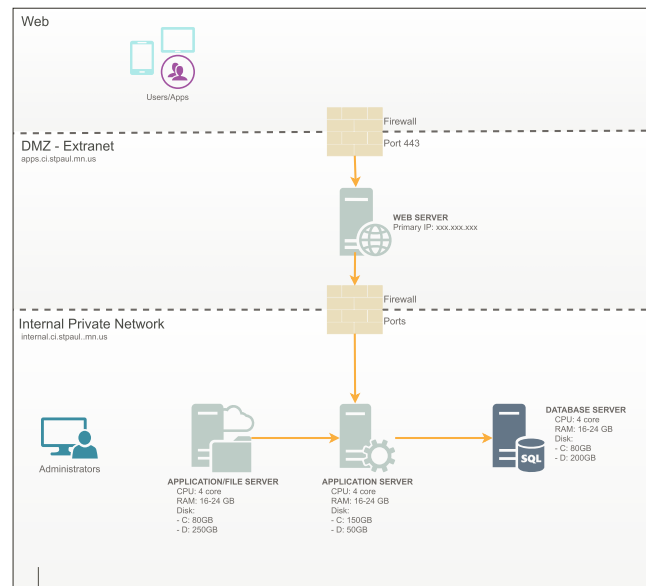
- Identify risks to implementing the EAM
- Rate the likelihood that the risk event will occur and the impact of the risk event
- Develop strategies to mitigate the risk

While this task is not identified in the RFP, in our experience this activity greatly increases the chance of success when implement an EAMS.

Task 4.3 System Architecture Requirements

WSB will meet with OTC staff at the beginning of this task to discuss how this project aligns with the city's cloud vision over the next 5 years. Based on the city's vision, the integration requirements and the information from the Capacity Tool developed in Task 3.2 WSB will identify the hardware, software, and hosting requirements for the future state.

This information will be documented using either our Standard system architecture templates or the city's documentation standard.



SAMPLE ENTERPRISE AMS SYSTEM DIAGRAM

DELIVERABLES:

Using the information gathered above WSB will deliver a Future State Document that includes the following sections:

- Preliminary System Road Map: Showing prioritization of assets and functional requirements, legally mandated requirements, productivity gains, integration plan with other enterprise systems,
- Risk Management Plan: Documenting risks, impacts and mitigation strategies
- System Architecture: Standardized diagrams, specs for future system
- EAMS RFP Submission Requirements: Document summarizing all functional and non-functional requirements for the future system.

TASK 5:

Identify and Research Alternatives

This task includes performing market research on available EAMS vendors and ranking the vendors based on a set of criteria developed in this project. This Task includes the following subtasks:

Task 5.1: Research Available Vendors

Through our experience implementing and managing EAMS WSB has broad knowledge about numerous solutions that the City of St. Paul should review. For this task, we will also leverage various statewide surveys assembled by public works organization and the Institute of Asset Management (IAM).

Task 5.2: Build Evaluation Model

WSB will build an evaluation model that supports the scaled rating of systems on criteria Identified in RFP and recommended by WSB including:

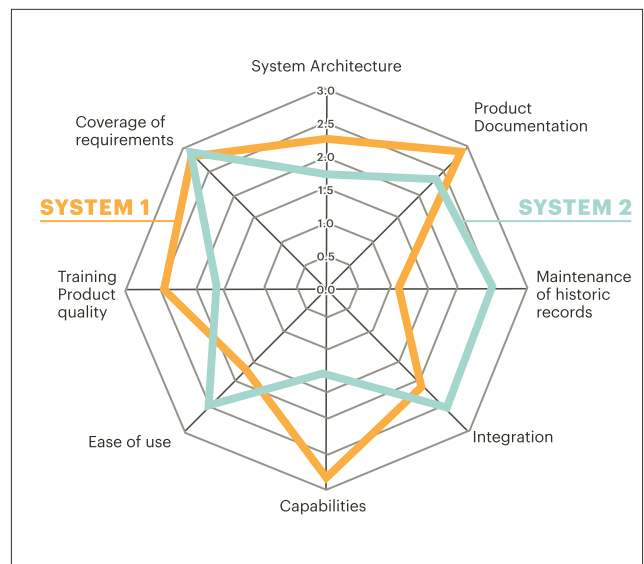
- Coverage of city's system requirements
- System Architecture
- Product Documentation
- Maintenance of historic records
- Integration Capabilities
- Ease of use
- Training
- Product quality

Additional criteria will also be evaluated but may be separated outside the scaled model including:

- Cost
 - Data conversion costs
 - Implementation cost
 - Maintenance costs
- Additional criteria TBD

Task 5.3: Evaluate Systems

WSB will apply the evaluation model to the top vendors to short list the top solutions. For vendors on the shortlist, WSB will perform a SWOT type analysis and prepare spider charts comparing the solutions across the variables in the model.



This includes performing a business case analysis including Cost Benefit Analysis (CBA) and calculating Return on Investment (ROI) for the city.



Task 5.4: Finalize Road Map

WSB will then take the information from the vendor research and combine it with the asset prioritization developed in Task 4 to develop a final road map for the city with the goal of providing immediate next steps and actions for the city to follow.

The road map will leverage WSBs experience implementing EAM from the perspective of operations experts, technology implementers and project managers. It will include:

- Timeline
- Cost
 - Data conversion costs
 - Implementation Cost
 - Maintenance costs
- Staffing
 - Resource requirements
 - Skill assessments and requirements
- Consultant requirements

Task 5.6: Finalize RFP Documentation

WSB will then develop the final documentation required for the RFP. This includes:

- The scope of work (SOW) for EAMS implementation
- Documentation of roles to be fulfilled by EAMS vendor project manager
- Requirements of vendor work plan
- Scripts for vendors to follow during demonstrations

WSB will then incorporate the RFP requirements documentation developed in Task 4 into the final RFP package.

Task 5.7: Executive Summary

WSB will provide an executive summary that clearly articulates the overall strategy, road map and ROI the EAM will provide. to St. Paul for presentation to city leadership. One presentation to City of St Paul executives is expected (as directed by the city PM). Presentation is expected to be similar to an executive summary of the process and recommendations.



DELIVERABLES:

- Market Research Report and Rating: Reviews vendors/products and provides a scaled rating based on matrix developed in Task 5.2
- Final Roadmap: Documenting costs, timeline, staffing and consultant requirements
- Final RFP Documentation: Including SOW, roles and work plan
- Executive Summary: Document and presentation

Similar Experience



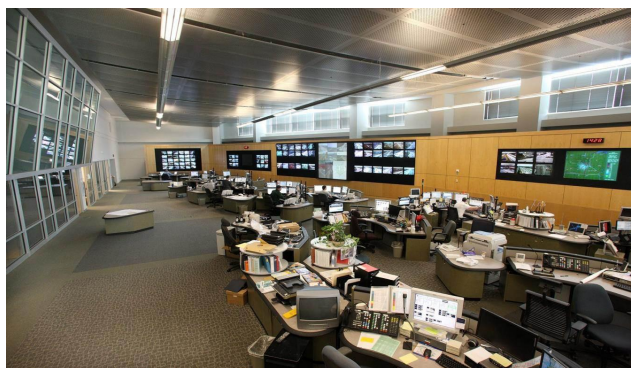
Intelligent Fiber Asset Management System (IFAMS), Regional Traffic Management Center (RTMC)

CLIENT: MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT)
LOCATION: STATE-WIDE

WSB led the effort to gather the system requirements, define and re-engineer business processes, select a vendor and implement a GIS/AMS for MnDOT RTMCs fiber assets.

The MnDOT RTMC manages more than 600 miles of fiber optic cable and other assets required for MnDOT's Intelligent Transportation System (ITS). As the ITS system grew over time, updating detailed schematic drawings became a more cumbersome and time-consuming process. RTMC staff found it necessary to re-engineer existing business practices and apply GIS and Asset Management technology in order to automate the generation of over 500 schematic drawings needed by RTMC staff to manage the fiber infrastructure.

WSB's developed detailed criteria and ranked a number of vendors who provided fiber asset management solutions. Ultimately, MnDOT chose a solution based on 3-GIS Web, ArcGIS Server, and 3-GIS Mobile that allows MnDOT to modernize the entire life cycle of fiber management. This includes fiber management, design, operations, and data maintenance with a single GIS-based AMS solution. WSB worked with MnDOT to implement the system and develop the processes to maintain the system moving forward.



RELEVANCY:

This project demonstrates WSB's experience managing complex requirements for diverse subject matter, evaluating vendors, and designing a technical architecture that meets large IT organization's requirements.

KEY WSB STAFF: JOHN MACKIEWICZ, JUSTIN HANSEN

REFERENCE: ADAM JULSON | ADAM.JULSON@STATE.MN.US
| 651.234.7082

Public Works Asset Management Plan

CLIENT: CITY OF BLOOMINGTON
LOCATION: BLOOMINGTON, MN

The City of Bloomington partnered with WSB to develop a Strategic Asset Management Plan for the city's Public Works Maintenance Division. WSB performed a needs assessment for multiple departments including public works, parks, fleet, finance, and information technology. WSB helped Bloomington develop vision, high level objectives, departmental assessments, and a road map that resulted in the successful implementation of an AMS. In addition, the city required a focus on integration with the city's centralized Enterprise GIS system. WSB developed an Asset Management Plan (AMP) which included a Risk Assessment and Management Plan (RAMP) that allowed the city to consolidate their organizational/business and technical needs. WSB then developed a set of requirements and that were directly integrated into the RFP package. While working for the City, Charlie Wild then developed the final RFP package. Ultimately, the city was able to use the AMP to procure a vendor for an Enterprise Asset Management system.

KEY WSB STAFF: JOHN MACKIEWICZ, JUSTIN HANSEN, CHARLIE WILD

REFERENCE: SCOTT ANDERSON, 952.563.5867

RELEVANCY:

This project demonstrates WSB's experience gathering requirements and developing an RFP that was successfully used by a client to select a vendor.

Transportation Asset Management

CLIENT: CITY OF MINNEAPOLIS
LOCATION: MINNEAPOLIS, MN

WSB has supported the City of Minneapolis for over eight years with the city's Transportation Asset Management program. This includes assisting the city's Traffic Division with asset management strategy, supporting the city's sign replacement program, integrating the asset management system (AMS) with the city's enterprise GIS and EAM, and adding additional assets to the AMS. The city has been able to reach their goal of digitally transforming their multi-year sign replacement program that manages and replaces more than 90,000 street signs. Since the start, WSB has provided high-level strategic support that includes asset management assessments and policy recommendations. As the city's asset management program has evolved, WSB developed the Traffic Division's road map for asset management, developed strategies for addressing gaps, and supported engagement with city leaders. The Traffic Division's AMS is based on Cartegraph and the Citywide EAM is based on IBM Maximo.

KEY WSB STAFF: JUSTIN HANSEN, JOHN MACKIEWICZ

REFERENCE: JESSE SONJU | TRAFFIC ENGINEERING APPLICATIONS ANALYST | 612.673.5413

RELEVANCY:

This project demonstrates WSB's experience working with large municipalities and our ability to integrate departmental Asset Management Systems with larger EAM.

Strategic Asset Management Plan

CLIENT: CITY OF EAGAN
LOCATION: EAGAN, MN

The City of Eagan was an early adopter of Asset Management technology and had assembled several Asset Management silos that met departmental needs but did not provide actionable information across the City. Working with Public Works, GIS staff, and IT staff, WSB worked with the City to implement an enterprise approach to asset management. Eagan was unique in that it had a number of systems that were functioning at a high level that required integration and alignment to meet the City's larger goals. WSB developed a strategy to implement Esri based tools augmented with other technologies to achieve the City's Enterprise Asset Management (EAM) objectives. This included developing a five-year budget, implementation plan, and recommending technology to meet the City's goals. WSB continues to assist Eagan with implementing best practices for GIS application development, asset management and Capital Improvement Planning

KEY WSB STAFF: JOHN MACKIEWICZ, JUSTIN HANSEN

REFERENCE: RUSS MATTHYS | RMATTHYS@CITYOFEAGAN.COM | 651.675.5637

RELEVANCY:

This project demonstrates WSB's ability to implement an Enterprise Approach to asset management for a group of stakeholders who had successful, silo's asset management systems.

Public Work Asset Management

CLIENT: CITY OF BURNSVILLE
LOCATION: BURNSVILLE, MN

Asset management is a core tenant of Burnsville's focus on being a smart community. Burnsville sought WSB's support during a staff transition and our relationship has grown quickly since. WSB staff initially provided direct asset management staff augmentation but that quickly grew to providing annual asset management consulting services. Our services for Burnsville revolve around supporting the City's Public Works and Engineering departments with asset management strategy, technology guidance, and staff education. WSB has been central to the City's growth in asset management through these annual services in addition to our hosting of the City's entire VUEWorks Asset Management environment in a private cloud. WSB is the City's asset management technology partner and we continue to support the City's changing needs. Examples include an integration with the City's new Enterprise GIS to a move to a mobile workforce.

KEY WSB STAFF: JOHN MACKIEWICZ, JUSTIN HANSEN

REFERENCE: STEVE ALBRECHT | STEPHEN.ALBRECHT@SHAKOPEEDAKOTA.ORG | 952.233.4236

RELEVANCY:

This project showcases WSB's ability to understand complex technical environments through our hosting of Burnsville's asset management platform and its integration with a centralized enterprise GIS.



Stakeholder Involvement

Stakeholder departments involvement will depend on the number of meetings required and the number of staff department leaders assign to meetings. Our team realizes the value of staff time and will use pre-meeting surveys and templated requirement sheets to make requirement meetings as efficient as possible. Additionally, we will leverage our experience and knowledge of best practices to bring standard examples and best practice recommendations to the meetings to efficiently facilitate requirements meetings. This will significantly reduce staff time.

Department leaders will have final say, but based on prior projects the city should plan for the following:

- Requirements gathering: Two meetings lasting one hour attended by a champion, supervisor and key staffer. Two hours of total follow up per division/department.
- Risk Management Workshop: Three hours for one staff member from each department
- System Architecture: Two hours each for three OTC staff members







TASK & DESCRIPTION	STAFF HOURS								COST
	PROJECT MANAGER	SYSTEM ANALYST	BUSINESS ANALYST I	BUSINESS ANALYST II	PW OPERATIONS	OFFICE TECH	ST PAUL OTC STAFF	ST. PAUL DEPT/ DIV STAFF	
TASK 1: PROJECT MANAGEMENT									
PROJECT MANAGEMENT	24					8			\$5,400
PROJECT PLAN	4			4			2		\$1,388
STATUS REPORTS AND INVOICES	8								\$1,576
RISK MANAGEMENT PLAN	4						2		\$788
TOTALS FOR TASK 1	40	0	0	4	0	8	4	0	\$9,152
TASK 2: VISION AND HIGH-LEVEL OBJECTIVES									
VISIONING MEETINGS	4			4	4		3	18	\$2,176
DRAFT VISION AND OBJECTIVES	4			4	2				\$1,782
TOTALS FOR TASK 2	8			8	6		3	18	\$3,958
TASK 3: ASSESS CURRENT SYSTEM									
SPRWS – PRODUCTION DIVISION: CAPITAL AND MAINTENANCE REQUIREMENTS	2		4	4				8	\$1,466
SPRWS – DISTRIBUTION DIVISION: CAPITAL AND MAINTENANCE REQUIREMENTS	2		4	4				8	\$1,466
SPRWS – ENGINEERING DIVISION REQUIREMENTS	2		4	4				8	\$1,466
SPRWS – FLEET MAINTENANCE REQUIREMENTS	2		4	4				8	\$1,466
SPRWS – ADMINISTRATION REQUIREMENTS	2		4	4				8	\$1,466
SPRWS – INVENTORY MANAGEMENT REQUIREMENTS	1		4	4				8	\$1,269
SPRWS – FINANCE MANAGEMENT REQUIREMENTS	1		4	4				8	\$1,269
SPRWS – FACILITIES MAINTENANCE REQUIREMENTS	1		4	4				8	\$1,269
SPRWS – TIMEKEEPING AND LABOR COSTS	1		4	4				8	\$1,269
PW – CONSTRUCTION REQUIREMENTS	1		4	4				8	\$1,269
PW – ENGINEERING MAINTENANCE	1		4	4				8	\$1,269
PW – ADMINISTRATION REQUIREMENTS	1		4	4				8	\$1,269
PW – INVENTORY MANAGEMENT REQUIREMENTS	1		4	4				8	\$1,269
PW – FINANCE MANAGEMENT	1		4	4				8	\$1,269
PW - SEWER UTILITY REQUIREMENTS	1		4	4				8	\$1,269
PW – FACILITIES MAINTENANCE	1		4	4				8	\$1,269
PW -STREET MAINTENANCE REQUIREMENTS	1		4	4				8	\$1,269
PW - TRAFFIC, SIGNALS, AND LIGHTING OPERATIONS REQUIREMENTS	1		4	4				8	\$1,269
PW – TIMEKEEPING AND LABOR COSTS REQUIREMENTS	1		4	4				8	\$1,269
PARKS, FACILITIES, LIBRARY, FIRE AND PUBLIC SAFETY REQUIREMENTS	4		24	24				36	\$7,220
REQUIREMENTS MANAGEMENT AND CAPACITY TOOL	1		12	12			2		\$3,413
GAP ANALYSIS	12			24	8				\$7,540
FINALIZE REPORT	12			24	2	8			\$7,030
ADDITIONAL MEETINGS	4			8	4		4	20	\$2,776
TOTALS FOR TASK 3	57	0	112	168	14	8	6	208	\$53,075

- CONTINUED ON FOLLOWING PAGE -

TASK & DESCRIPTION	STAFF HOURS								COST
	PROJECT MANAGER	SYSTEM ANALYST	BUSINESS ANALYST I	BUSINESS ANALYST II	PW OPERATIONS	OFFICE TECH	ST PAUL OTC STAFF	ST. PAUL DEPT/ DIV STAFF	
TASK 4: DESCRIBE THE FUTURE EAM SYSTEM									
PRIORITIZE REQUIREMENTS	16		16	16	8				\$9,016
RISK MANAGEMENT WORKSHOP	12			8			4	24	\$3,564
RISK MANAGEMENT PLAN	8						1	6	\$1,576
TECHNOLOGY REVIEW AND SYSTEM ARCHITECTURE	4	16					8		\$3,572
TOTALS FOR TASK 4	40	16	16	24	8	0	13	30	\$17,728
TASK 5: IDENTIFY AND RESEARCH ALTERNATIVES									
RESEARCH VENDORS	1	2		24					\$4,145
BUILD EVALUATION MODEL	4		4	8					\$2,460
EVALUATE SYSTEMS	4	2	4	8			2	12	\$2,808
FINALIZE ROAD MAP	4			16					\$3,188
FINALIZE RFP DOCUMENTATION	4			8	4		2	8	\$2,776
EXECUTIVE SUMMARY	8			4	4	2	2	4	\$3,132
TOTALS FOR TASK 5	25	4	8	68	8	2	6	24	\$18,509
TOTAL HOURS FOR EACH TASK	170	20	136	272	36	18	32	280	\$102,422
HOURLY RATES	\$197	\$174	\$118	\$150	\$197	\$84			
TRAVEL AND PER DIEM									\$0
COSTS FOR OTHER CATEGORIES INDICATED IN RFP									\$0
TOTAL PROJECT FEE									\$102,422

Schedule

Based on the available information and our experience working with municipalities, we have developed a draft schedule to complete this project. During the project initiation WSB will work with OTC, PW and SPRWS to adjust the timeline depending on Saint Paul's timeline requirements, the number of meetings required and other factors. The WSB team has the resources available to accelerate the timeline below if requested by the city.

TASK	2021					
	APR	MAY	JUN	JUL	AUG	SEP
PROJECT INITIATION						
DEVELOP STRATEGIC EAM VISION AND OBJECTIVES						
ASSESS CURRENT SYSTEM						
DESCRIBE THE FUTURE EAM						
IDENTIFY AND RESEARCH ALTERNATIVES					