

Scope of Work #16-2-3

Integration of Schneider Electric's Responder OMS with Clevest MWM

Version 1.2

Prepared For:



April 21, 2016

Work to be performed by





Table of Contents

1	Overview	3
1.1	Design Phase	4
1.1.1	Kickoff and Workshop	4
1.1.2	Documentation	5
1.2	Development Phase	6
1.3	Deployment Phase	7
2	Assumptions.....	8
3	Project Plan	9
4	Quote	10



1 Overview

To satisfy Denton Municipal Electric's ("DME") stated requirements of seamlessly utilizing the Schneider Electric ("SE") Responder Outage Management System information in the field on a real-time basis, SSP Innovations ("SSP") is proposing a comprehensive integration project between Responder and Clevest mobile work management (MWM) tools.

Specifically, SSP proposes the design, development and deployment of integration code to provide the *Responder side* of a two-way interface to Clevest software for four independent functions:

- GetOutageReasonCodes
- GetAllActiveOutageEvents
- UpdateOutageStatus
- RestoreOutage

At times this project may require several different SSP, Clevest and DME resources. However, throughout the entirety of the project, the selected SSP Project Manager (TBD dependent on start date) will be the sole person responsible for executive project communication, issue resolution, resource management & scheduling, and ultimately, an on-time delivery of the stated solution. Additionally, the SSP Account Manager (Dean Perry) will be available to DME throughout the project duration to discuss any non-technical or personnel-specific concerns or questions.

DME is already utilizing and is familiar with Esri ArcGIS and the Schneider Electric ArcFM software. This project will interface DME's Responder OMS with the Clevest MWM software to provide a more streamlined, efficient, and ultimately valuable usage of time during an outage event.

The following section describes the tasks required to perform this implementation in detail.



1.1 Design Phase

1.1.1 Kickoff and Workshop

Prior to kicking off the project, SSP will internally meet to review the goals, roles, risk items and plans for the project. This shall ensure all SSP project personnel have a clear understanding of the plan ahead of work beginning.

Next, the SSP Senior Consultant and PM will remotely host a project kickoff meeting with DME. This meeting will consist of a review of the project goals, roles, personnel and schedule. Time will be allowed for questions and answers. IT team members from DME and technical representatives from Clevest are required to attend and participate.

Upon the Kickoff Meeting's conclusion, SSP will lead a review of the touch points between the two products, where in the workflow they will be used, and what they will do.

The four integration touch points are described below, as understood at the creation of this SOW:

- **GetOutageReasonCodes** is called in an on-demand fashion by an administrator as needed. The goal of this is to pull all of the legal outage cause codes from the OMS so that Clevest can present those codes to field workers for selection and then ultimately the code(s) selected by the field worker for an individual outage are sent back to the OMS when restoration occurs. This method is generally called once during the initial setup and then again if the list of valid cause codes is ever updated in the OMS. DME has requested that the outage reason codes will not be the full set that is available in the Responder system, and will be configured for this integration touch point on the Responder side of the interface.
- **GetAllActiveOutageEvents** is called on a configurable polling interval. This is generally set somewhere around every 1 to 15 minutes with the utility being able to balance system performance against how quickly new information moves from the OMS to Clevest. This call will effectively create new outages in Clevest and update existing outages in Clevest with the latest information from the OMS.
- **UpdateOutageStatus** is called multiple times per outage as the assigned crew(s) work the outage. Most of these updates are related to crew status (Acknowledged, Onsite, etc). At this time, DME has requested to Clevest that the ETOR will not be passed in from the field for the outage, though this data may be passed in the future.
- **RestoreOutage** is called once per outage at the time the field worker concludes their work and believes the faulting device has been repaired or replaced. Additionally, comments will be entered by the field worker that will need to be passed into the Responder system.



1.1.2 Documentation

Upon completion of the workshops, SSP will create a document detailing the design approach of the integration from the Responder perspective. The design will explicitly cover the web method signatures from the Multispeak specification as well as the expected implementation of functionality within the Responder API. SSP will then review the document with Clevest remotely to ensure the design specifications match the expectations from Clevest.

Upon completion of the joint review meeting, SSP will update the document as required and submit it to Clevest and DME for each recipient's future usage.

Provided all issues raised in the review meeting were addressed sufficiently, the Design Document will be considered approved for development at this time.



1.2 Development Phase

To begin the development phase, SSP will meet with Clevest and DME to establish a test environment at DME. Responder sample data will be loaded into the environment for testing purposes. Clevest should be prepared to provide an installation of their MWM software in the SSP-accessible test environment. If this is not possible they should be prepared to fully validate the approach SSP uses to create test harnesses as noted below.

*Per updated SSP internal technology policy, in order for SSP to utilize DME's Schneider Electric licensing for development and/or testing purposes, SSP will require DME to accommodate one of two activities for SSP's proper access:

1. If permitted within its software license agreements and preferable to DME, DME will provide SSP the required Schneider Electric software installers via FTP or Sharefile for SSP's use on development machines. DME provides access to its network via VPN along with the IP address and machine name of its license server. SSP will reference the license server for the term of testing any code / processes only. The network access will support allowing SSP machines onto the DME network to reference the server.
2. Alternatively, DME will provide a desktop or server that SSP is provided login rights to, on DME's network. SSP will deploy our software development tools to this machine and use it to develop and test all new functionality. SSP will remote desktop to this environment to perform this work. This machine can be either physical or virtual. If virtual is preferred, SSP can provide the machine to DME. SSP's TFS source control can and will still be used for code control.

Next, SSP will develop the programming code which will successfully enable the four interfaces that will be exposed to Clevest per the Multispeak specification. Only the web methods required for these operations will be implemented within the web service (i.e. the entire Multispeak interface will not be exposed). SSP will create messages to be used through SoapUI that will allow the integration points to be unit-tested.

Each piece of functionality will be unit-tested to ensure it is working as designed. Clevest may be consulted during this unit testing to ensure the interface is operating as required for their software requirements. Clevest's involvement during unit testing will be handled via GoToMeeting sessions.

Finally, SSP will document the integration for future interrogation by DME. This document will include an installation guide and a description on how to configure, test, and validate each web method.



1.3 Deployment Phase

To deploy the solution, SSP will travel onsite to DME offices for ~three days. It is expected that Clevest would also be present onsite for this implementation, testing, and validation exercise.

SSP will install the integration code into the client production environment. For the balance of the visit, SSP will provide onsite production support as DME users test and validate the new functionality utilizing the Clevest software against their Responder environment. Any issues will be addressed by either SSP or Clevest as needed to ensure that the integration is working as designed. DME will be expected to validate that the functionality meets the design documentation and operates correctly.

Finally, upon completion of the onsite trip, SSP will provide remote support for the solution, up to 40 hours, over the following 10 business days. If support is required beyond the 10 business days or the 40 hours (whichever is achieved first) a change order may be required.

At the completion of the offsite support period, the integration project will be considered complete.



2 Assumptions

The following assumptions have been made regarding the description of this work:

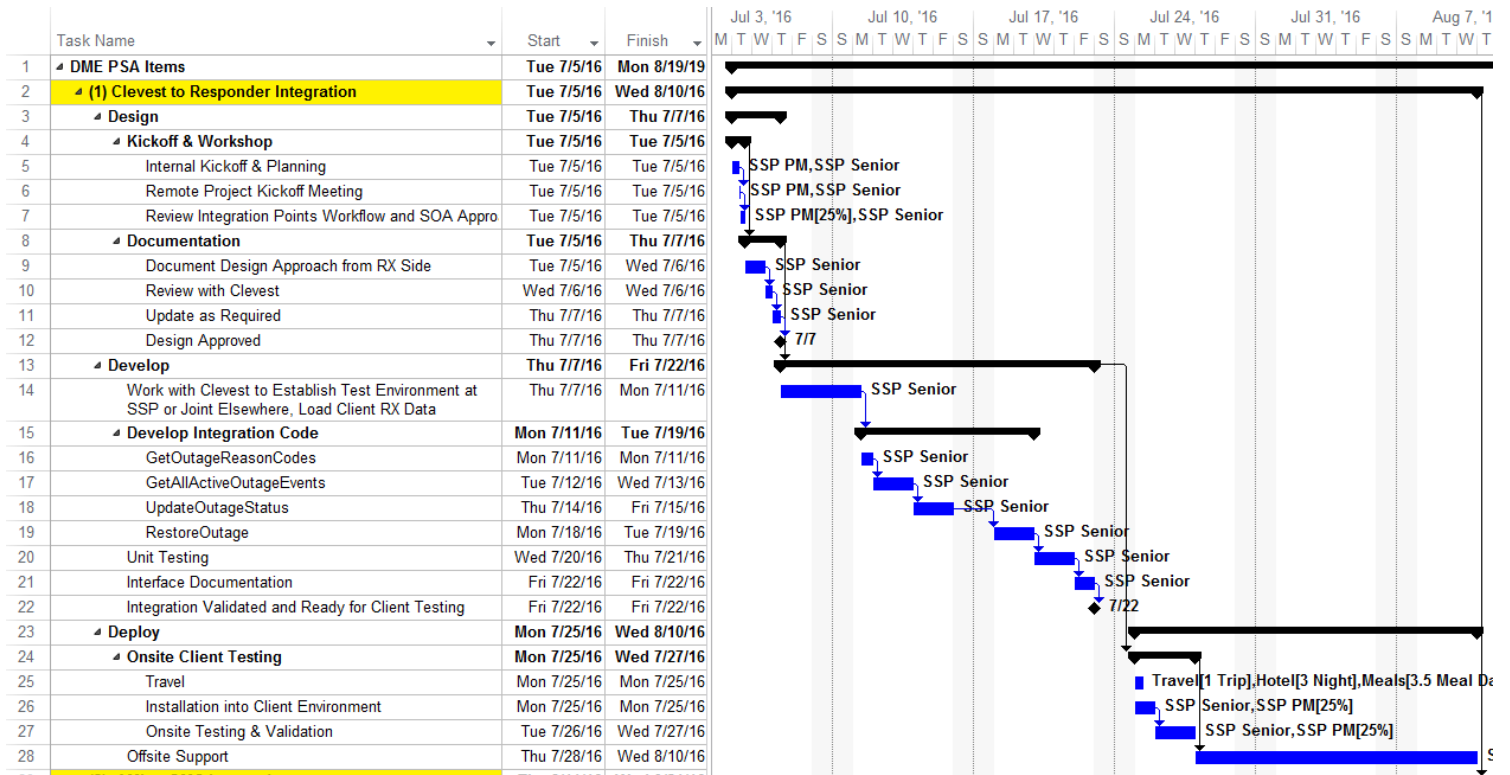
- DME will provide their GIS and Responder data to SSP for testing purposes in an SSP test environment.
- DME IT will provide all servers and will install all core Operating Systems.
- DME IT will be available to support any environmental, system access, or operating systems issues throughout the project.
- DME IT will provide all required environmental access in a timely manner (response time within 24 hours of request).
- DME must provide the targeted Oracle database version to SSP in writing at the project kickoff.
- DME will provide appropriate staff commitment levels to ensure the success of the integration project.
- Clevest will provide appropriate staff commitment levels to ensure the success of the integration project.
- Alterations to the design documentation after acceptance may require a change order depending on the significance of the change.
- Only the four web service end points noted in Section 1 will be implemented as part of this project.
- SSP has not included any time to train Schneider Electric on the support of the code, the usage of the code, the test harness, or the integration. If training time is needed, a change order will be required.
- DME will be responsible for ensuring that any required Responder data is in place to support the integration.
- DME and/or Clevest will be responsible for developing any formal test cases of the integrations points based on their usage within the Clevest software. SSP will not create or deliver any formal test cases.
- Post deployment support will be provided for up to 10 business days following the onsite go live week or 40 hours of work, whichever expires first. Once this support phase expires, the project will be deemed complete. If additional support time is required a change order will be required.
- The integration will be developed against Responder version 10.2.1.
- No formal training has been included in this statement of work. It is expected that the DME staff will be trained on Responder and Clevest usage independent of this project.



3 Project Plan

The detailed project plan that was used to scope and budget this project has been included below. It can be reviewed for additional information on tasks and duration.

Dates depicted in the project plan are tentative and subject to change dependent on actual project start date and other factors; they're included here to communicate duration of tasks.





4 Quote

This quote is tied directly to the scope of work detailed within this document. Any changes to the scope of work before or during the project would result in a change order.

This quote is provided as a fixed priced number inclusive of all expenses and is good for 90 days from the date listed on this SOW.

Upon completion of this project, a single invoice will be provided to DME for its entirety.

Project Task	Est. Duration*	Subtotal
DME Responder-Clevest Integration		
Design Phase	3 bus. days	\$4,800.00
Project Management		
Kickoffs & Workshops		
Documentation		
Development Phase	12 bus. days	\$23,500.00
Project Management		
Work w/ Clevest to Establish Dev/Test Environment		
Develop Integration Code		
Unit Testing		
Interface Documentation		
Deployment Phase	13 bus. days	\$18,135.00
Project Management		
Onsite Client Testing		
Offsite Support		
Grand Total 28 bus. days \$46,435.00		

*Duration estimates are subject to many project factors, some of which are outside of SSP's control. Therefore, all durations depicted are non-binding estimates only.

Note: All travel costs are included in the above quote.