IT Project Management
✓ A PMO Health-Check
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BACKGROUND

The District’s Internal Audit plan for 2015-2016 included an audit of the Project Management Office (PMO) – to conduct an operational audit of the projects function and portfolio in light of current major strategic projects such as digital curriculum and the student information system.

The Project Management (PM) function was previously established as an Enterprise Project Office (EPO) within the Information, Communication & Technology Services (ICTS) department – to provide “…program, project, and portfolio management, data governance and management, quality assurance, business process mapping standards, and organizational change management services to ensure the successful delivery of large, complex district-wide ICTS initiatives.” It was later renamed as the Project Management Office (PMO) to align with industry functional-role naming standards; and will be referred as such in this report.

The mandate of the PMO is to provide overarching project management and implementation accountability within project cycles and to facilitate improvements to the governance and control objectives of all technology-related enterprise projects in ensuring effective and efficient value delivery.

The PMO’s mandate is delivered by approximately seven (7) FTE employees located within the ICTS department. Its organizational structure (cf. figure 1) consists of three main roles: three (3) Project Managers, one (1) Organizational Change Manager and two (2) Quality Assurance Managers (QAM). A Director of Enterprise Projects is responsible for these roles with oversight by the ICTS-CIO and COO in that order. As supplementary resources, a number of external consultants and the ICTS staff are also engaged in scores of projects to expand and improve support for OCPS’s core business activities, in addition to providing day-to-day operation and support of technology services and products.

![Project Management Office Organization Chart](image_url)

Figure 1 - Project Management Office Organization Chart
OBJECTIVES, SCOPE & METHODOLOGY

OBJECTIVES

The objectives of this audit to support and enhance the PMO’s value delivery were:

- To evaluate the PMO’s alignment with recognized Project Management and Quality Standards and determine whether it is effectively /efficiently maintaining the base PM processes to minimize risk of project failures;
- To verify the existence /implementation of project management methodologies to assess effectiveness in support of the full range of technology-related projects; and
- To ensure the project implementation groups are complying with procedures as documented in OCPS’ approved Project Governance Framework*.

* We were informed at the beginning of this audit that ICTS had a project governance framework and we planned to test against that. However, as more fully discussed in Finding #2, we subsequently learned that no such framework has been approved and adopted.

SCOPE

This was not an audit of individual projects. The scope of the assurance engagement was expressed as a function of the five base process groups, within the context of the following project cycle processes and management areas:

- Project cycles processes: Initiation, planning, implementing /execution, control and closure
- Management areas: integration, scoping, timing, costing, quality, resources, communication, risk and procurement

This is a basic PM reference that identifies better practices for process effectiveness.

This auditing process also addressed the internal operations of the PMO and its coordination with other external partners, i.e. Executive Steering Team (EST) and other divisions/departments in the District.

METHODOLOGY

This audit was conducted in accordance with the International Professional Practices Framework (IPPF) - a conceptual framework promulgated by the Institute of Internal Auditors that organizes authoritative guidance.

We compared the PMO’s operations against several established industry standards, namely:
• ISO Guidance on Project Management
• The Project Management Institute’s (PMI) Project Management Body of Knowledge (PMBOK)
• ISACA’s Control Objectives for Information and Related Technology (COBIT) Framework, including applicable contributing procedures
• Relevant guidelines and better/leading practices

Internal Auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization’s operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

We are required to note any material deficiencies in accordance with Florida Statutes, School Board Policy and sound business practices. We also offer suggestions to improve controls or operational efficiency and effectiveness.

We used the above-mentioned Standards and Guidelines to review the PMO’s project activities in order to ensure reasonable application of better practices and compliance to these guidelines. For instance, we reviewed all project documentation to ensure that the processes of:

• Managing each project is clear and well documented
• Creating and maintaining the team is documented
• Managing change on the project is apparent and documented
• Managing risk is continuous, is documented and followed
• Reviewing task completion is documented and followed
• Reviewing the budget is documented and followed
• Closing and evaluating the project is documented and followed
FINDINGS & RECOMMENDATIONS

This was a process-driven audit and was performed using the ISO, ISACA & PMI frameworks as references and guidance for identifying the gaps in the existing project implementation cycles. This approach ensures that the PMO is effectively and efficiently providing project implementation controls for the District, and that it is providing the appropriate enabling environment for projects.

The district has adopted an IT Governance Framework. We reviewed the processes carried out by the PMO during individual project cycles applying requirements stipulated in the ITG Framework alongside the ISO, PMI & ISACA globally-recognized standards as functional guides. The ITG Framework contains limited details on project governance. It describes an overall process, but lacks the specific procedures that would direct staff in implementing the process from a project management standpoint. Those specifics would be expected to be in a separate, supplemental framework focusing specifically on the operations of the PMO and its projects implementation cycles. Please see finding #2 for more information.

Our assessment was also based on role-based interviews with PMO personnel and a review of the District’s technology-related projects universe as of November 19, 2015. The projects at that time numbered 17 as noted in the PMO’s centralized library on its SharePoint Collaboration Platform and as depicted in Figure 2 below. Some of these projects are “portfolio” projects and some are “tactical” projects. The Director of the PMO indicated that portfolio projects are full scope projects managed by her team while tactical projects are those where the PMO has a more limited role. Our review of the PM processes centered on the five key processes noted in the scope section of this report and depicted in Table 1 in the appendix to this report. The accomplishment of each process is represented by specific primary outputs within the management areas previously mentioned.

![Figure 2 - Projects Universe as captured on PMO Collaboration Site (as of November 19th 2015)](image-url)
**Project Governance**

The areas that were observed/reviewed under project governance were the PMO’s projects portfolio road map in reference to governance, escalation, change management and utilization/effectiveness of the PMO tracking tool (i.e. through SharePoint). We also determined whether the project teams have been tracking their projects through this tool.

**Finding #1: Inadequate records of Executive Steering Team (EST) meetings – Significant Risk**

Good quality, complete, records are a critical part of a transparent and accountable process. According to the ITG Framework, the EST’s role is to “... provide sponsorship and execution oversight as an initiative is defined, considered, approved, delivered and verified to have met the District’s needs.”; and “... track the progress of initiatives and resolve issues and risks as they are escalated for their consideration.” Furthermore, (under “Specific Responsibilities” – the ESTs are required to “... meet on a regular basis (not less than once a month).”

However, although the frequency (from the baseline schedule) is dependent on project portfolio factors, our request for EST minutes to validate the occurrence of such meetings revealed that they were either not held as consistently required – i.e. at least monthly; or they were held without recording of minutes.

The Business-side EST did not consistently record minutes of their meetings - we received only two sets of minutes for 2015 (August and December) and one in 2016 (January). On the other hand, the Instructional EST resource provided adequate details to confirm the occurrence of these meetings with recording consistency in 2015 and 2014.

**RECOMMENDATION #1**: According to the PMO Director, the Business EST has since started the practice of recording minutes – as corroborated by the submission of minutes for December 2015 and January 2016. It is commendable that this has started and we encourage the EST to sustain the practice going forward. This will provide a supporting reference for the PMO (in coordination with the EST) in identifying and prioritizing projects in line with strategic/operational plans.

**Finding #2: No active/dedicated Project Management Framework – High Risk**

The PMO structure is applied in different ways in different organizations; so for a proper assessment, the first point of understanding is the scope/focus of the PMO. Our approach was driven towards developing a clear understanding of what the PMO is meant to be doing in relation to the District. In effect, the PMO’s processes and contributions needed to be verified/validated against a ratified framework - and could be used to determine the discovery of project implementation gaps. For this reason, it was important to know what the PMO is mandated to do and responsible for.

In the course of this engagement, we noted that PMO personnel applied an informal governance approach and structure with no formally-established project governance framework. A review of the PMO library revealed two different draft versions of such a document (i.e. ‘ICTS PMO Project Governance 2015’, and ‘Project Governance for the PMO-5’ – both posted in June 2015). We also noted that those two draft
versions were developed with content from a previous draft document obtained from a former CIO in January 2014.

The COO provided documentation on the establishment of the EST that revealed the existence of a formal IT Governance Framework (‘OCPS ITG Framework v5a’ - rev. 5.1 of May/August 2010). Although this copy contained limited but essential details related to projects governance – the concern here is the absence of a supplementary framework focusing specifically on the operations of the PMO.

As noted earlier in this report, we were initially informed that a Project Governance Framework existed. Further inquiry revealed the draft documents mentioned above and the ITG Framework document just described. We were then informed by the PMO Director that the PMO office considers the Project Management Body of Knowledge (PMBOK) to be its Project Management Framework. PMBOK is a set of guidelines /standards which project managers should consider in adopting their own organization’s PMO practices. It is not fully applicable to all types of projects and/or organizations. Following PMBOK guidelines still requires that an OCPS framework be developed and adopted to document how OCPS will implement those guidelines.

Despite the existence of an informal framework, it was challenging to assess and provide an opinion on the PMO’s effectiveness (i.e. if it is working as designed) against no formally-documented and approved processes.

Formally-documented processes would outline the specifics of OCPS’ PMO mandate, with goals and objectives that serve as fulfillment of the mandate, management’s agreement /assessment of the PMO’s value in fulfilling this mandate, specifics of the project delivery methodology and how well that strategy is working in terms of processes and metrics.

**RECOMMENDATION #2:** The PMO should develop and adopt its own project management procedural framework following the PMBOK guidelines to complement the content introduced in the existing ITG Framework document.

ICTS management should establish a project management framework that defines the scope and boundaries of managing projects, as well as the project management procedures to be adopted and applied to each project undertaken. The methodology should address, at a minimum, procedures related to:

- the allocation of responsibilities
- task breakdown
- budgeting of time and resources
- milestones
- check points
- approvals

The existing draft versions and series of project implementation process diagrams and templates would be good starting points – to consolidate and compile respective EPM, QAM & OCM process details into a formalized governance framework document.
Additionally, since the most recent revision of the ITG Framework document was in August 2010, it will be useful to review it involving all necessary stakeholders to ensure a more current representation of the service roles and responsibilities relevant to the District’s technology projects environment.

Finding #3: Varying PMO Online Presence & Repositories – Low Risk

The ICTS introductory page on the OCPS intranet site (via www.ocps.net) links up to an obviously outdated EPO page (https://www.ocps.net/intranet/op/icts/epo/Pages/default.aspx) with another site (http://collaboration.ocps.net/team/PMO/SitePages/Home.aspx) hosted in an older SharePoint platform. The latter site contains projects-related documentation (mostly 2011-2014).

We noted an ITG site - http://districtcollaboration.ocps.net/team/itgovernance/_layouts/15/start.aspx#/ that holds some project documentation (such as business cases referencing projects reviewed by the EST).

The PMO files do not include all projects, just the portfolio and tactical projects mentioned earlier. There is no single, comprehensive listing of projects.

RECOMMENDATION #3: The PMO should ensure that all outdated information related to its function is removed /replaced with current content. We are aware that the department has moved to a new SharePoint platform. It will be more efficient to maintain a single-source repository and migrate the old libraries to the new site in SharePoint. This would avoid confusion for enterprise information seekers of reference materials, templates, versions, etc.

Finding #4: Inconsistency in project documentation postings on PMO Collaboration Platform – Moderate Risk

Observation of the PMO library revealed a trend of unmethodical postings as follows:

- The entire Library theme creates an impression of posting material without due diligence. For example there is a mix-up of documents in “Project Documentation” folders (e.g. Donor Project), mislabeling of document versions (e.g. Project charter v4 still labelled as v1.0 in the Blackboard Project)
- There is a host of empty folders in individual project libraries - most uniform process folders (supposedly for storing generic PM templates) have no content!
- There is a lack of consistency in documentation (naming + format conventions) within individual project libraries (e.g. some have “Tasks” with content and others none)
- Critical primary input /output process documentation is missing (e.g. EPM, QAM & OCM content)
- We noted a series of unsigned primary input/output process documents – e.g. change requests, risk assessment forms, project charters, etc. (hence, we were unable to validate /determine authorized versions)
- We were unable to determine final versions of documentation as no affirmative statements/signatures were present. For example, the Donor Project contained an MOU with the Foundation for OCPS still posted as draft. Conversely, the City Year project files contained signed charters.
- Signed documents excluded specific approvers' names/designations (e.g. sign-off forms)
- Massive documentation dump with postings listed mostly in June, July and November 2015 (reveals inconsistency in updates/postings of project progression) with very few postings in 2016; thus unable to determine if some files are periodically updated – as a lot of docs were posted same day with no progressive change requests.
- Duplication of folders – with different version postings (e.g. Donor Project Charter files were found under “Initiating Process Group” and some under separate folder “Project Charter”).
- Project dashboards were not consistent with progress status (e.g. info on dashboard not reflected in project plans).
- Stakeholder Meetings have required agenda – but apart from a couple of instances, generally have no recorded minutes of those events – unable to ascertain if those meetings took place!

**RECOMMENDATION #4:** The PMO team should endeavor to adhere to better practices in file management of project documentation to ensure uniformity in postings and ease of reference/navigation. We recommend the PMO adapt a template similar to “Table 1” as depicted in the Appendix of this report to serve as a guide in the organization of project documentation using appropriate filing conventions.

**Project Management Processes**

The areas that were observed/reviewed under this subject were:
- The presence of properly designed processes (at least, as stipulated in the ITG Framework since there is no formal PM governance framework).
- PMO’s culture in following those processes and properly maintaining associated records (e.g. subsidiary plans, change control, corrective actions, etc.).
- Logging details during project cycles with feedback indicating areas of attention (e.g. on entire PM process, project costing, requirements gathering and so forth).

The related findings are categorized according to the process groups and knowledge area/subject groups as recommended under the ‘Appendix – Table 1’ as follows:

**Finding #5: Lack of Salient/Structured Documentation within Project Cycles - Significant Risk**

A review of the PMO central library revealed several instances of missing documentation or requisite content as per process group below:

A. **Initiating Process**
- Business cases have not been developed/posted for some project initiatives.
- Benefits realization models/spend analyses have not been prepared for each project initiative.
- Missing project charters; thus, unable to determine if project requirements had been fully defined and approved.

As noted in the ITG Framework document, the “collection of candidates” process is driven by the submission/review of business cases and spend analyses using provided templates for potential initiatives. So it is important that business cases and related supporting documentation be in the files.
B. Planning Process

- Projects without active project plans or project management plans
- Not all projects have relevant material demonstrating attention to scheduling issues
- Budget /Operating plans have not been developed for each project initiative
- Missing quality approach /plans
- Missing internal /external communication plans (with enterprise project team & stakeholders)

- Project (Management) Plan:
The PMO team should ensure that project plans are always developed and updated in the course of the project cycles. This should list all necessary activities to achieve each deliverable defined, and determine the workload and duration necessary to its realization, taking into account the interdependencies between them.

Since the project plans contain the baselines of the projects, in terms of scope, schedule, resources, risks, work breakdown structure, etc.; this may be supplemented with the inclusion of Project Management Plans – that combine the management plans of the different subject groups /knowledge areas into subsidiary plans (e.g. risk management plan). A commendable PMP sample version was observed under the ‘Human Capital Management” business project.

- Risk Management:
A consistent risk identification and assessment procedure should also be included in the planning process to identify the key risks and lists the actions that will reduce their impact on the project. The project manager-led team should identify potential risks, define risk priority ratios (e.g. likelihood score x impact score), select risks that will be followed, identify activities that will mitigate impact of risks on projects and create activity schedules related to risks mitigation.

On a positive observation, we commend the diligent effort on the risk identification process of the ‘Student Information System’ instructional project; as well as the ‘Human Capital Management’ business project.

- Quality Planning /Management:
The PM and quality assurance team should plan the activities to be undertaken during the project to deal with the control quality and assurance quality, including formal roll-offs and knowledge transfer procedures. Such plan serves as the baseline for quality assurance – to check whether the processes to achieve the quality criteria of the deliverables are met, and to plan the verification required.

In this area, we also commend the exemplary effort on the quality planning process of the ‘Volunteer Management System’ business project.

- Communication Planning /Management:
Lack of effective communication is often at the root of the difficulties encountered during a project. Ensuring effective communications management will entail the regular monitoring of communication activities and should be defined in a separate Communication Plan or section of the Project Management Plan.
This communication involves the EST, the project team, the beneficiary and other stakeholders; and entails specific activities to carry out effective communication (such as: define a list of stakeholders to be informed about project progress, identify type of information to be transmitted to each group of stakeholders and identify methods of communication to be used).

We recommend that the PM team (particularly, associated BPS with OCM) regularly coordinate/prepare the content of each communication action with relevant materials and communicate information to stakeholders according to expected timing.

On another positive note, we commend the equally diligent effort on the communication planning process of the ‘Enterprise Visitor Management System’ and ‘Volunteer Management System’ business projects.

C. Implementing /Executing – (Nothing Significant to Report)

D. Monitoring and Controlling

- Projects lacking required change control processes, recordings of requisite issues/change requests and associated actions
- Cost and trend reports have not been prepared for each project initiative
- Not all projects have funding approval process to support new requests
- Not all projects have existing risk/issue management processes & procedures in place
- Not all projects have clear risk/issue mitigation strategies (e.g. owners assigned to each risk/issue)
- Inconsistent formal quality acceptance approach
- Missing quality metrics or report cards

- Change Control Management:
The PM team should register/log/perform change control throughout the project cycle. The process of change management is very important, as it can control the flow of change requests that usually come from the beneficiary. These requests may involve minor changes but they can also involve major changes that have a significant impact on time and on budget. Keeping a good track of changes will prevent delays in project development and budget overruns.

The PM team should ensure that the process of change control involves (amongst others) – logged receipt of request for change in the agreed format, analysis of the opportunity to support the change request, submittal of the request to the EST when the impact is significant (duration, budget), and modify activities and the action plan accordingly. All such details should be logged for changes on work being undertaken, request for process adaptations, configuration changes, etc. as these are typical deliverables that flow between processes.

- Progress Reporting:
This should be required for all projects and prepared by PM teams on a regular basis. Using appropriate project progress reporting formats would provide a framework for formally assessing status/record of project implementation at any given time. Such formally-documented reporting informs stakeholders on project progress, as well as revising arrangements to ensure proper development of projects (such that decisions proposed for approval have been implemented correctly and documented). This will also promote transparency and accountability in facilitating project audits and evaluations.
Another commendable observation of due diligence fulfilment was noted under the project status reports of the ‘Human Capital Management” business project.

- **Cost Management:**
  On costs control, the PM must perform budget monitoring – and accede to the data or information regarding the project budget utilization (against expenditures). Budget monitoring is an essential aspect of good project management to ensure that obligated funds and expenditures remain within established allocations and the overall project budget. Close follow-up on forecasted versus actual costs is the key to monitoring costs and forecasting any potential deviation from the original budget plans. Project stakeholders should be kept informed through projects financial reports, and substantive deviations from the original budget plans should be reflected in budgetary reviews by the EST.

As insight on the PMO’s projects cost accounting approach, we noted that each PM used excel spreadsheets for compiling project costs. However, these cost spreadsheets are not regularly posted in the relevant project libraries in the PMO collaboration site. It is our recommendation that this is effected for ease of tracking project budgets and expenditures from a central source.

Meanwhile, the PMO has recently engaged a new finance-initiative in applying WBS elements within SAP for the tracking of projects portfolio accounting.

- **Risk Control:**
  The PM team should perform continuous risk control (considering the risks identified during the assessment at the planning stage and issues logged during implementing/executing), and develop a detailed sheet for each of these risks using an approved risk monitoring template, follow up activities related to the mitigation of each risk, and review the risk matrix for updates.

  In relation to the risk management planning observations, we also commend the diligent efforts on the risk registration, treatment and control processes of the ‘Student Information System’ instructional project; as well as the ‘Human Capital Management’ business project.

- **Quality Control:**
  The PM with QAMs should consistently implement and document quality control measures to ensure that the processes designed to achieve the desired quality criteria (previously agreed with beneficiaries) are met.

**E. Closing (Note: undetermined projects status may be assumed as closed or still in progress)**

- Unable to determine project closure statuses or lessons learned
- Missing Phase /Project Closure Reports

- **Closure Reporting:**
  Closure Reports are required upon completion of all project /phase activities and contain information on the achievements of objectives, results, and clear explanation of any variances from the originally approved project in terms of duration, budget, results and delivered services.
It’s important to distinguish between the two stages of project closure: the closure of project phase and final project closure after all phases have been completed. Such closures may be determined by the dates indicated in the original agreement signed with the sponsor, or in subsequent approved project extensions. Final project closure refers to completion of all operational activities and termination of all financial transactions.

Closure should be performed immediately after completion of all activities of the project. Alternately, it will be useful for the EST to request for closure reports to be submitted within a specified timeframe (say, 30-60 business days of the operational completion of the project), unless a different timeline is stipulated in the relevant agreements with project stakeholders.

To ensure project closures on the operational level, the PM team should produce closure reports specifically addressing the following: that all activities listed in project ‘management’ plans are satisfactorily completed with envisaged results and products delivered to the satisfaction of beneficiaries, Post Implementation Reviews are prepared, contracts with consulting personnel, suppliers and service providers are formally-terminated, and decisions have been made regarding the residual funds of the project, if any.

- Lessons Learned /Knowledge Management Culture:

As a last stage of the project life-cycle, the PM team should analyze and consolidate the lessons learned for projects that have been identified during the implementation and evaluation phases.

Such analyses will provide examples of better practices which are concluded in an effective and efficient manner. Projects that delivered concrete and sustainable benefits/impact to the beneficiaries should be identified at this stage and stored in a better practice database in the ITG or PMO repository. This database will provide a foundation for the PMO with bragging rights on success stories and achievements made through implementation of projects.

The closure reports and lessons log would serve as a reference to future projects in order to ensure that lessons learned (project successes, failures, better practices) through implementation are available for consideration when formulating and implementing similar projects.

On the next page we have included a summary outline of the documentation observed in project files during our audit.

**RECOMMENDATION #5**: The PMO team should improve all aspects of its project documentation ensuring that it is complete, signed and dated where appropriate, and up to date. In a mature project environment, documentation and knowledge are deemed the most important project resource and thus it deserves to be treated as a valuable subject in the discipline of project management.
### Outline of PMO Process Documentation Statistics

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<tr>
<th>Process</th>
<th>INITIATING</th>
<th>PLANNING</th>
<th>MONITORING &amp; CONTROLLING</th>
<th>CLOSING</th>
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- **Expected Documentation /Updates Available, with notations regarding commendable examples where applicable**
- **Expected Documentation /Updates Unavailable**
- **No Access – Unable to Determine Documentation Status**

**Process Legend -**

- **BC** (Business Case)
- **SA** (Spend Analysis)
- **PC** (Project Charter)
- **APP** (Active Project Plan)
- **B$** (Budget)
- **QP** (Quality Plan)
- **CP** (Communications Plan)
- **CR** (Change Request)
- **PR** (Progress Report)
- **CS** (Costs Control)
- **RISK_C** (Risk Control)
- **QC** (Quality Control)
- **PhCR** (Phase Closure Report)
- **PjCR** (Project Closure Report)
- **LL** (Lessons Learned)
CONCLUSIONS AND NEXT STEPS

Documentation and Knowledge Management

The ISO standards and PMI guidelines recognize the optimum performance of project management through processes, and application of such processes through effective process management can empower project teams to deliver effectively and efficiently.

The PMO should rely on these fundamental PM processes with sound Project and Portfolio Management, Systems Development, and with other enterprise operational /service delivery processes to achieve the objective of effective /efficient project deliverables.

It is important for the PMO/project teams to develop and sustain a project management culture that embraces such processes, with continuous appraisal of the projects environment to address factors that may potentially make these processes a hindrance versus the means and approaches to make processes practical and enabling.

For ease of reference and addressing the specific areas under the project cycles, we have enclosed a key processes matrix categorized by subject groups /knowledge areas (cf. Appendix - Table 1) that has been adapted from the ISO and PMI to represent the focus areas that require the PMO’s attention towards document organization. This should be recognized as a recommended framework only, as projects vary in size and scope and so the PMO processes may be adaptable to various scenarios.

This table will assist the PMO in selecting appropriate processes required to meet project objectives, and assigning/redirecting respective project documentation into the appropriate “Process Group” folders in the PM Library. This will aid the PMO in developing a clear process /methodology for the management of projects from beginning to end, develop a process for key project elements (i.e. stakeholder /cost /risk /change /quality /communication management process, etc.) and thereby provide assurance that existing processes reflect better practices by the PMO in supporting projects accepted through the governance process, and ensuring the end result of the project meets all expectations.

In due course, a follow-up review would be appropriate – for a focused audit of some of the major projects in the PMO’s portfolio, and once the PMO gets their documentation in order. That will be our continuous assurance effort to ensure the consistency of effective /efficient controls over the IT process of managing projects that satisfy the District’s strategic business requirements (in setting priorities and delivering projects on time and within budget) through the adoption and application of sound project management techniques for each project undertaken.

In closing, we wish to thank the COO & the CIO and particularly the PMO Director (Ms. Diana Pienaar) and the project team, for their cooperation and assistance during this review; as well as the former Snr. Instructional Process Specialist (Mr. John Davis) for providing feedback during the evidence gathering process of this exercise.

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District Internal Auditor, IT
APPENDIX
<table>
<thead>
<tr>
<th>Process Groups</th>
<th>Subject Groups</th>
<th>Knowledge Areas</th>
<th>INITIATING</th>
<th>PLANNING</th>
<th>IMPLEMENTING /EXECUTING</th>
<th>MONITORING /CONTROLLING</th>
<th>CLOSING</th>
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<td></td>
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<td></td>
<td>start project or phase, define project phase, project objectives &amp; authorize project manager to proceed with project work</td>
<td>develop planning detail, establish baselines to manage/measure/control project implementation &amp; performance</td>
<td>perform project management activities and support the provision of project deliverables in accordance with project plans</td>
<td>monitor, measure &amp; control project performance against project plans; take preventive &amp; corrective actions with relevant change requests</td>
<td>formally establish completion of project phase or project; provide lessons learned for consideration &amp; implementation</td>
</tr>
</tbody>
</table>

### DEVELOP PROJECT CHARTER
- Required primary inputs & outputs:
  - Project Charter
  - Contract
  - Business Case
  - Previous Phase Results

### DEVELOP PROJECT /MANAGEMENT PLANS
- Required primary inputs & outputs:
  - Project Charter
  - Baselines (cf. project plans)
  - Subsidiary Plans (cf. knowledge areas/pmp)
  - Lessons Learned from previous projects
  - Business Case
  - Approved Changes
  - PROJECT PLAN(S)
  - PROJECT MANAGEMENT PLAN

### DIRECT /MANAGE PROJECT WORK /EXECUTION
- Required primary inputs & outputs:
  - Project Plans
  - Change Requests
  - Approved Changes
  - PROGRESS DATA
  - ISSUE LOG
  - LESSONS LEARNED

### MONITOR /CONTROL PROJECT WORK
- Required primary inputs & outputs:
  - Project Plans
  - Progress Data
  - Quality Control Measurements
  - Risk Register
  - Issues Log
  - CHANGE REQUESTS
  - CHANGE REPORTS
  - PROJECTS COMPLETION REPORTS

### CLOSE PROJECT PHASE OR PROJECT
- Required primary inputs & outputs:
  - Project Plans
  - Progress Reports
  - Approved Changes
  - Lessons Learned
  - Issues Log
  - Risk Register

### IDENTIFY STAKEHOLDERS
- Required primary inputs & outputs:
  - Project Charter
  - Project organization chart

### MANAGE STAKEHOLDERS ENGAGEMENT
- Required primary inputs & outputs:
  - Stakeholder Register
  - Project Plans

### CONTROL SCOPE
- Required primary inputs & outputs:
  - Project plans
  - Staff assignments

### ESTABLISH /ACQUIRE PROJECT TEAM
- Required primary inputs & outputs:
  - Resource requirements
  - Project organization chart
  - Resource availability
  - Project plans
  - Role descriptions
  - STAFF ASSIGNMENTS
  - STAFF CONTRACTS

### ESTIMATE ACTIVITY RESOURCES
- Required primary inputs & outputs:
  - Activity List
  - Project Plans
  - Approved Changes
  - RESOURCE REQUIREMENTS
  - RESOURCE PLAN

### DEFINE PROJECT ORGANIZATION
- Required primary inputs & outputs:
  - Staff assignments
  - Resource availability
  - Resource plan
  - Role descriptions
  - TEAM PERFORMANCE
  - TEAM APPRAISALS

### DEVELOP PROJECT TEAM
- Required primary inputs & outputs:
  - Staff assignments
  - Resource availability

### CONTROL RESOURCES
- Required primary inputs & outputs:
  - Staff assignments
  - Resource availability
  - Resource requirements
  - CHANGE REQUESTS
  - CORRECTIVE ACTIONS

### INTEGRATION
- identify, define, combine, unify, coordinate, control and close activities

### STAKEHOLDER
- identify and manage project sponsor, customers and other stakeholders

### SCOPE
- identify & define “ONLY” the work and deliverables required

### RESOURCE
- identify & acquire adequate project & HUMAN resources

### SUMMARY
- Table 1 - Project management processes cross-referenced to process and subject groups (Validation in reference to Projects Universe) /Combined Sources: ISO 21500:2012 & PMI PMBOK® Guide 5th 2012 Edition
<table>
<thead>
<tr>
<th>Process Groups</th>
<th>INITIATING</th>
<th>PLANNING</th>
<th>IMPLEMENTING / EXECUTING</th>
<th>MONITORING / CONTROLLING</th>
<th>CLOSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Groups</td>
<td>start project or phase, define project phase / project objectives &amp; authorize project manager to proceed with project work</td>
<td>develop planning detail / establish baselines to manage / measure / control project implementation &amp; performance</td>
<td>perform project management activities and support the provision of project deliverables in accordance with project plans</td>
<td>monitor, measure &amp; control project performance against project plans; take corrective actions with relevant change requests</td>
<td>formally establish completion of project phase or project; provide lessons learned for consideration &amp; implementation</td>
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<tr>
<td>TIME</td>
<td>schedule project activities and monitor progress to control schedule</td>
<td>Required primary inputs &amp; outputs: - Activity List - Approved Changes - ACTIVITY SEQUENCE</td>
<td>Required primary inputs &amp; outputs: - Activity List - Approved Changes - ACTIVITY SEQUENCE</td>
<td>Required primary inputs &amp; outputs: - Schedule - Progress Data - Project Plans - CHANGE REQUESTS - CORRECTIVE ACTIONS - SCHEDULE FORECASTS</td>
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<tr>
<td>COST</td>
<td>develop budget and monitor progress to control costs</td>
<td>Required primary inputs &amp; outputs: - Activity List - Approved Changes - ACTIVITY SEQUENCE</td>
<td>Required primary inputs &amp; outputs: - Activity List - Approved Changes - ACTIVITY SEQUENCE</td>
<td>Required primary inputs &amp; outputs: - Schedule - Progress Data - Project Plans - CHANGE REQUESTS - CORRECTIVE ACTIONS - SCHEDULE FORECASTS</td>
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<tr>
<td>Process Groups</td>
<td>Subject Groups</td>
<td>Knowledge Areas</td>
<td>INITIATING</td>
<td>PLANNING</td>
<td>IMPLEMENTING/EXECUTING</td>
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<td>ASSESS RISKS /PERFORM QUALITATIVE &amp; QUANTITATIVE RISK ANALYSIS</td>
<td>Required primary inputs &amp; outputs:-  - Risk Register  - Project Plans  - PRIORITIZED RISKS</td>
<td>PERFORM QUALITY ASSURANCE</td>
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<tr>
<td>QUALITY</td>
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<td>PLAN QUALITY MANAGEMENT</td>
<td>Required primary inputs &amp; outputs:-  - Project Plans  - Quality Requirements  - Quality Policy  - Approved Changes  - QUALITY PLAN</td>
<td>PERFORM QUALITY ASSURANCE</td>
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<td>PLAN PROCUREMENTS</td>
<td>Required primary inputs &amp; outputs:-  - Project plans  - In-house capacity and capability  - Existing contracts  - Resource requirements  - Risk register  - PROCUREMENT PLAN  - PREFERRED SUPPLIERS LIST  - MAKE-OR-BUY DECISION LIST</td>
<td>SELECT SUPPLIERS /CONDUCT PROCUREMENTS</td>
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<td>COMMUNICATIONS MANAGEMENT</td>
<td>Required primary inputs &amp; outputs:-  - Project plans  - Stakeholder Register  - Role Descriptions  - Approved changes  - COMMUNICATIONS PLAN</td>
<td>DISTRIBUTE INFORMATION</td>
</tr>
</tbody>
</table>

**GREEN** – represents the key output documentation expected as an outcome of the respective process group events.
<table>
<thead>
<tr>
<th>Exception Noted</th>
<th>Management Response</th>
<th>Responsible Person</th>
<th>Outcome Timeline</th>
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</thead>
</table>
| **Finding #1: Inadequate records of Executive Steering Team (EST) meetings** | Finding #1. According to the PMO Director, the Business EST has since started the practice of recording minutes – as corroborated by the submission of minutes for December 2015 and January 2016. | Owner of the meeting | - Every time a meeting is held  
- Published minutes |
| **Finding #2: No active /dedicated Project Management Framework** | To update the existing Project Mgmt. Framework, and maintain the documentation going forward (including the elimination of outdated docs.) | PMO | - Date: January 2017  
- Once the new version of the documentation is approved by the PMO Senior director and the CIO and it is posted on SharePoint. |
| **Finding #3: Varying PMO Online Presence & Repositories** | The PMO intranet page has been updated. | PMO | - Date: May 25, 2016  
- The updates to the website is an ongoing process and will be approved by the PMO Senior director. |
<table>
<thead>
<tr>
<th>Finding #4: <strong>Inconsistency</strong> in project documentation postings on PMO Collaboration Platform</th>
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</thead>
<tbody>
<tr>
<td>To update the inconsistencies of the existing PMO documentation in SharePoint, and standardize the existing folders and documentation going forward (including the elimination of outdated docs.)</td>
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<td>PMO</td>
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<tr>
<th>Finding #5: <strong>Lack</strong> of Salient /Structured Documentation within Project Cycles</th>
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<tbody>
<tr>
<td>To include missing documentation, update and standardize the existing PMO documentation in SharePoint going forward (including the elimination of outdated docs.)</td>
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<tr>
<td>PMO</td>
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</tbody>
</table>

- Date: January 2017
- The updates to the website is an ongoing process and will be approved by the PMO Senior director.