Project Approval and Oversight Process Assessment.

Washington State Consolidated Technology Services June 28, 2019



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Executive Summary



Introduction

Consolidated Technology Services (CTS) of the State of Washington provides telecommunications, computing, and digital government services to more than 700 state agencies, boards and commissions, local governments, tribal organizations, and qualifying non-profits. CTS also includes the Office of the Chief Information Officer (OCIO). The OCIO is responsible for, in part, establishing and maintaining state enterprise information technology (IT) policies and standards.

By statute (RCW 43.105.220, RCW 43.105.245, and RCW 43.105.255) the OCIO is required to approve and monitor all major IT projects occurring in any executive branch agency or institution, provide guidance to agencies as to what threshold of information technology spending constitutes a major information technology product or service, and track business outcomes. The OCIO currently monitors nearly 60 major IT projects valued at approximately \$1.4 billion.¹

The OCIO plays a key role in ensuring projects align with business goals and priorities, achieve success in meeting those business goals and priorities, and are completed within approved scope, schedule, and budget. To meet these objectives, the OCIO seeks to improve the identification of major projects, the processes for approving these projects, and the subsequent oversight of these projects.

In March 2019 the OCIO engaged Plante Moran to conduct an independent assessment of existing project approval and oversight processes and practices, statutes and policies, and supporting tools, and to develop recommendations for an improved model based on the best practices of implemented models in other states and similarly large, complex government organizations. The charter for this project clearly defined the following nine key questions, around which we focused our assessment efforts.

- 1. How can we gain earlier visibility into agency projects?
- 2. How should the State determine if a project is to be considered major and subject to oversight?
- 3. How can we make the process of assessing projects and associated risks more consistent?
- 4. How can we improve the Information Technology Project Assessment (ITPA) tool to better assess project risks and identify major projects? Are the right risks highlighted and are the risk scales appropriately assigned?
- 5. What due diligence is required as part of early project work? When should the diligence include formal feasibility study? What minimum requirements should there be for a project feasibility study?
- 6. How can we optimize current project approval and oversight processes and make them more efficient? How can we make them scalable for projects of different size, complexity, and risk levels?
- 7. How can we better accommodate changes to project scope, schedule, and budget for phased projects?
- 8. How can we effectively manage the resulting changes to policy, practices, and processes?
- 9. What key metrics and performance indicators can be used to effectively monitor and report on project performance as a project improves its level of confidence?

The following sections summarize our key research findings and significant recommendations. The remainder of this report details these findings and recommendations.

¹ Washington State Office of the Chief Information Officer (OCIO), *I.T.'s Transparent: Project Dashboard*, June 19, 2019 [http://waocio.force.com/].

Summary Observations

The OCIO invited Plante Moran to critically look at existing technology project oversight processes and recommend a comprehensive, new model to align with best practices. However, we found Washington State's approach already aligns with best practices and the practices of high performing peers in many cases. This is noteworthy since the State has a federated model for information technology services, which can make centralized oversight a particular challenge.

- The OCIO's Information Technology's (IT) Transparent: Project Dashboard provides transparency around major IT projects in Washington State. It is a centralized, publicly accessible, web-based reporting tool that publishes the State's portfolio of IT projects and provides project budget information; overall, scope, schedule, and budget status; Quality Assurance (QA) reports; and other project documents where available.
- The State has a formal oversight process, dedicated oversight resources, and governing statutes that
 provide clear authority for oversight. Many other states with federated or distributed information
 technology services focus on standardized project and portfolio management practices through a
 centralized project management office, but do not have processes or dedicated resources for
 independent oversight.
- Project oversight is risk based. Oversight is determined after a careful assessment of project risk in six categories. Risk-based oversight is a best practice in public and private industry.
- The State is pursuing financial gating of projects. Beginning in the 2015-2017 biennial budget, the Legislature identified projects for financial gating, and processes have been adapted to address financial gating requirements. In some cases, the first financial gate is a formal feasibility study, increasing the rigor around early project planning.

Key Findings

While we identified a number of strengths in our summary observations above, we also found opportunities for improvement. The following summarizes our key findings related to the scope of our assessment, including the State's technology project oversight processes and practices, governing policies, and supporting tools.

- 1. **Current practice does not provide early OCIO visibility into agency projects.** Nor does it provide consistent opportunity to engage with agencies earlier to ensure comprehensive project planning (including feasibility studies and market analyses) to support successful project outcomes.
- 2. Project risk assessments are not uniformly or consistently performed, and the assessment process misses some best practice measures of risk. Some projects do not perform risk assessments. The Information Technology Project Assessment (ITPA) tool itself can be subjectively interpreted, does not scale for projects of different size or complexity, and misses some best practice measures of risk such as agency experience with successful, similar projects, external dependencies, vendor relationships, and relationship, if any, to a larger program.
- 3. **Current project oversight is "one-size-fits-all."** It does not differentiate projects of varying size, complexity, cost, or levels of risk.

- 4. There is often inadequate documentation to support consistent technical oversight of projects. It does not appear that the OCIO Enterprise Technology Architect consistently receives adequate technical documentation (e.g., architecture diagrams) to effectively evaluate compliance with or exceptions to statewide technical standards, or effectively provide technical oversight for projects.
- 5. **The investment planning process does not effectively support phasing or gate approvals.** Nor does it provide adequate opportunity to refine cost and schedule estimates at key project phases or gates.
- 6. **Reported project health measures and status definitions are inconsistent.** Legislative staff, Office of Financial Management (OFM) staff, OCIO oversight consultants, and QA providers often report on different health measures and use different definitions for dashboard status (i.e., green, yellow, red).
- 7. Revisions to Policy 121 removed project categories and levels of oversight counter to best and peer practice. Previous versions of Policy 121 IT Investments Approval and Oversight provided for three levels of oversight as defined by investment size, risk, and expected impact on citizens and state operations. The policy as revised in 2017 removed project oversight levels. Several other states and large public and private sector organizations consider project categories and associated levels of oversight (Washington's previous model) a best practice.

Significant Recommendations

The following summarizes our significant recommendations related to the scope of our assessment, including the State's technology project oversight processes and practices, governing policies, and supporting tools.

- 1. Direct all state agencies to submit IT strategic plans to the OCIO to provide earlier insight into agency projects and a comprehensive inventory of statewide projects.
- 2. Adjust the filter criteria for project risk assessments and refine the risk assessment to provide scalability and add new risk questions based on best practices.
- 3. Establish risk-based oversight levels and associated oversight requirements and minimum project manager requirements.
- 4. Revise Policy 121 IT Investments—Approval and Oversight and associated procedures to reintroduce risk-based project oversight categories.
- 5. Require detailed feasibility studies for all high-risk projects. Require feasibility studies "light" for moderate risk projects.
- 6. Standardize project reporting and key performance measures.
- 7. Reassess risk and the Investment Plan at key project phases or gates.
- 8. Define required technical deliverables to support improved architecture reviews and technical oversight.
- 9. Enhance support for the Technology Services Board (TSB) in its role in the oversight process.

Assessment Findings



The OCIO has six oversight consultants currently overseeing 57 active major projects across approximately 100 state agencies.² This chapter summarizes Plante Moran's independent assessment of existing IT project approval, monitoring, and oversight standards, processes, and procedures. This chapter is organized as follows:

- Assessment Approach
- Approval and Oversight Processes and Practices
- Governing Statutes and Policies
- Supporting Tools

Assessment Approach

Our assessment approach was comprehensive in both document review and solicitation of stakeholder input. Our assessment included:

- Legislative Interviews. We conducted one-on-one interviews with Senator Patty Kuderer and Representative Zack Hudgins, Legislative members of the Technology Services Board. We interviewed Senator Reuven Carlyle. We also interviewed members of the legislative staff involved in the project review, approval, and oversight process. As representatives of the authorizing environment, we asked for their objectives for project approval and oversight, and how effective they perceived this process to be working as measured against those objectives. We also asked about how effectively they felt this process manages risk.
- Office of Financial Management (OFM) Interviews. We met with OFM budget analysts involved in the IT project review, approval, and oversight process. Similar to our Legislative interviews, we asked for their objectives for project approval and oversight, and how effective they perceived this process to be working as measured against those objectives. We also asked about how effectively they felt this process manages risk.
- Technology Services Board Focus Group. We conducted a focused session with the Technology Services Board. We asked members to discuss their current role in the project approval and oversight process and opportunities for improvement. We asked how effectively members felt the current process identifies and manages risk. We asked what other criteria could be considered in evaluating risk, and how risk and other evaluation factors could support tailored, right-size oversight rather than one-size-fits-all.
- Agency Focus Groups. We conducted three 1.5-hour focus groups with key stakeholders from small, medium, and large agencies who have participated in an IT project under OCIO oversight within the last two years. Representatives from five agencies attended the small agency session, 10 agencies attended the medium agency session, and five agencies attended the large agency session. We discussed strengths and opportunities for improvement for the risk assessment process. We also discussed how effect the oversight process was in mitigating risk and supporting the delivery of successful projects.

² Note that more than 40 additional projects have funding starting in July 2019.

- CIO and OCIO Interviews. We conducted one-on-one interviews with the Washington State Chief Information Officer, Deputy Director of the Office of Chief Information Officer, the State Enterprise Technology Architect, the Chief Information Security Officer, the OCIO Senior Portfolio Program Manager, and the OCIO oversight consultants. We asked their perceptions of the risk assessment and project approval process, implementation oversight process, project performance management and reporting, and existing, guiding statutes and policies. We also asked about other consulting services offered to agencies.
- Quality Assurance (QA) Provider Summit. We facilitated a four-hour summit with QA providers currently providing quality assurance services to projects under OCIO oversight. Seventeen QA professionals from 10 QA firms were invited to attend. Thirteen QA professionals participated in the working session. Small breakout groups of three to four individuals were asked to brainstorm key questions surrounding project determination, risk assessment, oversight, and suspension and termination. The large group of 13 were then asked to prioritize the responses to each. While we separately provided the results of this summit to the OCIO, the results of this summit also informed our findings presented here.
- Benchmark Survey. To supplement our discovery efforts, experience, best practices, and industry research, we conducted a benchmark survey and follow up interviews of peer states and one private benchmark organization to document alternative approaches to project assessment, approval, and oversight. While we separately provided our detailed findings to the State OCIO, the results of these interviews also informed our findings presented here. Appendix B: Benchmark Organization Profiles provides a summary profile for the benchmarked states: 1) Colorado; 2) Florida; 3) Michigan; 4); Pennsylvania; and 5) Utah, and the private benchmark organization.
- Document Review. Prior to conducting interviews and working sessions, we reviewed existing documentation to become familiar with the State's project approval and oversight process and authorizing environment. This included relevant state codes and OCIO policies, Technology Services Board presentation documents, quarterly CIO review meeting documents, and the IT Project Dashboard, It also included process documents and associated tools and templates (e.g., decision package ranking, IT Project Assessment [ITPA], concept review, Investment Plan [IP] and IP Amendment, grey zone meetings, go-live readiness, and project management life cycle, critical success factors, and lessons learned).

Our findings included here are supported by consistent themes uncovered during one or more of our discovery activities, and reviewed and validated with the OCIO project steering committee. Appendix C: Findings and Supporting Discovery Activities identifies those discovery activities above that contributed to each of our findings in this chapter. Where feasible, we also have identified these sources of input in our specific findings below.

Approval and Oversight Processes and Practices

The OCIO invited Plante Moran to critically look at existing technology project oversight processes and recommend a comprehensive, new model to align with best practices. We found Washington State's approach already aligns with best practices and the practices of high performing peers in many cases. This is noteworthy since the State has a federated model for information technology services, which can make centralized

oversight a particular challenge. However, there are opportunities for improvement. This section documents our findings regarding both the strengths of and opportunities for improvement for the State's approval and oversight processes and practices.

Strengths

- 1. The OCIO's Information Technology's (IT) Transparent: Project Dashboard provides transparency around major IT projects in Washington State. It is a centralized, publicly accessible, web-based reporting tool that publishes the State's portfolio of IT projects and provides project budget information; overall, scope, schedule, and budget status; Quality Assurance (QA) reports; and other project documents where available. Even though improvement efforts are underway, Legislators and legislative staff members, OFM staff, agencies, TSB members, OCIO oversight consultants, and QA providers reported using this tool to track project status and reference other project information. This level of public transparency is not common among the benchmark organizations nor among other large, complex public sector organizations with federated technology services.
- 2. The State has a formal oversight process, dedicated oversight resources, and governing statutes.

 Many other states with federated or distributed information technology services focus on standardized project and portfolio management practices through a centralized project management office, but do not have processes or dedicated resources for independent oversight.
- 3. **Project oversight is risk based.** Oversight is determined after a careful assessment of project risk in six categories. Risk-based oversight is a best practice in public and private industry. Many agencies reported additional benefits, including support for their own internal risk management planning and mitigation, and ongoing conversations with project sponsors. They also reported it provided increased credibility for their agency project management offices.
- 4. **The State is pursuing financial gating of projects.** Beginning in the 2015-2017 biennial budget, the Legislature identified project for financial gating, and processes have been adapted to address financial gating requirements. In some cases, the first financial gate is a formal feasibility study, increasing the rigor around early project planning.
- 5. The OCIO Concept Review process is an effective process to communicate expectations for immediate next steps during major project initiation.

All major IT projects have a Concept Review. The agency executive sponsor, project manager, IT representative, OCIO team members, customer account manager, DES contracts liaison, OFM budget analyst, and GIS representative are invited as appropriate to review and discuss the project business objectives, cost, schedule, anticipated outcomes, and alignment with the State IT Strategic Plan. This model for the Concept Review could be used to support the deployment of the process recommendations included in this report, and potentially repeated at major project phases or gates, with a specific focus on the revised oversight process for that phase or gate.

6. Project sponsor training is increasing the awareness of effective sponsorship as a critical project success factor.

Policy 131 – Managing Information Technology Projects lists executive management support as a critical indicator of project performance.³ The 2017 Quality Assurance Summit identified effective sponsorship as one of the top three factors critical to project success. Since the 2017 Summit, the OCIO began offering training to project sponsors. Agencies, OCIO oversight consultants, and QA providers report that this has resulted in more executive management support and engagement in projects. This model could be used to support the deployment of the recommendations affecting major stakeholder roles and responsibilities included in this report, including project steering committees and project management teams.

Opportunities for Improvement

1. Current practice does not provide early OCIO visibility into agency projects.

Not all IT projects are reported by the agencies to the OCIO for tracking. It has no way to track projects that do not require a Decision Package, projects with a total cost of \$500,000 or less, projects less than four months in duration, or projects for which agencies do not submit an IT Project Assessment. Some agencies reported not clearly understanding the requirements for reporting and others expressed reservation for being under oversight, whether due to a perception of unnecessary administrative requirements or anticipated project delays. OCIO oversight consultants confirmed this finding based on their experience with the agencies. As a result, the OCIO often becomes engaged only after a project has selected its technical solution or approach.

2. Feasibility studies are not routinely conducted, or are not conducted or documented with rigor. In interviews with Plante Moran, OFM staff and OCIO oversight consultants reported that they lack early visibility into projects in the planning or feasibility study phase, and when they are engaged with agency feasibility studies, the rigor of analysis can vary from project to project. QA providers confirmed this finding.

3. Assessments of projects and associated risks are not performed uniformly.

Many OCIO oversight consultants reported receiving relatively few risk assessments from agencies. In addition, OCIO oversight consultants, agencies, and QA providers reported that some risk assessment questions and response choices could be subjectively interpreted. As a result, an increasing number of projects require a "grey zone" meeting with the OCIO oversight consultant and agency to determine a final risk rating.

4. The IT Project Assessment does not scale and misses some best practice measures of project risk.

All agencies are responsible to assess projects greater than \$500,000 or more than four months duration using the IT Project Assessment process and tool. The process evaluates risk in the following six categories: schedule, cost/funding, business impact, agency readiness, technology impact, and security and privacy. Currently it does not scale for projects of different size or complexity, and it

³ Washington State Office of the Chief Information Officer (OCIO), *Appendix D: Critical Indicators of Project Performance Early Warning Signs*, June 19, 2019 [https://ocio.wa.gov/policies/131-managing-information-technology-projects/131-appendix-d-critical-indicators-project].

misses some best practice measures of risk such as agency experience with successful, similar projects, external dependencies, vendor relationships, and relationship, if any, to a larger program.

5. The current investment planning process does not provide for incremental refinement.

Agencies are required by Policy 121 to submit Investment Plans and Investment Plan Amendments for approval by the OCIO when they have a major IT project that is under oversight. The current Investment Plan requires detailed information on the project, its purpose, justification, scope, schedule, budget, procurement plan, project governance and management, and risks at the start of a project, when they are most subject to change with new information as the project progresses. This process does not effectively support phasing or gate approvals (e.g., requirements analysis, RFI, RFP/procurement, detailed planning, design, testing) and provides limited opportunity to refine estimates at key project phases or gates.

6. Current project oversight is one-size-fits-all.

The existing process applies the same project management rigor, governance, documentation, and reporting requirements to all projects under OCIO oversight. It currently does not consider projects of different size, complexity, cost, business impact, technology impact, potential impact to citizens or state services, project sponsorship, project management experience, organizational change readiness, or other risk factors. Many agencies, OCIO oversight consultants, and QA providers reported that this put undue oversight requirements work on smaller and lower risk projects. Some Legislators and legislative staff members, OFM staff, and TSB members also noted the potential benefits of scalable oversight requirements for projects of different risk levels. Several other states and large public sector organizations consider project categories and associated levels of oversight a best practice.

7. There is often inadequate documentation to support consistent technical oversight of projects. It does not appear that the OCIO Enterprise Technology Architect consistently receives adequate documentation (e.g., architecture diagrams) to effectively evaluate compliance with or exceptions to statewide technical standards, or effectively provide technical oversight for projects.

8. Currently project health measures and status definitions are inconsistent.

While scope, schedule, and budget are common health measures for projects, OFM staff, OCIO oversight consultants, and QA providers often include additional or different measures such as governance, quality management, project resources, stakeholder management, communication management, risk management, procurement and vendor management. Additionally, these interviewed stakeholders reported applying different definitions for green, yellow, and red status.

9. Some agencies perceive project oversight to be punitive rather than focused on risk mitigation and project success.

In focus groups with Plante Moran, some agencies expressed project oversight as creating a culture where agencies are reticent to report a yellow or red project status. TSB members and OCIO oversight consultants also reported experiencing this with agencies. Because of this agency perception, some agencies may overestimate project budgets and schedules to avoid reporting over budget or behind schedule, and may be overly optimistic in reporting project status other than green. Further, agency reluctance to engage OCIO oversight consultants may lead to missed opportunities for sharing of best practices, leveraging OCIO expertise, or other value added practices.

10. Some agencies report a lack of clear understanding of the role of the OCIO oversight consultants.

In interviews with Plante Moran, agencies reported a lack of clear understanding of the role of the OCIO oversight consultant in relationship to the QA provider. OCIO oversight consultants and QA providers confirmed this finding. Agencies also shared a desire for OCIO oversight consultants to serve more in the capacity of a "project advocate" during the approval and oversight process.

11. The Technology Services Board (TSB) expressed a desire to be more involved in the project oversight process.

In the working session with Plante Moran, and in individual follow up, some TSB members expressed a desire to be more of a resource to major projects, providing advice, mentorship, and support for evaluating options to address project risk. To be effective, TSB members indicated they would need more project information sooner to be prepared for meetings.

Governing Statutes and Policies

As part of our assessment, Plante Moran reviewed the statutes RCW 43.105.220 2b Strategic information technology plan – Biennial performance reports, RCW 43.105.245 Planning, implementation, and evaluation of major projects – Standards and policies, and RCW 43.105.255 Major technology projects and services – Approval, and policies 121 IT Investments – Approval and Oversight Policy, 131 Managing Information Technology Projects, 132 Project Quality Assurance. Overall, we found these to be generally consistent with best practices from peer state agencies and similarly large, complex government organizations, adapted within the context of the State of Washington.

Strengths

1. Relevant state codes provide clear authority for oversight.

RCW 43.105.220 clearly instructs the OCIO to prepare biennial performance reports including "an analysis of the success or failure, feasibility, progress, costs, and timeliness of implementation of major technology projects." RCW 43.105.245 authorizes the OCIO to "suspend or terminate a major project...[if that project] is not meeting or is not expected to meet anticipated performance standards.

2. Relevant state codes provide ample flexibility for project oversight.

RCW 43.105.255 indicates the OCIO "shall provide guidance to state agencies as to what threshold of information technology spending constitutes a major information technology product or service." This allows the OCIO the flexibility to define major technology project with only changes in policy.

3. Polices provide for independent quality assurance.

OCIO Policy 132 requires the use of a qualified, independent QA provider on all major projects and associated Standard 132.30 details the minimum project quality assurance activities, including a Quality Assurance Plan, monthly assessments, and a Closeout Report. This is best practice for large, complex technology projects, although not commonly applied in other states. This standard also defines 10 best practice project performance measures.

 $^{^{\}mbox{\tiny 4}}$ This was the specific term used by agencies.

Opportunities for Improvement

1. Revisions to Policy 121 removed project categories and levels of oversight counter to best and peer practice.

Policy 121 IT Investments – Approval and Oversight indicates that the OCIO is responsible for defining what constitutes a major IT project. Until December 2017 this policy provided for three levels of oversight as defined by investment size, risk, and expected impact on citizens and state operations. The revised policy approved by the TSB in December 2017 removed these project oversight levels. In August 2018, this policy was further revised to establish a minimum filter for technology investments to be evaluated for oversight (i.e., more than \$500,000 or longer than four months in duration). As previously noted, several other states and large public sector organizations consider project categories and associated levels of oversight (Washington's previous model) a best practice.

2. The OCIO is challenged to effectively compile the information required to prepare the biennial performance report.

By statute (RCW 43.105.220), the OCIO is required to prepare a biennial state performance report, including an analysis of the success or failure of major information technology projects under oversight. This includes reasons for project delays or cost increases, contractor performance, progress towards the original goals and performance measures of the project, lessons learned, and identification of benefits generated. Much of this information is not available until after a project is completed and consequently, the OCIO often does not receive this information from the agencies.

Supporting Tools

The OCIO has many tools to support its approval and oversight processes, including an Information Technology Project Assessment (ITPA) tool, Investment Plan (IP), IP Amendment, online project dashboard and many others, as well as templates and checklists to aid agencies in the process. This section documents our findings regarding both the strengths of and opportunities for improvement for the key tools reviewed as part of our scope of work.

Strengths

1. The OCIO's Information Technology's (IT) Transparent: Project Dashboard provides transparency around major IT projects in Washington State.

The dashboard is a centralized, publicly accessible, web-based reporting tool that publishes the State's portfolio of IT projects and provides project budget information; overall, scope, schedule, and budget status; Quality Assurance (QA) reports; and other project documents where available.

2. Most agencies are pleased with the revised IT Project Assessment (ITPA) tool.

In working sessions with Plante Moran, many agencies reported that the newer, shorter ITPA tool appropriately balances effort to complete with an effective high-level evaluation of project risk. OCIO oversight consultants confirmed this finding.

Opportunities for Improvement

1. Some tools and forms require duplicative information from agencies.

The Decision Package or IT project business case form typically includes an introduction to the project, goals and objectives, scope definition, alternatives analysis, estimated budget, project timeline, implementation approach, staffing requirements, agency impacts, impacts to customers and service

providers, risks, procurement strategy, data and system architecture, technologies, operational readiness and change management, and project management approach. The Investment Plan typically includes an introduction to the project, goals and objectives (anticipated outcomes), estimated budget, project timeline, risks, and project management approach. The associated IT Addendum requests additional detail in many of these areas. While some of this information can be copied from one form to another, or copied with minor adjustments, there currently is no easy to use solution or automated workflow to make iterative updates to these project planning and initiation documents. Agencies and QA providers commented on this overlap of required information across multiple documents.

2. As the primary tool supporting the IT Project Assessment, the ITPA tool does not scale and misses some best practice measures of project risk.

The ITPA is an 18-question assessment that rates risk in six risk categories. It does not scale for projects of different size or complexity, as noted by many agencies, OCIO oversight consultants, and QA providers. It also misses some best practice measures of risk such as agency experience with successful, similar projects, external dependencies, vendor relationships, and relationship, if any, to a larger program when compared to benchmark organizations.

- 3. Agency cost estimates included in the Investment Plan are not always calculated consistently.

 Existing policies clearly state what should be included in project cost estimates however, agencies report not having clear instruction on how to calculate these costs. As a result, there are inconsistencies in how agencies consider staffing, contracted services (e.g., feasibility study consulting, quality assurance, project management, implementation services), hardware purchase or lease, software purchase or lease, travel, training, and annual operational costs as part of the total cost of ownership from planning through post go-live. Some legislative staff, OFM staff, OCIO oversight consultants, and QA providers confirmed this finding.
- 4. Agencies report that some tools and templates are outdated or difficult to find online. In focus groups with Plante Moran, some agencies indicated that it was difficult to find current online versions of tools and templates such as the Investment Plan and IP Amendment, or sample documents for required or recommended project artifacts from initiation, planning, monitoring, execution, and closeout.
- 5. Technology Services Board (TSB) members are not consistently provided a reference handbook.

 In interviews with Plante Moran, some TSB members indicated that they did not receive a comprehensive handbook outlining the oversight process, governing statutes and policies, and their roles and responsibilities as TSB members.

Recommendations



This chapter summarizes Plante Moran's recommendations to improve the identification of major projects, the processes for approving these projects, and the subsequent oversight of these projects. This chapter is organized as follows:

- Approval and Oversight Processes and Practices
- Governing Statutes and Policies
- Supporting Tools

Approval and Oversight Processes and Practices

1. Clarify the definition of IT "project" as distinct from a technology investment.

All IT projects are technology investments, but not all investments are projects. The OCIO recognizes the Project Management Body of Knowledge (PMBOK) definition of a project. This best practice industry standard defines a project as "a temporary endeavor undertaken to create a unique product, service or result." A project is temporary in that is has a defined beginning and end in time. A project is unique in that it is a specific set of activities designed to accomplish a specific goal or outcome. In contrast, operational efforts are ongoing or often repeated and produce similar results, such as minor patches and routine maintenance efforts. The purpose of operations is the keep the organization functioning while the purpose of a project is to meet its goals and conclude.

Consider refining the definition of an IT project with the following litmus test questions:

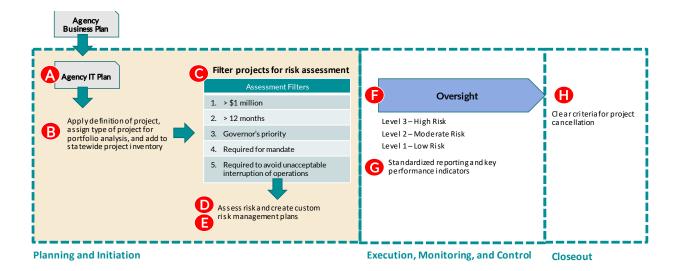
- a) Does this implement new technology systems or infrastructure?
- b) Does this significantly enhance the functionality or increase the efficiency of existing technology systems or infrastructure?
- c) Does this extend the useful life of existing technology systems or infrastructure?⁶

Filter technology investments using this criterion and apply this definition to evaluate projects for risk and oversight.

2. Refine the project intake, assessment, and oversight process according to the illustration on the following page.

⁵ A Guide to the Project Management Body of Knowledge, Fifth Edition (Newtown Square, PA:PMI, 2013).

⁶ Carefully consider this question as it is not intended to include annual subscription or support and maintenance services.



A. Direct all state agencies to submit IT strategic plans to the OCIO.

All state agencies should submit annual IT strategic plans aligned with their business plans. These IT strategic plans should include specific planned projects, providing the OCIO earlier insight into agency projects and a comprehensive inventory of statewide projects. Both Michigan and Pennsylvania maintain comprehensive IT project portfolios. Note that RCWs 43.105.007, 43.105.054 and 43.105.205 already have content that supports this process. In the future, agencies could submit IT strategic plans and projects through an online agency portal.

B. Filter technology investments using the revised definition of "IT project."

Register only IT projects in the statewide project inventory and assign project types to support portfolio management. Consider project types such as investment type (e.g., Run, Grow, Transform) as used by the State of Pennsylvania, legislative or Governor's priorities as used by the State of Utah, or business priority and IT strategy as used by our private benchmark agency. Consider also types employed in other large, complex public and private sector organizations that align with project outcomes such as: 1) mandated project; 2) maintains existing or implements new systems to prevent unacceptable interruption of operations; 3) maintains existing or implements new systems to support strategic initiative; and 4) maintains existing or implements new systems to add incremental capacity or improve services. Defining and assigning project types can support project portfolio analysis and reporting. In the future, an automated project portfolio management (PPM) solution as used by several other states could streamline this analysis.

C. Refine the filter criteria for the project risk assessment.

Assess all projects for risk that are: 1) over \$1 million; 2) more than 12 months in duration; 3) required to comply with a mandate; or 4) required to prevent unacceptable interruption of operations. The filter increases the threshold of \$500,000 or four months in duration in alignment with best practices for government organizations of similar size and complexity, and to moderate the workload of OCIO oversight consultants.

⁷ Note that Michigan is a centralized IT services model while Pennsylvania is federated, similar to the State of Washington.

D. Refine the risk assessment process.

While the State's risk categories are largely aligned with peer practices in many states including Colorado, Michigan and Pennsylvania as well as best practices in other large, complex organizations, some enhancements can be made. Refine the assessment process and ITPA to:

- a) Provide different question responses and associated risk ratings for small, medium, and larges agencies for "What is the anticipated duration of the project?"
- b) Provide different question responses and associated risk ratings for small, medium, and larges agencies for "What is the anticipated budget from initiation through implementation, transition to operations, and closeout?"
- c) Revise Question #14 "How many Major Projects has the agency managed in the last five years?" to solicit information on how many successful major projects has the agency completed in the last five years, and how that experience applies to the current project.
- d) Add a question to assess external dependencies, such as on other agencies and external vendors or service providers. Consider the complexity of these dependencies and the experience of the vendor or service provider in working with the State.
- e) Add a question to assess if the project is part of a larger program.

E. Create risk mitigation plans based on risk profiles.

Create risk mitigation plans to address the areas of highest risk identified during the assessment process. It should be the responsibility of the agencies to create and submit these to the OCIO. QA providers should assess and report on the quality of the risk mitigation plans. Agencies, OCIO oversight consultants, and QA providers all responded positively to this recommendation.

F. Establish risk-based oversight levels and scalable oversight requirements.

Based on the scoring of the risk assessment, create three new project oversight levels: Category Level 1 for low risk projects; Category 2 for moderate risk projects, and Category 3 for high-risk projects or complex programs. This is aligned with Washington State's previous model as well as with practices in the States of Florida, Michigan, and Pennsylvania.

Require all Category 2 and Category 3 projects to perform a formal feasibility study. At a minimum, the feasibility should include the business problem and project objectives (to be moved forward into the Investment Plan), project scope, requirements, alternatives analysis including costbenefit, and recommended solution and approach. Whether performed by the agency or third party consultant, the alternatives and cost analysis methodology and source data should be included to assist the OCIO oversight consultant (and potentially QA provider) in determining the soundness of the analysis and conclusions.

Tailor oversight requirements by category level. Appendix D provides other recommended oversight practices by project risk category. Also define minimum project manager qualifications by category level. Appendix E provides suggested minimum project manager qualifications by project risk category.

G. Standardize project reporting and key performance measures.

Establish a minimum standard for reporting project health. Include scope, schedule, and budget. Consider a small number of other key measures such as project resources, stakeholder management, vendor management, risk management, and progress toward outcomes. Consider

post-project measures such as realized benefits and customer satisfaction. Establish common definitions for project status (i.e., green, yellow, red).

H. Establish clear criteria for project cancelation.

Establish clear criteria to be applied when considering evaluating a project for suspension or cancelation. Consider:

- No longer able to meet the business needs due to a change in environment
- Technology solution becoming obsolete and losing relevancy
- Consistently missing deliverable or key schedule milestones, or exceeding Investment Plan milestones for a number of reporting cycles
- Loss of executive/business sponsorship
- Loss of key resources or lack of adequate resources

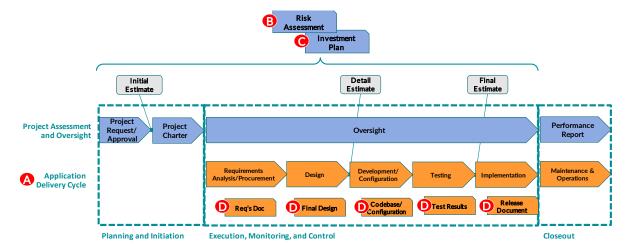
A project could be considered for reinstatement if it can correct or demonstrate a strong plan to correct the last three items above.

3. Clearly define the responsibilities and services of the OCIO oversight team and communicate the role of oversight consultants.

As previously noted, by statute the OCIO is required to monitor all major IT projects. However, in addition to monitoring for adherence to scope, schedule, and budget, there is an expectation among legislative members, TSB members, and agencies that OCIO oversight consultants also play a key role in ensuring projects align with business goals and achieve success in meeting business objectives. To counterbalance the perspective of some agencies of the oversight process as overly burdensome, we suggest the OCIO oversight team reframe their role as "a resource in supporting agencies achieve project success." Note that many OCIO oversight consultants already perceive themselves in this role and this relationship is improving with agencies. Over time, this could lead to greater trust, earlier engagement with agency projects, better risk mitigation, and more successful projects.

4. Align risk assessment, investment planning, and oversight activities with the project or application delivery life cycle.

The graphic below illustrates one possible example.



A. Adopt a standardized project delivery framework and methodology.

Establish a statewide standard, yet scalable, framework and methodology for application delivery, infrastructure install or upgrade, and large-scale software upgrade projects. The methodology should have the flexibility to accommodate both in-house developed and vendor solutions, as well as waterfall and agile approaches. Consider the State of Michigan's State Unified Information Technology Environment (SUITE) framework that was developed based on industry-accepted standards such as the Project Management Methodology (PMM) and System Engineering Methodology (SEM). Allow for exceptions on a case-by-case basis for key steps that are not applicable to the project.

B. Re-assess project risk at each project phase or gate.

Re-assess project risk at major project phases or gates. Consider pre-charter (IT Project Assessment), requirements analysis/procurement, design, and other implementation event-driven milestones such as the states of Colorado, Florida or Michigan uses. Update associated risk management plans and resources. In the future, agencies could update these plans through an online agency portal.

C. Clearly define and communicate the required components to calculate total cost of ownership and incrementally refine the Investment Plan at each project phase or gate.

Train agencies on state policies guiding project cost estimates. Incrementally refine the Investment Plan at each project phase or gate. Consider pre-charter (IT Project Assessment), requirements analysis/procurement, design, and other implementation event-driven milestones such as the states of Colorado, Florida or Michigan uses. The final estimates can assist in creating ongoing support and maintenance plans. These incremental updates provide for increasing levels of accuracy and encourage agencies to engage the OCIO earlier in investment planning. In the future, could update their Investment Plans through on online agency portal.

D. Define required technical deliverables to support improved technical oversight.

Require high-level system architecture diagrams with Investment Plans to demonstrate compliance with statewide architecture standards (e.g., firewalls, server architecture, network architecture) or to request an exception. Define required technical deliverables to support phase or gate closures and improve technical oversight throughout the project. This may include those included in the illustration above as well as increasingly detailed architecture diagrams to support ongoing architecture reviews.

5. Enhance support for the Technology Services Board (TSB) in its role in the oversight process.

As previously noted, some TSB members expressed a desire to be more of a resource to major projects, providing advice, mentorship, and support for evaluating options. Consider the following actions.

- Develop and provide new TSB members with a comprehensive handbook outlining the risk assessment and oversight processes, governing statutes and policies, and their roles and responsibilities as TSB members.
- Identify standard criteria for presenting projects to the TSB such as projects in red or trending yellow status and projects of special interest to the TSB, similar to what the State of Michigan has done.

- Identify other key milestones for project presentations to the TSB, such as at project kickoff, when major project changes occur (e.g., changes in project sponsor, project team, vendor, external dependences), and for post-implementation lessons learned and benefits review.
- Standardize minimum project health measures to present to the TSB. In addition to scope, schedule, and budget, consider a small number of other key measures such as project resources, stakeholder management, vendor management, risk management, and progress toward outcomes.
- Provide relevant project information including project overview, objectives, current status, and current risks and issues in advance of TSB meetings.
- Focus TSB meetings on risk mitigation discussions rather than project status updates. Provide
 the opportunity for projects to leverage the experience and expertise of TSB members as
 public sector and private industry leaders in evaluating problem solutions.

Governing Statutes and Policies

1. Revise Policy 121 IT Investments—Approval and Oversight and associated procedures to reintroduce risk-based project oversight categories.

Include in the policy three project oversight levels based on the scoring of the IT Project Assessment: Category Level 1 for low risk projects, Category 2 for moderate risk projects, and Category 3 for high-risk projects or complex programs. Revise associated procedures to address tailored oversight requirements by category level. Consider minimum project manager qualifications by category level.

2. Create a future working group to look for opportunities to consolidate and streamline polices.

As previous noted, we reviewed the statutes and policies governing the IT project approval and oversight process as part of our assessment. While overall we found the directives of these to be consistent with best practices from peer state agencies and similarly large, complex government organizations, it appears Washington has a significantly larger array of policies compared to other states. There may be a long-term opportunity to consolidate policies, standards and procedures, and leverage updated documents to promote better agency understanding and compliance.

Supporting Tools

Refine the IT Project Assessment (ITPA) tool.

Refine the ITPA tool to reflect the process changes previously described. Adapt the tool to support updates by phase or gate while maintaining history.

2. Revise the Investment Plan (IP) tool.

Add additional detail on the technology solution and streamline or eliminate redundant information. Move some content to the project charter. The following table summarizes our recommendations.

	Section	Recommendation	Req'd for Oversight Category
1	Business Problem	No changes	2,3
2	Business Benefits/Performance Outcomes and Measures	No changes	2,3

	Section	Recommendation	Req'd for Oversight Category
3	Discovery	No changes	2,3
4	Proposed Technology Solution	Enhance to include enterprise architecture, technology stacks, and other relevant information	2,3
5	Alignment with Statewide Technology Strategies and Architecture	Enhance with enterprise architecture diagrams	2,3
6	Relationship to State's Technology Infrastructure	Enhance; require submittal of system architecture diagrams in compliance with statewide architecture standards (e.g., firewalls, server architecture, network architecture) or requesting exception(s)	2,3
7	Proposed Exceptions to OCIO Policies and Technical Standards	No changes	2,3
8	Acquisition Plan	No changes	2,3
9	Delegated Authority	No changes	2,3
10	Schedule	No changes; encourage incremental refinement at project phases or gates	2,3
11	Project Governance	No changes	2,3
12	Project Team Organization	Move to project charter	2,3
13	Executive Sponsor	Move to project charter	2,3
14	Project Manager Experience and Qualifications	Move to project charter	2,3
15	Project Quality Assessment	No changes	3
16	Independent Verification and Validation	No changes	
17	Formal Methodology	Document only exceptions to standard methodology	
18	Scope Management	Move to project charter; project management plan 2,3	
19	Business User Involvement	Move to project charter; project management plan 2,3	
20	Organizational Change Management	No changes 2,3	
21	Dependencies	Include here and in project charter 2,3	
22	Investment Impact on Other Government Organizations	No changes 2,3	
23	Readiness Assessment	Move to project charter 2,3	
24	Project Risks	No changes 2,3	
25	Severity and Risk Assessment	Merge with #24 Project Risks 2,3	
26	Project Funding	No changes	2,3

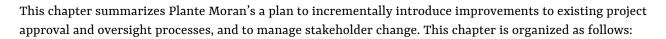
	Section	Recommendation	Req'd for Oversight Category
27	Maintenance Funding	No changes	2,3
28	Cost Benefit Analysis	Merge with # 2 Business Benefits	3
29	Project Budget by Fiscal year	No changes; encourage incremental refinement at project phases or gates	2,3

3. Procure and implement an automated project Portfolio Management (PPM) solution after deploying the process and policy changes recommended in this assessment report.

Based on best practices and benchmark interviews with similarly sized organization, an automated portfolio management solution is essential to successfully streamlining the governance and management of a multi-million dollar project portfolio as well as supporting associated data analytics and data-driven decision-making. Such a solution can automate the project intake process and review, assessment, approval, and oversight workflows and provide an online workflow status display for agencies. It also can provide a dashboard for individual project status and portfolio analysis.

Deployment and Change Management





- Deployment Plan
- Change Management

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Deployment Plan

The following deployment plan presents a suggested timeline for implementing the recommendations in the previous chapter.

	2019	2020	2020	
	July – December	January - June	July - December	
Approval and Oversight Processes and Practices	 Clarify the definition of IT "project." Refine the project intake, assessment, and oversight process. Clearly define the responsibilities and services of the OCIO oversight team and communicate the role of oversight consultants. Enhance support for the TSB in its role in the oversight process. 	Align risk assessment, investment planning, and oversight activities with the project or application delivery life cycle.		Scalable oversight process for projects of different size, complexity, and risk
Governing Statutes and Policies	Revise Policy 121 IT Investments— Approval and Oversight and associated procedures to reintroduce risk-based project oversight categories.		Create a future working group to look for opportunities to consolidate and streamline polices.	Policies to govern risk-based oversight levels and activities
Supporting Tools	 Refine the IT Project Assessment tool. Revise the Investment Plan tool. 		Procure and implement an automated project Portfolio Management (PPM) solution.	Revised tools to support scalable oversight and streamlined processes

Change Management

Every change in process also creates change for people. A good change management plan begins with a stakeholder analysis including: 1) who will be impacted; 2) how they will be impacted; 3) what they need to know, and at what time and what intervals. It is also important to know what existing infrastructure exists to support communication and training, and what new models may need to be developed.

As the OCIO creates a formal change management plan to support the deployment of the recommendations included in this report, it should consider the following stakeholder groups and associated impact analyses.

- 1. **OCIO Project Steering Committee.** The steering committee for this project provided guidance and oversight to our scope of work. The committee included the OCIO Deputy Director, OCIO Sr. Program Manager, OCIO Enterprise Technology Architect, and two OCIO oversight consultants.
 - This assessment report (and the follow on presentation to the Technology Services Board) concludes the work effort for which the OCIO engaged Plante Moran. The OCIO Project Steering Committee should formally accept this assessment report, and closeout the project following the presentation to the TSB.
- 2. **Technology Services Board (TSB).** Among other duties, the TSB reviews, approves, and provides oversight for major information technology projects. Members include legislators, business leaders, agency directors, and a union representative.
 - While this assessment report does not recommend specific policy changes affecting the TSB, it does make recommendations to enhance its role in the oversight process. The OCIO should consider communication of the recommendations of this assessment report, sepecific training in roles and responsibilities (especially for new members), and a reference handbook outlining the oversight process, governing statutes and policies, and their roles and responsibilities as TSB members.
- 3. **Legislature and Legislative Staff.** The Washington State Legislature can identify projects for OCIO oversight that do not specifically meet the existing definition of a major IT project (known as the IT Pool). Legislative staff report status to legislative members as requested.
 - It will be important for legislative members and staff to understand changes to the oversight process and status reporting requirements resulting from this assessment. The OCIO should consider informing legislators and legislative staff of the changes to the oversight process resulting from this assessment and collaborating on defining common reporting requirements.

It will be important for legislative members and staff to understand changes to the oversight process and reporting requirements resulting from this assessment. The OCIO should consider informing legislators and legislative staff of changes to the oversight process and collaborating on defining common reporting requirements.

 $^{^{8}}$ This is currently scheduled for the TSB meeting on August 8, 2019.

- 4. **Office of Financial Management (OFM).** OFM budget analysts review agency IT project planning and budget requests (i.e., Decision Packages) before prioritization by the OCIO and review budget status of agency IT projects under OCIO oversight.
 - It will be important for OFM budget analysts to understand changes to the oversight process and reporting requirements resulting from this assessment. The OCIO should consider informing OFM budget analysts of changes to the oversight process and collaborating on defining common reporting requirements.
- 5. **Agency Chief Information Officers (CIO).** Washington State's information technology leadership environment is federated, with many state agencies having CIOs and IT departments of their own. The CIO Forum meets monthly to facilitate the exchange of information, discussion of business problems and solutions, and conversation around how Washington Technology Services (WaTech) can best support agencies.
 - Changes to policies, risk assessment and associated oversight processes, and associated tools will impact the way agencies interact with the OCIO during IT projects under oversight. The OCIO should consider formally presenting the findings and recommendations of this assessment report during an upcoming OCIO Forum.
- 6. **OCIO Oversight Consultants.** Oversight consultants monitor projects that have been assessed as "under project oversight" by the Office of the Chief Information Officer. They conduct monthly project assessments and escalate issues to the State CIO as needed. In addition, they are a point of contact for agency projects teams regarding policies and standards, procedures, and assistance with presenting to the Technology Services Board.
 - Changes to policies, risk assessment and associated oversight processes, and associated tools will impact the way OCIO oversight consultants do their work and interact with state agencies. In addition, the OCIO consultant's role as project advocate will continue to evolve. The OCIO should consider communication of the recommendations of this assessment report, role-specific training, updates to the oversight consultant desk manual, and train-the-trainer training for training to the agencies.
- 7. Agency Project Governance Groups. Project governance provides business sponsorship to a project. It seeks to remove roadblocks, make available the necessary resources, and resolve escalated issues for a project. State agency governance groups may involve just a project sponsor or business owner for smaller, lower risk projects or a formal project steering committee including the project sponsor and stakeholder representatives from multiple agencies, business units, and/or direct customers for larger, high-risk projects.
 - Changes to policies and in the project approval and oversight processes will impact these groups. The OCIO should consider expanding its project sponsor training and offering it multiple times each year to project sponsors and project steering committees. This training should focus specifically on the revised policies and processes, member roles and responsibilities, and the resources available to support governance and the project, including the OCIO and third party quality assurance.
- 8. **Agency Teams Involved in the Project Request, Planning, and Initiation Processes.** These state agency teams are involved in the early stages of a project, including the initial project proposal, decision package, IT Project Assessment, and Investment Plan.

Changes in the IT Project Assessment, definition and determination of oversight categories, and iterative, phase or gate driven investment planning will impact these teams. The OCIO should consider training offered multiple times each year to agencies with projects in the project request phase. This training should focus specifically on the ITPA and investment planning processes and the tools and resources to support these processes.

9. **Agency Fiscal Managers.** Agency fiscal managers are responsible for an entire agency's fiscal operations and report to the divisional level in a state agency. They support the project request, investment planning, and budget status reporting of IT projects.

Changes in the investment planning and budget status reporting processes in particular will impact state agency fiscal managers. The OCIO should consider training offered multiple times each year to agency fiscal manager involved approved projects under oversight. This training should focus specifically on fiscal management roles and responsibilities in the oversight process, and the tools and resources available.

10. Agency Project Management Teams. State agency project management teams manage the implementation of information technology projects, from project approval through execution and monitoring through closeout. At a minimum, these teams consist of a project manager (whether an employee of the agency or a third party project management consultant), but can be as expansive as including functional leads, technical leads, a change and/or communication management team, and more. Some of these team members may have been involved in the request, planning, or initiation processes, but this may not be the case for all projects.

Changes in the monitoring and reporting requirements for projects of different oversight categories, including new iterative, phase or gate driven investment planning, will impact how these teams interact with their OCIO oversight consultants. The OCIO should consider training offered multiple times each year to approved projects under oversight. This training should focus specifically on project management team roles and responsibilities in the oversight process, and the tools and resources available to them.

11. **Third party Project Management Providers.** Some agencies to procure third party project management consulting services due to lack of staff capacity, specialty expertise, or other reasons. In these cases, these project management providers manage scope, schedule, and budget, direct the day-to-day activities of the project, manage risks and issues, monitor and report project status to project leadership and agency executives, and perform all other responsibilities that an agency project manager otherwise would.

Changes to the oversight process, including the monitoring and reporting requirements for projects of different oversight categories, will impact these third party project managers in the same way they impact state agency project managers. The OCIO should consider training offered multiple times each year to approved projects. This training should focus specifically on project management team roles and responsibilities in the oversight process, and the tools and resources available to them.

12. **Quality Assurance (QA) Providers.** Independent quality assurance is required on all major IT projects. QA providers are engaged prior to submission of the Investment Plan and continue through project closeout. They may also be involved during the feasibility, procurement, and contracting phases of a project. They are required to provide a quality assurance plan, readiness assessment, regular monthly

assessments, and closeout report. Changes to the oversight process, including the risk monitoring and reporting requirements for projects of different oversight categories, will impact these QA providers.

Because QA providers contributed to this assessment in a significant way at the May 2019 QA Summit, the OCIO should consider sharing the findings and recommendations of this report. It should also consider training offered multiple times each year focused specifically on QA roles and responsibilities in the revised oversight process.

13. **State Department of Enterprise Services (DES) and Procurement Officers.** DES's Information Technology Contracts (ITC) program manages master IT contracts and provides procurement assistance to support the IT acquisition goals of public entities across Washington.

Changes to the investment planning process may impact DES procurement offices and contracts liaisons. The OCIO should consider formally presenting the findings and recommendations of this assessment report.

Appendices



A: List of Acronyms

AST (Florida) Agency for State Technology

CAPM Certified Associate in Project Management

CIO Chief Information Officer

CPI Cost Performance Index

CTS Consolidated Technology Services

DES (Washington State) Department of Enterprise Services

DP Decision Package

DTS (Utah) Department of Technology

ePMO Enterprise Project Management Office

GIS Geographic Information System

IP Investment Plan

IT Information Technology

ITC (DES) Information Technology Contracts program

ITIF (Michigan) Information Technology Investment Fund

ITPA Information Technology Project Assessment

IV&V Independent Verification and Validation

OCIO Office of the Chief Information Officer

OFM Office of Financial Management

PgMP Program Management Professional

PMBOK Project Management Body of Knowledge

PMI Project Management Institute

PMM Project Management Methodology

PMO Project Management Office

PMP Project Management Professional

PPM Project Portfolio Management

QA Quality Assurance

RCW Revised Code of Washington

SEM System Engineering Methodology

SPI Schedule Performance Index

SUITE (Michigan) State Unified Information Technology Environment

TGB (Benchmark Agency) Technology Governance Board

TSB (Washington) Technology Services Board

WaTech Washington Technology Services

B: Benchmark Organization Profiles

To supplement our discovery efforts, experience, best practices, and industry research, we also conducted a benchmark survey and follow up interviews of five peer states and one large utility organization to document alternative approaches to IT Project Assessment, approval, and oversight. We separately provided our detailed findings to the State OCIO. This appendix provides a summary profile for the benchmarked states: 1) Colorado; 2) Florida; 3) Michigan; 4); Pennsylvania; and 5) Utah, and the benchmark utility agency. We begin with a profile for the State of Washington for comparative purposes.

State of Washington	
IT Services	Federated
# Projects under Oversight	57 (plus 40+ new projects beginning July 1, 2019)
\$ Value of Projects under Oversight	\$1.4 - \$1.5 billion (total estimated project budget lifecycle)
Project Approval and Oversight Body(ies)	Technology Services Board, Office of the Chief Information Officer (OCIO)
Oversight Criteria	All projects greater than \$500,000 or more than four months in duration and assessed as high risk
Project Risk Assessment Criteria	1) Schedule; 2) Cost/Funding; 3) Business Impact; 4) Agency Readiness; 5) Technology Impact; 6) Security and Privacy
Project Categories	Single project oversight category; all projects greater than \$500,000 or more than four months in duration and assessed as high risk are placed under OCIO oversight
Category Oversight	State statues drive requirements for OCIO oversight; OCIO polices drive requirements for quality assurance (QA)
Phasing/Gate Approvals	Currently transitioning to phasing/gate approvals
Project Approval and Oversight Process	 Submit decision package (funding request) Assess/approve/prioritize decision package Assess and score risk (to determine oversight) Develop Investment Plan Submit monthly QA reports Provide monthly oversight reports Closeout project
Key Project Metrics	Scope, Schedule, Budget, Overall Health; additional metrics tracked and reported by QA consultants

⁹ As delegated by the State Legislature.

State of Washington	
Relevant Statutes and Polices	 RCW 43.105.220 2b Strategic information technology plan – Biennial performance reports RCW 43.105.245 Planning, implementation, and evaluation of major projects – Standards and policies RCW 43.105.255 Major technology projects and services – Approval Policy 121 IT Investments – Approval and Oversight Policy Policy 131 Manager Information Technology Projects Policy 132 Project Quality Assurance

State of Colorado	
IT Services	Centralized
# Projects under Oversight	Not provided
\$ Value of Projects under Oversight	Not provided
Project Approval and Oversight Body(ies)	Executive Governance Committees
Oversight Criteria	All major IT projects as measured by a project size rating and any project that represents a high level of risk in security, architecture, or implementation
Project Size/Risk Assessment Criteria	1) Size; 2) Risk (Business Criticality, Cost, Delivery and Operational Risk, Security)
Project Categories	Major IT project as defined by oversight criteria
Category Oversight	All major and high risk IT projects follow oversight process
Phasing/Gate Approvals	Yes
Project Approval and Oversight Process	 Ensure accurate and complete project documentation; review key deliverables by PMI project stages Review weekly project status and weekly trending reports (project managers) Guide gate process Ensure IV&V findings and being remediated Certify IT project Share lessons learned
Key Project Metrics	Scope, Schedule, Budget, others as identified
Relevant Statutes and Polices	 Senate Bill 063 (identified certified projects and provided specific legislative mandates around how these projects are to be managed) Senate Bill 254 (instituted the Executive Governance Committees as the advisory boards for oversight of major projects) House Bill 12-1288 Administration of IT Projects in State Government

State of Florida	
IT Services	Decentralized
# Projects under Oversight	Not provided
\$ Value of Projects under Oversight	\$600-700 million (annual average)
Project Approval and Oversight Body(ies)	Agency for State Technology (AST) Oversight
Oversight Criteria	 State Agency information technology projects that have total project costs of \$10 million or more and that are funded in the General Appropriations Act or any other law Cabinet Agency information technology projects with a total project cost of \$25 million or more and that impacts one or more other agencies. (74-1.009, Agency for State Technology (AST) Oversight.)
Project Risk Assessment Criteria	Risk, Complexity
Project Categories	Driven by Risk and Complexity (4: High Risk, High Complexity; 3: High Risk, Medium Complexity; 2: Medium Risk, Medium Complexity; 1: Low Risk, Low Complexity)
Category Oversight	Project categories drive requirements for the use of PMP ® certified project manager, risk manager, independent verification and validation (IV&V); governance; documentation, and reporting requirements
Phasing/Gate Approvals	Pre-charter, Initiation, Planning, Execution (event driven)
Project Approval and Oversight Process	Rule 74-1.009, Agency for State Technology (AST) Oversight
Key Project Metrics	Schedule, Project Schedule Performance Index (SPI), Budget, Project Cost Performance Index (CPI), Scope, Progress against Deliverables
Relevant Statutes and Polices	Rule 74-1, F. A. C Florida Information Technology Project Management and Oversight Standards

State of Michigan	
IT Services	Centralized
# Projects under Oversight	250-300 (annual average)
\$ Value of Projects under Oversight	\$250-300 million (annual average)
Project Approval and Oversight Body(ies)	Project Management Office (PMO), Project Review Board (including agency general managers)
Oversight Criteria	All projects
Project Risk Assessment Criteria	Complexity, Duration, # of Agencies, Potential Impact to Citizens, Potential Impact on State Services, New Technology/Approaches, Regulatory/Compliance Requirements, Total Cost of Ownership, Cultural Change Management
Project Categories	Driven by Risk Assessment Criteria Above
Category Oversight	 Project Review Board (PMO and agency general managers) for projects reporting red for three or more consecutive reporting periods ITIF Information Technology Investment Fund (ITIF) Review Board for projects aligned with Governor's priorities, specially funded, and in yellow status
Phasing/Gate Approvals	Initiation, Planning, Execution (initial), Execution (final)
Project Approval and Oversight Process	 Using the portfolio management tool, General Managers for all agencies enter the IT projects for the fiscal year; standard definition of a project is used Conduct joint reviews among Application Delivery, PMO, Infrastructure, and shared services to review the projects/dependencies/alignment with IT strategic plans Perform bi-weekly or monthly oversight by category based on funding (Governor/General Fund), mandated (mostly federal), and compliance (such as PCI) Review other projects based on red or trending yellow status Provide standard reporting to all stakeholders by PMO End oversight when the project is complete and becomes operational
Key Project Metrics	Schedule, Budget, Scope, Benefits Realized, Customer Satisfaction
Relevant Statutes and Polices	State Administrative Policy 1355 https://www.michigan.gov/documents/dmb/1355.00_281427_7.pdf

State of Michigan	
	State Administrative Policy 1360 https://www.michigan.gov/documents/dmb/1360.00 281429 7.pdf
	Public Act 389, Section 115, effective December 19, 2018 http://www.legislature.mi.gov/documents/2017- 2018/publicact/pdf/2018-PA-0389.pdf
	Public Act 207, Section 830, page 98, effective June 21, 2018 http://www.legislature.mi.gov/documents/2017-
	2018/publicact/pdf/2018-PA-0207.pdf

State of Pennsylvania	
IT Services	Federated
# Projects under Oversight	Projects for approximately 46 agencies (total number not provided)
\$ Value of Projects under Oversight	Not provided
Project Approval and Oversight Body(ies)	Enterprise Project Management Office (ePMO)
Oversight Criteria	All projects categorized by Run, Grow, and Transform
Project Risk Assessment Criteria	Complexity, Visibility, Duration, Cost
Project Categories	Driven by Risk Assessment (Level 1: Significant Risk; Level 2: Moderate Risk; Level 3: Minimal Risk)
Category Oversight	Risk levels drive project management rigor, governance, documentation, and reporting requirements
Phasing/Gate Approvals	None identified
Project Approval and Oversight Process ¹⁰	 Submit project request Assess/approve project request Score and classify (i.e., Run, Grow, and Transform) project for portfolio management Develop high-level project estimates Approve project Manage project Closeout project
Key Project Metrics	None provided
Relevant Statutes and Polices	None identified

 $^{^{10}}$ Note that oversight is primarily focused on project management following good project management practices as overseen by the State ePMO.

State of Utah				
IT Services	Federated			
# Projects under Oversight	Projects for approximately 26 agencies (total number not provided)			
\$ Value of Projects under Oversight	Not provided			
Project Approval and Oversight Body(ies)	Agency IT Directors, Business Leaders, State Project Management Office (PMO), State CIO			
Oversight Criteria	 High visibility projects Projects linked to the Governor's initiatives 			
Project Risk Assessment Criteria	Subjective (1: High to 5: Low)			
Project Categories	None identified			
Category Oversight	None identified			
Phasing/Gate Approvals	None identified			
Project Approval and Oversight Process ¹¹	 The State PMO is directly responsible for enterprise/infrastructure projects Agency assigned development teams work with project managers who report to agency IT Directors The State PMO works with the Department of Technology Services (DTS) to ensure the project management tool (ServiceNow) is configured to meet the needs of the various agency teams; this model provides flexibility to work within customer agency project models while delivering consistent enterprise project management statistics and dash boarding 			
Key Project Metrics	Scope, Schedule, Budget			
Relevant Statutes and Polices	Executive Branch Information Technology Strategic Plan <u>Utah Code 63F-1-203</u>			

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 $^{^{11}}$ Note that oversight is primarily focused on project management following good project management practices as overseen by the State PMO.

Private Benchmark Agency ¹²	
IT Services	Federated
# Projects under Oversight	Not provided
\$ Value of Projects under Oversight	Not provided
Project Approval and Oversight Body(ies)	Technology Governance Board (TGB)
Oversight Criteria	1) Qualified as an "enterprise" project; 2) required by a new legal, regulatory, compliance, or other mandate; 3) assessed as high risk; 4) budget; 5) business impact
Project Risk Assessment Criteria	Consequence of failure (penalty for non-compliance, interruption of service, loss of revenue, failure to meet a strategic business initiative, unacceptable political impacts) x likelihood of failure (including project or system complexity, project team, vendor experience, business and organization impacts, schedule, budget, external dependences and constraints)
Project Categories	Driven by Oversight Criteria (Level 1: High Risk; Level 2: Moderate to Low Risk)
Category Oversight	All Level 1 (high risk) projects are under oversight of the TGB
Phasing/Gate Approvals	Aligned with annual budget; assessed as needed based on project health
Project Approval and Oversight Process	 Score and classify by business priority, IT strategy, and investment type (i.e., Run, Grow, and Transform) project for portfolio management Bring all projects in red status and those requested by the TGB to the TGB for review Closeout project closure Report project lessons learned/benefits review to TGB
Key Project Metrics	Scope, Schedule, Budget, Quality, Progress against Milestones
Relevant Statutes and Polices	The TGB operates under the authority of the Director and is governed by the applicable codes, regulations and policies of the agency

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 $^{^{12}}$ This benchmark agency provides public utility services. Its IT project oversight processes reflect a focus on critical infrastructure and risk management.

C: Findings and Supporting Discovery Activities

The findings included in this assessment report are supported by consistent themes uncovered during one or more of our discovery activities, and reviewed and validated with the OCIO project steering committee. The table on the following page identifies those discovery activities that contributed to each of our findings.

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Finding	Legislative Member/Staff Interviews	OFM Interviews	TSB Focus Group	Agency Focus Groups	CIO/OCIO Interviews	QA Summit	Benchmark Survey	Document Review
Approval and Oversight Processes and Practices								
Strengths								
The State has a formal oversight process, dedicated oversight resources, and governing statutes.	X	X	Х	X	X	X	X	X
2. Project oversight is risk based.				X	X	X		X
3. The State is pursuing financial gating of projects.	X	X		X	X			X
4. The OCIO Concept Review process is an effective process to communicate expectations for immediate next steps during major project initiation.		X		Х	Х			Х
5. Project sponsor training is increasing the awareness of effective sponsorship as a critical project success factor.				X	Х	X		Х
Opportunities for Improvement								
Current practice does not provide early OCIO visibility into agency projects.	X	X	X	X	X	X		X
2. Feasibility studies are not routinely conducted, or are not conducted or documented with rigor.		X		X	X	X		X
3. Assessments of projects and associated risks are not performed uniformly.				X	X	X		X
4. The IT Project Assessment does not scale and misses some best practice measures of project risk.			X	X	X	X	X	X
5. The current investment planning process does not provide for incremental refinement.	X	X	X	X	X	X		X
6. Current project oversight is one-size-fits-all.	X	X	X	X	X	X	X	X

Finding	Legislative Member/Staff Interviews	OFM Interviews	TSB Focus Group	Agency Focus Groups	CIO/OCIO Interviews	QA Summit	Benchmark Survey	Document Review
7. There does not appear to be consistent technical oversight of projects.					X	X		X
8. Currently project health measures and status definitions are inconsistent.	X	X	X	X	X	Х		X
9. Some agencies perceive project oversight to be punitive rather than focused on risk mitigation and project success.			X	X	X			
10. Some agencies report a lack of clear understanding of the role of the OCIO oversight consultants.				X	X	X		
11. The TSB expressed a desire to be more involved in the project oversight process.			X					
Governing Statutes and Policies								
Strengths								
1. Relevant state codes provide clear authority for oversight.	X				X			X
2. Relevant state codes provide ample flexibility for project oversight.	X				X			X
3. Policies provide for independent quality assurance.					X	X		X
Opportunities for Improvement								
1. Revisions to Policy 121 removed project categories and levels of oversight counter to best and peer practice.				X	X	Х	X	X
2. The OCIO is challenged to effectively compile the information required to prepare the biennial performance report.	X			X	X	X		X
Supporting Tools								
Strengths								
The OCIO's IT Transparent: Project Dashboard provides transparency around major IT projects in Washington State.	X	X	X	X	X	X		X

Finding	Legislative Member/Staff Interviews	OFM Interviews	TSB Focus Group	Agency Focus Groups	CIO/OCIO Interviews	QA Summit	Benchmark Survey	Document Review
2. Most agencies are pleased with the revised ITPA tool.				X	X			
Opportunities for Improvement								
1. Some tools and forms require duplicative information from agencies.				X		X		X
2. The ITPA tool does not scale for agencies of different of size, nor does it include some best practice measures of project risk.				X	X	Х	X	X
3. Agency cost estimates included in the Investment Plan are not always calculated consistently.	X	X		X	X	X		X
4. Agencies report that some tools and templates are outdated or difficult to find online.				X				X
5. Technology Services Board members are not consistently provided a reference handbook.			Х					

D: Recommended Oversight Practices by Project Risk Category

This appendix provides a recommended set of information technology project oversight practices by project risk category, including governance and oversight structure, oversight authority and reporting frequency, and specific artifact reviews by traditional project management phase. These recommendations are based on industry best practices (aligned with the Project Management Body of Knowledge published by the Project Management Institute), common peer practices in large, complex organizations (both public and private sector), and Plante Moran's experience providing technology consulting services to government organizations for nearly 40 years. They have been adapted based on Plante Moran's understanding of the unique environment of Washington State.

	Category 3 (High Risk)	Category 2 (Moderate Risk)	Category 1 (Low Risk)
Governance and Oversight Structure			
Project Sponsor	Required	Required	Recommended
Project Steering Committee	Required	Required	Recommended
Project Manager	Required	Required	Recommended
OCIO Oversight	Required	Required	Not Required
Quality Assurance	Required	Required	Not Required
Oversight Authority and Reporting Frequency			
Oversight Authority	OCIO	OCIO	Agency
OCIO Reporting	Bi-weekly	Monthly	None
QA Reporting	Monthly	Quarterly ¹³	None
Oversight Practices/Artifact Reviews			
Project Planning and Initiation			
Feasibility Study	Required	Required	Not Required
Risk Assessment ¹⁴	Required	Required	Required
Risk Management Plan ¹⁵	Required	Required	Recommended

¹³ Or more frequently as defined by the QA Plan, Risk Management Plan, and/or as needed in response to project milestones and implementation events.

¹⁴ Required initially for all projects meeting the minimum criteria for a risk assessment. For Category 3 and Category 2 projects, refine incrementally based on project phases or event-driven gates (e.g., requirements analysis/procurement, design). Incremental updates recommended for Category 1 projects.

 $^{^{15}}$ Tailor to specific areas of high risk as assessed in the risk assessment.

	Category 3 (High Risk)	Category 2 (Moderate Risk)	Category 1 (Low Risk)
Investment Plan ¹⁶	Required	Required	Not Required
Procurement Plan	As needed	As needed	As needed
Project Charter	Required	Required	Recommended
Project Management Plan	Required	Required	Recommended
Detailed Workplan and Schedule	Required	Required	Recommended
Change and Communication Plan	Required	Required	Recommended
Execution, Monitoring, and Control			
Event-driven Implementation Artifacts ¹⁷	Required	Required	Recommended
Deployment Plan	Required	Required	Recommended
Training Plan	Required	Required	Recommended
Transition and Maintenance Plan	Required	Required	Recommended
Go-live Readiness Assessment	Required	Required	Recommended
Closeout			
Project Closeout Report	Required	Required	Recommended
Lessons Learned	Required	Required	Recommended
Business Outcomes/Benefits Report	Required	Required	Recommended

 $^{^{16}}$ Refine incrementally based on project phases or event-driven gates (e.g., requirements analysis/procurement, design).

¹⁷ Project artifacts documenting the end of a phase or gate. These should align with the State's standard project methodology, adapted as needed to the specific project (e.g., requirements analysis/procurement, design, test plan).

E: Suggested Minimum Project Manager Qualifications

This appendix provides suggested minimum project manager qualifications by project risk category. These are compiled from Plante Moran's public sector job classification database, industry sources such as the Project Management Institute (PMI), and other peer governmental organizations for which Plante Moran has provided technology consulting services. It is important to note that the following qualifications are suggestions only, provided for the State's consideration.

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Project Category 3 (High Risk)

Category	Category 3 (High Risk)
Title	Program/Senior Project Manager
Key Responsibilities	 Manages Category 3 (high-risk) projects and programs. Serves in a lead capacity over a large team of professionals in the formulation, development, coordination, planning, and implementation of projects. Develops work plans, prepares budgets, creates project schedules, and oversees implementation of assigned programs and projects. Organizes and manages resources to bring about the successful completion of specific projects goals and objectives. Coordinates the sharing of resources among constituent projects. Monitors the program/project by reviewing key performance indicators in order to address performance issues and maintain alignment with the organization's strategic business goals. Regularly reports project performance. Ensures adherence to project management policies and standards. Provides consultation and mentoring in project management methodologies and best practices.
Required Knowledge, Skills, and Abilities	 Advanced knowledge of program/project management principles, methods, and change management processes. Advanced knowledge and experience in more than one technology discipline (e.g., software development, network administration). Advanced knowledge of technology planning principles and technology alignment practices. Advanced knowledge of IT management practices and techniques. Advanced knowledge of information systems lifecycle methodologies, including analysis, design, testing, implementation, maintenance, documentation, and training procedures and practices. Advanced knowledge of vendor management practices and processes. Advanced knowledge of project benefits realization principles and processes. Ability to develop program/project plans, including schedule, scope, budget, human resource, risk and issue, change, and quality management plans. Ability to monitor and control day-to-day program/project work. Ability to identify and manage high-level program risks, assumptions and constraints.

	 Ability to establish and maintain cooperative, effective, and productive working relationships with others at all organizational levels. Ability to build consensus around complex issues; mediate and resolve problems; and implement change. Ability to guide and motivate others and shape team priorities to reflect program goals and objectives. Advanced time-management and organizational skills. Advanced skill in working on highly visible and politically sensitive projects and programs. Advanced skill in effectively communicating both verbally and in writing to staff and executive level audiences. Advanced skill in summarizing complex information. Advanced skill in creating a cooperative and productive program/project environment. Advanced skill in leading large, matrixed, multi-discipline project teams to achieve program/project goals and objectives. Advanced skill in influencing and persuading others with respect, tact, and courtesy. Advanced skill in problem solving and acting decisively.
	 Advanced skill in negotiating and conflict resolution. Advanced skill in vendor management.
Required Experience	 10+ years' IT management experience 10+ years' IT project management experience
Required Education	 Bachelor of Arts or Bachelor of Science degree in information technology, computer sciences, business administration, engineering or related field Master's degree in information technology, computer sciences, business administration, engineering or related field, or equivalent Certified Project Management Professional (PMP) Program Management (PgMP) certification preferred

Project Category 2 (Moderate Risk)

Category	Category 2 (Moderate Risk)
Title	Project Manager
Key Responsibilities	 Manages Category 2 (moderate risk) projects. Serves in a lead capacity over a large team of professionals in the formulation, development, coordination, planning, and implementation of projects. Develops work plans, prepares budgets, creates project schedules, and oversees implementation of assigned projects. Organizes and manages resources to bring about the successful completion of specific projects goals and objectives. Monitors the project by reviewing key performance indicators in order to address performance issues and maintain alignment with the organization's strategic business goals. Regularly reports project performance. Ensures adherence to project management policies and standards.
Required Knowledge, Skills, and Abilities	 Advanced knowledge of program/project management principles, methods, and change management processes. Advanced knowledge and experience in at least one technology discipline (e.g., software development, network administration). Knowledge of technology planning principles and technology alignment practices. Knowledge of IT management practices and techniques. Knowledge of information systems lifecycle methodologies, including analysis, design, testing, implementation, maintenance, documentation, and training procedures and practices. Knowledge of vendor management practices and processes. Knowledge of project benefits realization principles and processes. Ability to develop project plans, including schedule, scope, budget, human resource, risk and issue, change, and quality management plans. Ability to monitor and control day-to-day project work. Ability to manage, track, and report on project performance, including schedule and budget. Ability to identify and manage high-level program risks, assumptions and constraints. Ability to establish and maintain cooperative, effective, and productive working relationships with others at all organizational levels.

	Ability to build consensus around complex issues; mediate and resolve problems; and implement change.
	 Advanced time-management and organizational skills.
	Advanced skill in large-scale project management.
	• Advanced skill in effectively communicating both verbally and in writing to staff and executive level audiences.
	Advanced skill in summarizing complex information.
	 Advanced skill in creating a cooperative and productive project environment.
	• Advanced skill in leading large, matrixed, multi-discipline project teams to achieve project goals and objectives.
	 Advanced skill in influencing and persuading others with respect, tact, and courtesy.
	Advanced skill in problem solving and acting decisively.
	Skill in working on highly visible and politically sensitive projects.
	Skill in negotiating and conflict resolution.
	Skill in vendor management.
Required Experience	• 5+ years' IT management experience
	• 5+ years' experience managing moderately large, complex and/or vendor related projects
Required Education	Bachelor of Arts or Bachelor of Science degree in information technology, computer sciences, business
	administration, engineering or related field
	Certified Project Management Professional (PMP)

Project Category 1 (Low Risk)

Category	Category 1 (Low Risk)
Title	Project Manager
Key Responsibilities	 Manages Category 1 (low risk) projects. Serves in a lead capacity over a large team of professionals in the formulation, development, coordination, planning, and implementation of projects. Develops work plans, prepares budgets, creates project schedules, and oversees implementation of assigned projects. Organizes and manages resources to bring about the successful completion of specific projects goals and objectives. Monitors the project by reviewing key performance indicators in order to address performance issues and maintain alignment with the organization's strategic business goals. Regularly reports project performance. Ensures adherence to project management policies and standards.
Required Knowledge, Skills, and Abilities	 Knowledge of project management principles, methods, and change management processes. Basic knowledge of technology planning principles and technology alignment practices. Basic knowledge of information systems lifecycle methodologies, including analysis, design, testing, implementation, maintenance, documentation, and training procedures and practices. Ability to develop project plans, including schedule, scope, budget, human resource, risk and issue, change, and quality management plans. Ability to manage, track, and report on project schedule and budget. Ability to monitor and control day-to-day project work. Ability to identify and manage high-level project risks, assumptions and constraints. Ability to effectively close out projects. Ability to establish and maintain cooperative, effective, and productive working relationships with others at all organizational levels. Ability to build team consensus around complex issues; mediate and resolve problems; and implement change. Time-management and organizational skills. Skill in effectively communicating both verbally and in writing to staff and executive level audiences. Skill in summarizing complex information.

	 Skill in creating a cooperative and productive project environment. Skill in leading project teams to achieve project goals and objectives. Skill in influencing and persuading others with respect, tact, and courtesy. Skill in problem solving and acting decisively
Required Experience	2 years' IT project management OR equivalent experience
Required Education	 Associates Degree Bachelor of Arts or Bachelor of Science degree in information technology, computer sciences, business administration, engineering or related field preferred Certified Associate in Project Management (CAPM) or Certified Project Management Professional (PMP) preferred



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