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1. Introduction

The DOR requires a comprehensive approach by the Offeror to provide operational support for the DOR-MVD System. This includes the development of support tools and methodologies which will support end users as well as provide technical support for the system. These will be implemented throughout the SDLC and for a 1-year support/warranty period once the DOR-MVD System is fully operational.

The Offeror must setup and administer all hardware, software, and infrastructure components of the solution for the duration of the contract period while preparing state staff to support the solution in the future.

The Offeror must provide the operations, maintenance, support, defect management, and documentation requirements described in this section.

The Offeror must also provide a solution that meets the system recovery and performance metrics and demonstrate the solution meets these metrics during the testing of the solution.

The DOR may request additional support after the Warranty Period.

1.1 General Requirements

1.1.1 Scope of Operations & Maintenance (O&M) Support

The Offeror shall:

- Lead the creation of the processes and procedures related to the support of the DOR-MVD System.
- Lead in the development and implementation of support tools and system support knowledge management content.
- Lead the O&M system support effort throughout the project and to the end of the warranty period.
- Work collaboratively with DOR support staff to ensure that they are properly prepared, trained, and have the knowledge and skills to fully lead support services after the warranty period.
- The Offeror shall provide support for all system environments as soon as they are established.
- The Offeror shall develop a training program for technical staff that will support the DOR-MVD System. By the end of the warranty period, all appropriate staff, as designated by the DOR, shall be successfully trained, by the Offeror, and have the knowledge and skills for their role supporting the DOR-MVD System.
- The Offeror provides all levels of support prior to the end of warranty period.
- Support for DOR computer systems is provided by the DOR and the Bureau of Information and Telecommunications (BIT). The Offeror shall collaborate with the State to deliver support services for Project.
- The DOR may request additional support after the Warranty Period.

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1.1.2 Support Levels

- The Offeror shall propose an incident and problem management ticketing system to record and track questions and inquiries until a resolution is implemented and the incident is closed. The Offeror shall propose processes and procedures for incident and problem management. The Offeror is responsible for prioritizing, categorizing, and reporting all inquiries using proposed processes and procedures. The State will collaborate with the Offeror to finalize the approach, tools, policies, and procedures.
- The Offeror shall provide the initial support of the system until DOR staff is trained by the Offeror to support it internally. During the course of the project, the following support model shall be used:
 - **Level 1 Support** – Reception of support and operation calls shall be handled by a State provided Help Desk and this shall include logging calls and resolving simple problems for which an existing solution has been documented or is known. Help Desk shall reference the knowledge base and other tools to find documented solutions for problems. All support calls shall be logged as tickets in proposed vendor incident and problem management ticketing system. Any call, which Level 1 support cannot resolve for any reason, shall be escalated to Level 2 Support. The customer will be transferred to Level 2 when the customer first calls and escalation is determined to be necessary.
 - **Level 2 Support** – All Level 2 activities shall be handled by the Offeror. This includes resolution of problems and documentation of solutions. Level 2 shall be staffed with individuals capable of troubleshooting, diagnosing, and resolving a limited range of technical and system usage problems. Customer phone calls are transferred to Level 3 for immediate response only if there is an emergency. Referral to Level 3 is typically handled off-line.
 - **Level 3 Support** – All Level 3 activities shall be handled by the Offeror. This includes resolution of problems and documentation of solutions. Level 3 shall be staffed with individuals capable of troubleshooting, diagnosing, and resolving all technical and system usage problems either directly or by accessing related project staff.
- The Offeror shall train and confirm Level 1 staff to be prepared prior to support the first UAT.
- The Offeror shall train and certify DOR Level 2 & 3 staff during the warranty period so they are prepared to take over from the Offeror at the end of the warranty period.
- The DOR may request additional support from this team after the Warranty Period.
- For escalated tickets, the Offeror shall adhere to the Service Level Agreements (SLAs) described in this RFP.

1.1.3 Issue Resolution

- The Offeror shall define and implement an approach for recording, tracking, managing, and reporting on production issues and collaboratively refine it with the State and gain the State's approval.
- The Offeror shall address all production system issues for which it is responsible within the timelines outlined in this RFP. Resolution of production system issues shall be managed through the proposed incident and problem management ticketing system application and

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any additional ticket and tracking functionality implemented by the Offeror as part of the DOR-MVD System implementation.

- The State has the option to review and approve any Offeror-proposed tool(s).

1.1.4 Reporting and Management of Support Incidents

The Offeror shall track and report on incidents including trend analysis and reporting of all application and application related tickets.

The Offeror shall link incidents to problems and identify recurring trends.

The Offeror shall identify the root cause of all incidents and implement permanent corrective actions.

1.1.5 DOR Best Practices and ITIL Compliance

All aspects of the support operations, including all contributions and deliverables by the Offeror, shall be consistent with DOR practices and industry best practices such as ITIL 4 standards and other standards of BIT/DOR.

1.2 Warranty Period

- The Warranty Period for the DOR-MVD System shall start when the last release of software has been successfully moved into production, all users are migrated onto the DOR-MVD System, and all other implementation and testing activities are complete and approved by the DOR and the State provides written notice of System Acceptance.
- During the warranty period, the Offeror, as part of the proposed solution and services, shall:
 - Perform O&M Services, User Support and Service Desk activities, and Issue Resolution as described in this RFP.
 - Perform problem resolution and correct any identified defects in the elements of the DOR-MVD System for which the Offeror had implementation responsibilities according to approved requirements. System defects covered by warranty shall include all defects preventing the DOR-MVD System from performing as per the approved requirements, including but not limited to (1) all defects identified with the configuration of the DOR-MVD System; (2) all defects resulting from implementation of an approved Change Request; (3) all defects resulting from customizations, custom workflows, or interfaces developed by the the Offeror; (4) all defects identified in the DOR-MVD System technical infrastructure and (5) issues identified with the performance of the full system or individual components of the DOR-MVD System.
 - Support the production environment with the DOR.
 - Provide enhancements to the system as available time permits.
- The Warranty Period will last for one year after written notice of System Acceptance.

1.3 O&M Support Requirements

1.3.1 Planning Requirements

Staffing Needs Analysis

The Offeror shall conduct an analysis of the staffing needs for long term support operations of the DOR-MVD System based on the complexity, design, and implementation of their solution.

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The Offeror shall prepare formal recommendations for future ongoing staffing of the DOR support operations.

Operations and Support Rollout Plan

The Offeror shall develop an O&M Support Rollout Plan that includes the approach, schedule, resources, and tools that shall be used to accomplish the work required in this RFP. The plan shall identify which State or Offeror staff will be trained or participate in knowledge transfer prior to UAT. The plan shall identify long term DOR resources who will be trained or participate in knowledge transfer prior to the end of the warranty period.

1.3.2 Support Preparation Requirements

Support Documentation

- The Offeror shall develop documentation that clearly defines the troubleshooting steps towards solution, support processes, and problem workarounds for the DOR-MVD System. Complete System Operation manuals and O&M procedures shall be developed by the Offeror; the materials shall be incorporated into training materials, reference materials, online help, other applicable materials, and the Knowledge Management System content.
- All support related plans, outlines, drafts, final documentation and other deliverables shall be submitted to the DOR for approval. The documentation shall integrate with the Knowledge Management System and Standard Operating Procedure (SOP) library unless an alternate solution is presented to the DOR and approved by the DOR.

Knowledge Management System Content

- The Offeror shall work collaboratively with DOR staff throughout development and deployment to develop and maintain the Knowledge Management System content. The DOR may provide the Knowledge Management System to be used and is open to an Offeror-provided solution. Offerors proposing an existing solution that already includes a Knowledge Management System shall fully document its features in the bid response for this section. The DOR reserves the right to require the contractor to use the DOR provided Knowledge Management System. The Knowledge Management System may be part of the proposed Incident and Problem Management Ticketing System or another system provided by the DOR.
- The Offeror shall work with the DOR and make recommendations for efficiently organizing and maintaining the Knowledge Management System content along with other support documentation and project documentation.

Help and Support Tools

- **Incident and Problem Management Ticketing System** – The Offeror shall assist the DOR in configuring the proposed Incident and Problem Management Ticketing System so that it properly supports the DOR-MVD System's operations.
- **Context Sensitive Help** – The Offeror shall develop context sensitive help as part of the proposed solution.
- **System Help Keys** – The Offeror shall implement System Help Keys as part of the proposed solution. This utility shall allow users to capture a screen when experiencing a problem and make notations for clarification on the problem, or a similar solution shall be presented. This feature shall operate within the system boundaries and the constraints established by

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DOR's data loss prevention policies which may prohibit users from printing screens or sending sensitive information via email.

1.3.3 O&M Services

- O&M services shall include both the DOR-MVD System application software and the associated technical infrastructure, whether hosted or on hardware maintained by the State.
- O&M services shall be priced as a fixed price system O&M component to cover ongoing system support from project inception through the Warranty Period.
- The DOR may request additional O&M Services after the Warranty Period.
- The Offeror shall provide operations support for all aspects of the DOR-MVD System from inception until the end of the warranty period, according to State policies as found at https://bit.sd.gov/bit?id=bit_standards_vendor_client_sec_req. The Offeror shall ensure that the system operates effectively. Offeror O&M support activities shall include but are not limited to:
 - **Support Environments** – Maintain and support all DOR-MVD System environments; Monitor, tune and configure the performance of the production environment as needed to comply with the Service Level Agreement (SLA).
 - **Patch and Version Management** – Patch testing and promotion to ensure all components of the DOR solution are operating with latest patch levels, validated by ongoing testing, verification, and application of patches or updates provided by third-party hardware or software vendors. Offeror shall support system upgrades to the technology stack, as necessary, to maintain latest release levels of existing technologies.
 - **Test Updates** – Evaluate any software or updates in a testing environment and apply patches to production at the firmware, OS, server, client and application levels based on State standards.
 - **Software Version Control** – Follow best practices for software version control to ensure the integrity of all software releases.
 - **Application Updates** – Maintain and deploy changes to system components over internal and/or the public internet as needed for security compliance.
 - **DR Plan Testing** – Perform Disaster Recovery Testing.
 - **Performance Monitoring and Management** – Participate in Capacity Planning and Performance Monitoring/ Management activities during development and ongoing operations and maintenance activities, including support for storage location considerations
 - **Data Analysis Support** – Support for DOR subject matter experts in data analysis and reporting where guidance is needed to understand the system's data model and available data.
 - **Defect Resolution** – Perform Break-fix analysis and correction.
 - **Third Party SW Defect Coordination** – Manage relationships with any COTS software vendors and hardware/laaS vendors for hardware, infrastructure or software implemented as part of this DOR solution. The Offeror shall work with third-party vendors to facilitate correction of defects, where it is the responsibility of a third-party vendor to actually correct the defect and deliver a fix to the Offeror for implementation in the State's environment.

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- **Technical Knowledge Transfer** – Perform knowledge transfer to Operations, Support, and Technical staff.
- **Backup Management** – Perform backups of all systems and servers on a regular basis. Minimally, this shall include daily incremental backups and full weekly backups of all volumes of all systems and servers.
- **External Partners Directory** – Create and maintain a directory of external partners to facilitate communication and information exchange

1.3.4 Release Management Requirements

The Offeror shall implement a formal Release Management process that will cover all major and minor software releases. The DOR shall work with the Offeror's modifications to ensure integration with DOR/BIT practices.

- The Offeror shall propose a formal implementation plan for supporting tools and processes and include a formal training plan. Implementation shall occur as part of the setup and configuration of O&M.
- The Offeror shall lead the development of the Release Management Process including:
 - Release Policy and Planning
 - Release Management Rollout
 - Release Schedule
 - Forward Schedule of Change
 - Help Desk Production Turnover
- The Offeror shall provide the following:
 - **Release Management Process Implementation** – The Offeror shall take a lead role in designing, implementing, and configuring the Release Management tools and processes to support the implementation of the DOR-MVD System and the ongoing operation of the DOR.
 - **Testing and Release Acceptance** – The Offeror shall perform formal planning for testing and associated release acceptance criteria shall be developed. These tasks shall be performed collaboratively with the DOR.
 - **Release Rollout Plan** – The Offeror shall develop a complete Release Rollout Plan for each release of software or new configuration. The plan shall be developed collaboratively with the DOR support team. The plan shall include, but not be limited to, requirements for communications, preparation, training, knowledge and skills to support system.
 - **Rollout Plan Execution** – The Offeror is responsible for executing the rollout plan for each release.
 - **Site Readiness Surveys** – The Offeror shall participate in the development and execution of Site Readiness Surveys with the DOR for each release.
 - **Update Support Documentation** – The Offeror shall be responsible for updating all documentation for each new release. This includes business user, technical, training, and support documentation.
 - **Configuration Management Database** – The Offeror shall develop and maintain the Configuration Management Database content throughout the project and update it for every release. The Offeror shall provide the content for the database.

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- **Archive and Retire Configurations** – The Offeror shall develop and implement procedures and tools to archive and retire all prior releases and configurations as new ones are deployed.
- **Known Error Log** – The Offeror shall develop a Known Error Log as part of the support documentation using the Knowledge Management System or another tool as approved by the DOR.
- **Release Installation Procedures** – The Offeror shall develop detailed installation procedures for each release and ensure that the plan and related tools and standard operating procedures (SOPs) have been properly tested.
- **Back Out Plans** – The Offeror shall develop back out plans jointly with the DOR for each release. The Offeror shall ensure that the plan is properly documented and communicated to all participants and that preparation and trainings are in place in case the plan needs to be executed. Any parts of the plan or related tools which need to be tested shall be tested before the release is deployed.

1.3.5 O&M Staffing Requirements

- The Offeror shall recommend and provide sufficient staffing to support DOR-MVD System Operations & Maintenance.
- The Offeror shall provide on-site technical and application support staff to augment DOR's technical support staff and function as members of the support team throughout the SDLC and Warranty Period.
- During the Warranty Period, the Offeror shall provide two (2) additional full-time employees responsible for completing DOR-MVD System change requests and performing defect analysis and corrections. The State reserves right to take over the responsibility of the Offeror's full-time employees from the Offeror prior to the end of Warranty Period with a thirty (30) days notification. In such case, a credit for the unused portion of time will be provided to DOR.
- The DOR may request additional support from this team after the Warranty Period.

1.4 Service Level Agreement Requirements

The Offeror shall meet standards for Service Level Agreements (SLA) and related metrics to meet the requirements of DOR, BIT, and the Counties.

Failure to attain any SLA shall result in the assessment of service level credits as agreed to in the final contract. The State and Offeror shall treat service level credits as compensation to the State for the Offeror's failure to timely deliver the contracted services or quality of service.

The Offeror shall comply with and measure each SLA and provide detailed reports for each calendar month, as agreed upon with DOR. Such details shall include all data necessary to fully calculate the SLA results, but at a minimum shall include total system downtime events such as:

- The date and time of the outage
- The duration of the outage
- The root cause of the outage
- The specific system component that was the cause of the outage

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- The total time that the system was non-operational during the month for all causes
- The total time the system was non-operational during the month for unplanned causes (excludes planned system maintenance activities).

The Offeror shall calculate and report monthly availability excluding any time that the system is unusable due to the following:

- Maintenance time
- Failure by the State's or County's internet service provider
- Failure by the State's or County's provided infrastructure
- Force majeure events
- Any failure in DOR, BIT, or County hardware, software, or network connection
- Bandwidth restrictions

Service Level Requirements

- System Uptime: 99.99%
- Problem Ticket Acknowledgement: 15 minutes
- Top Priority Problem Resolution: 4 hours or less