

FY 2012 - 2013 AGENCY GUIDE TO IT INVESTMENT PLANNING

OhioDAS
Office of Information Technology

Investment and
Governance Division
Service · Support · Solutions



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1.0 Purpose of the Agency Guide to IT Investment Planning

Over the past several decades, Information Technology (IT) has become increasingly important to the efficient and effective operation of state government. Investment of scarce public resources in carefully selected IT projects offers significant benefits including increased productivity of government workers and improved service delivery to the citizens and businesses of Ohio. Effective IT investment planning is a good first step to actually do more with less.

Government agencies in the State of Ohio have been engaged in formalized IT investment planning activities during the last two decades. The benefit to these agencies and the citizens of Ohio is undeniable. Over time, the maturity of agency IT investment planning processes has improved. The maturity of these planning activities necessitates the continued maturity in automated support for these activities.

State of Ohio IT Policy ITP D.4, "Information Technology Planning," requires that state agencies establish and maintain IT investment plans. The *Agency Guide to IT Investment Planning* is designed to help agencies prepare, update, and use IT investment plans submitted to the Office of Information Technology (OIT) pursuant to State of Ohio IT Policy ITP D.4 (ohio.gov/ITP).

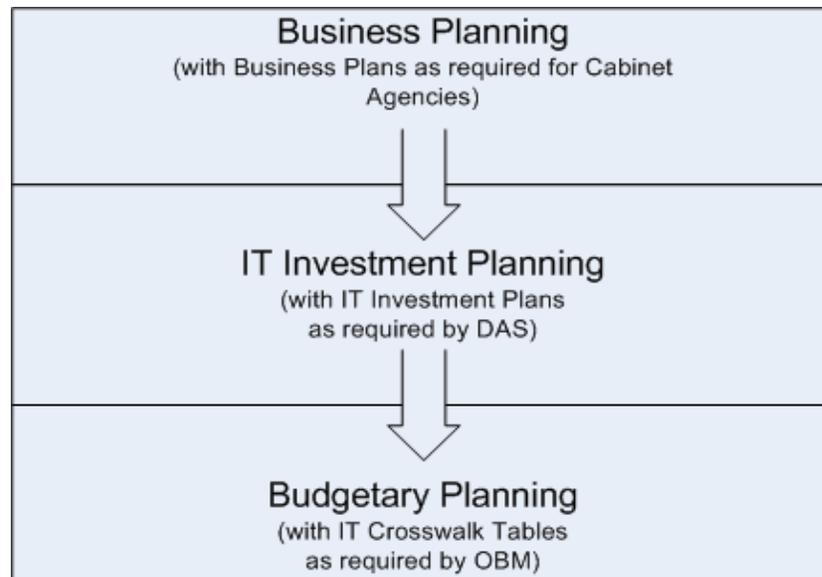


Figure 1 – Progressive IT Investment Planning Approach

The figure above shows the normal sequence of planning activities for IT investment planning. First, agency planners consider their mission, business goals and objectives, and other direction during the creation of their business plans. Second, agency planners involve their IT managers and determine how

IT assets (operational and planned) can help achieve agency business goals and objectives during the creation of their IT investment plans. Finally, agency planners develop budgetary profiles that identify how and when financial support for the IT investment decisions can be executed during the creation of their Crosswalk tables.

Automated tools are not a requirement for successful execution of IT investment planning, but they can aid business and IT managers across the enterprise. For the FY12/13 planning cycle, the Information Technology Investment Planning (ITIP) application is available through the OIT portal. The FY12/13 version adds a significant capability for IT planners, allowing the definition and budgeting for application and infrastructure activities. This additional capability increases the detail and planning visibility for IT efforts traditionally lacking in this area.

The *ITIP* database will contain the IT investment plans for each agency. Those plans document the IT projects and operations activities that each agency wants to execute and the budget profile for that IT project or activity. Further, the IT investment plans double as a narrative to inform the development of the IT budget. Any new IT assets that are delivered during project execution are catalogued in the *Application Management-Inventory (AM-I)* database for future agency and OIT use. On the financial side, the budgetary profiles for those IT projects and operations are documented in the IT investment plans. After budget approval, acquisition requests flow through the *Release and Permit (R&P)* application for acquisition approval, and subsequently through *OAKS* as those requests become purchases. Thus, the entire financial series of transactions can be monitored and managed within both an IT and business perspective.

This guide explains the basic elements that should exist in an IT investment plan and provides guidance on how to obtain and document this information. For agencies that have previously developed IT investment plans, the guide provides formatting structure and additional information for use in IT planning. For agencies that have not developed IT plans, the guide provides a process for developing IT investment plans accompanied by examples. Agencies must take it upon themselves to integrate IT investment plans and IT planning processes into their ongoing management of information technology. After agencies have formulated their IT plans, the *ITIP* tool (<https://appportal.oit.ohio.gov>) provides a vehicle for agencies to document and update IT investment plans as required in State of Ohio IT Policy ITP-D.4. For guidance on how to use the *ITIP* tool, see the ITIP Users Guide.

2.0 Agency IT Investment Plan Overview

An agency IT investment plan is a tool to help State of Ohio agencies improve the selection and management of IT investments. IT investment plans provide a framework for agencies to respond to dynamic social, political and economic conditions when making decisions regarding the use and procurement of IT. The goal is not just to create a useful document, but also to engage state agencies in a disciplined process that offers them the capability to deliberately respond to changing environments when making decisions regarding IT.

The successful application of IT does not start with technology; it starts with a business view firmly anchored in strategic thinking, which considers agency mission, vision, business drivers, business goals and business objectives. Proper application of IT maximizes the efficient operation of state agencies and the effectiveness of government services. Successful IT planning for state agencies requires the following elements:

- Active involvement of agency executive management in partnership with agency IT management to complete IT investment planning.
- Clear and concise understanding of agency purpose and mission.
- Strong alignment of IT investments to agency business objectives and business goals.
- Adherence to spending controls as dictated by economic and budgetary realities.
- Strong alignment of agency IT investments with State of Ohio IT policies, direction, and initiatives.
- Compiling and sharing with key decision-makers the best available information regarding costs, benefits, and vulnerabilities for each planned IT project and operations activity.

The State of Ohio's IT investment planning process starts with agency business strategies (i.e. mission, vision, goals and objectives). These concepts are incorporated in an agency's business plan. The agency profile information contained in the ITIP application identifies specific IT related activities that the agency plans to undertake in order to support its business strategy. This includes specific information about planned IT projects, application operations, and infrastructure operations.

Agency IT investment plans are developed on a biennial basis in conjunction with the development of biennial budget recommendations. IT investment plans should be updated as the agency's business conditions change, budgetary conditions change, or other significant project planning information changes (this may occur several times a year). The timeline for IT investment plan submission and scheduled minimum updates for fiscal years 2012 and 2013 is as follows:

Pre-Planning Activities:	
Application Management	Ongoing
Planning Activities:	
Initial Plan Submissions:	July & August 2010
Biennial Plan Updates:	October 4, 2010
Periodic Plan Updates:	August 31, 2011
Preparation for next biennial plan:	Ongoing
	January 2012

The budgetary aspects of investment planning information may require several updates to the agency plans. Initial project and operations estimates can be revised several times before final submission to OBM. Once budgets are approved and source funds identified, final revisions should be applied to planned projects and operations forecasts.

IT investment plan updates to other plan sections should be made on an ongoing basis as certain events or conditions occur. For further guidance on updating an IT plan, see *Appendix A: IT Plan Updates*.

At various times in this planning guide, an "*Investment Planning Application Information Requirements*" section will appear. These sections indicate specific information required by the planning application as a by-product of the planning process under discussion. This highlights the role of the planning application as the record of agency IT planning already performed, not the real-time support of IT planning.

3.0 Developing and Submitting Agency Profile Information

IT investment planning is a joint activity between agency business executives and IT management. If IT management performs IT investment planning without this partnership, the value of the planning process is less useful for the agency. There are two elements to a solid foundation for IT investment planning: the business context and the agency IT context.

Successful IT investment planning requires awareness of the business mission context, identification of long-term and short-term business needs, and recognition of that perspective during the various IT planning phases. This business context provides the primary justification for investments in IT assets. As identified in figure 1, the business plans required of cabinet agencies provide this business context and support IT investment planning.

Some IT investment planning components have a broad impact on the agency and should be considered within the agency IT context. Such information identifies business realities and IT assumptions and constraints for multiple IT activities. This agency IT context is outlined in the beginning of the IT

investment plan and should remain a key factor during the various planning phases of IT investment planning. This portion of the IT investment planning guide provides a high-level understanding of the planning elements needed for the agency IT context.

Finally, one significant element to the agency's IT planning processes is how the activities and efforts documented in the IT plan align with enterprise-level IT priorities. These IT priorities focus on an enterprise-level approach to improve efficiencies, decrease costs, maximize use of resources, improve services to customers, and reduce redundancies across the state. For this planning biennium, this alignment will appear in three different areas of the IT plan: application operations (discussed in section 3.4.2), infrastructure operations (in section 3.5.2), and IT projects (in section 4.2). Agency IT plan alignment from these three activity classifications should be considered at the agency-level first, so that an agency-wide strategy can exist for each IT priority, then documented and executed as necessary within each of those activity classifications. Supplemental guidance exists in *Appendix D. State IT Priorities – Supplemental Guidance* to provide detailed information for each IT priority, and to elaborate on how IT planners can strategize the development of each one.

3.1 Agency Profile – Overview

The first step in the development of agency profile information is a high-level overview about IT planning within the agency. During the early stages of the planning period, an honest assessment of recent progress by the agency and a clear, high-level summary of the planned direction resulting from the activities and efforts documented in the remainder of the plan should be identified. In other words, where has the agency been, and where is it going?

Recent Progress

Agency investment planners should consider and document the progress made since the publication of their initial IT plan during the last planning period. The progress made since the last planning period identifies areas with positive organizational momentum, and organizational areas needing redirection. Further, if agency progress was different from the planned progress, a high-level summary of deviations the agency may have made from the initial plan, including any mitigating factors (e.g., changing technology, culture, consultant costs, budgetary adjustments, constituents, etc.) that contributed to the deviations should be noted. Significant business or technical events or changes that occurred during the last biennium that may have been unforeseen or beyond the control of the agency should also be noted, particularly if the effects of those events play a role in how the remainder of the agency IT investment plan develops.

Planned Direction

Agency investment planners should also assess their high-level goals and statement of direction. These business and technical goals should drive the planning for the IT activities documented in the investment plan and how these activities are implemented. For the purposes of the IT investment plan, this plan information can also be considered an executive summary, as it summarizes the high-level IT activities and efforts for the next biennium. Accordingly, this plan section summarizes the agency's IT investment plan and since it is the first plan section a reader of the plan sees, it sets the stage for how the rest of the plan is received.

Investment Planning Application Information Requirements

- ✓ IT Investment Plan Contact – the individual the agency designates as the primary point of contact for IT investment planning and how that individual may be contacted.
- ✓ Executive Summary – a high-level summary of the remainder of the IT investment plan, i.e., a statement of the agency IT investment goals and how they may be implemented during the next biennium.
- ✓ Progress Made Since Last Planning Period – a description of what changes occurred within the agency during the last planning period.

3.2 Agency Profile – Assessment

The next step in the development of agency profile information is an agency-level assessment about IT investments and planning within the agency. Information in the agency profile assessment includes considering supplemental planning documents, agency strengths and weaknesses and the maturity of project management within the agency.

Business Plan

The agency business plan provides the proper context for how an agency approaches the development of their IT investment plan. Many agencies already have a business plan. Many exist because the agency recognizes the value of a business plan. However, if the agency has not created a business plan for their own internal purposes, the agency planner should consider the creation of an agency business plan, incorporating the following components:

- Business goals
- Business objectives
- External factors that compel agency activity, such as business drivers
- Critical Success Factors (CSFs)

Finally, it should be noted that the creation of a business plan document is not required in order to complete or publish an IT investment plan. However, it is highly recommended that an agency perform the business planning activities documented in a business plan prior to creation of the IT investment plan, as IT assets should exist to support business activities. If a business plan does not exist to drive IT investment priorities, then it is likely that the IT investment plan will reflect IT priorities and may even informally reprioritize how some business goals and objectives are satisfied.

IT Budget Crosswalk

Although the IT budget crosswalk is created later in the IT investment planning process, it is mentioned here as an additional supplemental document. It supports the financial planning component presented in figure 1. Although a business plan is either required or highly recommended for successful IT investment planning within a business context, the IT budget crosswalk is required for successful IT investment planning within a financial context. The crosswalk must reconcile with the cost summary tables provided in the IT investment plan, and be consistent with OBM budgetary direction.

Agency Strengths and Weaknesses

An honest assessment of the agency, particularly within the context of how to effectively leverage IT investments must include agency strengths and weaknesses in the administration of IT resources. The conditions considered at this point may not be totally under the control of the planners, but existing circumstances and constraints cannot be ignored.

The organizational strengths information should address the positive aspects of how IT resources are managed and administered in the agency. Examples of agency strengths may include effective training programs, low turnover rate for IT personnel, effective communication channels across management levels, and stakeholders that offer strong support.

Example of agency strength statement:

“Most of our IT managers have been with the agency in excess of ten years and they provide a wide variety of IT expertise, and fully understand and support the agency organization and mission. The agency has a strong training program that keeps pace with current and leading edge technology. We experience a very low turnover rate of IT staff.”

The organizational weaknesses statement should address negative aspects of how IT resources are managed and administered in the agency. Examples of agency weaknesses may include obsolete hardware assets, poor support facilities, and anticipated shortfalls in financial resources.

Example of agency weakness statement:

“Insufficient IT staffing levels due to retirement and budget constraints; current and expanding technological needs that cannot be addressed due to insufficient human and financial resources.”

Consideration of an agency’s strengths and weaknesses in the context of IT resource usage should factor heavily in the planning of IT operations activities and the IT projects included in the IT investment plan.

Project Management Maturity within the Agency

The project management maturity level within an agency is a good indicator of the success of the planned IT activities (i.e., operations activities and IT projects). If the project management processes maturity level is high, the deployment of new or enhanced resources has a higher probability of success. If the project management processes maturity level is low, there is a higher probability of project failure.

Project Management Maturity Plan

Agencies may document additional information to support or elaborate on their project management process maturity level. Maturity comments may include statements about existing best practices in the agency, the current status of project management training efforts, and the project management trends within the agency (i.e., practices that are improving or not improving).

Example:

“The agency made significant progress in its project management maturity during the last planning period. Over half of the agency’s project managers became certified during the last eighteen months, and some internal project management practices were documented during the last year.”

Investment Planning Application Information Requirements

- ✓ Business Plan – If the agency has a business plan, the agency planner should locate it and have it available for upload. Some agencies have other documentation that contains the critical planning elements of a business plan. If so, the application will prompt the user for a file path and name.
- ✓ IT Budget Crosswalk – Once the agency completes their IT budget crosswalk for submission to OBM, it can upload that document and associate it to the agency IT plan. This can be of use to agency planners as well as OIT personnel.
- ✓ Agency Strengths – A description of the agency strengths regarding the use of IT resources in the agency.

- ✓ Agency Weaknesses – A description of the agency weaknesses regarding the use of IT resources in the agency.
- ✓ Project Management Maturity Level – The selection of a statement that most closely matches the agency project management maturity level for all IT projects across the agency.
- ✓ Project Management Maturity Plan – If the agency has planning information that documents how the agency will mature their project management environment, then an approach can be documented here.

3.3 Agency Profile – Application Operations

Two types of IT activities are documented in the IT investment plan: maintenance on or operation of existing IT assets, and the creation of new IT assets or capabilities, in the form of their portfolio of IT projects. These operational activities consider existing operations for infrastructure and applications. For this section of the agency level plan, application operations activities are documented.

Anticipated Application Operations Activities

Application operations include all IT staff operations performed on a regular basis to maintain the functionality of existing application software and to maintain service levels for the agency and its user community. Maintenance and updates of application software or end-user programs are considered application operations. These application operations should support the IT applications catalogued in the OIT *AM-I* application.

Anticipated Application Operations Budget

The budget forecasting process is a sequential progression that begins with an initial estimate and continues through the assignment of source funds. Again, agency planners should use the inventory of agency applications from the *AM-I* inventory as a starting point for this budget. The values that appear in this table should represent a summary of the budget estimates for all of the application operations, plus additional activities that may support multiple applications.

Anticipated Application Operations Activity List

A list of anticipated application operations activities should represent the entire agency IT application portfolio catalogued in the OIT *AM-I* application. Unless the agency has determined that no costs will be expended for an application in operation, all active (i.e., not retired) agency applications should have anticipated operations and an estimated budget to sustain existing operations. Even if an application is scheduled for replacement or retirement during the planning period, some activities are likely to occur until and at shut-down. Other types of application operations may also be documented here, particularly if

those activities provide IT support for one or more applications and serve to implement an agency or statewide IT priority.

Investment Planning Application Operations Information Requirements

- ✓ Application Operations – for all of their application-oriented activities, agency planners should document their high-level approach to application operations, significant application operations (either by cost, technical impact, or business criticality), or additional application operations not addressed by the individual application operations listed later in the application screen.
- ✓ Application Operations Budget Profile – a high-level profile of the budget planned for application operations activities for both fiscal years. This table will reflect a financial summary of the individual application operations listed later in the application operations screen, plus those application operations efforts not specifically identified.
- ✓ Anticipated Application Operations – a detailed list of the anticipated operations for the agency’s active application portfolio. For each of the application operations listed here, an additional set of information will be necessary to further describe those activities, but in less detail than the IT project information.

3.3.1 Application Operations – Activity Profile

The first step in the development of application operations profile information is a high-level overview of the application operations as currently envisioned by agency planners. This overview establishes a business and technology context for the application operations.

Application Operation Identifier

This identifier is automatically generated by ITIP when a new application operation is created. The Activity ID consists of the agency’s abbreviation code, an “-A,” and a two-digit number (e.g., ABC-A01). Agency planners do not need to create this identifier, but should take note of the identifier assigned by the *ITIP* application, since it is used by OIT and other agencies for referencing.

Operation Name

The application operation name should have meaning and should be appropriate. Usually, the operation name corresponds to the application name as catalogued in the AM-I repository or the application name as commonly referred to within the agency.

Operation Purpose

The application operation purpose should describe problems or opportunities that the operation will address and the consequences if the operation is not pursued according to the technical approach established for the operation (also in this plan section). Problems or opportunities may include mandated requirements such as changes in the law or executive directives, end-user/customer requests, or technology initiatives to improve the agency's technology-based operations. The purpose of the operation should align with satisfying the agency business goals and objectives typically found in the agency business plan or a statewide business or IT direction. Generally, the operation purpose is one to five sentences in length but may be as long as one page.

Examples:

- Application ABC Migration to Database Platform Z – “This operation will include the migration of the ABC application to the Z database platform. Most of the newer agency applications use the Z database and migration of this application to the same platform should help reduce operating costs.”
- Application DEF Code Maintenance – “This operation includes the normal error correction and minor enhancements for the DEF application.”
- Application QRS Implementation of XYZ Report Writer – “The XYZ report writer was recently purchased to provide agency-wide efficiencies for application reporting. This operation includes the implementation of existing reports in the newer platform, and the removal of reporting functionality in the legacy code of the QRS application.”

Operation Technical Approach

The operation technical approach identifies how hardware, software and telecommunications services will be employed in the operation, to the extent known. Additionally, if security requirements exist for the operation, those should be identified and a high-level approach outlined. It should be clearly stated if no hardware, software, telecommunications, or security requirements exist for the operation. Additionally, the technical approach should discuss how lifecycle operations will be affected by the results of this operation. If agency planners decide to fragment this effort into multiple operations, it would be sufficient to reference those other operations and indicate any time or capability based dependencies between them.

Examples:

- Application ABC Migration to Database Platform Z – “Since the current database platform contains some stored procedures, some software code will require revision as part of the migration. The processing speed and storage capacity of the hardware should also be increased to support this migration. Since the database will reside on the same hardware and telecommunications

environment, no changes in the telecommunications environment is anticipated. No security or privacy-driven efforts are anticipated for this migration.”

- Application DEF Code Maintenance – “The anticipated operation and budget estimate for the DEF application is based on historic error and enhancement trends. Accordingly, no significant changes to the software, hardware, telecommunications, or security environments are anticipated for this operation.”
- Application QRS Implementation of XYZ Report Writer – “The XYZ report writer will run most efficiently on a dedicated server and database platform. The effort to implement these two platforms is documented as project AgA-312. For the QRS application, the effort to incorporate this capability will begin after the AgA-312 project enters the testing phase, and will start with report prototypes. Existing report capabilities in the QRS will remain until the new reports are in production. Since the hardware and database platforms are part of project AgA-312, no additional hardware effort is anticipated. However, since a new server at a hosted location is anticipated, some telecommunications work will be required and additional capabilities implemented in the early stages. Significant security work will not be necessary.”

Operation Business Justification

Every application operation should exist to satisfy a business goal and objective. For application operations, the objective is often the reduction of IT costs or maximization of existing IT assets. Identifying the business context for each operation establishes the linkage between IT assets and capabilities and the business objectives they should support.

Examples:

- Application ABC Migration to Database Platform Z – “This operation will include the migration of the ABC application to the Z database platform. The current Y database platform has seen a tripling of license fees in the last ten years, and the internal staff skills for this platform have been reduced 50% in the last three years.”
- Application DEF Code Maintenance – “Although the DEF application is nearing ten years in age, the last two upgrades incorporated web-based functionality, extending its’ projected lifecycle. The error rates for the last two years have slightly increased, and the anticipated budget for this operation follows the same anticipated trend.
- Application QRS Implementation of XYZ Report Writer – “The XYZ report writer will not substantially reduce operating costs for the QRS application, as the current reports are already in operation and in a steady state. However, recent changes at the federal level cause agency managers to anticipate a significant increase in reporting requirements, and the XYZ report writer will provide the quickest and more accurate support for those requirements.”

3.3.2 Application Operation – State IT Priorities

The agency planner should document how the application operations fit into the enterprise view of prioritized IT activities. In this plan section, the agency

planner documents alignment of the application operation to the Ohio state IT priorities. An agency application operation may depend on or contribute to the success of a statewide IT priority. When that is the case, the relationship between the operation and the priority should be documented in the purpose, technical approach, or business justification sections of the operation plan.

3.3.3 Application Operations – Federal Enterprise Architecture (FEA)

One important task in the application operations activity planning process is the placement of an application within the context of enterprise architecture. Every agency has an enterprise architecture, although much of the architecture may be undocumented and informal. OIT uses the Federal Enterprise Architecture (FEA) and its component reference models as a classification framework for project, application, and IT asset alignment purposes. The FEA is stable and has been in use at the Federal level for almost ten years. Although an additional resource tool is available to provide an expanded explanation of each reference model, the definitions below provide a high-level synopsis of the FEA reference models in use for this planning period:

- Business Reference Model (BRM) – This reference model provides a framework facilitating a business function (rather than organizational) view of the state government's lines of business, including its internal operations and its services for citizens, independent of the agencies, commissions, boards and offices performing them.
- Service Reference Model (SRM) – This reference model provides a business-driven, service-oriented framework classifying service components according to how they support business and performance objectives.
- Technical Reference Model (TRM) – This reference model is a component-driven, technical framework categorizing the standards and technologies to support and enable the delivery of service components and capabilities.

These reference models provide a stable classification framework to help agency and enterprise planners map their IT support environment to business functions, and identify collaboration and interoperability opportunities. These alignments provide planners with another tool to help understand the business processes supported by the services implemented by the technology. As investment planning processes mature, identifying overlaps, gaps, and high-alignment areas will become important to agency and IT planning managers.

For a more thorough description of the reference models listed above, see *Planning Resource – FEA-RM Overview*.

3.3.4 Application Operations – Budget Profile

The budget estimating and forecasting process is a sequential progression that begins with an initial estimate and continues through the assignment of source funds and the recording of expenses. The budget profile for an application operation breaks down as follows:

- FY12 and FY13 – These two columns provide a time-based orientation to when expenses are anticipated to occur.
- Budget Categories – These nine rows provide a high-level categorization scheme to identify where the expenses will occur.

For each of the nine entries in this budget profile table, anticipated budget expenses should be documented. These sub-totals become part of the total application operations budget, and expenses documented for this operation should not be counted elsewhere.

All application operation budget costs should be applicable only to the operations costs of one or more applications. Costs associated with significant development effort (typically more than 20% of the code) should probably be classified as an IT project; while costs associated with infrastructure components that support multiple applications should be associated with infrastructure operations.

3.4 Agency Profile – Infrastructure Operations

Two types of IT activities are documented in the IT investment plan: maintenance on or operation of existing IT assets, and the creation of new IT assets or capabilities, in the form of their portfolio of IT projects. These operational activities consider existing operations for infrastructure and applications. For this section of the agency level plan, infrastructure operations are documented.

Anticipated Infrastructure Operations

Infrastructure operations include all IT staff operations performed on a regular basis to maintain the functionality of the current IT infrastructure, such as maintaining physical computing resources and updating systems software. Maintenance and updates to the current computing infrastructure to sustain existing service levels for the agency and its user community are considered infrastructure operations. Also, operations associated with infrastructure components that support multiple applications should be included in this planning classification.

Anticipated Infrastructure Operations Budget

The budget forecasting process is a sequential progression that begins with an initial estimate and continues through the assignment of source funds. The values that appear in this table should represent a summary of the budget estimates for all of the infrastructure operations, plus additional operations that may support multiple infrastructure assets.

Anticipated Infrastructure Operations List

A list of anticipated infrastructure operations should represent the significant activities associated with IT infrastructure assets. Examples of infrastructure operations include the type of services offered by OIT Infrastructure Services Division (ISD), architectural components (e.g., mainframe, server, or printer), or coordinated operations for multiple components.

Investment Planning Application Operations Information Requirements

- ✓ Infrastructure Operations – for all of their infrastructure-oriented activities, agency planners should document their routine activities undertaken to support current applications at existing or slightly improved service levels. Significant infrastructure activities should be documented individually.
- ✓ Infrastructure Operations Budget Profile – a high-level profile of the budget planned for infrastructure operations for both fiscal years. This table will reflect a financial summary of the individual infrastructure operations listed later in the infrastructure operations screen, plus those infrastructure operations efforts not specifically identified.
- ✓ Anticipated Infrastructure Operations – a detailed list of the anticipated operations for the agency's active IT asset inventory. For each of the infrastructure operations listed here, an additional set of information will be necessary to further describe those operations, but in less detail than the IT project information.

3.4.1 Infrastructure Operations – Profile

The first step in the development of infrastructure operation profile information is a high-level overview of the infrastructure operation as currently envisioned by agency planners. This overview establishes a business and technology context for the infrastructure operation.

Infrastructure Operation Identifiers

This identifier is automatically generated by ITIP when a new infrastructure operation is created. The Activity ID consists of the agency's abbreviation code, an "-I," and a two-digit number (e.g., ABC-I01). Agency planners do not need to

create this identifier, but should take note of the identifier assigned by the *ITIP* application, since it is used by OIT and other agencies for referencing.

Operation Name

Infrastructure operation names should have meaning and should be appropriate. Usually, the name corresponds to a specific IT infrastructure component or IT service that relates numerous IT infrastructure components.

Operation Purpose

The infrastructure operation purpose should describe problems or opportunities that the operation will address and the consequences if the operation is not pursued in the specified planning period. Problems or opportunities may include mandated requirements such as changes in the law or executive directives, end-user/customer requests, or technology initiatives to improve the agency's technology-based operations. The purpose of the project should align with satisfying the agency business goals and objectives typically found in the agency business plan. Generally, the operation purpose is one to five sentences in length but may be as long as one page.

Examples:

- Data Warehouse Environment – “This infrastructure operation supports the data warehousing requirements for all the agency applications that support citizen-facing services. Several new applications are scheduled for adoption for this capability this planning period.”
- Security Upgrade – “This project is needed to comply with ORC-xxx, which requires new security protection for all IT applications providing service to citizens. There are eight existing applications that require technology upgrades to satisfy the law. Failure to complete the project within the planning period will be considered non-compliant, which may result in penalties to the agency.”

Operation Technical Approach

The operation technical approach identifies how hardware, software and telecommunications services will be employed in the operation, to the extent known. Additionally, if security requirements exist for the activity, those should be identified and a high-level approach outlined. It should be clearly stated if no hardware, software, telecommunications, or security requirements exist for the operation. Additionally, the technical approach should discuss how lifecycle considerations will be affected by the results of this operation. If agency planners decide to fragment this effort into multiple operations, it would be sufficient to reference those other operations and indicate any time or capability based dependencies between them.

Examples:

- Data Warehouse Environment – “Additional scripting and modeling will be required to migrate the remaining legacy applications to this environment. Also additional hardware storage and telecommunications capacity should be increased incrementally over the next few years until a steady state is achieved. Existing security capabilities will be addressed in another infrastructure operation.”
- Security Upgrade – “After an initial security gap analysis, a contractor is anticipated to provide most of the effort for this operation. Most software costs will likely be associated with hardware and telecommunications equipment. The last phase of the operation will repeat the security gap analysis to validate compliance to ORC-xxx.”

Operation Business Justification

Every infrastructure operation should exist to satisfy a business goal and objective. The objective may be to reduce IT costs or maximize existing IT assets, but new or expanded capabilities are usually undertaken to satisfy a business requirement. Identifying the business context for each operation establishes the linkage between IT assets and capabilities and the business functions they should support.

Examples:

- Data Warehouse Environment – “Migration of the remaining agency applications to the data warehouse environment will reduce the operating costs of those applications and improve the timeliness and accuracy of reporting to executive decision-makers.”
- Security Upgrade – “Although security capabilities cannot always be easily measured, the penalties associated with non-compliance to ORC-xxx would exceed anticipated costs within six months. Litigation and settlements costs would be likely, with those cost estimates to be provided as a result of the gap analysis.”

3.4.2 Infrastructure Operations – State IT Priorities

The agency planner should document how the infrastructure operation fits into the enterprise view of prioritized IT activities. In this plan section, the agency planner documents alignment of the infrastructure operation to the State IT priorities. The planned infrastructure operation may depend on or contribute to the success of a statewide IT priority. When that is the case, the relationship between the operation and the IT priority should be documented in the purpose, technical approach, or business justification sections of that operation.

3.4.3 Infrastructure Operations – Infrastructure Alignments

The infrastructure alignments information plan section is unique among the three IT planning classifications (i.e., IT projects, application operations, and infrastructure operations). The categories and sub-categories identified in this section is intended to help inform enterprise-wide decision makers in their assessment of pending IT operations and how they may affect statewide priorities.

3.4.4 Infrastructure Operations – Federal Enterprise Architecture (FEA)

An important task in the infrastructure operation planning process is the placement of an infrastructure component or service within the context of enterprise architecture. Every agency has an enterprise architecture, although much of the architecture may be undocumented and informal. OIT uses the Federal Enterprise Architecture (FEA) and its component reference models as a classification framework for project, application, and IT asset alignment purposes. The FEA is stable and has been in use at the Federal level for almost ten years. Although an additional resource tool is available to provide an expanded explanation of each reference model, the definitions below provide a high-level synopsis of the FEA reference models in use for this planning period:

- Business Reference Model (BRM) – This reference model provides a framework facilitating a business function (rather than organizational) view of the state government's lines of business, including its internal operations and its services for citizens, independent of the agencies, commissions, boards and offices performing them.
- Service Reference Model (SRM) – This reference model provides a business-driven, service-oriented framework classifying service components according to how they support business and performance objectives.
- Technical Reference Model (TRM) – This reference model is a component-driven, technical framework categorizing the standards and technologies to support and enable the delivery of service components and capabilities.

These reference models provide a stable classification framework to help agency and enterprise planners map their IT support environment to business functions, and identify collaboration and interoperability opportunities. These alignments provide planners with another tool to help understand the business processes supported by the services implemented by the technology. As investment planning processes mature, identifying overlaps, gaps, and high-alignment areas will become important to agency and IT planning managers.

For a more thorough description of the reference models listed above, see *Planning Resource – FEA-RM Overview*.

3.4.5 Infrastructure Operations – Budget Profile

The budget estimating and forecasting process is a sequential progression that begins with an initial estimate and continues through the assignment of source funds and the recording of expenses. The budget profile for an infrastructure operation breaks down as follows:

- FY12 and FY13 – These two columns provide a time-based orientation to when expenses are anticipated to occur.
- Budget Categories – These nine rows provide a high-level categorization scheme to identify where the expenses will occur.

For each of the nine entries in this budget profile table, anticipated budget expenses should be documented. These sub-totals become part of the total infrastructure operations budget, and expenses documented for this operation should not be counted elsewhere.

Any infrastructure component or service that supports multiple applications should probably have those operations documented in this infrastructure planning classification. Infrastructure components dedicated to only one application should have those operations and costs documented in the applications planning classification.

IT Planning Classifications:

Because agency planners will include application and infrastructure operations as individually defined IT activities this planning cycle, the operations previously defined as IT projects in agency IT plans may now be classified in one of the two operations categories. Before proceeding into the project section of this guide, use the classification table in Figure 3 to aid the classification of IT efforts and help in placement of those efforts in the proper plan section.

Classification of IT Plan Activities

IT Projects	Application Operations Activities	Infrastructure Operations Activities
<p>IT projects are defined using <u>ALL</u> of the following requirements:</p> <ul style="list-style-type: none"> • Activity with definite beginning and end. • Activity is unique or non-routine for the agency. • Activity is complex for the agency. • Activity is undertaken to create new IT capability/functionality. 	<p>Application operations is defined using the following requirements:</p> <ul style="list-style-type: none"> • Activity is routine and needs to occur on a regular basis in support of an agency application. • Activity is undertaken to maintain existing service levels or is undertaken to maintain/modify existing application functionality. <p>Subcategories of operations include:</p> <ul style="list-style-type: none"> • Fixes: Include changes to recover from system or application failures. • Enhancements: Include changes to extend existing capabilities for application users. • Upgrades: Include changes to improve system performance and efficiency. • Improvements: Include changes to improve existing functionality, but affects <20% of the existing code. 	<p>Infrastructure operations is defined using the following requirements:</p> <ul style="list-style-type: none"> • Activity is routine and needs to occur on a regular basis in support of IT assets (non-application). • Activity is undertaken to maintain or expand existing service levels for the user community. <p><u>AND</u> one of the following:</p> <ul style="list-style-type: none"> • Activity is undertaken to maintain physical computing infrastructure or systems software (e.g., operating systems, compilers and utilities for managing computer resources). • Purchased software package and ongoing operations thereof (whether externally or internally maintained).

Figure 3

The preceding figure offers clarification to distinguish between the various IT efforts. A few examples may be helpful at this time:

- Personal computer replacement – IT purchases to replace aging IT assets should normally be identified in the infrastructure operations area.
- Pre-packaged software – Often, these IT assets are pre-loaded on newly purchased computers. However, there are times when an entire platform

requires an update (e.g., Microsoft Office). These operations and purchases should normally be identified in the infrastructure operations area.

- Pre-packaged/Adapted application – Some agencies have purchased, licensed, or are supporting an application used by other agencies or customers (e.g., OAKS, CAVU/e-licensing). Those operations and purchases should normally be identified in the application operations area.

4.0 Developing and Submitting IT Project Profile Information

The portfolio of IT projects document the majority of the short-term IT activities in the IT investment plan. They exist to implement technology-based change within an agency and its operating environment. An IT project is an activity that is undertaken to create new IT capability/functionality; has a definite beginning and ending time frame, and is unique, non-routine and complex. This section of the planning guide provides an overview of the planning activities for development and documentation of IT projects.

The next step in investment planning, and the first step associated with IT projects is the creation of a list of candidate IT projects. Agency planners will always have more IT project candidates than time and resources allow. Consequently, the following list of factors should be considered by agency planners during the project candidate list review and assessment:

- Ongoing projects – Ongoing projects should not be continued just because they are not finished. Constraining factors accounting for schedule slippage, budget overruns, and other potential problems should affect a decision to continue, redirect, or end an ongoing project.
- (new projects)
- Business alignment
 - Technology alignment
 - Risk and benefit profile

These and other factors should be considered by agency planners as investment selection criteria during the project candidate selection process prior to their inclusion in an IT investment plan. Establishing priorities for selected and unselected projects aids the planning process, and may also have an impact on operations activities and budget.

Once the project candidate list has been reviewed, assessed, and validated by agency planners, a detailed project information profile for each of the selected projects must be established. This project information profile provides a high-level overview of the project for interested stakeholders. This same information should be included in the IT investment plan. The remainder of this investment planning guide documents the planning progression for this process.

As the project section of the planning guide continues, some concepts may be better explained with some examples. A few fictional projects are defined below to facilitate understanding in those areas:

- Legacy-to-Web App – a project to convert a legacy application to a web application.
- Health Record Information Compliance – a project to change the existing database and data exchange formats to comply with new Federal requirements.
- Data Warehouse App – a project to support multiple agency business units with a centralized data warehouse.

4.1 IT Project Profile – Overview

The first step in the development of project profile information is a high-level overview of the IT project as currently envisioned by agency planners. This overview establishes a business and technology context for the project.

Project Identifiers

Establishing a nomenclature for a project for future reference is not critical to understanding the identity or role of a project. However, they can be of some value in managing lifecycle costs or larger groups of projects.

IT Project Identifier

This identifier is automatically generated by *ITIP* when a new project is created. The Project ID consists of the agency's abbreviation code and a three-digit number (e.g., ABC-001). Agency planners do not need to create this identifier, but should take note of the identifier assigned by the *ITIP* application, since it is used by OIT and other agencies for referencing.

OAKS Project Identifier

Some agencies use OAKS to help track their projects. For those agencies, the project identifier assigned by OAKS can be entered here to support cross-referencing.

Agency Project Identifier

There are two different reasons why agency planners would use a third project identifier supported by the *ITIP* application.

1.) Some agencies have internally maintained identifiers for their projects. For those agencies, that same identifier can be used to facilitate agency cross-referencing between *ITIP* and their internal tracking mechanism.

2.) Some agencies manage multiple projects as a group. They may be considered programs, or portfolios, or some other logical grouping. An alternative grouping scheme would consider prefix/suffix attachments to identify

efforts with similar technologies, business goals, or other managerial tracking purpose.

Although the *ITIP* application provides for these three project identifier types, agency planners should not feel obligated to allocate significant time to this issue. It is provided to planners who need it, and can be given less consideration by those that do not.

Project Name

Project names should have meaning and should be appropriate. Usually, the name corresponds to what the project is commonly referred to within the agency.

Project Type

Agencies must specify the project type as new capability, enhancement/expansion, one-time requirement, or other IT-related activity. A description of each is listed below:

- New Capability – the project will add a new capability to the IT environment. New hardware, software, application, web site, etc.
- Enhancement/Expansion – the project will enhance or expand an existing capability to the IT environment. Examples would include platform migration (e.g., database, mainframe, or portal), or application modernization.
- Replacement/retirement – the project will replace an existing IT capability and the previous capability will be retired.
- Non-recurring Requirement – the project is a one-time, unique activity associated with the IT environment. Examples may include pandemic preparedness, creation of a plan or study, or an IT-related project that exists to satisfy a legislative or executive requirement/initiative.
- Other IT-Related Activity – any IT activity that cannot be classified as one of the other three. Examples may include staff augmentation or other continuous IT activity that cannot be classified as IT operations.

The goal of this classification scheme is to establish criteria that is mutually exclusive, and enables reasonable grouping of similar projects to assist investment management. The agency planner should consider the new capability type first, the enhancement / expansion type second, etc. For projects that can be classified as a *new capability* and an *enhancement/expansion*, use the type that occupies the most time, effort, and budget to successfully implement.

Project Purpose

The project purpose should describe problems or opportunities that the project will address and the consequences if the project is not pursued in the specified planning period. Problems or opportunities may include mandated requirements such as changes in the law or executive directives, end-user/customer requests, or technology initiatives to improve the agency's technology-based operations. The purpose of the project should support the agency business goals and objectives typically found in the agency business plan. Generally, the project purpose is one to five sentences in length but may be as long as one page.

Examples:

- Legacy-to-Web App – “This project is driven by a declining pool of IT programmers with specific skill sets, as well as the need to respond to citizen expectations. The existing legacy application is written in a language known by only three remaining IT personnel and two of them will retire within the next year. Additionally, several modules of the application provide service to citizens with expectations of web capabilities not available in the current application. If the application is not converted within the planning period, loss of key IT personnel will be detrimental. Subsequent conversion of the application will require significantly more resources including time, personnel, and funding. Moreover, the ability to meet citizens’ expectations for web capabilities will be delayed further.”
- Health Record Information Compliance – “This project is needed to comply with ORC XXX-999, which requires compliance with predefined data structures and content for health record information. Compliance will require modifications to two databases, eight data exchanges, and numerous reporting changes for three applications (i.e., App A, App F, and App M). Failure to complete the project within the planning period will cause non-compliance with ORC XXX-999 which may result in financial penalties to the agency.”
- Data Warehouse App – “This project will consolidate seven separate databases and their applications. Historically, the redundancy of data within the separate databases results in poor data quality. Redesigning the information and data architecture for the agency business units will significantly improve service to citizens and reporting capabilities for managers. If the project is not pursued within the planning period, poor data quality will continue to hamper the agency’s efforts to provide improved services to the citizens of Ohio. Additionally, inaccurate data will hinder management’s ability to make accurate, informed decisions.”

Project Dates

Every project has an anticipated duration, that is, when it should start and end. Sometimes there are business reasons why a project must start during a specific time period, or why it needs to be completed by a certain date. Sometimes, when funds or personnel can be available drives the end points and/or duration of the project. Consideration of these dates should be matched by the budget

profile, that is, funding should exist to cover the start and end date window, and not outside of that window.

An additional aid to establishing a start/end date window is the status and phase considerations for a project. Each project has a series of phases that define the lifecycle of the project, and a status that defines current project conditions. A good starting point to explain these phases and status conditions can be found in the state's project management methodology, the Project Management Community of Practice (PM COP) project management standards. Project planners should review these standards to help plan the lifecycle and progression of each project.

Project Scope

The project scope identifies the project deliverables such as features, functionality, and a description of the work that must be done to produce the deliverables. Deliverables are the high-level outcomes, results or items that must be produced to complete a project. These deliverables must be measurable, tangible and verifiable.

Example:

"The existing legacy application consists of nine major functional modules. The source code for all nine modules must be converted to *modern language Z*. Additionally, the three modules providing functionality to citizen group B will be redesigned to match existing expectations of web applications. The primary deliverable of the project is a new source code base, with the functional characteristics of the citizen-oriented modules adapted for web operations. Additionally, this will require revalidation of the business rules and test scripts for the unchanged modules (to verify continuation of existing functionality) and a requirements capture process to precede the redesign of the three web-browser based modules."

Project Technical Approach

The project technical approach identifies how hardware, software and telecommunications services will be employed in the project, to the extent known. Additionally, if security requirements exist for the project, those should be identified and a high-level approach outlined. It should be clearly stated if no hardware, software, telecommunications, or security requirements exist for the project. Additionally, the technical approach should discuss how the technical environment for the project will transition into the operations support environment. Projects not started should begin with high level descriptions in each area, while ongoing projects should provide additional detail in each area.

Examples:

- “Hardware – The hardware requirements for this project are minimal. The existing server platform in use by the agency has sufficient processing capabilities and disk space to support the next application. In the third phase of the project, additional disk space will be required to facilitate data backup requirements.
- Telecommunications – A telecommunications needs study will be part of the design phase of the project and the results of the study will be incorporated at a later time.
- Software – The data warehouse will be procured from an existing commercial source. The functional requirements are not rigorous, so enough candidates will be available to keep the acquisition costs down. Contractor support is expected for data migration and cleanup from the source applications. Internal staff will be trained in the software to provide reporting capabilities.
- Security – The existing security architecture in place for current applications should be sufficient for this project.”

Project Assumptions

Project assumptions include internal and external conditions such as technology constraints, human resources, stakeholder expectations and political factors. These assumptions may define, limit, or constrain the environment or circumstances under which the project is developed and implemented. The agency should document all project assumptions that could affect the cost, schedule or quality of the project during implementation and/or the expected benefits upon project completion.

Examples:

- Legacy-to-Web App – “Two of the three key programmers will only be available for two years due to planned retirement. Expansion of functionality will be limited to only the citizen-oriented modules.”
- Health Record Information Compliance – “The new ORC XXX-999 requirement mandates compliance by Mar 2015. Penalties will occur every 90 days beyond that date for non-compliant applications.”

Project Business Justification

Every IT project should exist to satisfy a business goal and objective. The objective may be to reduce IT costs or maximize existing IT assets, but new or expanded capabilities are usually undertaken to satisfy a business requirement. Identifying the business context for each project establishes the linkage between IT assets and capabilities and the business functions they should support.

Project Success Criteria

Success criteria describe the measurable value the agency expects from completion of the project, with the key word being measurable. If the results cannot be measured, it may be hard to justify the business value. Generally, success criteria are one to five sentences in length.

Example:

- Legacy-to-Web App – “The program code written in *obsolete language X* will be rewritten in *modern language Z* before the existing application maintenance staff retires. This will reduce the personnel cost to support the application by 20%.”

Project Mandate

Some projects exist to improve business conditions or services, while others exist to satisfy external requirements. Recognizing these external requirements may affect when or how projects are planned. Recognizing whether a project is voluntary or discretionary, mandated by legislation, or mandated by a non-legislative mission critical requirement can help establish priorities among projects competing for the same IT resources.

Investment Planning Application Information Requirements

- ✓ Project Identifiers – If agencies are currently using OAKS or other internal tools to help track existing or planned projects, then those identifiers should be available for cross-referencing.
- ✓ Project Name – A name currently in use within the agency during discussions and other project documentation should be available.
- ✓ Project Type – The type of project should be known.
- ✓ Project Purpose – A short project purpose statement should exist.
- ✓ Project Dates – A known window of project start date (actual or estimated), and project end date (estimated) should exist.
- ✓ Project Scope – A short project scope statement should exist.
- ✓ Project Technical Approach – The technical approach should be documented and available.
- ✓ Project Assumptions – Any project assumptions should be documented, or “None” stated if none exist.
- ✓ Project Business Justification – The business linkage between the IT project and business goals and objectives should be documented.
- ✓ Project Success Criteria – The criteria used to measure project success should be documented.
- ✓ Project Mandate – Any external requirements for the existence of the project should be known and identified.

Many of these planning components should be found in a typical project management plan, or one of its subsidiary plans. Most of the critical IT projects found in IT investment plans would benefit significantly from the creation of these management plans. Again, details on these plans and their use can be found in the PM COP.

4.2 IT Project Profile – State IT Priorities

The agency planner should document if the project aligns with the enterprise view of IT priorities. In this plan section, the agency planner documents alignment of the project to the State IT priorities. An agency project may depend on or contribute to the success of a statewide IT priority. When that is the case, the relationship between the project and the IT priority should be documented in the technical approach, success criteria, or assumption plan sections of the project plan.

4.3 IT Project Profile – Information

IT planning involves assessment of project benefits, vulnerabilities, project impact, and overall project feasibility. This assessment can involve a thoroughly documented risk review by the project manager, periodic review by an internal project review board, independent review of the project by a third party, external review by an investment committee, or any combination of these or other project review and assessment activities. The result of this effort provides valuable vulnerability, impact and feasibility control information to project planners and managers, and may help establish priorities among projects competing for the same resources.

Investment Planning Application Information Requirements

- ✓ The ITIP application contains a series of questions and possible answers to aid in the risk and benefit assessment of a project. Any materials used internally by an agency that supplemented this internal planning process should be available.

4.4 IT Project Profile – Collaboration Environment

For each planned IT project, identify all other agencies that have involvement in the design and/or implementation of the project. Significant value is recognized from the coordination and communication of activities during the project planning process and as the project progresses. In the past, it has been difficult to identify interagency projects because agencies refer to them by different

names. It is recommended that the agencies participating in interagency projects work together to provide similar naming conventions to aid in the identification of these projects.

Agency planners will also be asked to describe the nature of the collaboration efforts with other agencies. This often ignored aspect of project planning may help identify additional risks to the project as well as costs and constraints. The list below identifies some examples of when other agencies have a collaborative interest in an IT project:

- Another agency is a business partner in the service chain to the citizen.
- Another agency is a stakeholder for a business objective similar to the one identified by this agency.
- Another agency shares infrastructure with the target environment for the project.
- Another agency shares development or implementation resources that will be used for this project.

Investment Planning Application Information Requirements

- ✓ Collaborating agency list – Project planners will be asked to identify all the agencies participating in a collaborative manner on the project.
- ✓ Collaboration description – A brief description on the nature of the collaborations should exist. If different agencies have different collaboration requirements and activities, those should be documented.

4.5 IT Project Profile – State Business Priorities

The agency planner should document how the project fits into the Governor's business priorities. Agency planners will recognize that not every business priority has a clear IT solution, and some of these priorities exist outside the mission of their agency. Nonetheless, if the planned project supports one or more aspects of a business priority, an alignment should be documented.

4.6 IT Project Profile – Federal Enterprise Architecture (FEA) Alignment

One important task in the project planning process is the placement of a project within the context of enterprise architecture. Every agency has an enterprise architecture, although much of the architecture may be undocumented and informal. OIT uses the Federal Enterprise Architecture (FEA) and its component reference models as a classification framework for project, application, and IT asset alignment purposes. The FEA is stable and has been in use at the Federal level for almost ten years. Although an additional resource tool is available to provide an expanded explanation of each reference model, the definitions below

provide a high-level synopsis of the FEA reference models in use for this planning period:

- Business Reference Model (BRM) – This reference model provides a framework facilitating a business function (rather than organizational) view of the state government's lines of business, including its internal operations and its services for citizens, independent of the agencies, commissions, boards and offices performing them.
- Service Reference Model (SRM) – This reference model provides a business-driven, service-oriented framework classifying service components according to how they support business and performance objectives.
- Technical Reference Model (TRM) – This reference model is a component-driven, technical framework categorizing the standards and technologies to support and enable the delivery of service components and capabilities.

These reference models provide a stable classification framework to help agency and enterprise planners map their IT support environment to business functions, and identify collaboration and interoperability opportunities. These alignments provide planners with another tool to help understand the business processes supported by the services implemented by the technology. As investment planning processes mature, identifying overlaps, gaps, and high-alignment areas will become important to agency and IT planning managers.

For a more thorough description of the reference models listed above, see *Planning Resource – FEA-RM Overview*.

4.7 IT Project Profile – Budget Profile

The budget estimating and forecasting process is a sequential progression that begins with an initial estimate and continues through the assignment of source funds and the recording of expenses. Creating a budget profile for a project is a slightly different process than the creation of a budget profile for either of the two operations activities, as the entire project lifecycle should be considered and documented. Basically, the budget profile for a project breaks down as follows:

- Past/Prior FYs – If the project is not new, i.e., continued from the previous planning period, historic costs and expenditures exist for the project. It is important to maintain a record of past costs, and this portion of the budget profile documents those costs.
- Current/FY12 and FY13 – Initially, this portion of the budget profile documents the budget estimate for the two fiscal years in the current

planning period. As the planning cycle progresses, these budget estimates become approved budget values.

- Projected/Future FYs – If the project is scheduled for completion after this planning period, then a projected budget for cost estimates that are expected anticipated after the current planning period should be recorded.

All project budget costs should be applicable only to the successful completion of the documented goals for the project with duration as identified in the anticipated completion date. Any anticipated operational costs for implemented applications/capabilities would be recorded as operations costs in future IT investment plans.

For each of the three time periods, the appropriate budget groups and categories (i.e., hardware, software, and application/project support and their breakdowns) must be provided. When totaled, each of these budget groups and their cumulative totals comprise the budget profile for the lifecycle of the IT project.

5.0 Related Resources

The State of Ohio IT Policy ITP D.4, *Information Technology Planning*, effective July 2008 (www.ohio.gov/itp).

6.0 Inquiries

Direct inquiries concerning the planning issues covered in this planning guide to:

IT Investment Management Administrator
Office of State IT Investment Management
Investment and Governance Division
Office of Information Technology
Department of Administrative Services
30 East Broad Street, 39th Floor
Columbus, Ohio 43215

Telephone: (614) 387-3056
Facsimile: (614) 644-9152
Email: state.itplanning.manager@oit.ohio.gov

Appendices

Appendix A – *IT Plan Updates*: The *IT Plan Updates* appendix outlines factors and conditions that affect the planning process and require updates to agency biennial IT plans.

Appendix B – *FY12-13 Biennial IT Plan Importation Matrix*: The *FY12-13 Biennial IT Plan Matrix* lists the agency FY10-11 IT strategic and tactical plan sections that can be copied to the FY12-13 IT investment plan.

Appendix C – *State IT Priorities – Supplemental Guidance*: The *State IT Priorities – Supplemental Guidance* appendix provides detailed information about the state-level IT priorities, how IT planners can consider various implementation strategies.

Appendix A – IT Plan Updates

Agencies are required to update their IT investment plans on a biennial basis, and as factors and conditions occur that affect the planning process. This section discusses what those factors may be and how they may affect an agency's IT investment plan.

Application and Infrastructure Operations

Change in Application Operations – this type of change can occur when budgetary allocations are revised or operational conditions change. Examples include:

- Vendor for application support software terminates support or modifies its maintenance support contracts.
- Significant changes in number of internal staff or skill sets.
- Contracted services terminated for poor performance.
- Key stakeholders lose confidence in the value of provided services.
- Another agency changes its support status, severely impacting the quality of service of the application.
- A completed project transitions to an operations activity.

These types of changes should prompt a re-evaluation of the biennial budget projections and potentially the attainment of business goals, particularly if the successful operation of an affected application is strongly aligned to a business objective or goal.

Change in Infrastructure Operations – this change is similar to application operations, particularly with respect to budgetary changes. Additional examples include:

- Hardware or peripheral assets declared obsolete and unsupported by the vendor.
- Operational and performance capacities are impacted by the implementation of another agency's application.

These types of changes should prompt a re-evaluation of biennial budget projections and planned project timelines, especially if certain projects assume infrastructure support that may no longer be available.

Additional Considerations

A significant and unexpected change to project planning information should cause a re-examination of application and infrastructure operations components. A planned project experiencing significant delays may impact planned support estimates and timetables in both operational areas.

IT Project Profile Updates

This section addresses changes to project planning information that should prompt an update to the appropriate sections of a project plan. With rare exception, change in any area of a project should trigger a review of other areas in the project information sections, especially the cost and time projections. Examples of changes to project information that result in updates are listed below.

Change in Project Purpose – this can occur when the context of the project purpose changes. The project is planned to solve a problem or pursue an opportunity. When the opportunity no longer exists or the consequences of the anticipated problem are prematurely realized, the timing or even the need for the project may change. Often subtle conditions outside the control of project planners will trigger this type of change. Planners should periodically re-examine their purpose statement and context to confirm current validity. A confirmed change in purpose will affect the remaining components in the project planning information section.

Change to Project Status-Phase – this change should occur several times during the life span of the project. As the project changes from one project management status/phase to another, the planner should review all aspects of the project planning information. The normal progression of a project's status-phase is from "Not Started", to "Started–Initiation/Planning", to "Started–Execution & Control/ Closing," to "Completed." Although some projects will be "Postponed" and others will be "Cancelled," most IT projects progress through the aforementioned project management phases.

In all cases, change in status/phase signals the starting, stopping or altering of some resource expenditures. Once this occurs, the project plan information should be reviewed and changed as necessary. The project budget profile and the start and end dates particularly should be reviewed. Additionally, the application and infrastructure operations sections of the investment plan should be reviewed and updated as needed.

Change in Project Scope – this change occurs frequently and is normally caused by growing expectations of key stakeholders. The length of the project timeline can generally predict the degree of "scope creep" that may occur for a project. Unfortunately, project managers often accommodate changes in project scope without changing cost or time projections. Project planners should frequently review ongoing projects for changes to project scope. The change in scope may be valid and necessary, but any change (even a reduction in scope) should prompt a reexamination of all components of the project planning information.

Change in Technical Approach – this change occurs frequently and is normally caused by managers and technical personnel attempting to take advantage of recent technology advances. Some examples of changes in technical approach and their consequences are:

- **Technology Substitution** – this occurs when one technology solution is replaced with another technology solution. Often, a previously selected vendor offers an upgrade to previously purchased products. Sometimes, the project development team decides one technology can solve several problems at once and “reduce” costs and time. These shifts in the technical approach may result in a reduction of cost or time. Any change to project plans caused by this type of change should prompt a review by project planners.
- **Technology Barriers** – this occurs when a selected technology fails to perform as expected or is the wrong technology solution for the intended problem. This technical approach shift impacts implementation, making existing cost and time projections highly suspect, thus necessitating a review by project planners.
- **Methodology or Process Failures** – this occurs when the selected methodology or implementation process is not executed properly. A project team may compensate by reducing the scope, extending the timeline and/or increasing cost projections. In either case, cost and time projections should be reviewed along with project scope.

In all cases, the technical approach should be periodically reviewed for change.

Change in Project Assumptions – a change in project assumptions is triggered, among other things, when predictable factors such as human resources, technology and other project resources that influence key decisions about cost or time are altered.

Change in Project Business Support – this change occurs when a business goal is weak (i.e., loose project solution association with the stated problem) or the “problem to be solved” loses its impact. Project goals could also change when a business strategy changes direction. Therefore, project goals should be periodically reviewed to ensure project deliverables solve a valid problem.

Change in Project Success Criteria – this change occurs when the nature or severity of the problem that the project is intended to address changes; or when the importance of opportunity the project seeks to create diminishes. These types of occurrences will essentially invalidate the success criteria. The applicability of success criteria should be reviewed and, where necessary, new measurements to determine the project’s value and success should be documented.

Change in Project Vulnerability, Impact and/or Feasibility – these changes occur when there is not continuous risk management on a project. Strategic

vulnerability, project impact and strategic feasibility profiles should be established during initial project planning. However, every project has risks and, if not managed, risks will impact cost and time and may render the project not feasible for development and/or completion.

Change in Budget Amounts – these changes occur as the budget process progresses. The project planning budget should coincide with the initial budget submitted to OBM. Deviations that occur during the budget submission and approval process should be reflected in the project plan. The project budget should coincide with the budget approved by the legislature. Any deviation between the project budget and the approved budget should initiate an update in the project budget. When the project moves into the “Started” status, and as costs are applied and resources are consumed, the agency should periodically update the actual project costs through the expenditures capability.

Change in Other-Agency Interaction – this change normally occurs without notice and may go undetected for a long period of time. Critical dependencies regarding other agencies should be addressed using the strategic vulnerability, project impact and strategic feasibility profiles (see “Change in Project Vulnerability, Impact and/or Feasibility” above). However, all agencies critical to the success of the project should be periodically interviewed to ensure no changes have occurred that may impact the planned project’s success. Project planners should periodically examine meeting minutes or other correspondence as evidence of a proper degree of communication and coordination by project managers. Otherwise, this information should be reviewed with increasing frequency as critical milestones approach.

Appendix B – FY12-13 Biennial IT Plan Import Matrix

This appendix documents the portions of the previous agency plan (i.e., FY10-11) that will be migrated into the new plan (i.e., FY12-13). Comments provide additional guidance as necessary.

A special note should be made about IT projects carried-over from the FY10-11 plan. IT projects were imported from the FY10-11 plan if the project had an end date of June 30, 2011 or beyond. Agency planners are reminded that it is their responsibility to review all of the migrated data for relevancy to FY12/13 plans, as some of it may be no longer correct.

Plan sections annotated with “No” in the migration to the FY12/13 plan and no comment entry should assume those sections require information created by the planner during this planning cycle. Plan sections annotated with an “N/A” migration to the FY12/13 plan entry should recognize that no FY10/11 plan information is available.

ITIP Application Sections and Data Elements	Migration to FY12-13 Plan	Comments
Agency-Level Plan Sections		
Overview		
Plan Contact Information	Yes	Copied from previous plan.
Executive Summary	No	Customized for this biennium.
Progress Made Since Previous Planning Period	No	Customized for this biennium.
Assessment		
Business Plan	No	Customized for this biennium.
IT Budget Crosswalk	No	Customized for this biennium.
Agency Strengths	Yes	Copied from previous plan.
Agency Weaknesses	Yes	Copied from previous plan.
PM Maturity Level	No	Customized for this biennium.
PM Maturity Comment	No	Customized for this biennium.
State IT Priorities		
State IT Priority Statement	No	Customized for this biennium.
Operations		
Application Operations Description	No	Customized for this biennium.
Application Operations Budget Profile	No	Customized for this biennium.
Infrastructure Operations Description	No	Customized for this biennium.
Infrastructure Operations Budget Profile	No	Customized for this biennium.
IT Project Plan Sections		
IT Projects Home Page	Conditional	Will copy all projects identified by the agency as being "carried-over" into the new plan.
Profile		
Project ID	Yes	The old project ID from ITIP FY10-11 will be inserted in this field.
OAKS Project Identifier	Yes	Copied from previous plan.
Agency Project Identifier	Yes	Copied from previous plan.
Project Name	Yes	Copied from previous plan.
Project Type	No	Same field as before, but different choices.
Project Purpose	Yes	Copied from previous plan.
Start Date	Yes	Copied from previous plan.
End Date	Yes	Copied from previous plan.
Project Scope	Yes	Copied from previous plan.
Technical Approach	Yes	Copied from previous plan.
Assumptions	Yes	Copied from previous plan.

ITIP Application Sections and Data Elements	Migration to FY12-13 Plan	Comments
Business Justification	Yes	Copied from previous plan.
Success Criteria	Yes	Copied from previous plan.
Mandated	Yes	Copied from previous plan.
Mandate Explanation	Yes	Copied from previous plan.
Alignments		
State Business Priorities (alignment)	No	Customized for this biennium.
Information		
Question List	No	Customized for this biennium.
Interagency Information		
Explanation of Agency Collaborations	Yes	Copied from previous plan.
Other Agencies Participating in the Project Design or Implementation	Yes	Copied from previous plan.
State IT Priorities		
State IT Priority List (alignment)	No	Customized for this biennium.
FEA		
BRM Alignment	No	Customized for this biennium.
SRM Alignment	No	Customized for this biennium.
TRM Alignment	No	Customized for this biennium.
Budget		
Prior FYs Column	Yes	Prior FY values + FY10/11 values
FY12 Column	No	
FY13 Column	No	

Appendix C – State IT Priorities – Supplemental Guidance

This appendix to the *FY12/13 Agency Guide to IT Planning* provides a conceptual overview and additional detail to the statewide IT priorities for agency IT planning for the FY12/13 biennium. As stated in the guide, these State IT Priorities provide high-level insight to the areas of focus by executive management to achieve the goals of the vision established by the Governor and State CIO. The goals of these priorities are achieved formally defined application and infrastructure operations activities and IT projects. Accordingly, alignment between these operations activities and IT projects to these State IT Priorities should be made in the agency IT plan. Such alignments help identify the supporting efforts for the State IT Priorities, and where additional support may be necessary.

The structure of this appendix closely follows the OBM guidance provided to agencies to assist in the preparation of their biennial operating budget. For each of the topics below, the OBM guidance provided critical, but condensed information. This appendix elaborates each of the areas to assist agency planners in their plan creation and management. The conceptual overview and structure of the appendix follows:

- Statutory Requirements
 - ORC125.18(C)(2) – Privacy Impact Statements for systems containing Confidential Personal Information
 - ORC1347.15(B)(4) – Access to Confidential Personal Information
 - ORC125.18(C)(1) – IT security strategic plan by each agency
- OAKS Upgrades – from current platform to PeopleSoft 9.1
- Common Services – Deployed
 - OAKS Core Services – Financial and Asset Management, Payroll and Benefits Management
 - Financial and Human Resources Management Reporting (Business Intelligence)
 - Ohio Business Gateway – Secure Business-Facing Revenue Collection
 - Shared Services – Imaging and Call Center Management
 - Email
- Common Services – Underway
 - Enterprise Learning Management
 - Time and Labor Management
 - Data Center Management
 - Disaster Recovery Management
 - Server Management
- Server Virtualization
- Sharepoint
- Virtualized Desktop Infrastructure

Finally, it should be noted that economic considerations plays a significant role in how agencies should proceed in each of these areas. As agencies plan for their expenditures for each of these State IT Priorities, careful calculations and comparisons will be made between internal, agency-unique efforts against statewide implementations in each area. The lower, short-term costs to an

agency for one approach may not be the best strategy if longer term benefits accrue to the state for another approach.

Statutory Requirements

ORC125.18(C)(2) – Privacy Impact Statements for Confidential Personal Information:

A new statutory provision requires that prior to the implementation of any IT system state agencies shall prepare a privacy impact statement for that system. Agencies must now specifically evaluate possible privacy risks and the mitigation of those risks at the beginning and throughout the development lifecycle of a system.

ORC1347.15(B)(4) – Access to Confidential Personal Information:

This new provision requires that agencies adopt rules regulating access to the confidential personal information the agency keeps. Such rules must include a provision that any upgrades to an existing computer system or the acquisition of any new computer system that stores, manages, or contains confidential personal information must include a mechanism for recording specific access by employees of the agency to confidential personal information.

More information and helpful resources can be found online at the State of Ohio Privacy and Security Information Center at www.privacy.ohio.gov. For the purposes of IT budget planning, agencies should factor in any additional costs for preparing a privacy impact statement and incorporating any required access logging mechanisms into planned new systems or systems upgrades.

ORC125.18(C)(1) – IT Security Strategic Plan:

This new provision requires that each agency develop an IT security strategic plan addressing the management, control, and protection of the agency's information assets. More information and helpful resources can be found online at the State of Ohio Privacy and Security Information Center at www.privacy.ohio.gov.

For the purposes of IT budget planning, agencies are advised to budget for any anticipated costs for developing or refreshing an IT security plan for your agency.

OAKS Upgrades

OAKS FIN and HCM will be upgraded to PeopleSoft 9.1/9.2 over the course of the FY12/13 budget cycle. Agencies that maintain direct interfaces to OAKS FIN, HCM, ELM, CRM and EPM are advised to establish budgetary plans as follows:

1. Due to anticipated changes to the underlying PeopleSoft data structures, agencies that interface directly to OAKS or use OAKS data sourced directly from OAKS data structures and tables (with the exception of data sourced from EPM v9.0 as part of the Business Intelligence/EPMv9 upgrade process currently under way) should plan to modify their interfaces to work with PeopleSoft v9.1/9.2 and preferably source all operational reporting data from EPM data stores wherever possible.
2. While every effort will be made to preserve the current reporting structures of OAKS, Agencies that utilize standard reports provided as a service by OAKS (i.e., scheduled production reporting jobs and/or data extracts) should plan sufficient budgetary amounts to participate in upgrade acceptance testing and reporting optimization / elimination activities during the course of the upgrade process.

3. All OAKS users are notified that due to an upgrade to the PeopleTools elements of OAKS (i.e., those responsible for designing and presenting the OAKS user interface) the user interface of OAKS will change. While these changes are primarily aimed at optimizing the overall look and feel of OAKS, as well as to streamline transactional screens within OAKS, there may be some differences between the current OAKS 8.x environment and the upgraded OAKS environments. As such, agencies are advised to factor end-user training around these updates which are currently envisioned to be 1 day for casual users of OAKS and up to 3 days for more advanced users and business processes of OAKS. Every effort will be made to both minimize training needs on Agencies and make a flexible schedule available over the course of the upgrades to accommodate Agency schedules.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency.

Common Services – Deployed

OAKS Core Services – Financial and Asset Management, Payroll and Benefits Management: Financial and Human Resources Management Reporting (Business Intelligence):

Over the course of fiscal years 2009 and 2010 the State completed investments in OAKS designed to fortify the overall reliability, stability, cost predictability, and functional footprint of OAKS. For the 2012 and 2013 budget cycle, agencies should review existing financial and human resources transaction processing, reporting and analysis system assets that have the potential to be addressed by OAKS, and include plans and budgetary forecasts to both migrate these systems to OAKS, and to decommission or otherwise retire the use and operational and project spend associated with these “legacy Agency Systems” that can be replaced by OAKS. Specifically after determining a functional footprint with OAKS to replace existing applications or to provide new functional requirements, agencies will need to include funds in their budgets for the following:

- Agencies are to develop plans and include budgetary amounts to migrate remaining Agency Core Financials (including General Ledger and associated reporting) to OAKS Financials and leverage the OAKS EPM/BI/Cognos architecture and functions;
- Agencies are to develop plans and include budgetary amounts to migrate remaining Agency Transactional Finance systems (including Accounts Payable, Accounts Receivable, Billing and associated reporting) to OAKS;
- Agencies are to develop plans and include budgetary amounts to migrate remaining Agency Procurement systems (including Sourcing/Procurement applications, trackable assets with a value of greater than \$500 to OAKS);
- Agencies are to develop plans and include budgetary amounts to migrate remaining Agency Human Resource systems (including base HR, Benefit, and associated reporting) to OAKS:
- Migrate remaining Agency Enterprise Reporting /Business Intelligence systems (Planning/Budgeting, OAKS data reporting and analysis) to OAKS where OAKS data is used for one or more of the following business reporting and analysis functions:
 - ◆ General ledger reporting and analysis
 - ◆ Workforce analysis and profiling (composition, compensation, benefits, training, development and planning)
 - ◆ Accounts Payable and Receivable

- ◆ Workforce Compensation
- ◆ Planning and Budgeting
- ◆ Spending Analysis
- ◆ Procurement Related Reporting
- ◆ Asset Management
- Migrate remaining Agency Enterprise Reporting /Business Intelligence systems (Planning/Budgeting, OAKS data reporting and analysis) to OAKS where OAKS data is used for one or more business reporting and analysis functions.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency.

Ohio Business Gateway:

Department of Administrative Services (DAS), Office of Information Technology (OIT), in support of agencies interacting with the business community, will continue to expand the functionality of the Ohio Business Gateway (OBG). The OBG provides a secure and robust on-line environment intended to streamline and facilitate the interaction between businesses and the State. Agencies benefit by leveraging shared infrastructure that provides a common look and feel optimized for ease of use by businesses, but with flexible interfaces to support interaction between businesses and Agency systems of record.

Established in 2002, the OBG provides secure, on-line transactions and serves as the state's business portal (business.ohio.gov). OBG offers 14 different services and 50 different transactions within those service areas. Partners include eight state agencies and 500+ municipalities, and businesses now annually submit 2 million transactions and make electronic payments of \$5 billion.

As a nationally-recognized and successful program, OBG provides opportunities for significant exposure and visibility to Agencies that add to the existing menu of services and transactions serving Ohio's businesses.

For the FY2012/13 budget planning process, for agencies in reviewing their IT needs with respect to interacting with businesses in Ohio against the following capabilities of OBG, specifically:

- A simplified, easy-to-use portal to Agency services, forms, filing information and payment processing information;
- Simple online workflows that are designed to streamline routine interactions between the State and businesses for transactions involving the preparation, validation, and submission of data and payments;
- Industry-standard software development practices to specify, develop, and deploy and online transactions and services;
- Standardized payment methods including invoicing, ACH debit (check), and credit card acceptance and processing;
- Standardized transaction checkout and receipt issuance, with provisions for delivery of post-checkout artifacts (e.g. licenses, confirmations, etc.) and future access to historical filing information;
- Common presentation (“look and feel”) of Agency transactions that is business-friendly and expedites transactions between the State and businesses;
- Automation of high volume or recurring revenue- and non-revenue transactions and other key interactions between the State and businesses;

- Support for various agency-system integration techniques including web services, direct system interfaces, file import/extract, and secure eMail box delivery;
- A common security environment that mutually protects State computing assets, data and business transactions; and
- Differentiated and manageable end-user access levels, e.g. via roles spanning primary sources (e.g. businesses themselves), delegates (e.g. CPA, Law and Advisory firms) and basic consumers of services (e.g. limited access).

Agencies should also consider that the goal of OBG is to facilitate the interaction between businesses and the State by providing a common presentation, streamlined interaction, and secure electronic filing and payment services and not to specifically replace Agency legacy systems – Agency systems will retain their status as “systems of record” following the introduction of OBG services;

- The OBG is a broker and connection aid designed to make it easier for businesses to do business with the State, provide a positive experience, and minimize the impact of regulatory compliance which should help foster job creation, expansion and retention in the State of Ohio;
- The OBG (including the website portal, electronic filing services, and other online services) and Agency systems interaction/integration are designed in concert with Agency requirements and built to specification, and are subsequently operated and managed on an ongoing basis for the benefit of Agencies by OIT;
- Focal points for OBG are services and transactions that are designed to aid or otherwise facilitate: starting a business; obtaining licenses and required permits; maintaining compliance with State requirements; obtaining State assistance to grow businesses within Ohio; electronically filing information and payments associated with operating a business in Ohio; and accessing other value-added services provided directly by state Agencies.

The development and ongoing model (and hence Agency budget implications) are as follows:

- A priced engagement between OIT/OBG development experts inclusive of systems development lifecycle tasks (i.e. requirements gathering, design, construction, testing and deployment) that are created as part of a collaborative engagement;
- Ongoing operational costs (i.e., ongoing infrastructure, server, hosting, networking, etc.) are provided at no additional cost to Agencies.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency. In some cases, an infrastructure operations activity may be more appropriate.

Shared Services

The state of Ohio is the first state in the nation to implement a state government shared services center. Ohio Shared Services (OSS) works with state agencies to analyze and define tasks done at each of the agencies today, in an effort to build and deliver a single, standardized approach for processing commonly identified business transactions. This standardization is done in an effort to bring cost savings through efficiency, therefore allowing state agencies to focus on their core

mission. Ohio Shared Services offers a Statewide best in class, high performance, and transactional processing organization with a contact center to support Agency customer needs. For the FY12/13 planning period, OIT will focus on two OSS capabilities, Imaging and Call Center Management. These two services are described below.

Shared Services – Imaging:

As part of that effort, Ohio Shared Services is pleased to offer State Agencies the use of our extensive Document Imaging operation to enhance existing or planned business processes that involve imaging and related workflow/routing. The OSS Document Imaging offering includes:

- An imaging facility already in operation, part of Ohio Shared Services, with a secure mailroom featuring high-speed scanners from OPEX (www.opex.com). Which are designed to streamline the conversion from sealed envelopes to electronic documents with maximum efficiency;
- The ability to intake new documents with an impressive service level, while providing intake of existing documentation as a “back file” operation;
- Automated import of documents arriving as faxes or e-mail attachments;
- Automated processing of barcodes where available;
- Data entry for indexing purposes, both manual as well as automated via Optical Character Recognition *;
- Electronic document storage in a proven document management system used by other agencies today;
- Automated offsite backups and business continuity agreements in place;
- Secure short-term paper storage (assumes paper will be shipped back to agency or destroyed at agreed upon intervals);
- Electronic transmission of results to your facility via File Transfer Protocol;
- Web-based access to documents with flexible security, document versioning, and check in/out capabilities *;
- Reporting of productivity and service level metrics where appropriate with bi-directional scorecards that track both OSS and the agency; and
- A custom solution that can be designed based on specific requirements for agency-specific workflow and system integration as part of an enhanced package at additional cost.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency. In some cases, an infrastructure operations activity may be more appropriate.

Shared Services – Call Center Management:

Another OSS capability is the Contact Center facility already in operation. It supports Ohio Shared Services business, with a team of experienced call agents that can grow to serve Agency business needs. The State’s OSS Call Center Offering includes the following high level capabilities:

- Cisco Unified Contact Center solution, currently used for OSS operations;
- Voice-Over-IP (VoIP) phone handsets, providing clean sound and advanced call feature capabilities;

- Automated Call Distribution (ACD), allowing the creation of automated “call trees” to direct calls to the proper call agent;
- Interactive Voice Response (IVR), allowing the collection of caller data prior to agent interaction;
- Fully automated IVR allowing callers to retrieve information (fax documents back to the caller, etc) and make requests without human interaction *;
- Computer Telephony Integration (CTI), allowing screen “pop ups” based in OAKS, which puts the correct information in front of the call agent as the call arrives;
- Customer Relationship Management (CRM), allowing assignment, tracking, and management of call requests, using either the existing OAKS solution or an agency solution provided to OSS;
- Recording and auditing of calls to ensure quality via the CallCopy product;
- Responding to and providing solutions to requests to both e-mail and fax inquiries;
- Automated offsite backups and business continuity agreements are in place to ensure smooth business transitions;
- Providing comprehensive metrics on productivity, service levels, hold times, etc., as well as wall displays communicating similar metrics; and
- Design of custom solutions based on unique requirements for agency-specific CTI and web-based live chat, as part of custom package at additional cost.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency. In some cases, an infrastructure operations activity may be more appropriate.

Email:

Commencing in Fiscal Year 2011, a statewide platform standard of Microsoft Exchange will be available for Agencies to migrate legacy non-Exchange email and calendaring functions. Once migrated, Agencies will find that Exchange offers a number of improvements, including seamless integration of e-mail and calendaring as well as larger mailboxes and reduced operational and maintenance expense.

Agencies should plan projects to migrate and decommission legacy email platforms to the central OIT email service over the course of the 2012/13 budget cycle and include ongoing operational cost estimates of \$2.50 per web based user/mailbox or \$4.50 per client based user/mailbox on a monthly basis that are intended to be migrated.

For planning purposes, a summary of features and targeted user types is as follows:

Access Type	Budgetary Pricing per Client	Target Users / Key Features
Thin /Web	\$2.50 or \$30/year	<p>Target Users: remote or mobile workers, administrative mailboxes, contractor access, temporary or project based worker, distribution lists, unattended auto responder/forwarders, local government workers and public library staff (wherever possible)</p> <p>Key Features: Web Access from any web connected device Global address book access Mailbox Forwarding Personal Calendars as well as Calendar sharing Scheduling Assistant Spam filtration and Junk Mail Assistant Mailbox Search Out of Office Notification Accessibility for Blind and Low Vision Users</p>
Outlook 2010	\$4.50 or \$54/year	<p>Target Users: Centrally located office staff, employee access, full-time or long term resources, attended mailboxes, knowledge/workflow managers, or users that</p>

		<p>otherwise require advanced features offered by the full Microsoft Outlook 2007/10 client.</p> <p>Key Features: Web Access from any web connected device Global address book access Mailbox Forwarding Personal Calendars as well as Calendar sharing, multiple calendar display Sharepoint and File Services Integration Offline Address Book Import/Export Contacts Scheduling Assistant Spam filtration and Junk Mail Assistant Mailbox Search Out of Office Notification Accessibility for Blind and Low Vision Users</p>
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OIT has provisioned for the availability of mailboxes on a Statewide basis to all users during the FY12/13 budget period as a centrally provided service. Key features of the service (whether web or client based) include mailboxes of up to 7GB (with accommodation for larger email boxes upon request), universal access from within State facilities or external via the internet, nightly mailbox backup and restore (for exchange hosted managed mailboxes), real time server and firewall based virus, spam and phishing protection and mobile device access (for approved devices).

Agencies should contact OIT for additional details of this service and to assemble high level business case(s), migration plan(s) with likely associated costs as well as an indication as to the timing of migration and legacy decommissioning activities.

Agencies should assess their needs in aggregate by mailbox type (web or client) based on the following criteria:

- Specific platforms that should be contemplated for migration and retirement include Novell GroupWise (all versions), Lotus Notes (email and calendaring functions), Kana eMail, SquirrelMail and other non Microsoft Exchange based email platforms.
- Agencies that are currently using Microsoft Exchange based email that are not provided by OIT should review their operational spending amounts (inclusive of all state/contractor labor, hardware/software operations and costs, storage and backup, routine maintenance and other costs associated with the delivery of their existing Exchange platform) against the aforementioned budgetary cost points.
- Should the Agency determine that the annual total costs of their Exchange based email services exceed the aforementioned budgetary pricing levels by 15% or more the Agency should contact OIT to review the appropriateness, migration costs and timing of migrating Agency Exchange platforms to those provided by OIT.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency. In some cases, an infrastructure operations activity may be more appropriate.

Common Services – Underway

Enterprise Learning Management:

Migration of certain remaining Agency Learning Management systems or functions wherever possible to OAKS Enterprise Learning Management for the following functions:

- Employee training plan development, administration and tracking;

- Development of web-based training and Agency developed tests or delivery of 3rd party training content developed for the State and where the State retains license to distribute these materials in concert with training delivery activities;
- Employee training enrollment, registry and training delivery logistic functions (e.g., scheduling or management of training locations, venue, training materials, classrooms and participants); and
- Tracking of employee certification, professional license compliance, continuing education credit and other requisite training requirements that must be planned, tracked, managed and reported upon by Agencies.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency.

Time and Labor Management:

Over the course of fiscal year 2010 the State completed investments and deployed an OAKS-based Time & Labor tracking capability and migrated a large number of users to this solution. In addition, the State has provided basic time tracking and analytical reporting associated with time and labor as part of this deployment. Over the course of fiscal years 2011 and 2012, the State will be enhancing the reporting and analytical applications associated with time and labor as part of extensions to OAKS Time and Labor and the OAKS Enterprise Performance Management/Business Intelligence effort (EPM/BI).

The State acknowledges that many agencies may be utilizing Kronos for specific applications including time-in/time-out, badge swipe or other automated data collection functions or for more complex applications where employees and contractors are to their time against specific activities in order to comply with Federal, State and other statutory requirements.

It is the State's current goal to centralize, on a needs-based requirements basis to migrate remaining Agency Time and Labor, Time Management, Time Tracking and Leave Tracking (FMLA, other leaves of absence) to one of OAKS Time and Labor or Kronos which are the State's standards for Time Management to one of these solutions over the course of FY12/13 and decommission all applications that are used to:

- Collect time or attendance data;
- Apportion time spent on specific activities in accordance with statutory requirements;
- Analyze, audit and otherwise ensure quality and integrity in employee/contractor timekeeping in advance of any downstream processing, reporting or filing;
- Provide reporting and analysis functions prior to interfacing with either Kronos or OAKS (as applicable); or
- Interface with external parties in accordance with statutory requirements.

Agencies are directed to review existing Time and Labor applications, reporting and analysis system assets that have the potential to be addressed by Kronos or OAKS, and include plans and budgetary forecasts to both migrate these systems to Kronos or OAKS, and to decommission or otherwise retire the use and operational and project spend associated with these "legacy Agency Systems" that can otherwise be replaced by Kronos or OAKS.

For FY12/13 planning purposes, consider new IT projects or application operations activities to document IT planning for the Agency. In some cases, an infrastructure operations activity may be more appropriate.

Data Center Management:

In consideration of the State's ability to conduct business and support critical services in the event of a disaster or emergency condition that otherwise renders an Agency's primary production data processing facility or site unavailable or unusable, the State has provisioned for a secondary data processing facility to house State critical applications that support these services and functions.

This site will be available for occupancy in July of 2011 and from a facilities perspective will contain the requisite capabilities to support systems and processing functions including (but not limited to) application usage, power (primary, redundant and autonomous), physical and application security, networking and telecommunications, operational workspace, backup and restoration as well as system management functions that may be required over the course of the disaster or emergency condition until such time as the Agency's primary data processing facility resumes normal operations following the conclusion of the disaster or emergency condition.

This alternate site capability can also provide support for disaster recovery and business continuity requirements. Agencies can begin to leverage this data center over the course of the FY12/13 budget period and at the conclusion of Fiscal Year 2013 (June, 30 2012) to develop and implement disaster recovery functions maintain and regularly test disaster recovery functions for those applications deemed essential to the operation of the State.

For FY12/13 planning purposes, consider new IT projects or infrastructure operations activities to document IT planning for the Agency.

Disaster Recovery Management:

As part of the development of disaster recovery plans for the State, Agencies should assess their current and planned application inventory in light of the system's use in the broader context of the delivery of State services to the public as well as Federal and State requirements. Continuity planning is a discipline that helps identify, analyze, and prioritize mission-critical functions based on service criticality; scope and consequences of disruption; survivability (time-sensitivity); coordination requirements with other units or external entities; facilities, infrastructure, and IT support requirements. Agencies should inventory and classify their application portfolio to support their disaster recovery and business continuity planning, as well as reporting requirements for alternate site processing. The categories and definitions provided below provide a good foundation for application and business process classifications:

Essential to the continuing operation of the State and providing services to the public or maintaining relationships and compliance with Federal and State requirements. Failure to function correctly and on schedule could result in a major failure to perform mission-critical functions, a significant loss of funds or information, or a significant liability or other legal exposure.

Examples include (but are not limited to): Health and Medical Records, Public Safety and Law enforcement systems, Medicare/Medicaid disbursement and processing functions

Necessary to perform important functions. Operations could continue for a short period of time without those functions while normal operations are being restored.

Examples include (but are not limited to): State Financial, Accounting and transactional processing, State Payroll and Benefits processing, State Business and Administrative functions involvement disbursements of funds, services or benefits to the public

Deferrable for an extended period of time. Operations can continue without those systems or services performing correctly or on schedule.

Examples include (but are not limited to): routine office functions, administrative and clerical functions that are not public facing, business functions that are not time sensitive

Additionally, a degree of scope should be assessed as follows:

Potential Hardship to Public based on Service Unavailability – Applications that have a direct impact on more than 10,000 members on the public in delivering essential services, or any application that impacts more than 50,000 members of the public for necessary services should be considered as candidates to leverage the Alternate Data Center;

Maintaining Federal and State Regulatory Compliance based on Service Unavailability – Applications that if unavailable will drive the State to be outside of established requirements for Federal, State or other Jurisdictional requirements for maintaining compliance over the duration of a protracted or systemic outage should be considered as candidates to leverage the Alternate Data Center;

Employee Impact due to Service Unavailability – Applications that if unavailable have a widespread or statewide impact on the State’s availability to ensure that employees are compensated, able to use benefits or otherwise able to perform their job functions without undue hardship or impact should be considered as candidates to leverage an Alternate Data Center.

As an aid for planning, the following matrix is provided based on application/service criticality and scope should be strongly considered. Should your agency need assistance in identifying where on this matrix an application may fall, please contact OIT for discussion and specific guidance.

	Disaster Recovery Approach / Use of Alternate Data Center		
Essential	Mandatory	Mandatory	Mandatory
Necessary	Strongly Recommended	Mandatory	Mandatory
Deferrable	Suggested based on Cost / Benefit Analysis	Strongly Recommended	Strongly Recommended
Scope ►	Employee Impact	State/Regulatory Compliance	Public Hardship

For FY12/13 planning purposes, consider new IT projects or infrastructure operations activities to document IT planning for the Agency.

Server Management:

Over the course of FY10 and through FY11, OIT has developed a standard service offering designed to provide a virtualized server infrastructure for core and common server applications. Currently the State maintains approximately 5,500 web, application, infrastructure and database

servers across all agencies that support a variety of Agency functions across a diverse set of operating systems and versions. This centralized service is designed to:

- Reduce the overall count and complexity of the State’s windows, Unix and Linux server infrastructure in order to reduce operating costs, power consumption and drive to a set of standards to align the State’s IT workforce to;
- Reduce the variation (wherever possible) in diverse operating system support needs of all Agencies for server platforms while driving higher computing densities around a common set of virtualized servers and moving to a fully supported (i.e., most current stable version) of a core set of operating systems;
- Maximize the State’s buying power through pooling of purchases around a reduced set of vendors for key server, operating system and virtualization infrastructure software assets while driving commonality across State Agencies;
- Reduce the State’s real estate needs and costs through reduction of Agency data center floor space (and associated power, physical and logical security, cooling and related server support infrastructure) through initial virtualization of servers to the greatest extent possible, and then based on Agency willingness and participation, reduce the overall number of data centers or data processing facilities from the current number (more than 30) to a reduced number in accordance with State current and anticipated future needs;
- Simplify updates to operating system, security, patch and upgrade distribution so that supported file, print, integration, application and web services can be managed centrally by Agencies while eliminating complex configuration management and software distribution functions currently in place at the State;
- More effectively manage server assets and related licenses by allowing a centralized approach to the accounting for and distribution of these software assets such as Microsoft Windows, a variety of Unix and Linux distributions, security, VPN, virus/malware, device drivers and other operating system elements that are common to every server platform class in the State;
- Provide centralized data management and protection for data commonly maintained on Agency servers. Data maintained on individual user “servers” under a virtualized service will be stored and protected centrally as well as backed up and secured as part of a centralized data management activity as part of a virtual server service;
- Gain higher control over Agency physical assets while reducing the overall need for continual upgrades in these platforms in light of increasing computational and storage needs while reducing the overall footprint and cost of these assets through leveraging low-cost virtual servers;
- Drive software licensing, hardware, storage and infrastructure components to a common infrastructure and reduce the overall State expenditure associated with supporting and maintaining non common, duplicative or obsolete server platforms; and
- Position agencies to more readily take advantage of Data Center and Disaster Recovery Services contemplated to be designed and announced in FY11 and available for use in FY12/13.

For FY12/13 planning purposes, consider new IT projects or infrastructure operations activities to document IT planning for the Agency.

Server Virtualization

Agencies are requested to plan for Server Virtualization Services as follows:

- Agencies that are currently evaluating or planning for investing in new server infrastructure or are contemplating CPU, memory, storage, network or power/cooling capacity upgrades (collectively “Servers” hereafter) for existing windows, Unix or Linux platforms (all versions and distributions, collectively “Operating Systems” hereafter) that are not currently virtualized should include budgetary amounts for new Servers to include virtualization software to be installed on newly purchased based Servers that is based on the on VMware™ family of products wherever possible;
- Agencies are requested to develop plans for all existing Servers and Operating systems that fall into the identified virtualization scope to migrate all stand alone servers that are not currently virtualized to a fully virtualized environment during the FY12/13 budget cycle under the following virtualization targets:
 - ♦ Departmental, Workgroup, Agency or Interagency **File and Print Servers** should be planned (where feasible) to utilize 1 physical server for every 20 virtual servers or use a centrally offered virtualized server hosting service provided by OIT;
 - ♦ Departmental, Workgroup, Agency or Interagency **File and Knowledge Management, productivity, SharePoint servers** should be planned (where feasible) to utilize 1 physical server for every 8 virtual servers or use a centrally offered virtualized server or SharePoint hosting service provided by OIT;
 - ♦ Departmental, Workgroup, Agency or Interagency **Web Servers** should be planned (where feasible) to utilize 1 physical server for every 15 virtual servers or use a centrally offered virtualized server or SharePoint hosting service provided by OIT. Further Web Servers made available to the public for interaction purposes should be migrated to a centrally offered hosting service;
 - ♦ Departmental, Workgroup, Agency or Interagency **Application Servers** should be planned (where feasible) to utilize 1 physical server for every 5 virtual servers or use a centrally offered virtualized application server hosting service provided by OIT;
 - ♦ Departmental, Workgroup, Agency or Interagency **Middleware or Integration Servers** should be planned (where feasible) to utilize 1 physical server for every 5 virtual servers or use a centrally offered virtualized server hosting service provided by OIT; and
 - ♦ Departmental, Workgroup, Agency or Interagency **Database Servers** should be planned (where feasible) to utilize 1 physical server for every 3 virtual servers or use a centrally offered virtualized server hosting service provided by OIT.
- In consideration of the aggregate virtualization targets for the State, Agencies are requested to assess their entire server inventory (stand-alone, virtualized or otherwise) and drive for an aggregate virtualization target of 8 virtualized environments per physical server on all hardware purchased during FY10/11, contemplated for purchase during FY12/13 or 3 virtualized environments per physical server purchased prior to these periods as supported by VMware products. Moreover, at the conclusion of the FY12/13 budget period, Agencies are requested to drive to an aggregate 5 virtual to 1 physical server ratio for all windows, Unix and Linux servers maintained by the Agency;

- Agencies are directed not to invest in standalone, un-virtualized servers unless completely unavoidable due to specific COTS or Software manufacturer limitations, version/compatibility issues or applications that will not otherwise execute due to versioning reasons in a virtualized environment;
- Servers that support full lifecycle development or application maintenance functions (e.g., demonstration, prototyping, development, testing, pre-production, quasi production, production and disaster recovery / business continuity functions) are to be considered in scope as part of this request;
- Agencies are to develop specific plans to divest from and upgrade incompatible systems (i.e., unsupported operating systems or application software inclusive of all software tiers: presentation, logic and database) and migrate to a virtualized environment or retire the incompatible or otherwise unsupported software platform over the course of FY12/13;
- As a general set of estimating guidelines for OIT hosted services, agencies should contact OIT for the current existing server rate per month (whether physical or virtualized) to migrate to an OIT hosted server environment that is inclusive of data processing facility, rack, cooling, power, network, virtualization software and physical security services required to support an Agency server; and
- Agencies will retain all responsibilities for the operation and ongoing maintenance of applications and services executing on these servers inclusive of application security, logical and physical access, application specific considerations and customization/configuration functions as required by Agencies.

For the avoidance of doubt, when considering if an Agency server falls into one or more of these categories, please contact OIT Investment Governance regarding possible server migration / decommissioning approaches and to discuss potential budgetary amounts and timing to migrate servers to be in compliance.

For FY12/13 planning purposes, consider new IT projects or infrastructure operations activities to document IT planning for the Agency.

SharePoint

Over the course of FY10 and through FY11, OIT will be developing workgroup knowledge and reference data management standard platform service for providing SharePoint services for State Agencies. During FY12/13, this infrastructure standard will be deployed as a solution offering to State Agencies as a rated service. This service is designed to:

- Drive higher levels of intra and interagency collaboration by moving State Agencies to a single set of tools to manage common Agency functions such as reference data management, knowledge based workflow, common data lookup functions, common document and data management repositories, data tracking and data inventory applications;
- Drive a common infrastructure for the provision of knowledge management that is based on a single platform (Microsoft SharePoint®) to facilitate integration with standard office productivity applications (Microsoft Office 2003-2010) and centralized email (Microsoft Outlook/Exchange®) as well as future services that are being contemplated to centralize systems and data security and access management functions

that are designed to reduce Agency risk, effort and expenditure associated with the overall integration of the aforementioned tools in the State workplace;

- Reduce the overall risk in managing core knowledge information by providing a common platform that indexes, protects and facilitates information exchange between individuals, workgroups, agencies and external entities to the State in a highly structured and repeatable manner, while offering foundational benefits of centralized storage administration, data backup and restoration, security and other infrastructure services as required by the State;
- Reduce the cost and associated level of effort for integrating knowledge data across the State by driving to a platform/service Standard that is designed to be highly compatible and flexible within a single toolset while allowing the State to leverage IT skills across a single standard (as opposed to a variety of skill sets required to support a multi-standard platform in place today); and
- Drive software licensing, hardware, storage and infrastructure components to a common infrastructure and reduce the overall State expenditure associated with supporting and maintaining non common, duplicative or obsolete knowledge management application platforms.

For FY12/13 planning purposes, consider new IT projects or infrastructure operations activities to document IT planning for the Agency.

Target Applications

Knowledge Management/SharePoint Services are targeted for Agencies that meet one or more of the following criteria:

- Agencies that are currently evaluating or planning for investing Microsoft SharePoint® in FY11-13 for workgroup productivity, knowledge management / sharing or Agencies that have an existing investment or deployment of Microsoft SharePoint® ; or
- Agencies evaluating solution platforms for new knowledge management / workgroup productivity in light of new Agency needs or requirements to upgrade/enhance existing knowledge management / workforce productivity applications; or
- Agencies that seek to retire knowledge management / workforce productivity portals, data stores, simple workflow applications, reference / lookup data management applications that are based on Novell GroupWise®, IBM/Lotus Notes®, IBM/Lotus Domino®, Filemaker Pro®, WorkZone, EMC eRoom®, OpenSource Web CMS®, simple web portals or applets based on Microsoft Access®, SQL Server®, Oracle®, basic calendaring or scheduling functions; or
- Applications that provide access within or across agencies to simple file based data stores that are routinely managed and maintained in common office productivity applications such as Microsoft Office® and made available via intranet or internet applications.

Agencies that over the course of their FY12/13 budget planning identify themselves as meeting one or more of the target application criteria previously outlined should contact OIT during the planning cycle for specific direction as to the State SharePoint Services (as a minimal standard of compliance/compatibility) and the availability, timing and other planning considerations of these services as a centrally offered service or service platform.

Virtualized Desktop Infrastructure

Over the course of FY10 and through FY11, OIT will be developing a desktop standard for providing a Virtualized Desktop Infrastructure (VDI) for the State's current PC/Laptop footprint. During FY12/13, this infrastructure standard will be deployed as a solution offering to State Agencies as a rated service. This service is designed to:

- Dramatically simplify desktop administration by offering a single core image of common desktop operating systems and productivity applications that can be extended and tailored on a workgroup and individual basis.
- Simplify updates to operating system, security, productivity applications and underlying file, print and information sharing applications can be managed centrally to eliminate complex configuration management and software distribution functions currently in place at the State;
- More effectively manage productivity software assets and related licenses by allowing a centralized approach to the accounting for and distribution of these software assets such as Microsoft Office, Adobe applications, security, VPN, virus/malware and other applications that are common to every desktop/laptop in the State;
- Provide centralized data management and protection for data commonly maintained on user PC/Laptops. Data maintained on individual user "desktops" under a virtualized service will be stored and protected centrally as well as backed up and secured as part of a centralized data management activity as part of the VDI service;
- Gain higher control over desktop and laptop physical assets while reducing the overall need for continual upgrades in these platforms in light of increasing computational and storage needs while reducing the overall footprint and cost of these assets through leveraging low-cost virtual clients; and
- Consume 50-75% less power, require less cooling as well as offering a price point that is approximately 1/3 to 1/5 the cost of PC/Laptop platforms in use at the State and in support of the State's strategy to move to a more green power and cost effective computing infrastructure.

Target Applications

VDI applications are targeted for Agencies that meet one or more of the following criteria:

- Agencies that are currently evaluating or planning for investing in VDI applications in FY11-13 for their PC/Laptop inventory; or
- Agencies or workgroups that are contemplating upgrading capacity in existing or planned call centers that leverage a highly common desktop suite of applications (e.g., MS-Office, Agency specific public or business interaction applications, routine usage of Agency applications such as OAKS); or
- Agencies or workgroups that have a high number of transactional processing, information look-up/reference or routine office functions such as Agency systems, OAKS, and other large scale central applications that rely on a set of defined applications in the performance of Agency functions; or

Agencies or workgroups that are budgeting (in relation to their overall IT budget) a significant investment in PC/Laptop upgrades for either new hardware, capacity upgrades to existing hardware, or upgrades to existing software suites to more contemporary and supported versions (e.g., Windows XP to Windows7, Office2003 to Office 2010).

Agencies that over the course of their FY12/13 budget planning identify themselves as meeting one or more of the target application criteria previously outlined should contact OIT during the planning cycle for specific direction as to the State VDI standard (as a minimal standard of compliance/compatibility) and the availability, timing and other planning considerations of these services as a centrally offered service or service platform.