DAS DEPARTMENT OF ADMINISTRATIVE SERVICES

ENTERPRISE TECHNOLOGY SERVICES

Project Charter

Project Name:	**OEM, 9-1-1 Program Frame Relay Replacement Project**
Agency(s):	Oregon Military Department (OMD) Office of Emergency Management (OEM)
Sponsor(s), Business Owner(s):	Mark Tennyson – OEM Technology & Response Services Section Manager
Business Program Area(s):	Office of Emergency Management, 9-1-1 Program
Project Manager:	Frank Kuchta – Project Manager (Contracted from DAS/ETS)
Date:	3/24/2015

Project Charter Reviews and Approvals

Version Control:		
Version	**Change Description / Author**	**Date**
0.1	Initial/background charter content provided by OEM (Patrick Lustig & Theresa Connell)	1/7/15
1.0	Initial charter draft (Frank Kuchta)	4/13/15
Agency Reviewed by:		
Name	**Title/Position/Role**	**Date**
Bryan Nealy	ETS Engineering Manager	4/13/15
Wayne Smith	ETS Solutions Architecture Manager, Technical Solutions Consultant	4/13/15
Winnie Evans	ETS Solutions Architect/Consultant	4/9/15
Patrick Lustig	OEM Subject Matter Expert	4/10/15
Theresa Connell	OEM Subject Matter Expert	4/10/15
Darren Wellington	DAS/OSCIO Information Technology Policy& Planning Analyst	
Sponsor Approved by:		
Name	**Title/Position/Role**	**Date**
Mark Tennyson	OEM Technology & Response Services Section Manager, Project Executive Sponsor	4/13/15

1. Project Charter Overview

1.1. Project Summary

Following the release of the Governor's Budget for 2015-2017 Biennium, the Office of Emergency Management (OEM) has been mandated to use the Department of Administrative Services (DAS) to migrate from the Frame Relay network architecture, supported by CenturyLink and Frontier, to using Ethernet supported by Enterprise Technology Services (ETS). The current 911 System utilizes the Frame Relay architecture to transmit data with the system.

Frame Relay is a network architecture developed decades ago and uses specific hardware produced by a single manufacturer. At the time Frame Relay was deployed, it was state of the art and very effective for transmitting data between two locations. As technology has advanced, Ethernet has become a more effective and affordable technology to transfer data. For reasons unknown, the manufacturing of the hardware used for Frame Relay has been discontinued.

Frame Relay will be discontinued as of July 2017. The purpose of this project is to move the current Automatic Location Information (ALI), mapping data, management information systems statistical reporting, NetClock time synchronization, anti-virus, and operating system support off the Frame Relay architecture and onto an Ethernet topology before the diminished support for the network disrupts the Enhanced 9-1-1 service.

1.2. Problem Statement or Business Opportunity

This project will ensure that the visitors to and citizens of Oregon have reliable E9-1-1 services, delivered on a standards based, resilient, and scalable Ethernet based network with compatible call handling equipment. The new network architecture will facilitate interoperability among Oregon PSAPs by virtue of complying with industry standards including enhanced resilience, speed and effectiveness. Likewise, the adoption of international standards assures Oregon its place in interstate operability

1.3. Strategic Alignments and Mandates

This project aligns directly with the Governor's Budget for the 2015-2017 biennium.

OEM 9-1-1 was established by the 1981 Oregon Legislature (ORS 403.100 – 403.380). Its primary mission is to ensure the seamless operation of the statewide Enhanced 9-1-1 (E9-1-1) system. The program is responsible for the continual coordination and management of the network necessary to deliver E9-1-1 calls, including Automatic Location Information (ALI), to the

customer premise equipment (CPE) used by the Public Safety Answering Points (PSAP) to process those calls.

The following goals have been adopted to guide OEM 9-1-1 in fulfilling its mission:

- Goal A: Enhance the quality of the statewide E9-1-1 answering system to ensure that citizens and visitors have access to public safety answering services that are reliable, redundant, secure, and diverse.
- Goal B: Enhance network capabilities statewide to support advanced technologies, capable of delivering voice and data.

In order for OEM 9-1-1 to fulfill its goals the following objectives have been established:

- Objective 1: Design a statewide Ethernet based network for E9-1-1 Automatic Location Information (ALI) delivery, as well as, PSAP mapping data; delivery of Management Information Systems (MIS) statistical reporting data; NetClock's time synchronization of the network, systems, and devices for the PSAPs, to replace the existing Frame Relay architecture that is at end of support.
- Objective 2: Implement a statewide Ethernet network architecture for E9-1-1 Automatic Location Information (ALI) delivery, as well as, PSAP mapping data delivery; delivery of Management Information Systems (MIS) statistical reporting data; NetClock's time synchronization of the network, systems, and devices for the PSAPs based on the industry proven design.
- Objective 3: Develop a plan for the statewide use of Ethernet network architecture to deliver Automatic Location Information, as well as, PSAP mapping data delivery; delivery of Management Information Systems (MIS) statistical reporting data; NetClock's time-synchronization of the network, systems, and devices for the PSAPs in conjunction with the voice portion of the E9-1-1 call that will facilitate future needs.
- Objective 4: Coordinate a collaboration effort with DAS ETS.

1.4. Project Success Metrics

- Technical replacement solution is selected and approved for implementation.
- Viable procurement vehicle is in place and available for implementing the selected replacement solution.
- 43 Oregon PSAP locations are delivered Automatic Location Information (ALI) in conjunction with E9-1-1 calls.
- 43 Oregon PSAPs are migrated off of Frame Relay, delivered mapping data; Management Information Systems (MIS) statistical reporting data; NetClock's

time synchronization of the network systems, and devices for the PSAPs, across the Ethernet network architecture.

- Project meets milestones (timelines) and is completed within the approved schedule.
- Project meets milestones (cost) and is completed within the approved budget.

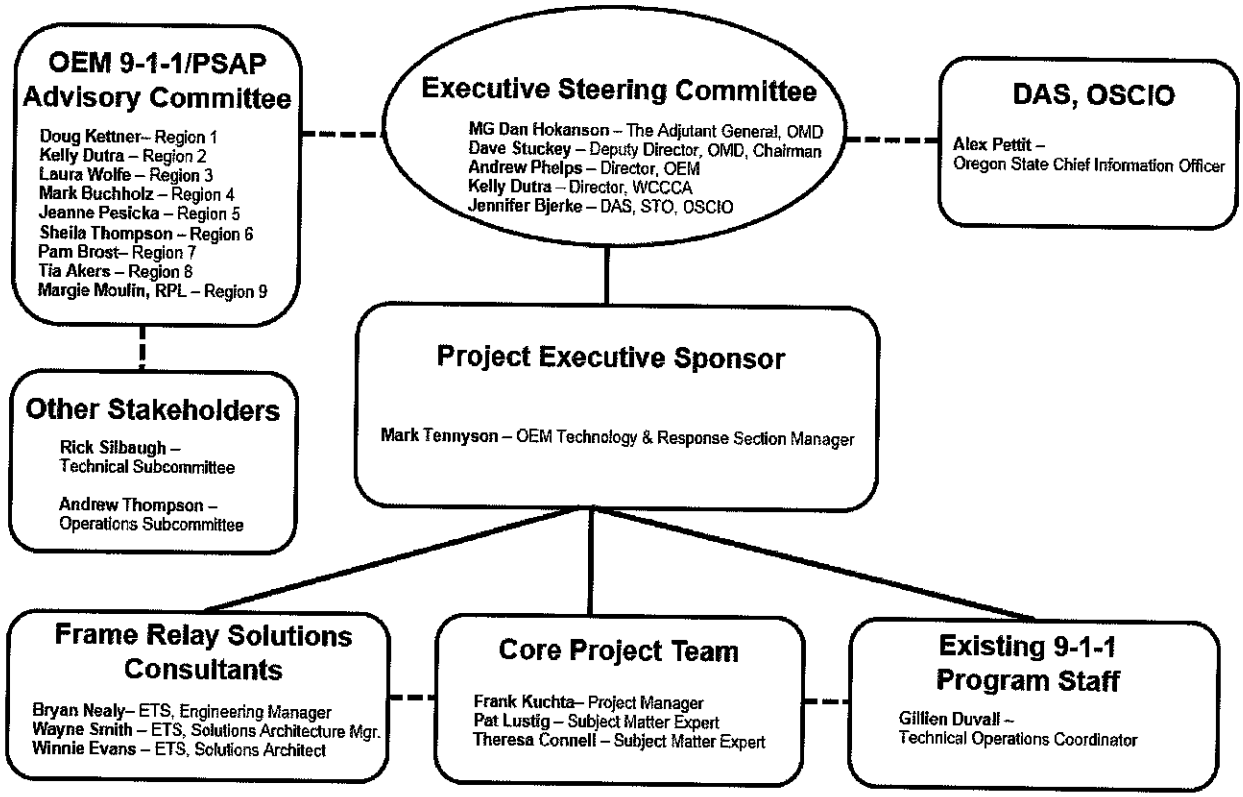
2. Project Charter Details

2.1. Project Governance Plan – Overview

The governance of this project is a system of management. It has a multi-tiered leadership, oversight, and accountability structure that provides ongoing review and assessment of the overall program schedule, budget, performance, and execution. The structure is designed to serve the project with input from project-related committees and functional management groups that bring PSAP operations expertise, project management and support, technical support, and policy advice to the table.

The project will be governed based on the structure and membership depicted below:

OEM Frame Relay Replacement Project
Governance Structure/Membership



2.2. Roles and Responsibilities

(Core Project Oversight & Management Roles)

The Executive Steering Committee:

- Make high-level, strategic decisions on the project.
- Provide guidance to assist the progress of the project from an enterprise point of view.
- Provide management level review of project status, major milestones, deliverables and scope changes.
- Provide ongoing evaluation of the project's alignment with State of Oregon's Strategic Plan.
- Utilize established procedures to provide ongoing evaluation of the developed systems to ensure systems meet the needs of its key stakeholders.
- Review and recommend changes to communications strategies of the project.

Project Executive Sponsor

- Is the primary liaison with the Executive Steering Committee.
- Responsible for major project scope change (Priorities of requirements added or removed from the baseline scope.)
- Has the authority to resolve major project issues.
- Is the approval authority of project expenditures, plans, and organization.
- Is ultimately responsible for delivering the project objectives.
- Helps resolve project issues, and escalates issues as necessary.
- Participates in status meetings with the Project Managers.
- Reports project status to upper management and the Executive Steering Committee on a scheduled basis.

Project Management Team

- Responsible for project planning and execution tasks producing deliverables as outline in the Frame Relay Replacement Project Plan.
- Responsible for project status reporting of major milestones, deliverables and scope changes.
- Provide ongoing evaluation and updates of the Project Management Plan and Timeline.
- Utilize established project management processes and procedures.
- Review and recommend changes to communications strategies of the project.
- Ensure project aligns with OAR and ORS.
- Outreach with other project stakeholders to include: OEM 9-1-1/PSAP Advisory Committee; Technical Subcommittee, and Operational Subcommittee.

The Executive Steering Committee will initially meet on a quarterly basis, however this will be adjusted during various phases of project life cycle as needed.

2.3. Project Approach:

OEM 9-1-1, DAS ETS and the PSAP's will work together on implementation schedules. A detailed project schedule will be developed in cooperation DAS ETS and the PSAPs. This detailed project schedule will serve as a baseline schedule for execution, monitoring and control of the project.

The project approach will be consistent with relevant guidance as provided in Guide to the Project Management Body of Knowledge (PMBOK) by the Project Management Institute (PMI). All change approvals to scope, budget and schedule will be documented and authorized by the approval of the Project Executive Sponsor.

2.4. Initial Scope Statement

Within Project Scope:

This project will migrate the current Frame Relay network architecture to a new Ethernet network architecture. This technology takes advantage of advancements in technology such as high speed switching, industry trends such as the pervasive use of Synchronous Optical Network (SONET), and builds upon strengths of earlier technologies to provide reliable transport of voice and data. OEM 9-1-1 will leverage the DAS ETS existing network service offerings.

The project scope will include NENA compliant ALI routing for call handling, updates for mapping applications, Management Information System statistical reporting data, anti-virus, operating system support and NetClock's time synchronization of the network, systems, and devices for the PSAPs on the underlying network.

Out of Project Scope:

- Voice delivery of 9-1-1 call across the new Ethernet network.
- Geographical Information Systems dataset development.
- Geospatial routing of 9-1-1 calls.
- Solution implemented through this project will not include Eithernet network redundancy.
- Next Generation 9-1-1 capabilities/applications (i.e. SMS, Video Feeds).
- Auditing or replacing 9-1-1 customer premise equipment (CPE).

2.5. Key Stakeholders

Replacement of the existing Frame Relay network will affect a variety of stakeholders, including OEM 9-1-1, all public-safety agencies, communications service providers (CSPs), and the citizens of and visitors to Oregon. Many of them have been and will continue to be involved in providing input as the project progresses. Contributions from internal and external stakeholders are key components of effective governance and decision-making for technology implementation of this scale, and will be a factor in the success of the Frame Relay Replacement Project.

The following table lists the affected organizations and their role in the project:

Organization	Role
State Legislature	Authorizes project and resources
Oregon Military Department (OMD) Office of Emergency Management (OEM) Executive Steering Committee (ESC)	Overall responsibility for State of Oregon 9-1-1 service. OMD, OEM, and the ESC provide the necessary executive oversight to ensure project success, and works with policymakers to obtain the necessary resources
DAS Oregon State Chief Information Office (DAS OSCIO)	Governmental entity with authority related to the planning, budgeting and prioritizing the project
Project Management Team (PMT)	Responsible for planning and executing the project
9-1-1 Originating Service Providers (OSPs)	Collaboration in delivery of Automatic Location Information (ALI) services
Legislative Financial Office (LFO)	Fiscal and policy role and interface with State Legislature
Oregon APCO/NENA 9-1-1 Advisory Committee	Technical and Operations Subcommittees will provide input on all technological and operational aspects of the network interfaces to the PSAP equipment for delivery of Automatic Location Information (ALI)
Public safety answering points (PSAPs) and emergency communications center management and staff	Advisory role and requirements development
Local law enforcement agencies, fire services, and emergency medical services (EMS)	Advisory role

Enterprise Technology Services (ETS) – Architecture Solutions	Provides recommended technical solution alternatives
Department of Administrative Services, State Procurement Office (SPO)	Provides procurement oversight/development of contracts necessary to procure products or services necessary for the replacement of the Frame Relay network.
State of Oregon, Department of Justice (DOJ)	Legal counsel for the clarification/modification existing Frame Relay contracts and/or counsel for future vendor product and service contracts. Ensuring compliance with OAR/ORS'

2.6. Internal Organizational Business or IT Process Impacts

This project will require the modification of existing operational maintenance support processes as it relates to how PSAPs report network performance issues or site specific support requests for ongoing maintenance.

Below is a general list of services that are dependent on solutions selection and may require changes to existing Business or IT Processes:

- Modified/discontinued use of Anti-Virus products on ALI transport network
- If a new ALI service provider is selected, PSAPs may need to transmit data using a new application interface for updating or modifying ALI database data.

2.7. Major or Significant Risks

In an effort to collect infrastructure information, for the purposes of supporting the solution alternatives development, cooperation with CenturyLink has been challenging

In the current network, ANI/ALI database service and Frame Relay network components are all provided by CenturyLink whom contracts with Frontier for some locations. Collaboration with CenturyLink is required to safely transition the network from Frame Relay to an Ethernet connection. The risk pertains to any potential lack of cooperation resulting in a significantly more difficult transition and increased likelihood of diminished services at the PSAP locations. The collaboration will result in effective transition from Frame Relay to Ethernet while ensuring the 9-1-1 CPE will function as expected and services will not be disrupted.

Failure to Complete Frame Relay Replacement within Stated Timelines

The current timelines are established based on the end of technology support for two key network components: Cisco 2800 series routers (Cisco, 2013)and Frame Relay network architecture. The Cisco 2811 routers are end of life as of November 2016 and Frame Relay will be turned off July 2017. If this project misses due dates and is postponed for any reason, the risk will be not completing the migration by the end of the current network technologies used resulting in outages for the PSAPs. The outages can result in missed 9-1-1 calls affecting citizens and possibly resulting in legal and political consequences.

Chosen Replacement Solution may Require Updates to Customer Premise Equipment (CPE) to Maintain Current Functionality

Although configuration changes/replacements to CPE is not within the scope of this project, some 9-1-1 CPE is configured with static router IP addressing and may not function properly unless a technical solution is available to allow CPE to continue to using the addresses they are currently hard coded with today.

CenturyLink will not allow its ANI/ALI database information to travel over another provider's network.

If CenturyLink continues to be resistant, OEM could initiate an action before the Oregon Public Utility Commission.

Non-Standard or Unique/Unknown PSAP LAN Infrastructure

PSAP Local Area Network (LAN) has dependencies of the Frame Relay network infrastructure. PSAP locations may not have similar LAN infrastructure configurations preventing a standard replacement solution design to apply to all sites. This could create schedule delays if the project team will be required to modify or customize the infrastructure at PSAP sites to accommodate implementing the new Ethernet solution. Site assessments would be required within the scope of this project to minimize the impact of this risk.

PSAP Community does not accept the proposed/recommended replacement solution

PSAP community has full statutory authority to acquire all the products and services necessary for the acquisition and operation of the emergency communication system. They have the authority to decline the recommended solution resulting in a significant change in project approach.

2.8. Procurement or Contracting High Level

Procurement requirements are unknown at this time. Procurement activities will be identified once a preferred technical solution alternative has been officially selected by OEM project sponsor.

2.9. Quality Management

OEM will obtain Quality Management services for this project at the direction of the Office of the State Chief Information Officer, Information Technology Investment & Planning Section.

2.10. Resource Estimate

Resource estimates will be completed after the technical solutions alternatives selection process is complete and detailed project planning is initiated.

2.11. Schedule Estimate

This project is anticipated to occur over 15 months:

Target Date	High Level Milestone
3/16/15	Project Kickoff
4/14/15	Finalize Project Charter
4/24/15	Deliver Final Solutions Alternative Recommendation to OEM
5/1/15	Project Sponsor & OSCIO Solution Final Acceptance
5/4/15	Initiate Detailed Project Planning
5/4/15	Initiate Solution Procurement
6/3/15	Inform Executive Steering Committee Meeting of Solution Selection
6/15/15	Finalize Project Plan
7/6/15	Receive RFP Responses
7/6/15	Initiate PSAP Outreach
7/24/15	Complete RFP Evaluations, Scoring & Award
8/24/15	Finalize Solution Procurements
9/14/15	Initiate PSAP Site Surveys
10/1/15	Finalize Ongoing Operational & Maintenance Support Plan
10/14/15	Complete PSAP Site Surveys
10/21/15	Finalize PSAP Upgrade Schedule
10/30/15	Finalize Implementation Test Plan
11/2/15 – 5/2/16	**PSAP Frame Relay Replacements**
5/2/16	Frame Relay Upgrade Complete (43 PSAP Locations)
5/30/16	Project Documentation Archived/Project Closed

2.12. Budget Estimate and Funding Sources

The Governor's Budget maintains the operations of this program and provides up to $500,000 Other Funds expenditure limitation for the program to use Department of Administrative Services' Enterprise Technology Services to convert the 9-1-1 Emergency Telephone System's Public Safety Answering Points from the current "Frame Relay" network architecture to an Ethernet architecture.

The specific costs associated with the implementation of the replacement of the frame relay network will be detailed in the Solutions Proposal developed by Enterprise Technology Services and accepted by the Executive Project Sponsor. Expenditures for this project will be tracked throughout project execution within 9-1-1 financial system under a unique project program cost account (PCA) and reported on a monthly basis.

2.13. Approving Authority and Signature:

Approving Authority and Signature:

Mark Tennyson **Date:** 4/13/15

Mark Tennyson, OEM Technology & Response Services Section Manager