# Information Technology Business Analysis Process Consulting Engagement

**Audit Plan Code: 22-12**

ASSURANCE • INSIGHT • OBJECTIVITY

## Final Report

**January 14, 2022**

Internal Audit partnered with Information Technology (IT) in their efforts to develop and establish a business analysis process to improve strategic planning before acquiring IT contracted goods and services.

EL PASO INDEPENDENT SCHOOL DISTRICT
INTERNAL AUDIT

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## Consulting Engagement Report



## Abbreviations

| | |
|---|---|
| CIO | Chief Information Officer |
| IT | Information Technology |
| PMI | Project Management Institute |

# Consulting Report

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## Background

In fiscal year 2020-2021, Internal Audit performed an audit (project code 21-05.01) of Information Technology (IT) to determine if contracted services with a cost of $25,000 or more and recorded in IT's Miscellaneous Contracted Services account were strategically acquired. The objective of that audit was to determine if documentation existed that could (i) identify the need, (ii) justify the purchase, (iii) support alignment to District goal(s), and (iv) show whether appropriate stakeholder input was elicited and obtained.

One of the recommendations from that audit stated the "Chief Information Officer (CIO) consult with IT division leads to develop and establish a centralized formal business analysis for contracted services…" The CIO agreed with the stated recommendation and created a corrective action activity to develop an IT business analysis process for implementation in fiscal year 2021-2022.

Internal Audit offered to provide consulting services and partner with IT to develop a formal business analysis to improve IT's strategic planning before acquiring contracted goods and services. The CIO agreed to the consulting engagement. A consulting engagement project was approved by the Board under Audit Plan project code 22-12.

The purpose of our consulting engagements is to add value by providing both verbal and written recommendations based on discussions with management, best practices, and our knowledge and understanding of internal controls.

## Objective and Scope

The objective of this consulting engagement was to collaborate with IT in their efforts to develop a formal business analysis process. This process aims to (i) improve strategic planning before acquiring IT contracted goods and services and (ii) document the process to a degree expected of a public sector entity. The process would be based on the guide to business analysis model prescribed by the Project Management Institute (PMI) as agreed with the CIO. This model is generally accepted as a global standard regardless of industry and can be tailored to the environment of any organization.

The scope included providing assistance and guidance in addressing four (4) of the six (6) knowledge areas of business analysis prescribed by the PMI. These four knowledge areas are:

1. Needs assessment
2. Analysis
3. Elicitation
4. Stakeholder engagement

The CIO decided to address the remaining areas (5) traceability and monitoring, and (6) solution evaluation in subsequent development efforts. The expectation is that users will become more acquainted with the business analysis process after initial use and be in a better position to give input into the development of the remaining areas.

## Methodology

To achieve our objectives, we:

- Met with the CIO to understand expectations, adjust the objectives and scope accordingly and select which business analysis model and best practices to follow.
- Researched global business analysis models and best practices published by the Project Management Institute (PMI).
- Met with IT's contract initiators/sponsors to discuss and collect input for the development of the needs assessment, and analysis process.
- Reviewed applicable IT, Procurement, and Budget & External Financial Management manual sections.
- Reviewed IT's needs assessment form and related documentation.
- Reviewed IT's analysis form and related documentation.

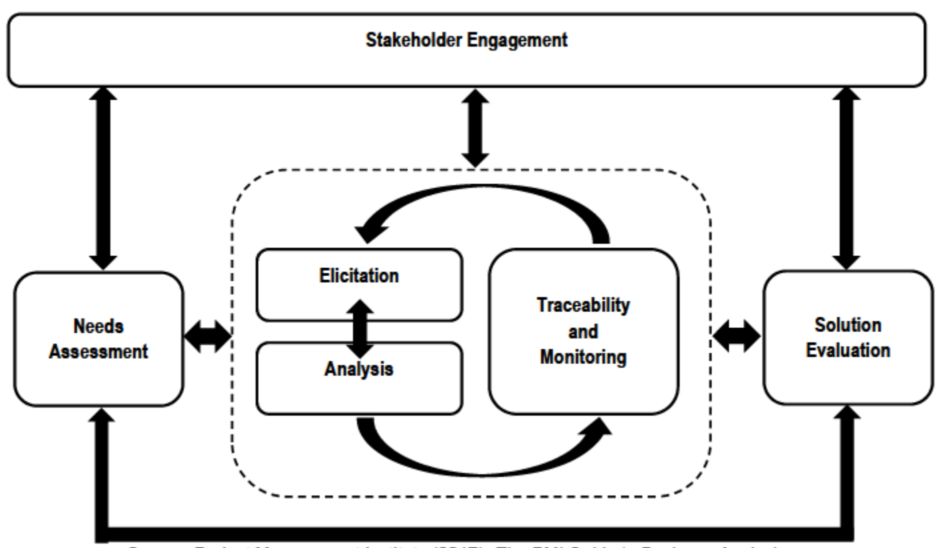
We would like to acknowledge and thank the CIO and her staff for their cooperation and feedback during the consulting engagement. Internal Audit appreciates the work IT performs on behalf of the District, its students, and staff.

## Results

<u>Business Analysis Model</u>

The business analysis model prescribed by the PMI contains six knowledge areas that combined make up a comprehensive business analysis process. **Figure 1** shows these areas and how they interact with each other. Internal Audit assisted IT in their development of four (4) of the six (6) knowledge areas mentioned in the scope section.

**Figure 1.**
**The six knowledge areas of a Business Analysis Model**




Source: Project Management Institute (2017). *The PMI Guide to Business Analysis*

Needs Assessment and Stakeholder Engagement Development

The PMI divides the needs assessment knowledge area into seven (7) key concepts. These seven concepts are the basis for the sections in the newly developed **Needs Assessment** form (Form 101A; See **Exhibit A**). **Figure 2** shows the seven key concepts of a needs assessment along with stakeholder engagement and how they align to the sections in the new IT Needs Assessment form.

Internal Audit collaborated with IT Leadership and staff to develop the questions under each section to ensure they would address the seven key concepts and prompt stakeholders to methodically document the need. To address stakeholder engagement, *Section 7: Stakeholder Identification* was developed and incorporated into the same form. This section contains 11 possible stakeholder roles to ensure clear identification of all those involved in the acquisition of contracted services. In addition, to aid in eliciting communication and information among stakeholders, this section requires the signature of the key stakeholders involved before proceeding to the next planning step.

**Figure 2.**
**7 Key Concepts for a Needs Assessment with alignment to Form 101A**

| Model Key Concept prescribed by PMI | Needs Assessment (Form 101A) |
|---|---|
| 1. Identify Problem or Opportunity | Section 1: Identify the need or opportunity |
| 2. Assess current state | Section 2: What are the current conditions? |
| 3. Determine Future State | Section 3: What are the expectations? |
| 4. Viable Options and Recommendation | Section 4: What are the options? Provide a recommendation. |
| 5. Roadmap Development<br>6. Assemble business case<br>7. Support Charter Development | Section 5: How will it align to District or department strategy, goals, and objectives?<br>Section 6: Project Charter<br>Section 7: Stakeholder Identification |

Analysis Development

The PMI divides the analysis knowledge area into nine (9) key concepts. These nine (9) key concepts are the basis for the sections in the newly developed **Analysis** form (Form 101B; See **Exhibit B**). **Figure 3** shows the nine key concepts with general alignment to the Needs Assessment and Analysis forms.

Internal Audit collaborated with IT Leadership and staff to develop questions that would prompt stakeholders to analyze and examine related information in sufficient detail and provide evidence for the needs assessment. Two examples are explained below:

- *Section 2: Duplication of Resource Analysis*, was developed to ensure contract initiators perform an analysis to prevent unnecessary overlapping of services and prompt identification of current goods/services that are no longer effective or not needed.
- *Section 3: Research* was developed to prompt the contract initiator to choose from the 15 research/analysis model options available that can best document their research.

**Figure 3.**
**9 Key Concepts of Analysis with alignment to Forms 101A and 101B**

| Model Key Concept prescribed by PMI | Needs Assessment (Form 101A) | Analysis (Form 101B) |
|---|---|---|
| 1. Determine Analysis Approach | No reference in NA | S3: Research |
| 2. Create and Analyze Models | No reference in NA | S3: Research |
| 3. Define and Elaborate Requirements | S3: What are the expectations? | S1 Service and Impact Analysis |
| 4. Define Acceptance Criteria | S3: What are the expectations? | S1: Service and Impact Analysis, S3: Research |
| 5. Verify Requirements | S3: What are the expectations?<br>S4: What are the options? | S3: Research |
| 6. Validate Requirements | S3: What are the expectations?<br>S4: What are the options? | S3: Research |
| 7. Prioritize Requirements and Other Product Information | S4: What are the options?<br>S5: How will it align to District/Dept. strategy, goals, and objectives? | S2: Duplication of Resource Analysis, S3: Research |
| 8. Identify and Analyze Product Risks | S6: Project Charter | S1: Service and Impact Analysis, S3: Research |
| 9. Assess Product Design Options | S4: What are the options? | S3: Research |

S = Section  NA = Needs Assessment

As a result of this consulting engagement, IT developed and established a foundational business analysis process which consists of two forms (101A and 101B) and related procedural documentation. The IT staff achieved consensus as to the structure and purpose of both forms and they were approved by the Chief Information Officer (CIO) on December 9, 2021. Users of this newly developed business analysis process will be trained by IT Leadership before full implementation. After training, the new business analysis process is expected to become part of IT's strategic planning activities for acquiring IT's Miscellaneous Contracted Services in Quarter 3 of the 2021-2022 fiscal year.

# Recommendation

As this was an agreed-upon consulting engagement, a corrective action plan (CAP) is not required by the Institute of Internal Auditors' Standards. However, in addition to the collaborative work performed explained in this report, Internal Audit is providing one additional recommendation. The recommendation aligns with one of IT's responsibilities to make "… operational decisions that are conducted in a transparent, fair, ethical and open manner…." The implementation and timeline of this recommendation are left to the CIO's determination. No follow-up review by Internal Audit is scheduled at this time.

**1** We recommend IT Leadership continues to build and adjust the IT business analysis process as familiarity with the process increases among users. The CIO should also lead the efforts to enhance related standard operating procedures with feedback from contract initiators. The overall goal should be to develop a mature business analysis process that includes all knowledge areas as prescribed by the PMI and/or other industry-leading best practices and is used as a knowledge base for strategic planning and decision making. When adjustments are necessary, the CIO should be aware not to remove/edit foundational business analysis elements rendering them inefficient, ineffective, or negatively impacting the overall business analysis process for internal and external stakeholders.

**Exhibit A**

EL PASO INDEPENDENT
SCHOOL DISTRICT

*Information Technology*

# Business Analysis Process
## Needs Assessment

| Form **101A** | **Contract Initiator's Name, Title, and Location**<br>Click or tap here to enter text | **Business Analysis Level**<br>Select a Level | **Needs Assessment ID** | | | Analysis ID |
|---|---|---|---|---|---|---|
| | | **Funding Request Number** | **FY** | **Sub Object Code** | **Created on** | yy.###.mmddyy |
| | | ######## | yy | ### | mmddyy | |

**PURPOSE:** A needs assessment is the first step in a comprehensive business analysis process. It aims to (i) document and analyze a current department/District problem or opportunity, (ii) analyze current and future states, (iii) determine an optimal solution that will provide value and address the need, and (iv) assemble the results of the analysis to provide decision-makers with relevant information for determining whether an investment in the proposed good(s)/service(s) is viable.

**INSTRUCTIONS:** This assessment is to be: (1) completed and signed by the contract initiator (2) reviewed and signed by the contract sponsor (3) signed by the appropriate stakeholders in Section 7 and (4) routed to the Procurement and Budget departments. The contract initiator may find it helpful to refer to the "Business Analysis Start Guide" to get a high-level view of the process and meet the need in a timely manner.

## SECTION 1: IDENTIFY THE NEED OR OPPORTUNITY

1.1 Specify what is prompting the need for the acquisition of the good(s)/service(s):
Click or tap here to enter text.

1.2 Describe the effects and/or impact the identified need (described in Q1.1) is having on district or department operations/goals?
Click or tap here to enter text.

1.3 Describe the good(s)/service(s) being proposed.
Click or tap here to enter text.

## SECTION 2: WHAT ARE THE CURRENT CONDITIONS?

2.1 Describe the current business processes in place that addresses the need described in Q1.1.
Click or tap here to enter text.

2.2 Describe the existing business services in place that address the identified need.
Click or tap here to enter text.

2.3 Describe the existing infrastructure in place that supports the identified need.
Click or tap here to enter text.

2.4 Describe the current state relative to best practice(s) or standard(s).
Click or tap here to enter text.

2.5 What are the underlying root causes/reasons that are creating the identified need.
Click or tap here to enter text.

## SECTION 3: WHAT ARE THE EXPECTATIONS?

3.1 What is the expected benefit (value) the good(s)/service(s) will have on District or department operations/goals?
Click or tap here to enter text.

3.2 Describe how the good(s)/service(s) being proposed will satisfy the identified need.
Click or tap here to enter text.

3.3 After stakeholder input, what features or capabilities were considered the most critical to satisfying the need identified?
Click or tap here to enter text.

3.4 What additional support is required to ensure this service/solution operates as intended in the first year of implementation? (For example, more funding, equipment, staff, training, etc.,).
Click or tap here to enter text.

3.5 If approved, how many users and/or campuses will be affected by the good(s)/service(s) being proposed?
Click or tap here to enter text.

## SECTION 4: WHAT ARE THE OPTIONS? PROVIDE A RECOMMENDATION.

4.1 What are all the options that are being considered?
Click or tap here to enter text.

4.2 After analysis (Form B), which options remain viable to meet the need?
Click or tap here to enter text.

4.3 If the good(s)/service(s) will **NOT** go out for bid, how well do the options in **Q4.2** address the need? Please rank them in order; based on how well each one meets the need identified.
Click or tap here to enter text.

4.4 Why is option 1 in **Q4.3** the recommended good/service being proposed?
Click or tap here to enter text.

4.5 After analysis and stakeholder input, why were the other good(s)/service(s) **NOT** the top recommendation?
Click or tap here to enter text.

## SECTION 5: HOW WILL IT ALIGN TO DISTRICT/DEPT. STRATEGY, GOALS, AND OBJECTIVES?

This section documents how the proposed good(s)/services will support District or department strategy, goals, and objectives over time. Please specify how the good(s)/services will align with any of the strategies, goals, and objectives using the table below.

| Alignment Number Table | | | |
|---|---|---|---|
| 1 | Federal or State Requirement/Mandate | 6 | Department Goal |
| 2 | Texas Education Agency Mandate | 7 | Mission Statement |
| 3 | Board Goal | 8 | Texas Cybersecurity Framework Goal |
| 4 | District Goal | 9 | |
| 5 | Strategic Goal | 10 | |

Other(s): Click or tap here to enter text.

| Reference | State the Full Description of the Strategy/Goal/Objective | Alignment Number |
|---|---|---|
| | | |
| | | |

Comments: Click or tap here to enter text.

## SECTION 6: PROJECT CHARTER (Form C)

The Project charter establishes the scope boundaries and creates a documented record of the initiation to proceed with implementing the good(s)/service(s). It is used to establish a partnership between the contract owner, contract initiator, and the stakeholders involved by establishing internal agreements within the department/team to ensure the proper delivery of the good(s)/service(s). Refer to the Business Analysis Guide if a Project Charter is required based on the dollar value, size, and complexity of the goods/services being proposed.

| CONTRACT INITIATOR: | Yes | No | Date Completed |
|---|---|---|---|
| 6.1 A Project Charter is required for this Business Analysis<br>*I certify there is an approved, signed, and current Project Charter (Form C):* | ☐ | ☐ | |

## SECTION 7: STAKEHOLDERS IDENTIFICATION

Using the Role/Responsibility table below, please assign each stakeholder the number that most identifies their role or responsibility. At a minimum, employees with role numbers 1, 2, 3, 5, 7, and 8 should be identified.

**Index - Role or Responsibility Number Table**

| | | | |
|---|---|---|---|
| 1 | Contract Sponsor; provide financial support. Also known as the budget authority. | 7 | Will be consulted |
| 2 | Contract Initiator; responsible for the delivery of good(s)/service(s). | 8 | Will be informed |
| 3 | Job Role and/or job duty activities may change due to the good(s)/service(s). | 9 | Will regulate or constraint |
| 4 | Will indirectly benefit from the good(s)/service(s) | 10 | Will directly benefit from the good(s)/service(s) |
| 5 | Will need to be involved during the entire delivery of the good(s)/service(s). | 11 | Overrides top recommendation (include his/her justification in the comments area and signature in Section 8). |
| 6 | Will implement the good(s)/service(s) | 12 | |

**Comments:** Click or tap here to enter text.

| Employee's Name (enter n/a if it's a group name) | Group Name (i.e., All Students, All Staff, High Schools, etc.,) | Title and Department | Role or Responsibility Assigned |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## SECTION 8: APPROVALS AND ACKNOWLEDGMENTS

The following employees acknowledge their roles and responsibilities by their signatures below. At a minimum, employees identified with role numbers 1, 2, 5, 7, and 8 should sign.

| Role | Employee Name | Title and Department | Signature | Date |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

### 8.1 - For Contract Initiator Only

I certify below that all information in this needs assessment is an objective view of the best documentary and information available from stakeholders to provide a basis for drawing reasonable conclusions.

| Employee's Name | Title | Signature | Date |
|---|---|---|---|
| | | | |

### 8.2 For Procurement Staff Use Only

To meet Procurement Services Manual procedure 13.3, the following employee confirms the Contract sponsor (Role 1) and Contract initiator (Role 2) have signed this assessment as part of the business analysis process.

| Employee's Name | Title | Initials or Signature | Date |
|---|---|---|---|
| | | | |

### 8.3 For Budget & External Financial Management (BEFM) Staff Use Only

To meet BEFM Manual procedure 9.11, the following BEFM employee confirms the Contract sponsor (Role 1) and Contract initiator (Role 2) have presented a completed and signed needs assessment as part of the business analysis process.

| Employee's Name | Title | Initials or Signature | Date |
|---|---|---|---|
| | | | |

**Exhibit B**

EL PASO INDEPENDENT SCHOOL DISTRICT

# Business Analysis Process
## Analysis

*Information Technology*

| Form 101B | Contract Initiator's Name, Title, and Location | Business Analysis Level | Analysis ID | | | Needs Assessment ID |
|---|---|---|---|---|---|---|
| | Click or tap here to enter text. | Select a Level | FY | Sub Object Code | Created on | yy.###.mmddyy |
| | | | yy | ### | mmddyy | |

**PURPOSE:** The purpose of the analysis is beyond analyzing, modeling, and documenting good(s)/service(s) information. The analysis supports the needs assessment by ensuring that it is correct, conforms to standards, can be traced to goals, has inherent risks identified, and can be turned into a viable service or solution to a need.

**INSTRUCTIONS:** This analysis is to be: (1) completed and signed by the contract initiator (2) reviewed and signed by the contract sponsor (3) and kept by the contract initiator for internal/stakeholder review/reference as necessary.

## SECTION 1: SERVICE AND IMPACT ANALYSIS

1.1 If the contract initiator is IT (skip otherwise), what IT service area(s) or division(s) are being serviced by the proposed goods/services? Select all that apply:

Security ☐ Support ☐ Applications ☐ Operations ☐
Other: Click or tap here to enter text.

1.2 What general impact is expected from the proposed goods/services? *Select all that apply and describe in the comments section if necessary.*

| Options Available | | | |
|---|---|---|---|
| 1 | ☐ To replace a current District function/process/method | 6 | ☐ To maintain District-wide mission-critical system(s) |
| 2 | ☐ To improve a current District function/process/method | 7 | ☐ To meet specific IT department need |
| 3 | ☐ Introduce a different method for an existing District function/process/method | 8 | ☐ To meet specific non-IT department need |
| 4 | ☐ To maintain the current level of service (no competitive edge) | 9 | ☐ To support District Initiative(s) (PowerUp, etc.,) |
| 5 | ☐ To improve the current level of service (improve competitive edge) | 10 | ☐ |

Comments: Click or tap here to enter text.

1.3 What is the impact to District operations if this particular good/service is NOT approved?

Low ☐ Medium ☐ High ☐ Critical ☐
Other: Click or tap here to enter text.

1.4 What are the reasons for the impact rating in Q1.3?
Click or tap here to enter text.

1.5 What data and/or metrics will be used to measure success and/or improvement?
Click or tap here to enter text.

1.6 What actually has to improve and by how much?
Click or tap here to enter text.

1.7 Are the risks fully understood, reasonable and manageable?
Click or tap here to enter text.

## SECTION 2: DUPLICATION OF RESOURCES ANALYSIS

2.1 What existing capabilities (such as infrastructure, business process, or efforts) are in place now to ensure the proposed good(s)/service(s) operate as intended?
Click or tap here to enter text.

2.2 What other good(s)/service(s) are currently in place that are similar to the new good(s)/service(s) being proposed?
Click or tap here to enter text.

2.3 Do the proposed good(s)/service(s) being analyzed overlap any of the current goods/services listed in Q2.2? If YES, what is being done to avoid excessive/redundancy of good(s)/service(s)?
Click or tap here to enter text.

## SECTION 3: RESEARCH

3.1 What type of research, models, or analysis were conducted as part of the business analysis process?
Select all that apply and please describe the results in the comments section

| Options Available | | | | | |
|---|---|---|---|---|---|
| 1 | ☐ Business Impact Analysis | 6 | ☐ Product Comparison Analysis | 11 | ☐ Sustainability Plan (focus is on long-term) |
| 2 | ☐ Competitor Analysis | 7 | ☐ Proof of Concept | 12 | ☐ SWOT Analysis |
| 3 | ☐ Cost-Benefit Ratio Analysis | 8 | ☐ Risk Analysis | 13 | ☐ Usability Evaluation |
| 4 | ☐ Duplication Analysis | 9 | ☐ Root Cause Analysis | 14 | ☐ Usage Reports |
| 5 | ☐ Pilot | 10 | ☐ Security Assessment | 15 | ☐ User Testing |

Comments: Click or tap here to enter text.

3.2 List all of the data gathered and analyzed to support the business analysis being performed.

| Data Analyzed | Data Source | Date |
|---|---|---|
| | | |
| | | |
| | | |

3.3 Based on Q3.2, what information was analyzed with stakeholders holding Role 3 (directly benefits) and Role 6 (job duties may change). Note: All Roles are identified in "Section 7: Stakeholder Identification" in Form 101A – Needs Assessment.
Click or tap here to enter text.

3.4 How was data elicited and gathered to perform the analysis?
Select all that apply and please describe the results in the comments section.

| Options Available | | | | | |
|---|---|---|---|---|---|
| 1 | ☐ External reports (not EPISD) | 6 | ☐ Meetings and/or workshops | 11 | ☐ |
| 2 | ☐ Information from vendor website | 7 | ☐ Observation | 12 | ☐ |
| 3 | ☐ Information provided by the vendor | 8 | ☐ Prototype | 13 | ☐ |
| 4 | ☐ Internal reports (EPISD) | 9 | ☐ Questionnaires | 14 | ☐ |
| 5 | ☐ Internet Search | 10 | ☐ Surveys | 15 | ☐ |

Comments: Click or tap here to enter text.

3.5 What conclusions were drawn from the research and analysis performed?
Click or tap here to enter text.

## SECTION 4: APPROVALS AND ACKNOWLEDGEMENTS

### 4.1 - For Contract Initiator Only

**I certify the analysis examined key data and documented the process in sufficient detail to ensure that it reflects the stakeholders' needs and information available from stakeholders to provide a basis for drawing reasonable conclusions. Unless otherwise stated, the data used is creditable, complete, accurate, and reliable.**

| Employee's Name | Title | Signature | Date |
|---|---|---|---|
| | | | |

### 4.2 - For Contract Sponsor Only

**I certify the analysis performed by the contract initiator appears to be sufficient to provide a basis for drawing reasonable conclusions.**

| Employee's Name | Title | Signature | Date |
|---|---|---|---|
| | | | |

EL PASO INDEPENDENT SCHOOL DISTRICT



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