



# SPECTRIM Application Portfolio Management Assessment Instructions FY2024

Guidance for Texas State Agencies

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## Table of Contents

<b>Overview</b> .....	<b>1</b>
Background.....	1
Purpose.....	1
Definitions.....	1
Sensitive Information.....	1
<b>General Instructions</b> .....	<b>2</b>
Organization.....	2
Accessing SPECTRIM.....	2
Accessing the APM Tool.....	2
Submission .....	3
Additional Information .....	3
<b>Part 1: Business Application Validation</b> .....	<b>4</b>
Business Application Validation Instructions .....	4
Instructions.....	5
Adding Business Applications.....	7
Removing Business Applications .....	8
Attestation.....	8
<b>Part 2: APM Assessment</b> .....	<b>10</b>
<b>Parts 3 – 6</b> .....	<b>12</b>
General Instructions.....	12
Accessing .....	12
<b>Part 3: Architecture Section</b> .....	<b>14</b>
<b>Part 4: Business Section</b> .....	<b>16</b>
<b>Part 5: Financial Section</b> .....	<b>29</b>
<b>Part 6: Technical Section</b> .....	<b>31</b>
<b>Acronym List</b> .....	<b>40</b>
<b>Glossary</b> .....	<b>41</b>
APM Coordinator.....	41
Assessment.....	41
Assessor.....	41
Business Application.....	41
IRDR .....	41
Reviewer.....	41



## Overview

### Background

The 84<sup>th</sup> Legislature directed the Texas Department of Information Resources (DIR) to develop and implement a shared application portfolio management program for state agencies that includes best practices and tools to assist with managing applications.<sup>1</sup>

In 2016, DIR launched the Application Portfolio Management (APM) module in its Statewide Portal for Enterprise Cybersecurity Threat, Risk, and Incident Management (SPECTRIM). State agencies must review their applications inventory as part of the Information Resources Deployment Review<sup>2</sup> (IRDR). They can use the APM module to assess their business applications—a subset of applications—and prepare for the Prioritization of Cybersecurity and Legacy Systems<sup>3</sup> (PCLS) project submission process.

DIR encourages agencies to complete a business application assessment as part of the IRDR process, however, agencies can create an assessment at any time. Agencies submitting PCLS projects can relate business applications with any assessments conducted in the last four years.

### Purpose

Through the SPECTRIM APM module, state agencies can validate that business applications are documented in SPECTRIM and complete questionnaires on each business application. Currently in SPECTRIM, each state agency has associated business applications. To ensure that the information associated with your agency is current and accurate, DIR requests that agencies validate their business applications.

This information will be used to launch application assessments for each business application, as well as to populate fields for future reporting requirements such as IRDR and PCLS project submissions.

### Definitions

You can find definitions of technical terms in this document's [Glossary](#).

### Sensitive Information

DIR complies with the [Public Information Act](#) for all public information requests. Due to the inherently sensitive nature of system-level cybersecurity information, DIR treats the information

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<sup>1</sup> See Government Code Section [2054.574](#)

<sup>2</sup> See Government Code Section [2054.0965](#)

<sup>3</sup> See Government Code Section [20545.069](#)

collected through the IRDR as confidential and will request a decision from the Office of the Attorney General for all public information requests that DIR receives seeking IRDR information.

## General Instructions

### Organization

These APM instructions below are organized as follows:

- **Part 1: Business Application Validation** prepares agency business application entries to support the IRDR and PCLS.
- **Part 2: APM Assessment** provides general information about your agency's business applications and personnel responsible for submitting information in questionnaires.
- **Part 3: Architecture Section** targets inventory configuration including technology vendors and implementation style.
- **Part 4: Business Section** targets understanding value and usage from an end user or business manager perspective.
- **Part 5: Financial Section** targets the ongoing costs (excluding upfront costs) from a business or technical manager perspective.
- **Part 6: Technical Section** targets the technology effectiveness from a technical manager or architecture perspective.

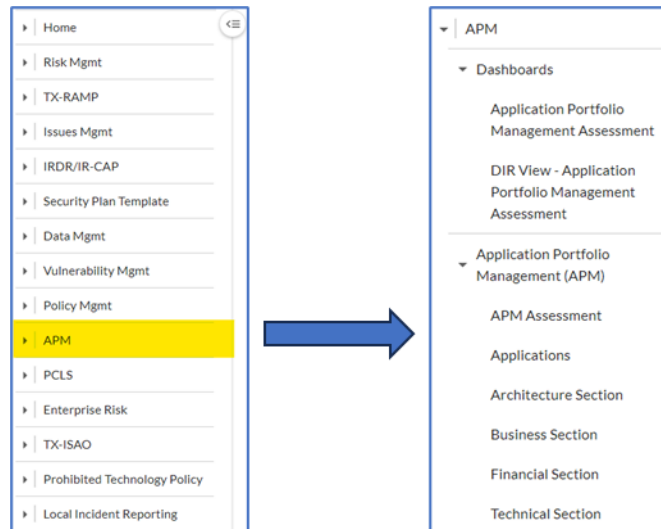
### Accessing SPECTRIM

To access SPECTRIM, review the [SPECTRIM User Guide for Information Resources Managers' Step 1 Log In to SPECTRIM](#) or access directly at [dir.archerirm.us/Default.aspx](http://dir.archerirm.us/Default.aspx).

If you would like to assign an APM Coordinator, Assessor, or Reviewer who is not currently an active user in SPECTRIM, please send an inquiry to [GRC@dir.texas.gov](mailto:GRC@dir.texas.gov) requesting access for those users. The IRM will need to provide written authorization since users cannot self-request.

### Accessing the APM Tool

To get to the APM tool, select the APM module in the left panel of SPECTRIM, which will bring you to the APM Assessment page. Optionally, you can access specific SPECTRIM APM Assessment components by expanding the APM selection on the panel as indicated below.



Data can be entered in multiple sessions from multiple computers, but individual records cannot be edited simultaneously. All entered data is saved in a central database and may be viewed and updated in future sessions. For questions about navigating or accessing SPECTRIM, reference the [SPECTRIM User Guide for Information Resources Managers](#) or send an email to [GRC@dir.texas.gov](mailto:GRC@dir.texas.gov).

### Submission

You must complete the APM submissions via SPECTRIM. No signature or hardcopy submission is necessary. Each APM Coordinator is responsible for coordinating the APM assessment review process within their agency and ensuring that APM assessments are completed.

### Additional Information

You can find [additional resources and instructions for completing the APM Business Application Validation and Assessment processes](#) on DIR's website.

DIR staff is committed to providing support to agencies and strives to answer all inquiries within two business days. Agencies are encouraged to submit inquiries if they do not understand a question or are uncertain how to respond to it.

Please send all inquiries regarding APM content and process to [PCLS@dir.texas.gov](mailto:PCLS@dir.texas.gov).

Please send all inquiries regarding SPECTRIM and technical assistance to [GRC@dir.texas.gov](mailto:GRC@dir.texas.gov).

## Part 1: Business Application Validation

The responsibility for validating that an agency's applications are accurate lies with the agency's Information Resources Manager (IRM). The IRM will need to review the following fields for accuracy and determine the status of the business application (active/inactive). Additionally, the IRM should add any new business applications not listed and complete the associated fields.

**Information System Name:** Business application name

**Business Application Long Name:** Full name of the application without using acronyms

**Application Description:** A brief description (one or two paragraphs) stating the application's purpose

**Mission Critical:** Yes or No. This value is determined by the agency's internal view of an application's relative business criticality.

**APM Coordinator:** An agency individual assigned to coordinate the assessment of that business application after the **App Validation** field is marked **Complete**. (Different agency staff may be assigned as APM Coordinators for the agency's various business applications.)

**Status:** The agency determines whether the business application is currently in use. If an application is no longer used, mark it **Inactive**. This will prevent an APM assessment from generating for the application.

**App Validation:** Agency should select **In Process**, **Complete**, or **Not Started** to indicate the validation status for each business application.

### Business Application Validation Instructions

#### Navigating to the Application Validation Page via URL

Agencies may use the following URL to directly navigate to the Application Validation Page:

<https://dir.archerirm.us/default.aspx?requestUrl=..%2fSearchContent%2fSearch.aspx%3fView%3dReport%26reportId%3d6372%26moduleId%3d70>.

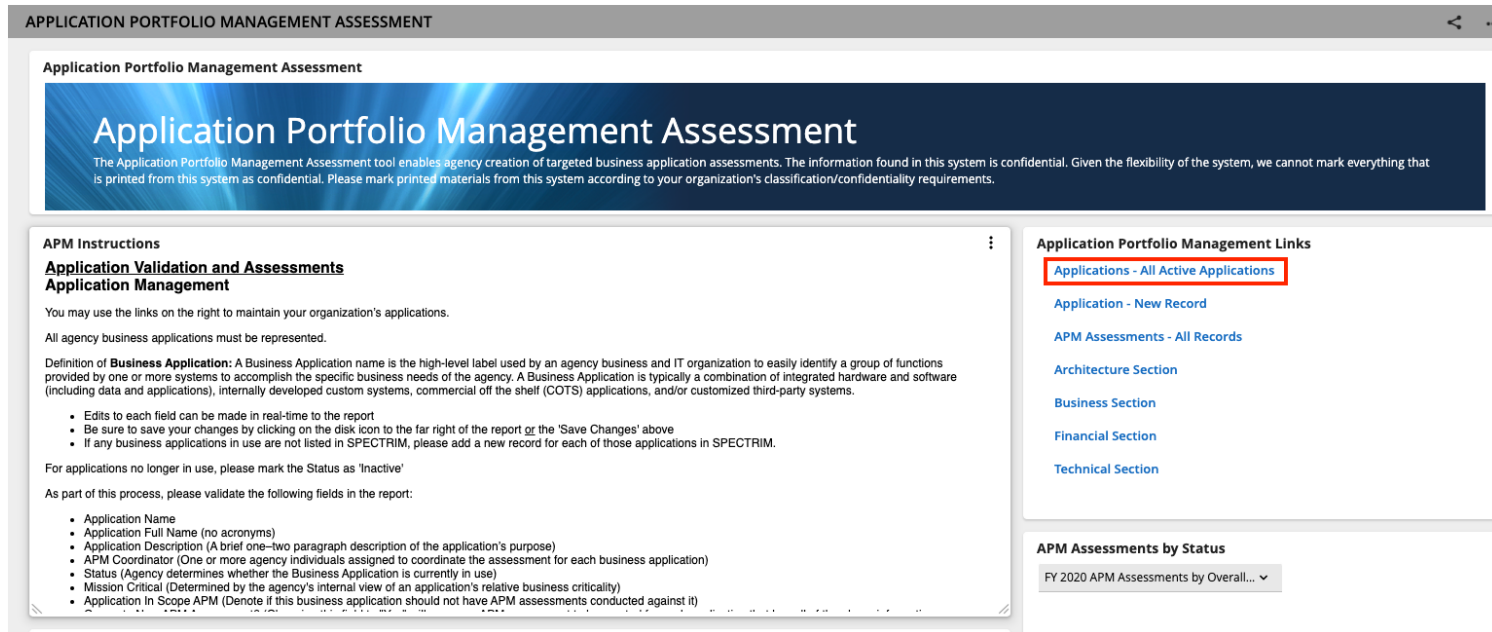
#### Navigating to the Application Validation Page from within SPECTRIM

To get to the Application Validation section from within SPECTRIM:



## SPECTRIM Application Portfolio Management Assessment 2024 Instructions

From the Application Portfolio Management Assessment Dashboard, locate the Application Portfolio Management Links pane (on the right-hand side of the webpage) and click the hyperlink titled **Applications - All Active Applications**.



APPLICATION PORTFOLIO MANAGEMENT ASSESSMENT

### Application Portfolio Management Assessment

The Application Portfolio Management Assessment tool enables agency creation of targeted business application assessments. The information found in this system is confidential. Given the flexibility of the system, we cannot mark everything that is printed from this system as confidential. Please mark printed materials from this system according to your organization's classification/confidentiality requirements.

#### APM Instructions

##### Application Validation and Assessments

##### Application Management

You may use the links on the right to maintain your organization's applications.

All agency business applications must be represented.

Definition of **Business Application**: A Business Application name is the high-level label used by an agency business and IT organization to easily identify a group of functions provided by one or more systems to accomplish the specific business needs of the agency. A Business Application is typically a combination of integrated hardware and software (including data and applications), internally developed custom systems, commercial off the shelf (COTS) applications, and/or customized third-party systems.

- Edits to each field can be made in real-time to the report
- Be sure to save your changes by clicking on the disk icon to the far right of the report or the 'Save Changes' above
- If any business applications in use are not listed in SPECTRIM, please add a new record for each of those applications in SPECTRIM.

For applications no longer in use, please mark the Status as 'Inactive'

As part of this process, please validate the following fields in the report:

- Application Name
- Application Full Name (no acronyms)
- Application Description (A brief one-two paragraph description of the application's purpose)
- APM Coordinator (One or more agency individuals assigned to coordinate the assessment for each business application)
- Status (Agency determines whether the Business Application is currently in use)
- Mission Critical (Determined by the agency's internal view of an application's relative business criticality)
- Application In Scope APM (Denote if this business application should not have APM assessments conducted against it)

#### Application Portfolio Management Links

- Applications - All Active Applications**
- Application - New Record
- APM Assessments - All Records
- Architecture Section
- Business Section
- Financial Section
- Technical Section

#### APM Assessments by Status

FY 2020 APM Assessments by Overall... ▾

Clicking the hyperlink will take you to the inline edit page for application validation. This page will have a list of all the business applications currently associated with the agency in SPECTRIM.

### Instructions

The IRM will need to update the fields for each application directly on this page. (You should not enter individual applications by selecting the ID hyperlink).

# SPECTRIM Application Portfolio Management Assessment 2024 Instructions


**Applications**

SAVE MODIFY NEW REPORT RELATED REPORTS

1 to 8 (of 8)

MANAGE ACTIVE APPLICATIONS (ORGANIZATIONS IN SCOPE FOR APM)

ID	Application Name	Status	Application Full Name	Application Description	Mission Critical	Application Subtype / Capability	Manufacturer / Provider	Asset Value	Data Classification	Development Source	Appli Scope
AS-0	AS	Active	Application 5 Testing	PCLS Submission testing	No						Yes
Application 3-0	Application 3	Active	Test State Agency Application 3	Jean Testing APM	No	Data Warehousing / Business Intelligence Web System					Yes
Application 4-0	Application 4	Active	Application 4 Testing	Testing Application Validation	Yes						Yes

To save your changes after updating a field, select the **save icon**  at the far right of the row. (Note that the save icon will not appear until you have made changes to a field). Saving locks in any changes you made to a single line (application). If you would like to save the changes globally, you may select the **Save Changes** option that appears in the upper-right hand corner of SPECTRIM after any changes are made to a record. After finishing and saving all changes, click the refresh button in the upper-right corner to verify that the application has been marked as **Complete**.

RELATED REPORTS

1 to 8 (of 8)

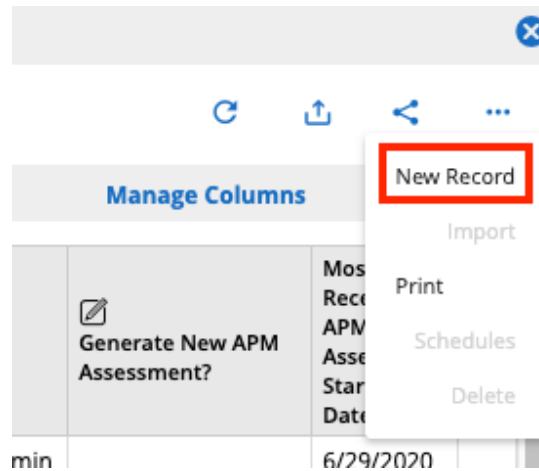
Save Changes Cancel Manage Columns Options

Application Description	Mission Critical	Application Subtype / Capability	Manufacturer / Provider	Asset Value	Data Classification	Development Source	Application In Scope for APM	APM Coordinator	Generate New APM Assessment?	Most Recent APM Assess... Start Date
PCLS Submission testing	No					Commercial off the Shelf - Customized	Yes	Non-DIR Admin / API, Raine (INACTIVE 9/30/22)		6/29/2020
Jean Testing APM	No	Data Warehousing / Business Intelligence					Yes	State Agency, ...		1/17/2020

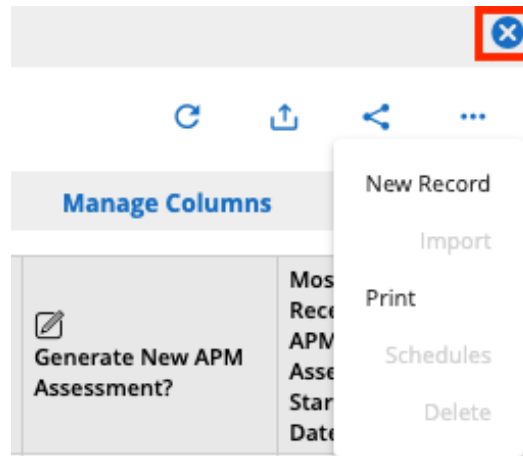
Once a business application validation is marked **Complete**, SPECTRIM will generate an APM assessment for that business application and send an email notification to the identified APM Coordinator.

### Adding Business Applications

If you need to add a new application to the list, click the ellipses in the upper right-hand corner (which will display the options) and click **New Record**. SPECTRIM will take you to a new screen to create the application.



Fill out the mandatory fields, click **Save** in the upper left-hand corner, then close the application window via the **X** in the upper right-hand corner.



### Removing Business Applications

If an application is listed that is no longer used by the agency, change its status to **Inactive**. *Please do not delete the application.* Setting the status to **Inactive** will prevent the APM tool from requiring an assessment for the application.

### Attestation

When all the agency's business applications have been validated, the IRM must confirm that all business applications currently in use have been added or updated in SPECTRIM.

# SPECTRIM Application Portfolio Management Assessment 2024 Instructions

IRDR : 1447374

EDIT VIEW SAVE SAVE AND CLOSE

Created Date: 1/18/2024 11:22 PM Last Updated: 1/19/2024 10:00 AM

131 of 272 Completed

or API) the devices inventory in ServiceNow to SPECTRIM. The API updates the IRDR devices inventory daily to synchronize it with the ServiceNow devices inventory. It does not update the IRDR applications inventory. You must carefully review and update both the devices and applications inventories to ensure that they are accurate and complete.

**2024 Device Inventory** This certifies that all agency servers, databases, mainframes, network assets, and other necessary IT equipment that exists as of the date of this attestation have been added/updated in SPECTRIM.

Attestation:  Confirmed

► DEVICES

▼ APPLICATION INVENTORY ATTESTATION

You must review and update your agency's list of business applications, add any new ones, and verify the accuracy of the information included about each application. You also have the opportunity to complete an Application Portfolio Management (APM) assessment of each application by answering "Yes" the "Generate New APM Assessment" field.

Agencies must have a current with most recent APM assessment start date" of January 1, 2020, or later assessment in SPECTRIM for each business application that you plan to include in your Prioritization of Cybersecurity and Legacy System (PCLS) projects funding. As you complete your agency's IRDR applications inventory, please carefully review each application's assessment date in SPECTRIM and consider whether you need to generate a new assessment. Visit DIR's [PCLS Projects webpage](#) for more information on the PCLS projects prioritization process.

**New in 2024:** Agencies must supply Legacy system classification for the business applications assets and you will find an additional field asking for this information.

**2024 Application Inventory Attestation** This certifies that all business applications that exist as of the date of this attestation have been added/updated in SPECTRIM.

Attestation:  Confirmed

► APPLICATIONS

Note that the Application Inventory Attestation is part of the IRDR process (Part 4 IT Inventory). For additional IRDR information and instructions, visit [DIR's IRDR webpage](#).

## Part 2: APM Assessment

Once all the required fields for an application have been updated and the validation status changed to **Complete**, the system will notify the APM Coordinator of that application that they may begin assigning assessors and reviewers.

Once in the APM Assessment window, the following information must be filled out and saved.

**APM Assessment Name:** Enter the assessment name

**ID:** Choose the business application

**Organization:** Input agency name

**APM Coordinator:** Auto-populated from the related business application (can be changed by IRM)

**Due Date:** Auto-populated to 45 days from the creation date

**Architecture Assessor:** Choose an Assessor to complete questionnaire

**Architecture Reviewer(s):** Choose up to three Reviewers to review questionnaire

**Business Assessor(s):** Choose up to three Assessors to complete questionnaire

**Business Reviewer(s):** Choose up to three Reviewers to review questionnaire

**Financial Assessor:** Choose an Assessor to complete questionnaire

**Financial Reviewer(s):** Choose up to three Reviewers to review questionnaire

**Technical Assessor(s):** Choose up to three Assessors to complete questionnaire

**Technical Reviewer(s):** Choose up to three Reviewers to review questionnaire

**Launch Architecture Section:** Choose Yes when ready to create questionnaires

**Architecture Section Launch Date:** Choose a future date to launch questionnaires

**Launch Business Section:** Choose Yes when ready to create questionnaires

**Business Section Launch Date:** Choose a future date to launch questionnaires

**Launch Financial Section:** Choose Yes when ready to create questionnaires

**Financial Section Launch Date:** Choose a future date to launch questionnaires

**Launch Technical Section:** Choose Yes when ready to create questionnaires

**Technical Section Launch Date:** Choose a future date to launch questionnaires

If you need to add an assessor or reviewer, please email [GRC@dir.texas.gov](mailto:GRC@dir.texas.gov).

Once the information is completed and saved, SPECTRIM will send the assessors an email with a link on how to start their portions of the assessment.

## Parts 3 – 6

### General Instructions

The assigned assessor will need to complete each questionnaire for all applications that they have been assigned. Assessors must complete the following four steps:

1. **Answer questions by selecting the appropriate answer to each question.** Question-specific help text may be available via the **?** icon. If the answer dictates an explanation, assessors may add further information via the available text box.
2. **Add comments to any question or attach supporting evidence for answers by clicking the note icon next to each question.** When the assessor has saved the comment, SPECTRIM changes the **note icon** to show that a comment has been added.
3. **Change the Status once it is ready to submit for review.** When the assessor has completed the questionnaire, they need to change the Submission Status to **Submitted**, which will route the questionnaire to the proper reviewer. (If no reviewer was assigned, then the questionnaire section is treated as complete). Please note that all values for list questions must be answered before submitting the questionnaire.
4. **Save/Exit the Questionnaire.** Assessors can save the questionnaire at any time by clicking the **Save button** in the upper left-hand corner. To exit the questionnaire, the assessor must click the **Save button** and then click the **X** in the upper right-hand corner.

### Accessing

Assessors should have received an email with a link to the specific assessment questionnaires that their IRMs assigned them.

Assessors can also access assessments by logging in to SPECTRIM, entering the APM dashboard, and clicking their assessment type on the right-hand side of the dashboard under APM Sections.



APPLICATION PORTFOLIO MANAGEMENT ASSESSMENT ▾

### Application Portfolio Management Assessment

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For applications no longer in use, please mark the Status as 'Inactive'

As part of this process, please validate the following fields in the report:

#### Application Portfolio Management Links

- [Applications - All Active Applications](#)
- [Application - New Record](#)
- [APM Assessments - All Records](#)
- [Architecture Section](#)
- [Business Section](#)
- [Financial Section](#)
- [Technical Section](#)

Clicking the section will present a screen of all available assessments fill out. Click the assessment's tracking ID (left side of the list) to begin.

### Part 3: Architecture Section

The Architecture section of the assessment contains five questions. Please carefully and thoughtfully complete each of these for the applications you have been assigned from an architecture perspective.

Architecture Question Number	Indicator	Question	Response
AR_01	Architecture Style	What is the primary type of architecture/design for the application?	RADIO BUTTONS: One-Tier / Monolithic Two-Tier Client/Server Three-Tier Component-Based/Modular N-Tier Service-Oriented N-Tier Event-Driven
AR_02	User Interface	What is the primary type of user interface for the application?	RADIO BUTTONS: Thick/Rich Client Web Browser-Based Virtual/Remote Desktop None
AR_03	Storage	What is the current size of the database(s) for the application?	RADIO BUTTONS: <1 GB 1- 99 GB

Architecture Question Number	Indicator	Question	Response
			100-999 GB 1-999 TB >1 PB
AR_04	Operations	Who runs the infrastructure and operations for the application?	RADIO BUTTONS: Internal IT Software Vendor External Hosting Provider Contracted/Managed Services Cloud
AR_05	Development	Who develops enhancements and new features for the application?	RADIO BUTTONS: Internal IT Software Vendor External Hosting Provider Contracted/Managed Services Cloud

### Part 4: Business Section

The Business section of the assessment contains 15 questions. Please carefully and thoughtfully complete these questions for the applications you have been assigned from a business perspective.

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-01	Effectiveness	How effective is the application at meeting your business requirements and process needs?	Please consider the degree of fit between currently supported functionality and your business requirements and process needs, and whether functional gaps exist. Additional indicators include the need for ancillary tools such as personal spreadsheets and databases to accomplish tasks.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Exceptional", Value: 5</p> <p>Label: "4 – Highly Effective", Value: 4</p> <p>Label: "3 – Effective", Value: 3</p> <p>Label: "2 – Somewhat Effective", Value: 2</p> <p>Label: "1 – Ineffective", Value: 1</p>	<p>5 – Exceptional: Exceeds all business requirements and process needs; all processes are optimized, no functional gaps exist, and no ancillary tools are needed to complete tasks.</p> <p>3 – Effective: Sufficiently meets business requirements and process needs; however, some processes are not optimized, some functional gaps exist, or ancillary tools/spreadsheets/databases are necessary to complete tasks.</p> <p>1 – Ineffective: Does not meet business requirements or process needs; most processes are not optimized, major functional gaps exist, and numerous tools/spreadsheets/databases are critical to complete tasks.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-02	Relevance	How well has the application kept up with change?	Please consider the degree to which functional enhancements have been met in a timely manner, relative to the number of change requests. Additional indicators include relevance to industry/market best practices, processes, and capabilities, and management attention and interest in keeping the application relevant.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Proactive", Value: 5</p> <p>Label: "4 – Very Relevant", Value: 4</p> <p>Label: "3 – Relevant", Value: 3</p> <p>Label: "2 – Somewhat Relevant", Value: 2</p> <p>Label: "1 – Irrelevant", Value: 1</p>	<p>5 – Proactive: Exceptionally responsive and agile; functional enhancements and process needs are proactively addressed; preempts industry/market changes.</p> <p>3 – Relevant: Remains relevant and has efficiently kept up with changing business requirements, process needs and industry/market capabilities.</p> <p>1 – Irrelevant: Functionality and processes are out of date; significant enhancements are backlogged or require substantial time and effort to implement.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-03	Complexity	To what extent is the application's functionality complex, requiring experience and resources to learn, use and manage?	Please consider whether this application is difficult to use, requires specialized expertise, needs significant training, or requires substantial overhead to manage changes, interfaces, and reports.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Very Simple", Value: 5</p> <p>Label: "4 – Simple", Value: 4</p> <p>Label: "3 – Reasonable", Value: 3</p> <p>Label: "2 – Complex", Value: 2</p> <p>Label: "1 – Very Complex", Value: 1</p>	<p>5 - Very Simple: Simple to use, little to no training to learn, and/or does not require specialized resources to manage or to get changes completed.</p> <p>3 – Reasonable: Reasonable training and expertise to use, some expected attention is required to manage changes, interfaces, and reports.</p> <p>1 – Very Complex: Difficult to use, very complex, requires significant training and highly specialized resources, significant overhead manage changes, interfaces, and reports.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-04	Utilization	How often is the application utilized and how much business volume is regularly handled by it?	Please consider how often users (including all end-users, managers, administrators) log in to the application (daily, weekly, monthly, yearly) and how rigorously functionality is utilized including process/workflow execution and information access/entry (including both user initiated processes and automated, batch processes).	<p>RADIO BUTTONS:</p> <p>Label: "5 – Constant", Value: 5</p> <p>Label: "4 – Routine", Value: 4</p> <p>Label: "3 – Frequent", Value: 3</p> <p>Label: "2 – Infrequent", Value: 2</p> <p>Label: "1 – Sporadic", Value: 1</p>	<p>5 – Constant: Constant, 24x7 use and/or extremely high volumes of business process transactions/information access</p> <p>3 – Frequent: Daily or weekly use and/or moderate volumes of business process transactions/information access</p> <p>1 – Sporadic: Monthly or yearly use and/or low volumes of business process transactions/information access</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-05	Usability	How useful, usable, and accessible is the application in meeting business requirements or process needs?	Please consider the interface layout and look and feel (visual design), the ability to quickly navigate, find, and access data (information), the clarity of data validation, error messages, and other points of interaction (interaction design), and the overall reach, understanding, and comprehension with which the user can access and use the application successfully (usability / accessibility).	<p>RADIO BUTTONS:</p> <p>Label: "5 – Streamlined", Value: 5</p> <p>Label: "4 – Intuitive", Value: 4</p> <p>Label: "3 – Usable", Value: 3</p> <p>Label: "2 – Operable", Value: 2</p> <p>Label: "1 – Difficult", Value: 1</p>	<p>5 – Streamlined: The user experience is optimized, information layout corresponds with frequency of use / function importance, interface is well-organized and intuitive; user input is validated and easily correctable; the user interface facilitates intuitive interaction with the application; users find application accessible and desirable to use</p> <p>3 – Usable: The user interface is generally usable and navigable with minor training; information is usually easy to find; and data and process exceptions are generally understandable and correctable; accessibility issues are minor enough to not detract from overall desirability of the application</p> <p>1 – Difficult: The user interface is complex; requires substantial training to use; heavy reliance on a few power users to find information; data validation requires translating error codes and exceptions require substantial rework; very little desire to use the application.</p>



Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-06	Information	How well does the application support your information/data management needs?	Please consider three aspects as to how the application supports the management of information: (1) the integrity and trustworthiness of the data (2) data quality such as searches and reporting accuracy; and (3) whether data are available to employees or customers when they need it.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Exceptional", Value: 5</p> <p>Label: "4 – Excellent", Value: 4</p> <p>Label: "3 – Sufficient", Value: 3</p> <p>Label: "2 – Tolerable", Value: 2</p> <p>Label: "1 – Poor", Value: 1</p>	<p>5 – Exceptional: Information is trustworthy with very high integrity, quality and timeliness. Decisions are confidently made based on information</p> <p>3 – Sufficient: Information integrity, quality, and timeliness are sufficient; decisions can be made from information, but usually require additional supporting evidence</p> <p>1 – Poor: Information integrity, quality, and timeliness are poor; no decisions can be based on information due to corruption and volatility.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-07	Security	How well does the application securely protect your information/data?	Please consider enforcement of proper access controls, privacy issues, and regulatory compliance, and how those security controls adversely affect user accessibility, usability, productivity, and effectiveness.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Optimized", Value: 5</p> <p>Label: "4 – Strong", Value: 4</p> <p>Label: "3 – Sufficient", Value: 3</p> <p>Label: "2 – Vulnerable", Value: 2</p> <p>Label: "1 – Exposed", Value: 1</p>	<p>5 – Optimized: All applicable security policies, processes, and procedures are strictly enforced; security controls do not inhibit accessibility, usability, productivity, or effectiveness</p> <p>3 – Sufficient: Critical security policies, processes, and procedures are enforced; some security controls inhibit accessibility, usability, productivity, or effectiveness; minor security vulnerabilities are known, but acceptable</p> <p>1 – Exposed: Security policies, processes, and procedures are not properly enforced; known, critical vulnerabilities exist; any existing security controls significantly inhibit accessibility, usability, productivity, and effectiveness</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-08	Integration	How well does the application integrate with business processes (and their related data) across different functional areas?	Please consider the ease of process integration, the level of manual intervention (such as repetitive data entry), the timeliness of data updates, and the simplicity of process handoffs.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Orchestrated", Value: 5</p> <p>Label: "4 – Automated", Value: 4</p> <p>Label: "3 – Sufficient", Value: 3</p> <p>Label: "2 – Manual", Value: 2</p> <p>Label: "1 – Disconnected", Value: Unable</p>	<p>5 – Orchestrated: Business processes and data are seamlessly and flawlessly integrated in real-time across functional areas; workflows and data translations are choreographed across applications without any manual intervention</p> <p>3 – Sufficient: Business processes are mostly integrated with automated workflows; some manual rekeying (export/import) necessary for ancillary tools and analysis; data are generally updated in real-time, but some batch and/or manual updates inhibit efficiency</p> <p>1 – Disconnected: Substantial manual data entry and re-keying across processes; data updates are largely batch and constrain process efficiencies; the application is disconnected from all other applications; data requires substantial translation to adapt with other applications</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-09	Resilience	How well does the application function correctly during stressful conditions?	Please consider the robustness of the application in handling high-transaction volume or congested activity, or if the application indicates issues or underlying problems with business process design, data access/entry, technology performance.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Elastic", Value: 5</p> <p>Label: "4 – Very Resilient", Value: 4</p> <p>Label: "3 – Resilient", Value: 3</p> <p>Label: "2 – Somewhat Resilient", Value: 2</p> <p>Label: "1 – Rigid", Value: 1</p>	<p>5 – Elastic: High volume and peak business throughput are handled on demand without failure or service degradation; demand is managed effortlessly without intervention; processes, data, and interfaces are optimized for scale.</p> <p>3 – Resilient: Minor increases/spikes in volume and throughput without issue; major increases require a reasonable level of management intervention, planning and investment; congestion occurs with an acceptable level of service degradation.</p> <p>1 – Rigid: Unable to handle increases in volume or throughput without significant service degradation and failure; substantial planning and investment required to meet any increase in demand; process design, data entry and technology are inflexible.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-10	Satisfaction	Please rate your overall satisfaction with the functionality of the application.	Please consider all functional, information, and usage aspects.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Elated", Value: 5</p> <p>Label: "4 – Very Satisfied", Value: 4</p> <p>Label: "3 – Satisfied", Value: 3</p> <p>Label: "2 – Somewhat Satisfied", Value: 2</p> <p>Label: "1 – Unsatisfied", Value: 1</p>	<p>5 – Elated: Exceeds expectations; directly improves business performance; optimal business process automation; measurably increases data quality and accessibility.</p> <p>3 – Satisfied: Meets expectations; indirectly improves business performance; acceptable level of business process automation; sustains and improves data quality and accessibility.</p> <p>1 – Unsatisfied: Does not meet expectations; degrades business performance; impedes business processes; degrades data quality and accessibility.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-11	Change Rate	For the business processes that the application supports, how frequently do those business processes change?	Please consider the broader environment surrounding the business processes including business strategy adjustments, regulatory updates, and economic impacts as well as operational changes.	<p>RADIO BUTTONS:</p> <p>Label: "Stable", Value: 1</p> <p>Label: "Recurrent", Value: 2</p> <p>Label: "Unpredictable", Value : 3</p>	<p>Stable: The business processes are formally structured and stable with a high degree of standardization, repeatability and control. Changes to the processes are rare and infrequent.</p> <p>Recurrent: The business processes are defined with regular/periodic change in response to competitive pressures for differentiation. Processes are configurable and must adapt quickly even though change is minimized.</p> <p>Unpredictable: The business processes change frequently in response to dynamic and unknown business conditions. Processes are exploratory and innovative with continual change.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-12	Engagement	How are the business sponsors, stakeholders and users engaged in managing the application?	Please consider how the business and IT work together to plan, implement, and maintain the application.	<p>RADIO BUTTONS:</p> <p>Label: "Formal Process", Value: 1</p> <p>Label: "Part of the Team", Value: 2</p> <p>Label: "Doing the Work", Value: 3</p>	<p>Formal Process: There is a formal process for engaging IT and business sponsors, stakeholders and users throughout the life cycle of the application. Clear scope and objectives are defined for each interaction.</p> <p>Part of the Team: IT and business sponsors, stakeholders and users are part of the project team and collaboratively manage the application throughout its life cycle. Interactions are fluid and sometimes spontaneous.</p> <p>Doing the Work: Business power users manage the application directly with IT throughout its life cycle to stay close to the ideas and implementation.</p>

Business Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
BA-13	Competitive-ness	How does the application contribute to the business strategy?	Please consider whether the application contributes to the business' competitive advantage or if the application is a cost of doing business.	<p>RADIO BUTTONS:</p> <p>Label: "Enable Cost Effective Scale", Value: 1</p> <p>Label: "Sustain Competitive Advantage", Value: 2</p> <p>Label: "Create Competitive Advantage", Value: 3</p>	<p>Enable Cost Effective Scale: The application supports commodity technology and scales well-defined capabilities.</p> <p>Sustain Competitive Advantage: The application improves on existing ideas, enables unique capabilities, and sustains differentiation.</p> <p>Create Competitive Advantage: The application enables innovative ideas, new ventures, and emerging trends.</p>
BA-14	Duplicate	Is there another application currently in use that performs the same function?		<p>RADIO BUTTONS:</p> <p>Label: "Yes", Value: 0</p> <p>Label: "No", Value: 1</p>	
BA-15	Organization	Does the application serve users within one department only?		<p>RADIO BUTTONS:</p> <p>Text: "Yes", Value: 0</p> <p>Text: "No", Value: 1</p>	



## Part 5: Financial Section

The Financial section of the assessment contains three questions. Please carefully and thoughtfully complete these questions for the applications that you have been assigned from a financial perspective.

Financial Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
FI-01	Support Costs	What is the estimated annual support cost required to maintain and run the application?	<p>For the prior fiscal year, please consider the labor and services costs required for:</p> <ul style="list-style-type: none"> <li>Routine maintenance and support, break / fix, patch and upgrade (internal and contracted)</li> <li>Shared support that can be reasonably allocated to this application (e.g., service desk, monitoring, deployment)</li> <li>Hardware and infrastructure support that can be reasonably allocated to this application</li> <li>FTE support, which may include State employees, contractors and/or consultants</li> </ul> <p>Please <u>do not</u> include costs required for application enhancements.</p> <p>Please select the appropriate dollar range from the options provided.</p>	<p>RADIO BUTTONS:</p> <p>\$0 - \$25,000</p> <p>\$25,001 - \$100,000</p> <p>\$100,001 - \$250,000</p> <p>\$250,001 - \$500,000</p> <p>\$500,001 - \$1,000,000</p> <p>\$1,000,001 - \$5,000,000</p> <p>Greater than \$5,000,000</p>	

Financial Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
FI-02	Licenses	What are the annual hardware maintenance and software license fees for the application?	<p>For the prior fiscal year, please consider all on-going annual hardware maintenance and software license fees. These fees include application software, application server, database server, and other infrastructure that can be reasonably allocated to this application.</p> <p>Please only include annual recurring license costs. Do not include onetime "sunk costs" related to this application's licenses (e.g. initial license fees).</p> <p>Please do not include initial license fees, client hardware licenses or network telephony that have negligible impact. Select the appropriate dollar range from the options provided.</p>	<p>RADIO BUTTONS:</p> <p>Less than \$5,000</p> <p>\$5,001 - \$10,000</p> <p>\$10,001 - \$25,000</p> <p>\$25,001 - \$100,000</p> <p>\$100,001 - \$200,000</p> <p>\$200,001 - \$500,000</p> <p>\$500,001 - \$1,000,000</p> <p>Greater than \$1,000,000</p>	
FI-03	Remediation Costs	Identify whether remediation costs have been identified and <u>documented</u> .	Cost components of remediation cost estimates may include: new hardware, new software, re-factoring, architecture design, development, deployment, changes to workforce, etc.	<p>RADIO BUTTONS:</p> <p>Label: "Yes", Value: 0</p> <p>Label: "No", Value: 1</p>	

## Part 6: Technical Section

The Technical section of the assessment contains 10 questions. Please carefully and thoughtfully complete these questions for the applications you have been assigned from a technical perspective.

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
TE-01	Standards	How well does the application align with accepted architecture practices, development principles and technology standards?	Please consider whether the application supports the architectural direction of the organization such as service-oriented architecture (SOA), business process management (BPM) and master data management (MDM); adherence to design principles such as loose coupling and modular design; and alignment with standardized technology platforms, infrastructure, and vendors.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Exemplary", Value: 5</p> <p>Label: "4 – Well Aligned", Value: 4</p> <p>Label: "3 – Aligned", Value: 3</p> <p>Label: "2 – Somewhat Aligned", Value: 2</p> <p>Label: "1 – Not Compliant", Value: 1</p>	<p>5 – Exemplary: A model that demonstrates the architectural direction; implementation of all design principles; uses all standardized platforms, infrastructure, and vendors.</p> <p>3 – Aligned: Compatible with most current practices, principles and standards (or work is under way that will render it so); waivers or rationale for non-compliance are documented and justifiable.</p> <p>1 – Not Compliant: Incompatible with current practices, principles and standards without reasonable justification (and lacking intention of increasing alignment)</p>

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
TE-02	Extensibility	How easily does the application adapt to changes and extend to meet new requirements?	<p>Please consider the degree to which changes are easily and responsively made to design, construction, integration and implementation of the application including:</p> <ul style="list-style-type: none"> <li>• Addition of business functionality.</li> <li>• Addition, deletion or modification of interfaces and integration to/from other applications.</li> <li>• Adaptation to infrastructure changes.</li> <li>• Collaborative interaction with external applications or services.</li> <li>• Evolution to new development languages and methods.</li> </ul>	<p>RADIO BUTTONS:</p> <p>Label: "5 – Model-Driven", Value: 5</p> <p>Label: "4 – Very Configurable", Value: 4</p> <p>Label: "3 – Configurable", Value: 3</p> <p>Label: "2 – Somewhat Configurable", Value: 2</p> <p>Label: "1 – Programmatic", Value: 1</p>	<p>5 - Model-Driven – Graphical, drag-n-drop technical adaptation and functional extensibility. Marginal effort needed to achieve additional capability and to sustain application relevancy.</p> <p>3 – Configurable: Configurations enable responsive to most functional enhancements; technologies are reasonably adaptive with the exception of known core dependencies; extensibility is achieved through configuration and additional modules.</p> <p>1 – Programmatic: Difficult and costly to extend functionality to any degree without significant modernization, programming, and database changes; technologies are unchangeable without significant investments;</p>
TE-03	Scalability	How easily does the application scale to	Please consider the degree to which the application	RADIO BUTTONS:	5 - Elastic – On demand technical scalability and

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
		deliver additional capacity?	responds to additional demand including growth in the number of users, usage, and data volume.	Label: "5 – Elastic", Value: 5  Label: "4 – Very Scalable", Value: 4  Label: "3 – Scalable", Value: 3  Label: "2 – Somewhat Scalable", Value: 2  Label: "1 – Rigid", Value: 1	capacity. Marginal effort needed to achieve growth and sustain application relevancy.  3 – Scalable: Responsive to most demand growth. Technologies are reasonably adaptive with the exception of known core dependencies; increases in scale and capacity are achievable, but not without advanced planning and investment.  1 – Rigid: Difficult and costly to scale to any degree; technologies are unchangeable without significant modernization investments; increases in scale and capacity are unachievable without significant changes to software and hardware.
TE-04	Integration	How easily does the application integrate data and processes?	Please consider the efficiency of both data (e.g., batch, ETL) and process (e.g., real-time, Web Services) integrations; the ease with	RADIO BUTTONS:  Label: "5 – Orchestrated", Value: 5	5 – Orchestrated: Business processes and data are choreographed through an enterprise service bus or integration hub without

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
			<p>which integration can be changed to reflect changing business processes; the degree to which data translations, technology adapters, and interfaces are hard-coded within the application or abstracted into integration hubs.</p>	<p>Label: "4 – Automated", Value: 4</p> <p>Label: "3 – Sufficient", Value: 3</p> <p>Label: "2 – Manual", Value: 2</p> <p>Label: "1 – Disconnected", Value: 1</p>	<p>manual intervention; interfaces adhere to standards for simplicity; connectors are adapted for modularity and efficient change; data translations are mapped for configurability.</p> <p>3 – Sufficient: Critical business processes are integrated with automated workflows; point-to-point integration is the primary integration mechanism; ancillary business processes require some manual rekeying (export/import); data are generally updated in real-time, but some delayed batch and/or manual updates exist.</p> <p>1 – Disconnected: Applications are siloed and compartmentalized; substantial manual data entry and re-keying with minimal integration; data updates are largely batch and constrain process efficiencies; data requires substantial, mostly</p>

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
					manual translation to adapt with other applications
TE-05	Security	How robust are the security controls for the application?	Please consider integration with enterprise identity management databases including integration with single sign-on; enforcement of required credentials across all user and system roles; adherence to role-based access control or other regulated authorization; the use of penetration, injection, and other dynamic/static security tests.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Optimized", Value: 5</p> <p>Label: "4 – Strong", Value: 4</p> <p>Label: "3 – Sufficient", Value: 3</p> <p>Label: "2 – Vulnerable", Value: 2</p> <p>Label: "1 – Exposed", Value: 1</p>	<p>5 – Optimized: Participates in enterprise identity management; enforces all credential requirements and policies; properly implements role-based access control; passes all security tests; actively logs and monitors activity with event-based notifications</p> <p>3 – Sufficient: Contains an internal identity database that adheres to enterprise identity policies; requires strong passwords, but does not support more secure credentials; maintains good access control and separation of data; passes most security tests with known and tracked vulnerabilities, logs critical activity</p> <p>1 – Exposed: Does not enforce any enterprise security controls; data is accessible and visible to anyone; fails most security tests or is consistently found in violation; no activity logging or monitoring.</p>

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
TE-06	Recovery	What assurances are in place to recover the application in the event of a disruption or disaster?	Please consider redundancy in hardware and software platforms, physical locations of data centers, frequency and comprehensiveness of replication, global and local failover, specificity of recovery time and point objectives, and the frequency and success of disaster recovery exercises.	<p>RADIO BUTTONS:</p> <p>Label: "5 – Full", Value: 5</p> <p>Label: "4 – Most", Value: 4</p> <p>Label: "3 – Sufficient", Value: 3</p> <p>Label: "2 – Insufficient", Value: 2</p> <p>Label: "1 – None", Value: 1</p>	<p>5 – Full: Business continuity is fully implemented including physically separate, redundant environments, replication, and clustering/grid failover as necessary; disaster recovery exercises consistently meet or exceed recovery time and point objectives</p> <p>3 – Sufficient: Impacts of data loss are generally understood; some redundancy exists for critical processes and data, but most loss is acceptable or recoverable given time; disaster recovery exercises are conducted periodically with known and acceptable deficiencies</p> <p>1 – None: Impacts of loss are not understood; no redundancy or recoverability; in the event of a disaster, all assets are lost.</p>



Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
TE-07	Analytics	What type of analytics is performed with the application?	Please consider the primary usage of information from the application	<p>RADIO BUTTONS:</p> <p>Label: "Describing", Value: 1</p> <p>Label: "Planning", Value: 2</p> <p>Label: "Predicting", Value: 3</p>	<p>Describing: Primarily operational and historical reports that describe past events</p> <p>Planning: Primarily operational and business activity events that assist with future planning and budgeting</p> <p>Predicting: Primarily scenario-based data mining and analysis that identify trends and potential behaviors</p>
TE-08	Users	Is the number of users for the application less than 50?		<p>RADIO BUTTONS:</p> <p>Label: "Yes", Value: 0</p> <p>Label: "No", Value: 1</p>	
TE-09	Specialization	Do the application require specialized skills or unique expertise to maintain?		<p>RADIO BUTTONS:</p> <p>Label: "Yes", Value: 0</p> <p>Label: "No", Value: 1</p>	

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
TE-10	Security	Please identify which (if any) of these security risks are applicable.	It is expected per TAC 202 requirements, that agencies have assessed the security posture of their software and hardware environments. As a result of these reviews, agencies should have identified various security risks exposed by any system in their environment.	<p>CHECK BOXES (select one or several):</p> <ul style="list-style-type: none"> <li>• Software security fixes are no longer available from the manufacturer, or cannot be applied due to compatibility constraints in the current environment.</li> <li>• Software lacks support for encrypted transport.</li> <li>• Lack of effective modern Authentication, Authorization and Accounting (AAA) mechanisms.</li> <li>• Forced to use old security protocols or configurations within the security infrastructure; which introduces legacy risks to new systems.</li> </ul>	

Technical Question Number	Indicator	Question	Question Explanation	Response	Response Explanation
				<ul style="list-style-type: none"> <li>• Hardware is easily impacted by Denial of Service (DoS) attacks due to limited performance.</li> <li>• Hardware is unable to support the necessary modern secure software systems.</li> <li>• None</li> </ul>	

## Acronym List

**APM** | Application Portfolio Management

**COTS** | commercial off-the-shelf

**DIR** | Department of Information Resources

**IRDR** | Information Resources Deployment Review

**IRM** | Information Resources Manager

**LAR** | Legislative Appropriations Request

**PCLS** | Prioritized Cybersecurity and Legacy Systems

**SPECTRIM** | Statewide Portal for Enterprise Cybersecurity Threat, Risk, and Incident Management

## Glossary

### APM Coordinator

The person at the agency organizing the SPECTRIM APM assessment of the business application by assigning assessors and reviewers.

### Assessment

A collection of indicators (questions and ratings) for each business application to be filled out by respondents.

### Assessor

A person who rates each business application by completing a questionnaire.

### Business Application

The high-level label used by an agency to easily identify a group of functions provided by one or more systems to accomplish the specific business needs of the agency. A business application is typically a combination of integrated hardware and software (including data and applications), internally developed custom systems, commercial off the shelf (COTS) applications, and customized third-party systems. For the purposes of APM assessments, business applications are a subset of applications.

### IRDR

A self-assessment tool designed to reveal an agency's technological strengths and weaknesses. Results are valuable because they can serve as the catalyst for a discussion among an agency's Information Resources Manager (IRM), business areas, and leadership.

### Reviewer

The person who reviews each assessment section performed by assessors.