# I. <u>Project Identification</u>

**Project Title:** DOT Telephone System Replacement

**Agency Name**

CT Department of Transportation

**Agency Business Unit**

Technology Services

**Your  Name** (Submitter)

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# II. <u>Project Details</u>

A. <u>Project Dates</u>

**Proposed Start Date** (MM/DD/YYYY)

10/01/13

**Expected Completion Date** (MM/DD/YYYY)

03/01/15

**Project Duration** (in months)

18

B. **Project Description -** This information will be used for listings and report to the Governor and General Assembly on capital funded projects.

Replacement of DOT Telephone System and Cabling at Newington Headquarters.

C. **Summary.**

| Summary |
| --- |
| The primary telephone switch (PBX) for the DOT Newington Headquarters is more than 20 years old and is past end of life. The system is no longer supportable due to the age of the hardware and the outdated software. At the same time, the cabling within the main building is too old to support new PBX technology and high-bandwidth geospatial applications. This project will replace the old cables as well as the current telephone system with new technology that will provide numerous benefits to the agency. |

| Purpose |
| --- |
| The purpose of the project is to: <br> 1. Replace the outdated, unsupportable PBX telephone system with new hardware and software that incorporates the latest VOIP (Voice Over IP) technology. <br> 2. Replace the cabling in the main building to support the use of VOIP as well as the expanded use of Geospatial tools. <br> 3. Attain survivability and continuity of operations options through new technology offered by VOIP. <br> 4. Reduce cost through the use of SIP (Session Initiation Protocol) technology. |

| Importance |
| --- |
| Because the current phone system is unsupportable there is the potential liability of a system failure. Should that occur, the DOT would be without phone service for an unspecified duration. This would have a disastrous effect on the DOT's ability to communicate and could potentially affect public safety. This liability will be mitigated by a new phone system and simultaneously will provide the DOT with cost savings as well as new technologically advanced features, some of which can improve efficiency and productivity. |

| Outcomes |
| --- |
| <ul><li>Replacement of old phone system with new technology to support the day to day operations of the DOT and increase bandwidth for DOT Geospatial applications.</li><li>Cost savings on phone charges.</li><li>Greatly improved management of the phone system by replacing proprietary PBX interface with web/GUI interface that can be used easily by multiple IT staff (current proprietary interface requires a specialized phone technician to manage the PBX).</li><li>Eliminate the need to be locked in to one phone vendor. Any brand of SIP hardware or software phone can be mixed with any brand of SIP-based IP PBX, PSTN Gateway or VOIP provider. In contrast, a proprietary phone system requires proprietary phones to use advanced features, and proprietary extension modules to add features.</li><li>Improved scalability (easily add more phones as needed).</li><li>Advanced features will enable integration of phone functions with business applications. As an example, outbound calls can be placed directly from Microsoft Outlook.</li><li>Greatly Improved productivity for adds, moves and changes. Currently, time consuming re-patching of extensions is required to move a phone. IP PBX technology allows the phone to be moved to a new location with no patching required.</li><li>Implement survivability by designating a District Office location as a secondary location with an Enterprise Survivability Server that is equipped to take over all locations.</li></ul> |

| Approach and Success Evaluation |
| --- |

The approach will be to use a third party vendor (Altura) to install the new system and manage the entire project. Altura's Project Management Philosophy is a process driven methodology that encompasses years of experience in the telecommunications industry, principles that are aligned with PMBOK® and are continuously reviewed through a continuous improvement process.

The project will have a controlled start, middle and end which consist of key activities, milestones and deliverables. All of these require diligent control, review and closure through communication, consistent review practices and involvement of the projects key stakeholders at the right time at each stage of the project.

Key Project Deliverables include:
1. Scope of Work
2. Installation Elevation Drawings
3. Bayface Layout
4. System Test Plan
5. Network Diagram detailing major data pathways and IP assignments
6. Product Information
7. Complete System Inventory
8. List of all software installed
9. Electronic set of service manuals

The new system will initially be installed and tested in parallel to the current system and then a cutover to the new system will be scheduled.

The success of this project will be measured by the results of the Functional, Performance, and Acceptance Testing phase of the project.

D. **Business Goals**. List up to 10 key business goals you have for this project, when (FY) the goal is expected to be achieved, and how you will measure achievement, Must have at least one. Please use action phrases beginning with a verb to state each goal. Example: "Reduce the Permitting process by 50%". In the Expected Result column, please explain what data you will use to demonstrate the goal is being achieved and any current metrics.

| Business Goal (Action Phase) | Target FY for Goal | Current Condition | Expected Result |
|---|---|---|---|
| Replace old phone system to support the day to day operations of the DOT. | 2014 | Current phone system is past end of life and not supportable. | 100% of the agency phones and phone lines will be operational after the cutover to the new system. |
| Migrate DOT onto Enterprise SIP trunk. | 2014 | Currently phone system cannot use SIP technology. | Reduce Newington trunk line costs by 40%. |

E. **Technology Goals**. From a technical perspective, following the above example, list up to 10 key technology goals you have for this project and in which Fiscal Year (FY) the goal is expected to be achieved. Please use action phrases beginning with a verb to state each goal. Example: "Improve transaction response time by 10%".

| Technology Goal | Target FY for Goal | Current Condition | Expected Result |
|---|---|---|---|
| Replace existing old cabling in Newington Headquarters to support VOIP technology. | 2015 | Much of the current cabling is too old to support VOIP | Improve bandwidth to enable full use of VOIP technology and Geospatial tools. |
| Migrate onto a local Enterprise survivability SIP trunk. | 2014 | Currently there is no option for survivability of DOT phone lines. | Insure survivability of DOT communications and business continuity in an emergency situation. |
| Enable advanced VOIP Features | 2015 | Current phone system does not support new technology that offers advanced features. | Improve usability through integration of business applications and other advanced features. |

F. **Priority Alignment.** The criteria in this table, in concert with other factors, will be used to determine project priorities in the capital funding approval process. Briefly describe how the proposed projects will align with each criterion.

| Priority Criterion | Y/N | Explanation |
|---|---|---|
| Is this project aligned with the Governor's Key Priorities? | Y | A key priority of the Governor is to "get our fiscal house in order" by providing "services to Connecticut residents, but at a substantially lower cost to taxpayers". This project will reduce current DOT phone costs by an anticipated 40%. |
| Is this project aligned with business and IT goals of your agency? | Y | According to the IT Strategic Plan, the mission and goal of DOT Technology Services is to provide quality IT services and solutions to its customers and provide the most cost efficient solutions that facilitate, support and improve the business needs of the agency. A business goal of the agency is to utilize the latest technology and reduce costs wherever possible. This project is aligned with these goals. |
| Does this project reduce or prevent future increases to the agency's operating budget? | Y | The use of SIP technology will reduce the current cost of phone lines at DOT Headquarters. |

| Will this project result in shared capabilities? | Y | A VOIP enabled PBX will allow the DOT to become a "survivability hub" for other agencies that are using VOIP technology. Additionally, the new PBX will enable the DOT to migrate to the BEST Enterprise Voicemail system. |
|---|---|---|
| Is this project being Co-developed through participation of multiple agencies? | Y | Several agencies are involved in deploying or have deployed VOIP technology under the direction and guidance of BEST. BEST is a strategic partner in the further development of VOIP technology among agencies that need to replace their current systems. BEST is working geographically to leverage locations for necessary survivability and economy with trunks and continuity of operations options through virtual lines offered by VOIP with redundant switches. |
| Has the agency demonstrated readiness to manage project of this size and scope? | Y | The DOT has an excellent track record of successfully managing large scale projects and overseeing the work of third party consultants and contractors. |
| Is the agency ready to deliver the business value proposed? | Y | New technology and cost savings offered by VOIP will be delivered by the installation of a new PBX. |

G. **Organizational Preparedness**. Is your agency prepared to undertake this project? Is senior management committed, willing to participate, and willing to allocate the necessary time, energy and staffing resources? How will the project be managed and/or governed and who will make the key project decisions?

Yes – the DOT is prepared to undertake this project and it is endorsed by DOT Senior Management as a mandated high priority project. A DOT project manager will be assigned to work with the third party project manager to ensure timeliness and successful implementation. Key project decisions will be made by the Director of Technology Services in conjunction with an assigned IT Project Steering Committee.

H. **Project Ramp Up**. If capital funds are awarded for this project, how long will it take to ramp up? What are the key ramp-up requirements and have any off these already been started? For example, has a project manager been identified? Has an RFI been issued? Is a major procurement required such as an RFP?

Meetings and discussions have already taken place between the vendor, DOT and BEST on the hardware and software that will be utilized as well as the immediate implementation plan and approach as well as the long range strategic plan for VOIP throughout the DOT Enterprise for more than 200 locations. Work could be scheduled soon after funding is made available. A DOT project manager has been identified.

I. **Organizational Skills**. Do you have the experienced staff with the proper training to sustain this initiative once it's a production system? Do you anticipate having to hire additional staff to sustain this? What training efforts are expected to be needed to maintain this system?

> Yes we have the experienced staff to sustain, maintain and support the new system.  No additional staff will need to be hired. Training and training manuals will be provided by the vendor.

J. **Financial Estimates.** From IT Capital Investment Fund Financial Spreadsheet

| Estimated Total Development Cost | Estimated total Capital Funding Request | Estimated Annual Operating Cost | One Time Financial Benefit | Recurring Annual Financial Benefit |
|---|---|---|---|---|
| 1,900,000.00 | 1,900,000.00 | 38,000.00 | | 300,000.00 |
| **Explanation of Estimates** | | | | |
| Estimated Total Capital Funding Request includes new VOIP enabled PBX as well as the replacement of old cables in Newington Headquarters to CAT 6 in order to support the bandwidth required by VOIP and the expanded use of Geospatial tools used by the DOT. The Annual Operating Cost includes ongoing annual maintenance and support of the new phone system (the first year is included in the total cost).The recurring Annual Financial Benefit is the estimated savings in annual phone charges via the use of SIP technology. | | | | |
| **Assumptions: Please list key assumptions you are using to estimate project development and implementation costs** | | | | |
| A key assumption is that the estimate provided for the replacement of old cabling at Newington Headquarters is accurate and that all the cabling is accessible to the cabling vendor without significant modification to the main structure. | | | | |

# III. **Expanded Business Case**

A. **Project Impact.**  Beyond the top business goals identified in Section II, 1) What impacts will this project have, if any, in the targeted areas below, 2) What would be the impact of not doing this project, 3) How will the project demonstrate benefits are achieved.

| (1) Impact Area (Vision) | Y/N | Description of Project Impact |
|---|---|---|
| Will this project provide efficient and easily accessible services for all constituents? | y | The implementation of a new telephone system with advanced features can provide more efficient communication services for all constituents. |
| Will this project promote open and transparent government with the citizens of the state? | Y | The implementation of a new telephone system with advanced features can make the DOT more accessible to citizens of the state. |
| Will this project establish efficient and modern business processes? | Y | The implementation of a new telephone system with new technology will provide efficient and modern business practices. |
| Will this project increase accuracy and timeliness of data for policy making, service delivery and results evaluation? | Y | The implementation of a new telephone system with advanced features can increase the timeliness of communication. |

| 2) What is the expected impact of NOT doing this project? |
|---|
| Because the current phone system is unsupportable there is the potential liability of a system failure. Should that occur, the DOT would be without phone service for an unspecified amount of time. This would have a disastrous effect on the DOT's ability to communicate and could potentially affect public safety.  Additionally, the impact of not replacing the cabling in Newington Headquarters will affect not only the ability to utilize the latest VOIP technology, but also the DOT's ongoing expanded use of applications that require greater bandwidth because the current cabling will not support the faster speeds.  Such applications use Geospatial Tools (such as ProjectWise, SMS/InspectTech and Exor) that are becoming more critical to the agency's efficiency, productivity and overall mission every day. These applications are also vital to meeting FHWA requirements and federal regulations such as MAP 21. |

| (3) How will you demonstrate achievement of benefits? |
|---|
| The success of this project will be measured by the results of the Functional, Performance, and Acceptance Testing phase of the new telephone system. Network Performance monitoring and measurement will demonstrate the increased speed and performance of the improved wiring as well as the measured response times of DOT geospatial applications. Reduction of phone charges will demonstrate cost reduction and savings benefits. |

**B. Statutory/Regulatory Mandates.**  1) Cite and describe federal and state mandates that this project in intended to address.  2) What would be the impact of non-compliance?

| (1)  Statutory / Regulatory Mandates: |
|---|
| The goals of this project  are intended to benefit all lines of business conducted by the agency and all governing statutes and regulations. However, there are no new statutory or regulatory requirements mandating this project that we are aware of. |

| (2)  Impact of non-compliance: |
|---|
| N/A |

**C. Primary Beneficiaries.**   Who will benefit from this project (citizens businesses, municipalities, other state agencies, staff in your agency, other stakeholders) and in what way?

Citizens as taxpayers will appreciate the reduction in cost for DOT phone services. Internal DOT staff will benefit from a new phone system that is easier and faster to use, faster applications (making them more productive) and IT staff will benefit from a system that is far easier to manage than the current conventional PBX.

## Important:

- **If you have any questions or need assistance completing the form please contact Jim Hadfield or John Vittner**
- **Once you have completed the form and the** IT Capital Investment Fund Financial Spreadsheet **please e-mail them to Jim Hadfield and John Vittner**

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