**Appendix (Attachment) R**

**Security and Vendor Questions**

**Agencies:** The following questions facilitate agencies acquiring technology that meets state security standards. These questions will assist in improving the quality and the timeliness of the procurement. The Bureau of Information and Telecommunications (BIT) recommends that you utilize your BIT Point of Contact (POC) to set up a planning meeting to review the project and these questions. Understanding the background and context of the questions greatly improves realizing the purpose of the questions. Again, the purpose of the questions is to ensure the product/service being procured will meet the technology and security standards of the state.

If you do not know the details of the technologies the vendor will propose, it is best to keep the question set as broad as possible. If there is a detailed knowledge of what will be proposed, a narrowed set of questions may be possible. Vendors are invited to mark any question that does not apply to their technology as NA (Not Applicable).

**Vendors:** The following questions help the state determine the best way to assess and integrate your product or service technology with the state’s technology infrastructure. Some questions may not apply to the technology you use. In such cases, simply mark the question as NA (Not Applicable). The questions are divided into sections to help identify the point of the questions.

Use the last column as needed to explain your response. Also note, many questions require you to explain your response. The more detailed the response, the better we can understand your product or service.

Where we feel that a Yes/No/NA response is not appropriate, the cell has been grayed out. **If the vendor answers a question by referencing another document or another part of the RFP response, the vendor must provide the page number and paragraph where the information can be found.**

The “BIT” column corresponds to the division within BIT that will be the primary reviewers. If you have questions about the meaning or intent of a question, we can contact the BIT division on your behalf. DC = Data Center; DEV = Development; TEL = Telecommunications; POC = Point of Contract.

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| **System/Product:** **The following questions are relevant for all vendors or third parties engaged in this hardware, software, application, or service.** |
| **Response** |
| **#** | **BIT** | **Question** | **Select all that apply** |
| **1** | DCDEV | Is your proposed solution a cloud-based solution or an on-prem solution? | [ ]  State Hosted On-prem (dedicated VM/infrastructure) [ ]  State Cloud Provider (PaaS Solution)[ ]  Vendor Hosted  |
| **2** | DCDEVTEL | What type of access is required by vendor or proposed solution to state hosted or external resources? | [ ]  Not Required[ ]  VPN[ ]  API[ ]  SFTP[ ]  Other: (Please state) |
| **3** | DC | What type of access is required by vendor to maintain and support the solution? | [ ]  Not Required[ ]  Citrix (For On-prem)[ ]  State Cloud Access[ ]  Other: (Please state) |
| **4** | TEL | If an on-prem solution, which of the following will apply? | [ ]  IoT Hardware[ ]  Non-Windows or non-domain joined solution[ ]  Windows-based domain joined hardware[ ]  Other: (Please state) |
| **5** | DCTEL | Does your proposed solution include/require additional devices connected to the application for activities such as scanning or printing? | [ ]  Yes[ ]  No  |
| **6** | DC | Does the proposed solution include the use of email? | [ ]  Yes[ ]  No |
| **7** | POCTEL | Will there be any desktop software installs, policies, or software required on state managed computers as part of this product? | [ ]  Yes[ ]  NoIf “Yes”, please define:  |
| **8** | POC | If there are desktop software installs, please provide a link to the licensing requirements or a copy of the licensing requirements.  | Please provide link below, if applicable: |
| **9** | POC | Will any hardware or peripherals need to be attached to or added to state managed computers? | [ ]  Yes[ ]  NoIf “Yes”, please define:  |
| **10** | POC | Will any browser plugins be required to install, access, or use this product? | [ ]  Yes[ ]  NoIf “Yes”, please define:  |
| **11** | POC | Will any products that connect or interact with a state managed computer or network be required as part of this product or project? | [ ]  Yes[ ]  NoIf “Yes”, please define:  |
| **12** | POC | Will any Bluetooth or RF frequency devices be required as part of this product or project? | [ ]  Yes[ ]  NoIf “Yes”, please define:  |
| **13** | POC | What operating system is the software/hardware compatible with? | [ ]  Microsoft Windows 10[ ]  Microsoft Windows 11[ ]  Other (please specify): [ ]  N/A  |
|  |  |  |  |
| **Section A. System Security** |
| **The following questions are relevant for all vendors or third parties engaged in this hardware, application, or service and pertain to relevant security practices and procedures.** |
| **Response** |
| **#** | **BIT** | **Question** | **YES** | **NO** | **NA** | **Explain answer as needed** |
| **A1** | DC | Does the solution require user authentication, and does that authentication solution support OpenID Connect or OAUTH2 to provide single sign-on? |  |  |  |  |
| **A2** | DCTELx | Will the system provide internet security functionality on public portals using encrypted network/secure socket layer connections in line with current recommendations of the Open Web Application Security Project (OWASP)? |  |  |  |  |
| **A3** | POC | Will the system have role-based access? |  |  |  |  |
| **A4** | DCTEL | Does the application contain mitigations for risks associated to uncontrolled login attempts (response latency, re-Captcha, lockout, IP filtering, multi-factor authentication)? Which mitigations are in place? What are the optional mitigations? |  |  |  |  |
| **A5** | DCTEL | Are account credentials hashed and encrypted when stored? |  |  |  |  |
| **A6** | DCTELx | The protection of the State’s system and data is of upmost importance. Security scans must be done if: * An application will be placed on the State’s system.
* The State’s system connects to another system.
* The contractor hosts State data.
* The contractor has another party host State data the State will want to scan that party.

**The State would want to scan a test system; not a production system and will not do penetration testing.**  The scanning will be done with industry standard tools. Scanning would also take place annually as well as when there are code changes.  Are either of these an issue? If so, please explain. |  |  |  |  |
| **A7** | DC | Will SSL traffic be decrypted and inspected before it is allowed into your system? |  |  |  |  |
| **A8** | POCx | Will organizations other than the State of South Dakota have access to our data? |  |  |  |  |
| **A9** | DEVTEL | Do you have developers that possess software security related certifications (e.g., the SANS secure coding certifications)? |  |  |  |  |
| **A10** | DEV | Are there some requirements for security that are “structured” as part of general release readiness of a product, and others that are “as needed” or “custom” for a particular release? |  |  |  |  |
| **A11** | TEL | What threat assumptions were made, if any, when designing protections for the software and information assets processed?  |  |  |  |  |
| **A12** | TEL | How do you minimize the threat of reverse engineering of binaries? Are source code obfuscation techniques used? |  |  |  |  |
| **A13** | TEL | What security criteria, if any, are considered when selecting third party suppliers? |  |  |  |  |
| **A14** | TEL | How has the software been measured/assessed for its resistance to publicly known vulnerabilities and/or attack patterns identified in the Common Vulnerabilities & Exposures (CVE®) or Common Weakness Enumerations (CWEs)? How have the findings been mitigated? |  |  |  |  |
| **A15** | TEL | Has the software been evaluated against the Common Criteria, FIPS 140-2, or other formal evaluation process? If so, please describe what evaluation assurance level (EAL) was achieved, what protection profile the product claims conformance to, and indicate if the security target and evaluation report are available. |  |  |  |  |
| **A16** | DCTEL | Are static or dynamic software security analysis tools used to identify weaknesses in the software that can lead to exploitable vulnerabilities? If yes, which tools are used? What classes of weaknesses are covered? When in the SDLC are these scans performed? Are SwA experts involved in the analysis of the scan results?  |  |  |  |  |
| **A17** | DCTELx | Has the product undergone any vulnerability and/or penetration testing? If yes, how frequently, by whom, and are the test reports available under a nondisclosure agreement? How have the findings been mitigated? |  |  |  |  |
| **A18** | DC | Does your company have an executive-level officer responsible for the security of your company’s software products and/or processes?  |  |  |  |  |
| **A19** | DC | How are software security requirements developed? |  |  |  |  |
| **A20** | DC | What risk management measures are used during the software’s design to mitigate risks posed by use of third-party components? |  |  |  |  |
| **A21** | DC | What is your background check policy and procedure? Are your background checks fingerprint based? |  |  |  |  |
| **A22** | DEV | Does your company have formally defined security policies associated with clearly defined roles and responsibilities for personnel working within the software development life cycle? Explain. |  |  |  |  |
| **A23** | TEL | What are the policies and procedures used to protect sensitive information from unauthorized access? How are the policies enforced? |  |  |  |  |
| **A24** | DCTEL | Do you have an automated Security Information and Event Management system? |  |  |  |  |
| **A25** | DCTEL | What types of event logs do you keep and how long do you keep them? |  |  |  |  |
|  |  | 1. System events
 |  |  |  |  |
|  |  | 1. Application events
 |  |  |  |  |
|  |  | 1. Authentication events
 |  |  |  |  |
|  |  | 1. Physical access to your data center(s)
 |  |  |  |  |
|  |  | 1. Code changes
 |  |  |  |  |
|  |  | 1. Other:
 |  |  |  |  |
| **A26** | DC | How are security logs and audit trails protected from tampering or modification?  Are log files consolidated to single servers? |  |  |  |  |
| **A27** | DEV | 1. Are security specific regression tests performed during the development process?
 |  |  |  |  |
|  |  | 1. If yes, how frequently are the tests performed?
 |  |  |  |  |
| **A28** | TEL | What type of firewalls (or application gateways) do you use? How are they monitored/managed? |  |  |  |  |
| **A29** | TEL | What type of Intrusion Detection System/Intrusion Protection Systems (IDS/IPS) do you use? How are they monitored/managed? |  |  |  |  |
| **A30** | DCTEL | What are your procedures for intrusion detection, incident response, and incident investigation and escalation? |  |  |  |  |
| **A31** | DC TEL | Do you have a BYOD policy that allows your staff to put any sort of sensitive or legally protected State data on their device personal device(s) or other non-company owned system(s)? |  |  |  |  |
| **A32** | DCTEL | Do you require multifactor authentication be used by employees and subcontractors who have potential access to legally protected State data or administrative control?  If yes, please explain your practices on multifactor authentication including the authentication level used as defined in NIST 800-63 in your explanation.  If no, do you plan on implementing multifactor authentication? If so, when? |  |  |  |  |
| **A33** | POC | Will this system provide the capability to track data entry/access by the person, date, and time? |  |  |  |  |
| **A34** | DCDEVPOCTEL | Will the system provide data encryption for sensitive or legally protected information both at rest and transmission? If yes, please provide details.  |  |  |  |  |
| **A35** | DC | 1. Do you have a SOC 2 or ISO 27001 audit report?
 |  |  |  |  |
|  |  | 1. Is the audit performed annually?
 |  |  |  |  |
|  |  | 1. If it is SOC 2 audit report, does it cover all 5 of the trust principles?
 |  |  |  |  |
|  |  | 1. If it is a SOC 2 audit report, what level is it?
 |  |  |  |  |
|  |  | 1. Does the audit include cloud service providers?
 |  |  |  |  |
|  |  | 1. Has the auditor always been able to attest to an acceptable audit result?
 |  |  |  |  |
|  |  | 1. Will you provide a copy of your latest SOC 2 or ISO 27001 audit report upon request? A redacted version is acceptable.
 |  |  |  |  |
| **A36** | DC | Do you or your cloud service provider have any other security certification beside SOC 2 or ISO 27001, for example, FedRAMP or ITTRUST? |  |  |  |  |
| **A37** | DCTEL | Are you providing a device or software that can be defined as being Internet of Thing (IoT)? Examples include IP camera, network printer, or connected medical device. If yes, what is your process for ensuring the software on your IoT devices that are connected to the state’s system, either permanently or intermittently, are maintained and/or updated? |  |  |  |  |
| **A38** | DC | Who configures and deploys the servers? Are the configuration procedures available for review, including documentation for all registry settings? |  |  |  |  |
| **A39** | DC | What are your policies and procedures for hardening servers? |  |  |  |  |
| **A40** | DCTEL | **(Only to be used when medical devices are being acquired.)** Please give the history of cybersecurity advisories issued by you for your medical devices. Include the device, date, and the nature of the cybersecurity advisory. |  |  |  |  |
| **A41** | DCPOC | Does any product you propose to use or provide the State include software, hardware, or hardware components manufactured by any company on the US Commerce Department’s Entity List? |  |  |  |  |
| **A42** | DC | Describe your process for monitoring the security of your suppliers. |  |  |  |  |

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| **Section B. Hosting****The following questions are relevant to any hosted applications, systems, databases, services, and any other technology. The responses should not assume a specific hosting platform, technology, or service but instead the response should address any hosting options available for the proposed solution.****For state-hosted systems that reside in a state-managed cloud:****To minimize impacts to project schedules, vendors are required to provide architectural plans, resource needs, permission plans, and all interfaces – both internal to the state and internet facing for cloud hosted systems. The documentation provided will be reviewed as part of the initial assessment process. If selected for award of a contract, and once the state has approved the submitted materials, a test environment will be provided after contract signature. Systems will be reviewed again before being moved to a production environment. Any usage or processes that are deemed out of compliance with what was approved or represent excessive consumption or risk will require remediation before being moved to production.** |
| **Response** |
| **#** | **BIT** | **Question** | **YES** | **NO** | **NA** | **Explain answer as needed** |
| **B1** | POC | Are there expected periods of time where the application will be unavailable for use? |  |  |  |  |
| **B2** | DC | If you have agents or scripts executing on servers of hosted applications what are the procedures for reviewing the security of these scripts or agents? |  |  |  |  |
| **B3** | DC | What are the procedures and policies used to control access to your servers? How are audit logs maintained? |  |  |  |  |
| **B4** | DCDEVPOCTEL | Do you have a formal disaster recovery plan? Please explain what actions will be taken to recover from a disaster. Are warm or hot backups available? What are the Recovery Time Objectives and Recovery Point Objectives? |  |  |  |  |
| **B5** | DC | Explain your tenant architecture and how tenant data is kept separately? |  |  |  |  |
| **B6** | DC | What are your data backup policies and procedures? How frequently are your backup procedures verified? |  |  |  |  |
| **B7** | DCDEVTEL | If any cloud services are provided by a third-party, do you have contractual requirements with them dealing with:* Security for their I/T systems;
* Staff vetting;
* Staff security training?
 |  |  |  |  |
|  |  | 1. If yes, summarize the contractual requirements.
 |  |  |  |  |
|  |  | 1. If yes, how do you evaluate the third-party’s adherence to the contractual requirements?
 |  |  |  |  |
| **B8** | DC | If your application is hosted by you or a third party, are all costs for your software licenses in addition to third-party software (i.e. MS-SQL, MS Office, and Oracle) included in your cost proposal?  If so, will you provide copies of the licenses with a line-item list of their proposed costs before they are finalized? |  |  |  |  |
| **B9** | DC | 1. Do you use a security checklist when standing up any outward facing system?
 |  |  |  |  |
|  |  | 1. Do you test after the system was stood up to make sure everything in the checklist was correctly set?
 |  |  |  |  |
| **B10** | DC | How do you secure Internet of Things (IoT) devices on your network? |  |  |  |  |
| **B11** | DCTEL | Do you use Content Threat Removal to extract and transform data? |  |  |  |  |
| **B12** | DCTEL | Does your company have an endpoint detection and response policy?  |  |  |  |  |
| **B13** | DCTEL | Does your company have any real-time security auditing processes? |  |  |  |  |
| **B14** | TEL | How do you perform analysis against the network traffic being transmitted or received by your application, systems, or data center? What benchmarks do you maintain and monitor your systems against for network usage and performance? What process(es) or product(s) do you use to complete this analysis, and what results or process(es) can you share? |  |  |  |  |
| **B15** | TEL | How do you monitor your application, systems, and data center for security events, incidents, or information?  What process(es) and/or product(s) do you use to complete this analysis, and what results or process(es) can you share? |  |  |  |  |
| **B16** | DCTEL | What anti-malware product(s) do you use? |  |  |  |  |
| **B17** | DCTEL | What is your process to implement new vendor patches as they are released and what is the average time it takes to deploy a patch? |  |  |  |  |
| **B18** | DC TEL | Have you ever had a data breach? If so, provide information on the breach. |  |  |  |  |
| **B19** | POC | Is there a strategy for mitigating unplanned disruptions and what is it? |  |  |  |  |
| **B20** | DCTEL | What is your process for ensuring the software on your IoT devices that are connected to your system, either permanently or intermittently, is maintained and updated? |  |  |  |  |
| **B21** | POC | Will the State of South Dakota own the data created in your hosting environment? |  |  |  |  |
| **B22** | DEV | What are your record destruction scheduling capabilities? |  |  |  |  |

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| **Section C: Database****The following questions are relevant to any application or service that stores data, irrespective of the application being hosted by the state or the vendor.**  |
| **Response** |
| **#** | **BIT** | **Question** | **YES** | **NO** | **NA** | **Explain answer as needed** |
| **C1** | DC | Will the system require a database? |  |  |  |  |
| **C2** | DC | If a Database is required, what technology will be used (i.e.  Microsoft SQL Server, Oracle, MySQL)? |  |  |  |  |
| **C3** | DC | If a SQL Database is required does the cost of the software include the cost of licensing the SQL Server? |  |  |  |  |
| **C4** | POC | Will the system data be exportable by the user to tools like Excel or Access at all points during the workflow? |  |  |  |  |
| **C5** | DCDEV | Will the system infrastructure include a separate OLTP or Data Warehouse Implementation? |  |  |  |  |
| **C6** | DCDEV | Will the system infrastructure require a Business Intelligence solution? |  |  |  |  |

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| **Section D: Contractor Process****The following questions are relevant for all vendors or third parties engaged in providing this hardware, application, or service and pertain to business practices. If the application is hosted by the vendor or the vendor supplies cloud services those questions dealing with installation or support of applications on the State’s system can be marked “NA”.** |
| **Response** |
| **#** | **BIT** | **Question** | **YES** | **NO** | **NA** | **Explain answer as needed** |
| **D1** | DCPOC | Will the vendor provide assistance with installation? |  |  |  |  |
| **D2** | DCDEVPOCTEL | Does your company have a policy and process for supporting/requiring professional certifications? If so, how do you ensure certifications are valid and up-to date? |  |  |  |  |
| **D3** | DEV | What types of functional tests are/were performed on the software during its development (e.g., spot checking, component-level testing, and integrated testing)? |  |  |  |  |
| **D4** | DEV | Are misuse test cases included to exercise potential abuse scenarios of the software? |  |  |  |  |
| **D5** | TEL | What release criteria does your company have for its products regarding security? |  |  |  |  |
| **D6** | DEV | What controls are in place to ensure that only the accepted/released software is placed on media for distribution? |  |  |  |  |
| **D7** | DCDEV | 1. Is there a Support Lifecycle Policy within the organization for the software
 |  |  |  |  |
|  |  | 1. Does it outline and establish a consistent and predictable support timeline?
 |  |  |  |  |
| **D8** | DC | How are patches, updates, and service packs communicated and distributed to the State? |  |  |  |  |
| **D9** | DEV | What services does the help desk, support center, or (if applicable) online support system offer when are these services available, and are there any additional costs associated with the options? |  |  |  |  |
| **D10** | DC | 1. Can patches and service packs be uninstalled?
 |  |  |  |  |
|  |  | 1. Are the procedures for uninstalling a patch or service pack automated or manual?
 |  |  |  |  |
| **D11** | DC DEV | How are enhancement requests and reports of defects, vulnerabilities, and security incidents involving the software collected, tracked, prioritized, and reported? Is the management and reporting policy available for review? |  |  |  |  |
| **D12** | DC | What are your policies and practices for reviewing design and architecture security impacts in relation to deploying patches, updates, and service packs? |  |  |  |  |
| **D13** | DC | Are third-party developers contractually required to follow your configuration management and security policies and how do you assess their compliance? |  |  |  |  |
| **D14** | DEV | What policies and processes does your company use to verify that your product has its comments sanitized and does not contain undocumented functions, test/debug code, or unintended, “dead,” or malicious code? What tools are used? |  |  |  |  |
| **D15** | DEV | How is the software provenance verified (e.g., any checksums or signatures)? |  |  |  |  |
| **D16** | DEV | 1. Does the documentation explain how to install, configure, and/or use the software securely?
 |  |  |  |  |
|  |  | 1. Does it identify options that should not normally be used because they create security weaknesses?
 |  |  |  |  |
| **D17** | DEV | 1. Does your company develop security measurement objectives for all phases of the SDLC?
 |  |  |  |  |
|  |  | 1. Has your company identified specific statistical and/or qualitative analytical techniques for measuring attainment of security measures?
 |  |  |  |  |
| **D18** | DC | 1. Is testing done after changes are made to servers?
 |  |  |  |  |
|  |  | 1. What are your rollback procedures in the event of problems resulting from installing a patch or service pack?
 |  |  |  |  |
| **D19** | DC | What are your procedures and policies for handling and destroying sensitive data on electronic and printed media? |  |  |  |  |
| **D20** | DCTEL | How is endpoint protection done? For example, is virus prevention used and how are detection, correction, and updates handled? |  |  |  |  |
| **D21** | DCTEL | Do you perform regular reviews of system and network logs for security issues? |  |  |  |  |
| **D22** | DC | Do you provide security performance measures to the customer at regular intervals? |  |  |  |  |
| **D23** | DCPOC | What technical, installation, and user documentation do you provide to the State? Is the documentation electronically available and can it be printed? |  |  |  |  |
| **D24** | DCDEVPOC | 1. Will the implementation plan include user acceptance testing?
 |  |  |  |  |
|  |  | 1. If yes, what were the test cases?
 |  |  |  |  |
|  |  | 1. Do you do software assurance?
 |  |  |  |  |
| **D25** | DCDEVPOCTEL | Will the implementation plan include performance testing?  |  |  |  |  |
| **D26** | DEV POC | Will there be documented test cases for future releases including any customizations done for the State of South Dakota? |  |  |  |  |
| **D27** | DEVPOC | If the State of South Dakota will gain ownership of the software, does the proposal include a knowledge transfer plan? |  |  |  |  |
| **D28** | DEVPOC | Has your company ever conducted a project where your product was load tested? |  |  |  |  |
| **D29** | DC | Please explain the pedigree of the software. Include in your answer who are the people, organization, and processes that created the software. |  |  |  |  |
| **D30** | DC | Explain the change management procedure used to identify the type and extent of changes allowed in the software throughout its lifecycle. Include information on the oversight controls for the change management procedure. |  |  |  |  |
| **D31** | DCDEVTEL | Does your company have corporate policies and management controls in place to ensure that only corporate-approved (licensed and vetted) software components are used during the development process? **Provide a brief explanation**. Will the supplier indemnify the acquirer from these issues in the license agreement? **Provide a brief explanation.** |  |  |  |  |
| **D32** | DEV | Summarize the processes (e.g., ISO 9000, CMMi), methods, tools (e.g., IDEs, compilers), techniques, etc. used to produce and transform the software. |  |  |  |  |
| **D33** | DEV | 1. Does the software contain third-party developed components?
 |  |  |  |  |
|  |  | 1. If yes, are those components scanned by a static code analysis tool?
 |  |  |  |  |
| **D34** | DCDEVTEL | What security design and security architecture documents are prepared as part of the SDLC process? How are they maintained? Are they available to/for review? |  |  |  |  |
| **D35** | DEV | Does your organization incorporate security risk management activities as part of your software development methodology? If yes, please provide a copy of this methodology or provide information on how to obtain it from a publicly accessible source. |  |  |  |  |
| **D36** | DC | Does your company ever perform site inspections/policy compliance audits of its U.S. development facilities? Of its non-U.S. facilities? Of the facilities of its third-party developers? If yes, how often do these inspections/audits occur? Are they periodic or triggered by events (or both)? If triggered by events, provide examples of “trigger” events.    |  |  |  |  |
| **D37** | DCTEL | How are trouble tickets submitted? How are support issues, specifically those that are security-related escalated? |  |  |  |  |
| **D38** | DCDEV | Please describe the scope and give an overview of the content of the security training you require of your staff, include how often the training is given and to whom.  Include training specifically given to your developers on secure development. |  |  |  |  |
| **D39** | DCTELx | It is State policy that all Contractor Remote Access to systems for support and maintenance on the State Network will only be allowed through Citrix Netscaler. Would this affect the implementation of the system?  |  |  |  |  |
| **D40** | POCTELx | Contractors are also expected to reply to follow-up questions in response to the answers they provided to the security questions.  At the State’s discretion, a contractor’s answers to the follow-up questions may be required in writing and/or verbally. The answers provided may be used as part of the contractor selection criteria. Is this acceptable? |  |  |  |  |
| **D41** | DCDEVPOCTELx | (For PHI only)1. Have you done a risk assessment? If yes, will you share it?
 |  |  |  |  |
|  |  | 1. If you have not done a risk assessment, when are you planning on doing one?
 |  |  |  |  |
|  |  | 1. If you have not done a risk assessment, would you be willing to do one for this project?
 |  |  |  |  |
| **D42** | DEVPOC | Will your website conform to the requirements of Section 508 of the Rehabilitation Act of 1973? |  |  |  |  |

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| **Section E: Software Development****The following questions are relevant to the tools and third-party components used to develop your application, irrespective of the application being hosted by the State or the vendor.** |
| **Response** |
| **#** | **BIT** | **Question** | **YES** | **NO** | **NA** | **Explain answer as needed.** |
| **E1** | DEVPOCx | What are the development technologies used for this system?Please indicate version as appropriate. |  |  |  |  |
|  |  | ASP.Net |  |  |  |  |
|  |  | VB.Net |  |  |  |  |
|  |  | C#.Net |  |  |  |  |
|  |  | .NET Framework |  |  |  |  |
|  |  | Java/JSP |  |  |  |  |
|  |  | MS SQL |  |  |  |  |
|  |  | Other |  |  |  |  |
| **E2** | DCTEL | Is this a browser-based user interface? |  |  |  |  |
| **E3** | DEVPOC | Will the system have any workflow requirements? |  |  |  |  |
| **E4** | DC | Can the system be implemented via Citrix? |  |  |  |  |
| **E5** | DC | Will the system print to a Citrix compatible networked printer? |  |  |  |  |
| **E6** | TEL | If your application does not run under the latest Microsoft operating system, what is your process for updating the application? |  |  |  |  |
| **E7** | DEV | Identify each of the Data, Business, and Presentation layer technologies your product would use and provide a roadmap outlining how your release or update roadmap aligns with the release or update roadmap for this technology. |  |  |  |  |
| **E8** | TELx | Will your system use Adobe Air, Adobe Flash, Adobe ColdFusion, Apache Flex, Microsoft Silverlight, PHP, Perl, Magento, or QuickTime? If yes, explain?  |  |  |  |  |
| **E9** | DEV | To connect to other applications or data, will the State be required to develop custom interfaces? |  |  |  |  |
| **E10** | DEV | To fulfill the scope of work, will the State be required to develop reports or data extractions from the database? Will you provide any APIs that the State can use? |  |  |  |  |
| **E11** | DEVPOC | Has your company ever integrated this product with an enterprise service bus to exchange data between diverse computing platforms? |  |  |  |  |
| **E12** | DC | 1. If the product is hosted at the State, will there be any third-party application(s) or system(s) installed or embedded to support the product (for example, database software, run libraries)?
 |  |  |  |  |
|  |  | 1. If yes, please list those third-party application(s) or system(s).
 |  |  |  |  |
| **E13** | DEV | What coding and/or API standards are used during development of the software? |  |  |  |  |
| **E14** | DEV | Does the software use closed-source Application Programming Interfaces (APIs) that have undocumented functions? |  |  |  |  |
| **E15** | DEV | How does the software’s exception handling mechanism prevent faults from leaving the software, its resources, and its data (in memory and on disk) in a vulnerable state? |  |  |  |  |
| **E16** | DEV | Does the exception handling mechanism provide more than one option for responding to a fault? If so, can the exception handling options be configured by the administrator or overridden?  |  |  |  |  |
| **E17** | DEV | What percentage of code coverage does your testing provide? |  |  |  |  |
| **E18** | DC | 1. Will the system infrastructure involve the use of email?
 |  |  |  |  |
|  |  | 1. Will the system infrastructure require an interface into the State’s email infrastructure?
 |  |  |  |  |
|  |  | 1. Will the system involve the use of bulk email distribution to State users? Client users? In what quantity will emails be sent, and how frequently?
 |  |  |  |  |
| **E19** | TELx | 1. Does your application use any Oracle products?
 |  |  |  |  |
|  |  | 1. If yes, what product(s) and version(s)?
 |  |  |  |  |
|  |  | 1. Do you have support agreements for these products?
 |  |  |  |  |
| **E20** | DC | Explain how and where the software validates (e.g., filter with whitelisting) inputs from untrusted sources before being used.  |  |  |  |  |
| **E21** | TEL | 1. Has the software been designed to execute within a constrained execution environment (e.g., virtual machine, sandbox, chroot jail, single-purpose pseudo-user)?
 |  |  |  |  |
|  |  | 1. Is it designed to isolate and minimize the extent of damage possible by a successful attack?
 |  |  |  |  |
| **E22** | TEL | Does the program use run-time infrastructure defenses (such as address space randomization, stack overflow protection, preventing execution from data memory, and taint checking)? |  |  |  |  |
| **E23** | TEL | If your application will be running on a mobile device, what is your process for making sure your application can run on the newest version of the mobile device’s operating system? |  |  |  |  |
| **E24** | DEV | Do you use open-source software or libraries? If yes, do you check for vulnerabilities in your software or library that are listed in:                                                   |  |  |  |  |
|  |  | 1. Common Vulnerabilities and Exposures (CVE) database?
 |  |  |  |  |
|  |  | 1. Open-Source Vulnerability Database (OSVDB)?
 |  |  |  |  |
|  |  | 1. Open Web Application Security Project (OWASP) Top Ten?
 |  |  |  |  |

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| **F. Infrastructure****The following questions are relevant to how your system interacts with the State’s technology infrastructure. If the proposed technology does not interact with the State’s system, the questions can be marked “NA”.** |
| **Response** |
| **#** | **BIT** | **Question** | **YES** | **NO** | **NA** | **Explain answer as needed.** |
| **F1** | DC |  Will the system infrastructure have a special backup requirement? |  |  |  |  |
| **F2** | DC | Will the system infrastructure have any processes that require scheduling?  |  |  |  |  |
| **F3** | DC | The State expects to be able to move your product without cost for Disaster Recovery purposes and to maintain high availability. Will this be an issue? |  |  |  |  |
| **F4** | TELx | Will the network communications meet Institute of Electrical and Electronics Engineers (IEEE) standard TCP/IP (IPv4, IPv6) and use either standard ports or State-defined ports as the State determines? |  |  |  |  |
| **F5** | DCx | It is State policy that all systems must be compatible with BIT’s dynamic IP addressing solution (DHCP). Would this affect the implementation of the system?   |  |  |  |  |
| **F6** | TELx | It is State policy that all software must be able to use either standard Internet Protocol ports or Ports as defined by the State of South Dakota BIT Network Technologies. Would this affect the implementation of the system? If yes, explain.  |  |  |  |  |
| **F7** | DC | It is State policy that all HTTP/SSL communication must be able to be run behind State of South Dakota content switches and SSL accelerators for load balancing and off-loading of SSL encryption. The State encryption is also PCI compliant. Would this affect the implementation of your system? If yes, explain. |  |  |  |  |
| **F8** | DCx | The State has a virtualize first policy that requires all new systems to be configured as virtual machines. Would this affect the implementation of the system? If yes, explain. |  |  |  |  |
| **F9** | TELx | It is State policy that all access from outside of the State of South Dakota’s private network will be limited to set ports as defined by the State and all traffic leaving or entering the State network will be monitored. Would this affect the implementation of the system? If yes, explain. |  |  |  |  |
| **F10** | TEL | It is State policy that systems must support Network Address Translation (NAT) and Port Address Translation (PAT) running inside the State Network. Would this affect the implementation of the system? If yes, explain. |  |  |  |  |
| **F11** | TELx | It is State policy that systems must not use dynamic Transmission Control Protocol (TCP) or User Datagram Protocol (UDP) ports unless the system is a well-known one that is state firewall supported (FTP, TELNET, HTTP, SSH, etc.). Would this affect the implementation of the system? If yes, explain. |  |  |  |  |
| **F12** | DC | The State of South Dakota currently schedules routine maintenance from 0400 to 0700 on Tuesday mornings for our non-mainframe environments and once a month from 0500 to 1200 for our mainframe environment. Systems will be offline during this scheduled maintenance time periods. Will this have a detrimental effect to the system? |  |  |  |  |
| **F13** | POCTEL | Please describe the types and levels of network access your system/application will require. This should include, but not be limited to TCP/UDP ports used, protocols used, source and destination networks, traffic flow directions, who initiates traffic flow, whether connections are encrypted or not, and types of encryption used.  The Contractor should specify what access requirements are for user access to the system and what requirements are for any system level processes.  The Contractor should describe all requirements in detail and provide full documentation as to the necessity of the requested access. |  |  |  |  |
| **F14** | POCx | List any hardware or software you propose to use that is not State standard, the standards can be found at http://bit.sd.gov/standards/. |  |  |  |  |
| **F15** | DC | Will your application require a dedicated environment?  |  |  |  |  |
| **F16** | DEVPOC | Will the system provide an archival solution? If not, is the State expected to develop a customized archival solution? |  |  |  |  |
| **F17** | DCTEL | Provide a system diagram to include the components of the system, description of the component, and how the components communicate with each other. |  |  |  |  |
| **F18** | DC | Can the system be integrated with our enterprise Active Directory to ensure access is controlled? |  |  |  |  |
| **F19** | TELx | It is State policy that no equipment can be connected to State Network without direct approval of BIT Network Technologies. Would this affect the implementation of the system? |  |  |  |  |
| **F20** | DCx | Will the server-based software support:1. Windows server 2016 or higher
 |  |  |  |  |
|  |  | 1. IIS7.5 or higher
 |  |  |  |  |
|  |  | 1. MS SQL Server 2016 standard edition or higher
 |  |  |  |  |
|  |  | 1. Exchange 2016 or higher
 |  |  |  |  |
|  |  | 1. Citrix XenApp 7.15 or higher
 |  |  |  |  |
|  |  | 1. VMWare ESXi 6.5 or higher
 |  |  |  |  |
|  |  | 1. MS Windows Updates
 |  |  |  |  |
|  |  | 1. Carbon Black
 |  |  |  |  |
| **F21** | TELx | All network systems must operate within the current configurations of the State of South Dakota’s firewalls, switches, IDS/IPS, and desktop security infrastructure. Would this affect the implementation of the system?  |  |  |  |  |
| **F22** | DC | All systems that require an email interface must use SMTP Authentication processes managed by BIT Datacenter. Mail Marshal is the existing product used for SMTP relay. Would this affect the implementation of the system? |  |  |  |  |
| **F23** | DCTEL | The State implements enterprise-wide anti-virus solutions on all servers and workstations as well as controls the roll outs of any and all Microsoft patches based on level of criticality. Do you have any concerns regarding this process? |  |  |  |  |
| **F24** | DCTEL | What physical access do you require to work on hardware? |  |  |  |  |
| **F25** | DC | How many of the vendor’s staff and/or subcontractors will need access to the state system, will this be remote access, and what level of access will they require? |  |  |  |  |

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| **Section G: Business Process****The following questions pertain to how your business model interacts with the State’s policies, procedures, and practices. If the vendor is hosting the application or providing cloud services, questions dealing with installation or support of applications on the State’s system can be marked “NA”.** |
| **Response** |
| **#** | **BIT** | **Question** | **YES** | **NO**  | **NA** | **Explain answer as needed.** |
| **G1** | DC | 1. If your application is hosted on a dedicated environment within the State’s infrastructure, are all costs for your software licenses in addition to third-party software (i.e. MS-SQL, MS Office, and Oracle) included in your cost proposal?
 |  |  |  |  |
|  |  | 1. If so, will you provide copies of the licenses with a line-item list of their proposed costs before they are finalized?
 |  |  |  |  |
| **G2** | POC | Explain the software licensing model. |  |  |  |  |
| **G3** | DCDEVPOC | Is on-site assistance available? If so, what is the charge?  |  |  |  |  |
| **G4** | DEVPOC | 1. Will you provide customization of the system if required by the State of South Dakota?
 |  |  |  |  |
|  |  | 1. If yes, are there any additional costs for the customization?
 |  |  |  |  |
| **G5** | POC | Explain the basis on which pricing could change for the State based on your licensing model. |  |  |  |  |
| **G6** | POC | Contractually, how many years price lock will you offer the State as part of your response?  Also, as part of your response, how many additional years are you offering to limit price increases and by what percent? |  |  |  |  |
| **G7** | POC | Will the State acquire the data at contract conclusion? |  |  |  |  |
| **G8** | POC | Will the State’s data be used for any other purposes other than South Dakota’s usage? |  |  |  |  |
| **G9** | DC | Has your company ever filed for Bankruptcy under U.S. Code Chapter 11? If so, please provide dates for each filing and describe the outcome. |  |  |  |  |
| **G10** | DC | Has civil legal action ever been filed against your company for delivering or failing to correct defective software? Explain. |  |  |  |  |
| **G11** | DC | Please summarize your company’s history of ownership, acquisitions, and mergers (both those performed by your company and those to which your company was subjected). |  |  |  |  |
| **G12** | DC | Will you provide on-site support 24x7 to resolve security incidents? If not, what are your responsibilities in a security incident? |  |  |  |  |
| **G13** | DEV | What training programs, if any, are available or provided through the supplier for the software? Do you offer certification programs for software integrators? Do you offer training materials, books, computer-based training, online educational forums, or sponsor conferences related to the software? |  |  |  |  |
| **G14** | DCTEL | Are help desk or support center personnel internal company resources or are these services outsourced to third parties? Where are these resources located? |  |  |  |  |
| **G15** | DC | Are any of the services you plan to use located offshore (examples include data hosting, data processing, help desk, and transcription services)? |  |  |  |  |
| **G16** | DC | Is the controlling share (51%+) of your company owned by one or more non-U.S. entities? |  |  |  |  |
| **G17** | DC | What are your customer confidentiality policies? How are they enforced? |  |  |  |  |
| **G18** | DCPOCx | Will this application now or possibly in the future share PHI with other entities on other networks, be sold to another party or be accessed by anyone outside the US? |  |  |  |  |
| **G19** | DC | If the product is hosted at the State, will there be a request to include an application to monitor license compliance? |  |  |  |  |
| **G20** | DCPOC | Is telephone assistance available for both installation and use? If yes, are there any additional charges? |  |  |  |  |
| **G21** | DCTEL | What do you see as the most important security threats your industry faces? |  |  |  |  |