Appendix A: IT Planning and Assessment Guidelines

This guide will help you prepare and manage your agency's technology portfolio. It describes the role planning plays in the portfolio management process; provides a practical approach to making technology investment decisions; and introduces tools to assist you in the process. Use of the concepts and tools presented are not mandated. Agencies may select other methods and processes to make technology investment decisions.

Elements of IT Portfolio Management

IT portfolio management provides an integrated approach to the identification, selection, control, evaluation, and life cycle management of technology investments.

The process may be viewed as consisting of three interrelated components:

- Planning and Selecting Technology Investments — Making decisions based on agency strategies and business requirements regarding the selection, continuation, or cancellation of investments. Risk assessment approaches described in Section V of this document will help the agency consider proposed investments by choosing from a variety of different tools.
- Managing Established Investments — Making sure that once technology investment decisions are made, performance expectations are achieved, costs are kept within budgeted resources, and schedules are met.
- Evaluating the Performance of Investments — Including baseline, ongoing, and new investment assessments.
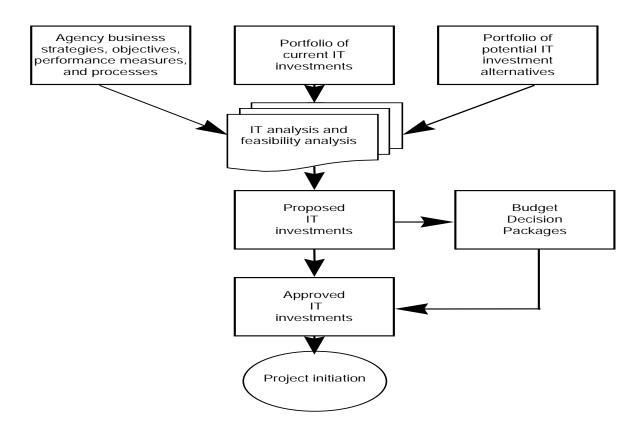
Figure 1: IT Portfolio Management Process

Critical Success Factors

Successful portfolio planning includes the following practices:

- Agency executives are actively involved in the portfolio management process
- Portfolio decisions are linked to the agency's business plan and budget and are consistent with state and agency technology policies and standards
- Decisions are based on the best available cost, benefit and risk information
- Previous projects are reviewed to determine if the desired objectives were met (cost, schedule, quality, etc.)

Emphasis is on maximizing value to the agency and the state while managing risk. Portfolio management helps decision-makers determine the real value of technology to the agency. The process builds on a traditional cost-benefit analysis approach for making financial investment decisions, but is tailored to technology products and services. The concept refines the definition of costs, suggests a way to quantify both tangible and intangible benefits, and recommends strong business justification as the basis for all technology decisions.

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In the sections to follow, the process of portfolio assessment, investment planning and selection, and project development are discussed.

- Section II describes the portfolio planning process and how it differs from planning efforts in the past, the recommended planning structure, and the steps in the planning process.
- Section III describes IT portfolio assessment.
- Section IV summarizes the process for developing new investments.
- Section V briefly describes several assessment tools that can be used to conduct the baseline assessment as well as evaluating the merits of new investments.

IT Investment Planning

IT investment planning is a systematic process for linking each agency's investment in IT to its business strategies, objectives, programs, and processes. The planning process includes:
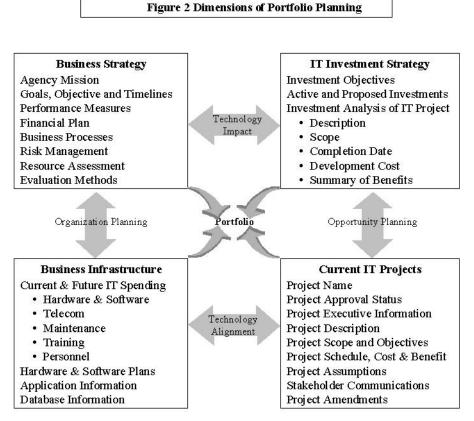
- Determining how well technology is currently meeting the business needs of the agency
- Identifying service gaps or technology opportunities that could improve agency performance
- Defining investments that will deliver desired business outcomes as well as customer satisfaction levels with the best value over the investment life cycle

At the heart of portfolio management lies a strong partnership between the business and technology domains of the agency. The business domain is the user of IT, while the technology domain is the supplier of technology services. The two domains must forge a partnership for portfolio planning and management to be effective. Figure 2 illustrates the continuous interaction between the business and technology domains in the portfolio planning process.

Four Dimensions of Technology Planning

As shown in Figure 2, the portfolio-planning model involves four types of planning activities.

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Figure 2: Dimensions of Portfolio Planning

Figure 2 Dimensions of Portfolio Planning

- **Organization Planning** — Begins with the agency's business strategy and defines the organizational structure and processes necessary to implement technology.
- **Technology Alignment** — Begins with the agency's business organization and processes and generates the information systems and applications that meet business needs.
- **Opportunity Planning** — Begins with the agency's existing technology inventory and defines current and future resources that may be deployed to change the business strategy and/or improve support for programs.
- **Technology Impact** — Begins with technology opportunities and generates changes to the business plan in terms of new strategies, products, services, customers, or customer interfaces.

Portfolio management differs from traditional planning models that typically focus on the automation of existing business processes (alignment planning). Portfolio management demonstrates how technology can enhance basic business strategies and methods. New problems, enhanced knowledge, advancing technology, and management perceptions drive plan changes and present new opportunities to improve business performance.

Portfolio Planning and IT Plans

The portfolio planning process replaces the development of agency strategic and tactical plans for IT. It structures executive decision-making in the selection of IT investments and feeds directly into the biennial budget process. Once an investment has been approved and

resources allocated, implementation of the investment falls under the policies, standards, and guidelines that have been established for project management.

Portfolio planning will help ensure that IT will effectively support the accomplishment of the agency's business strategies. As shown in Figure 2, it can also play an important role in shaping those strategies. The planning process can identify opportunities for program improvements that may significantly affect future business goals, plans, and strategies. For example, in many agencies the identification of opportunities for the use of electronic funds transfer has enabled fundamental business process improvement. Similarly, geographic information system technology may offer a whole new paradigm for the organization and use of information in agencies whose missions revolve around geographic considerations.

How Portfolio Planning Differs from "Strategic" and "Tactical" Planning

Portfolio planning uses the portfolio as the foundation for a continuous planning process resulting in a technology investment plan that identifies the technology strategies, goals, and new projects required to meet the business needs of each agency.

The technology portfolio is a working document that is maintained and continually updated by the agency. The Investment section of the portfolio must be updated on an annual basis during the budget cycle for the biennium or the supplemental budget and is updated more frequently when an agency identifies new problems or opportunities requiring a technology investment.

All investment decisions are based on cost, benefit, and risk assessments or driven by federal and legislative mandates or other external mandates. Investment performance is measured regularly to ensure that all investments contribute to the overall strategic business plan of the agency.

Organizing the Planning Effort – An Integrated Planning Process

Strategic planning for IT should be integrated into each agency's overall business strategy planning process. As previously noted, a close partnership between program management and technical management is essential for effective portfolio planning. Each agency's senior technology manager, its Chief Information Officer, should be a member of its strategic planning work team.

The tasks that are traditionally associated with the strategic planning process provide useful vehicles for integrating business and technical strategies. Stakeholder analysis, for example, should include the needs and expectations of both users and suppliers of IT. Analyses of internal strengths and weaknesses should address the strengths and weaknesses of the agency's technical infrastructure and its ability to respond to user needs. Similarly, the assessment of external opportunities and threats is an excellent channel for bringing technology issues, ranging from Year 2000 compliance issues to particularly promising new technologies, into the planning process.

If your agency anticipates using IT in conjunction with major business process improvement initiatives, has a relatively complex technical infrastructure, or has successfully adopted one of the formal, structured methodologies for technology planning, then it should establish a technical working group to support the overall strategic planning team. This working group should include agency executives, technical managers, and knowledgeable representatives of user management. The group charter should clearly state that its responsibility is to support the agency's overall strategic planning program, not develop an independent technical strategy.

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Linking Technology Investments to the Agency's Strategic Business Plan and Budget

With the 1997-99 Biennium, the state adopted a performance-based budgeting system that closely links each agency's strategic business plan with its budget. Agencies are required to directly tie their missions, goals, objectives, strategies, and performance measures to their financial plans.

Technology plays an important role in enabling each agency to accomplish its mission and program goals by supporting and enhancing basic business processes. Increasingly, technology is involved in every aspect of agency program operations. Therefore it is essential that technology planning be an integral part of the agency's overall performance-based business and budget plan. A major goal of portfolio-based IT management is to ensure the integration of business and technology visions.

Technology Planning Summary

Although the development of technology plans should be integrated within each agency's overall planning process, the following sequence of activities will help ensure that technological opportunities are identified and justified. The accomplishment of these steps should be the responsibility of the agency's strategic planning team, with support from its technical management and staff or a specialized work group of technical management and experienced technology users.

- **Assessing performance**. Assess the performance of the existing technology investments to establish a baseline. A technology portfolio measures how well existing investments are performing in terms of the business needs of the agency.
- **Identify service gaps or technology opportunities**. Planning is the process of analyzing business requirements, identifying problem areas, or identifying technology opportunities that will improve the business performance of the agency.
- **Identify alternatives.** Identify and assess alternative solutions for filling service gaps and/or take advantage of technology opportunities.
- **Implement investments and evaluate project/portfolio performance.**   Implement the best solution and evaluate its performance to determine the success of the planning effort. Technically not a planning step, project implementation concludes the planning cycle. The evaluation provides the data for the next planning cycle. Performance data resulting from a systematic assessment process of existing and proposed investments is needed throughout the portfolio planning and management process in order to make informed planning, selection, and management decisions.

IT Portfolio Assessment

Agencies are required to conduct annual assessments of their IT portfolios. These assessments examine how well existing investments are meeting the business needs of the agency, identify problems with the management of existing investments, and suggest opportunities for improving agency performance through new technology investments.

Costs, Benefits and Risks — Key Factors in Portfolio Assessment

Considerations of costs, benefits and risks should be continually applied throughout the planning, selection, management, and evaluation phases of portfolio management. New or continuing portfolio investment decisions should be based on analyses of these factors.

- Costs (Recurring and Non-Recurring)

- One-time costs, such as hardware and software, design and development cost
- Ongoing costs such as salaries, software upgrades, training, supplies, and maintenance
- Indirect costs such as initial productivity losses, network management, and data administration
- Benefits
  - Tangible benefits include those directly linked to the achievement of the agency's business strategy that can be explicitly quantified (e.g., cost reductions, productivity increases, processing time reductions, service quality improvements, etc.)
  - Intangible benefits include those directly linked to the achievement of the agency's business strategy that are difficult to quantify (e.g., greater data accuracy, improved data security, improved organizational knowledge, more efficient decision making, etc.)
- Risks
  - Strategic risk assessment ensures that proposed IT investments are aligned with the agency's strategic direction as set forth in the agency business plan
  - Financial risk is associated with the costs and duration of the development effort
  - Capability or project management risk is associated with the organization's capability of carrying out the changes required by the project, including management skill and experience
  - Technology risk is associated with the technology that will be used to implement a proposed application or system
  - Organizational impact or operational risk is associated with the degree and complexity of the changes to the business rules and processes

Agencies should assess their technology investments in terms of the performance of individual investments as well as the portfolio as a whole. A financial portfolio is measured by its overall gain or loss. Although individual investments may be profitable, if the overall results for the portfolio are below market benchmarks, the portfolio will not receive a positive rating. Market benchmarks in this context relate to at least the return on investment (ROI) being equal to or greater than original expectations. Successful projects are those that reach the expected outcome. Technology portfolios should be viewed in a similar fashion.

Portfolio-Level Assessment

Piecemeal assessment can result in the allocation of scarce resources to individual investments that are counter-productive in terms of the overall needs and expectations of the agency. Questions concerning interoperability, common architecture, or public information access cannot be resolved by assessing individual investments as separate entities. Viewed in isolation, an investment may appear to be justified; however, when considered within the context of other agency technology investments, it may prove to be redundant or inconsistent with the agency's overall technology strategy.

Therefore it is essential that each investment in the portfolio be assessed to ensure the investments support the strategic vision of the agency and are individually and collectively cost-effective. Portfolio assessment draws upon data about individual applications and projects, but it is not simply an aggregation of such data. It is necessary to assess each current and proposed investment in terms of its value in the context of the agency and state-level technology strategies.

Suggested below are some questions that will help you assess the value of the technology portfolio in achieving your agency's strategic vision.

- How well has the entire technology portfolio contributed to the achievement of the agency's mission, business goals, and objectives? Is technology producing cost-effective results?

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- How well are technology investments being managed? Has the technology portfolio been reviewed to identify and reduce redundant and low value applications? Have legacy/old applications, data, and infrastructure been considered for integration into new systems or replacement? Have new opportunities for consolidation and sharing been pursued?

- Is the agency maximizing the business value and cost effectiveness of technology? Is the agency leveraging its technology resources across its entire operation? Can resources be shared or consolidated?

- To what extent do current technology investments employ a common architecture? What links need to be developed for interoperability and data sharing?

- What has been done to ensure appropriate public access to agency information and the ability to do business with the agency using technology resources?

One tool to assist agencies in measuring the effectiveness of their technology portfolios in achieving their business strategies is the "balanced scorecard" methodology. The balanced scorecard approach, which has been adapted to public agency settings by the U. S. General Accounting Office, helps to translate business strategies into technology objectives, measures, and performance targets. For a more complete discussion of the balanced scorecard in the public sector, please see Appendix B.

Assessing Individual Investments

Each investment, application, or project in the portfolio should be assessed to determine how it is linked to the business plan. Benefits, costs, and risks should be measured. In addition to the information included in the portfolio itself, effective assessment may require that you review feasibility study reports, post-implementation studies, and program management reports.

Section V of this guide suggests some tools for conducting assessments of individual investments; however, you may use any combination of methodologies that together address:

- Cost/benefit ratios or other financial measures, such as ROI, that allow you to measure the investment against desired rates of return

- The investment's linkage to the business plan — agency strategies, goals and objectives, performance measures, and business process improvements

- Evidence that the project complies with state technology policies and standards

- Expected versus actual performance data measured against acceptable variation between expected and actual results

- A description of the risks associated with the investment and the success of the agency in controlling those risks — again measured against a level of acceptable performance

The assessment provides agency decision-makers with essential performance information about each individual investment and the portfolio as a whole. The process should validate most investments in the portfolio, but it may identify some for immediate or future elimination. Other investments may need active monitoring or even reassessment using a more detailed or rigorous assessment tool. The results of the assessments should be hyper-linked and Section 4 of the portfolio should be appropriately updated.

Developing New Investment Proposals

IT portfolio management is a continuous and dynamic process. Figure 3 illustrates how new agency investments are incorporated into the portfolio. Each investment should be evaluated and supported with sufficient justifying evidence on which to base a selection decision.

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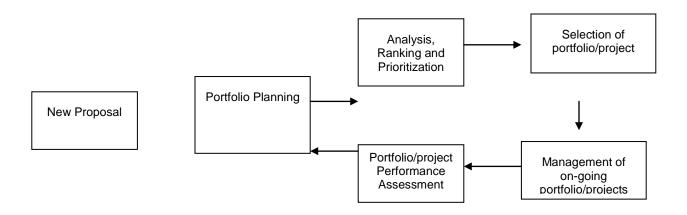An agency's decision to approve a new investment should be based on:

- The relative benefits, costs and risks of the project in comparison to all other proposals
- The strength of the project's linkage to the agency's strategic business plan
- Adaptability to future business needs and priorities
- Completion of the project's development cycle (or stand-alone increment) within two years

The contribution the proposed technology will make to the agency's technical infrastructure, including but not limited to analysis of the following:

- Use of existing assets including hardware, software, tools, and programs
- Ability to capture, analyze, maintain, and share data
- Robustness of the proposed solution and the estimated life expectancy of any developed system
- Reliability and ease of use of the user interface
- The reusability of any programs, purchased software, or tools
- Interoperability and scalability of any purchased or developed components
- The use of industry accepted standards for connectivity and open systems
- Ease of maintenance

In general, high risk (as identified in the IT Portfolio Structure and Content Standards, Appendix A) and multi-biennia investments are subject to OCIO and TSB prior approvals. Once an investment has been identified by the agency, it should be included in the Planned Projects/Investments section of the portfolio and ranked against other possible investments.

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Figure 3: Selecting New Investments

The process of conducting the annual portfolio assessment will identify gaps in the agency's technical infrastructure and suggest opportunities for improving agency performance through new technology investments. Once a problem or opportunity has been identified, you can begin the process of identifying and prioritizing possible new investments — a systematic and rigorous process of compiling data, identifying alternative solutions and analyzing the associated costs, benefits and risks of each alternative.

Responsibility for Selecting Investments

Primary responsibility for selecting IT investments lies with the head of each agency. The identification and assessment of technology investments in support of this executive responsibility may be overseen by the agency's strategic planning committee or by a separate IT portfolio planning team. In either case, detailed program and technology input should be drawn from both user and technology staff. The process of identifying and documenting technology investments is essentially similar to the project planning and justification stages in the state's established technology management process. As in the past, development follows the normal steps in the technology project cycle. At each succeeding step in the process, agency management has more information on which to make decisions to continue or curtail further investment.

Documenting Proposed Investments

Summary information about each proposed new investment must be included in the Planned Projects/Investments section of the portfolio investment plan. The format for the portfolio is specified in a separate document entitled, "IT Portfolio Structure and Content Standards." This summary information should be based on the best information about the investment that is currently available to the agency.

If a proposed investment requires OCIO or TSB approval, the agency should be prepared to supplement the information provided in the portfolio with whatever additional evidence it thinks appropriate to demonstrate the merits of the investment. Similarly, if the investment requires a budget action, the agency should be prepared to provide whatever additional information is specified in the current budget instructions.

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Agencies should retain documents — such as business process improvement studies, requirement analyses, or feasibility study reports — used in preparing the investment analysis for possible review or audit by the OCIO.

Analyzing and Justifying Proposed Investments

Each agency is responsible for analyzing and justifying its proposed IT investments and providing evidence that each will bring an appropriate return from the expenditure of scarce public resources and further agency and state-level priorities. In most cases, this analysis and justification should include:

- IT Investment Definition — A high-level analysis that addresses the business needs of the agency and the proposed scope, schedule, and cost of the investment
- Comparative Assessment of IT Investment Alternatives — Ranks alternatives in terms of agency priorities, as well as relative costs, benefits and risks
- Feasibility Study — Provides an in-depth analysis of the desired results of investments and examines the technical requirements of the project, the relative costs, benefits and risks of each technical alternative, and lays out a project implementation plan

The information developed through the investment definition and comparative analysis steps will normally be sufficient for executive decision-making and, if required, OCIO or TSB review and approval of proposed IT investments. In some cases, agencies may be asked to provide supplemental documentation to support control agency review and approval.

Investment definition, comparative assessment, and feasibility studies are discussed in the remainder of this section.

Investment Definition

The investment definition establishes the initial expectation of scope, schedule, and cost for a possible IT investment. The analysis should follow from a general design and requirements analysis and include:

- Background Statement and a discussion of the reasons for the investment
    - Business environment
    - Business needs
    - Business opportunities
    - Business service goals
    - Statutory requirements
- Objectives — the primary outcomes of the investment
    - Problems that will be solved and/or opportunities for business process improvement
    - Service delivery enhancements
    - Response to statutory requirements
- Project Impacts — other agencies or entities affected by the investment
    - Interagency
    - Intra-agency
    - Programs/Subprograms
    - Agency customers (i.e., clients, constituents, taxpayers, etc.)
- Organizational Effects — describe (as applicable) how implementation of the investment may affect the agency
    - Impact on work processes
    - Need for training

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- – Changes in job content
- – Changes in the organizational structure
- Description of the proposed solutions chosen and of the alternative solutions considered but not chosen
  - – Positive aspects of the chosen solution, that is, factors that ultimately made the approach the most desirable
  - – Shortcomings of the considered alternatives that made them ultimately less satisfactory in the project analysis under consideration
- Cost Projections

  An estimate of the total project cost for each phase of the investment from definition through implementation. You need to be able to document the methodology used to develop the estimate

- Cost-Benefit Summary

  An initial cost-benefit analysis of the proposed investment

- Estimated Time Frame

  An estimation of the time required to implement the investment

- Conformity with Agency Plans

  An analysis of how the proposed investment supports the agency's strategic business plan and the relationship between the investment and other current and proposed technology investments in the technology portfolio.

- Project Management and Organization
  - – Determination of the project management approach for the investment
  - – Roles and responsibilities
  - – Decision making process
  - – Management qualifications
  - – Quality assurance/oversight
  - – Risk management
  - – Procurement strategy
  - – Measures of success

Fiscal requirements

The estimated budget for the investment, including funding sources and spending plan.

Comparative Assessment

The purposes of the comparative assessment of proposed IT investments are to establish priorities among investment alternatives and to ensure that each investment is viewed in light of its impact on other current and proposed investments. The various investment definitions and the Project and Infrastructure sections of the agency's portfolio provide data for the assessment. Typical questions that should be addressed in conjunction with the assessment include:

What are the relationships between each proposed investment and other active and proposed investments?

To what extent does each investment enhance or restrict the value of other investments?

Is the success of any investment contingent upon the successful implementation of other investments or completion of ongoing projects?

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What criteria should be used in establishing the priority of agency IT investments and what should be the relative weight of each criterion?

How well does each proposed investment satisfy each criterion? What is its total score?

How should proposed investments be ranked for budgeting and resource allocation?

Agencies may establish any comparative assessment methodology that they feel is appropriate to support executive decision-making. The methodology should be systematic and fully documented, and the results of the assessment must be hyper-linked to, or referenced by the agency's portfolio.

Feasibility Study

A feasibility study is a rigorous examination and documentation of the costs, benefits and risks of an IT project and provides a transition from investment analysis to project management. The study builds on analyses and information already collected during the definition step of the portfolio management process. The scope of the study should be commensurate with the nature, complexity, risk, and expected cost of the project. Only very limited projects do not normally necessitate a feasibility study. These include projects of less than six months duration, that require minimal changes in the agency's business processes, or that respond to problems or opportunities with a straightforward solution based on off-the-shelf products.

The feasibility study should document:

- The problem or opportunity in terms of the effect on the agency's mission and programs
- The organizational, managerial, and technical environment within which a response to the problem or opportunity will be implemented
- Specific service level and/or financial objectives to justify the investment
- Functional requirements
- The identification and evaluation of alternative courses of action for each established objective
- Economic analysis (i.e., cost-benefit analysis) for each alternative which meets the established objectives and functional requirements
- Risk analysis for each alternative
- Risk mitigation plan for the selected alternative
- The selection of the alternative that is the best response to the problem or opportunity
- Project work plan for implementation of the proposed action

You may access the feasibility study guidelines and cost benefit analysis tools at: http://isb.wa.gov/policies/default.aspx.

Tools for Making Technology Investment Decisions

When using any assessment tool, keep in mind that assessments are dependent upon both soft and hard data. The responsibility of the agency is to provide a body of evidence in support of each proposed technology investment that will persuasively demonstrate that the investment is in fact a sound use of scarce public resources. Quantification of data to score or rank projects should be done whenever feasible; however, many aspects of the assessment process, such as the determination of benefits, will require an examination of both tangible and intangible benefits.

Methods that can be used for assessing, ranking, and selecting new investments are listed below and further detailed in Appendix B.

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An Information Economics Model

Information economics helps decision-makers determine the true value of IT and is based upon the concepts of value and two-domain analysis. Value is the contribution technology makes to enable the success of the business domain. The two-domain analysis separates business and technology to determine the impact of a technology investment on each domain. (Each of the impact measures listed below is defined in Appendix B.)

Business domain impact measures:

- Return on Investment (ROI)
- Strategic match (SM)
- Competitive advantage (CA)
- Management information support (MI)
- Legislative implementation (LI)
- Organizational risk (OR)

Technology domain impact measures:

- Strategic technology architecture alignment (SA)
- Definitional uncertainty risk (DU)
- Technical uncertainty risk (TU)
- Information system infrastructure risk (IR)

To evaluate a proposed project, the planning team and/or senior managers assign scores for each factor based on its value or risk to the agency and a weight reflecting the factor's relative importance to the agency. For a more detailed explanation, please see Appendix B.

Federal Assessment Model

The federal assessment model provides an assessment method derived from the information economics model. This model weighs costs, benefits and risks for proposed projects and scores them based upon five factors: linkage to the business plan, mission effectiveness, organizational impact, risk and cost-benefit ratio. By scoring all proposed new investments with this tool, decision-makers can readily see which projects appear to have the greatest value to the agency. Appendix B provides a description of the scoring technique and a hypothetical example using the method.

Balanced Scorecard

As noted above, the balanced scorecard is a results-oriented planning and assessment approach that integrates business, technology, and financial planning processes. The balanced scorecard translates business strategies into technology objectives, measures, and performance targets. Unlike other methods that focus solely on financial perspectives, the balanced scorecard uses three additional perspectives: the customer, internal business processes, and organizational learning and growth. Together, these perspectives give a comprehensive view of how technology is performing in relation to the agency's vision and business strategy. Proposed new initiatives or projects also are assessed to determine which ones have the greatest potential for contributing to the achievement of agency objectives.

To apply the balanced scorecard approach, a portfolio steering committee links specific business strategies to desired technology results. Based on the agency vision and strategy, the steering committee sets objectives by identifying success measures. Then specific measures are developed to gauge achievement of the objectives in relation to the customer, learning and growth, internal business processes and financial areas.   Balanced scorecard matrices are

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provided in Appendix B. Using the results obtained from using the balanced scorecard, decision-makers can readily see the strengths and gaps in their technology portfolio.

Other Tools

- Cost-Benefit Analysis

Cost-benefit analysis is a systematic quantitative method of assessing the desirability of projects or policies. A standard source for governmental agencies is the federal Office of Management and Budget Circular A-94 which provides an excellent guide to cost benefit analysis.

The following list of typical costs and benefits associated with technology projects may be used. The list of benefits includes both the tangible and intangible benefits of a project.

Costs	Benefits and Opportunities
Non-recurring - hardware - software - network hardware and software - software and data conversion - site preparation - installation - initial loss of productivity Recurring - hardware maintenance - software maintenance - systems maintenance - data administration - software development - communications - facilities (rent) - power and cooling - training	- Higher productivity, increased capacity - Reduced cost of rework, scrap, failure - Reduced cost of technology operations and support costs - Reduced cost of business operations - Reduced errors - Improved image - Reduced material handling costs - Reduced energy costs - Better resource utilization - Better public service - More timely information - Improved organizational planning - Increased organizational flexibility - Availability of new, better or more information - Ability to investigate an increased number of alternatives - Faster decision-making - Promotion of organizational learning and understanding - Better network and system interoperability - Better information connectivity - Improved IT response time to user requests - Expandability of standards-based systems - Greater access to agency information - Legislative and regulatory compliance

Online Excel spreadsheets are available at http://www.dis.wa.gov/portfolio/CBAmodel_0003011.xls and guide the preparation of information and provide the calculations needed for a valid cost-benefit analysis.

Risk Assessment Tools

Risk relates to the probability of success or failure of an action. Portfolio management focuses on five areas of risks to be considered in making IT investment decisions. These include:

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- Strategic Risk — The degree to which the proposed investment will align with the agency's strategic direction and integrate into the existing business.
- Financial Risk — The probability that the agency will be able to secure funding for the entire project life cycle and that the project will deliver on the proposed financial benefits.
- Capability or Project Management Risk — The probability that the agency has the project management capability needed to successfully implement the investment, including a realistic timeframe, sufficient resources, necessary skill levels, and a sound business approach.
- Technology Risk — The degree to which the investment must rely on new, untested, or outdated technologies, including hardware, software, and networks.
- Organizational Impact or Operational Risk — The amount of change needed within the agency to benefit from the new investment, as well as the effort required to continue program operations once the investment is implemented.

Assessing risk for a proposed new investment must be based upon the best information available at the time of the assessment and the judgment of the project planners. During the early stages of investment analysis, sufficient information for a thorough risk assessment may not be available. Therefore, risk assessment should be repeated at major milestones in the investment planning and project development sequence to assure that risks are within reasonable limits and an appropriate risk mitigation plan has been developed.

Many risk assessment methods employ survey instruments that ask affected program, financial, and technology managers, and system users to independently respond to questions designed to measure risk in the five areas. By involving a cross section of affected parties a broad perspective of potential risk is obtained.

Measuring the Success of the Portfolio Management Approach

Benchmarks that measure the successful implementation of portfolio management and establish the positive impacts expected from portfolio management approaches include the following:

- All required elements are included in the portfolio document.
    - Use checklist to measure level of compliance
- Technology investments are demonstrably linked with the Business Strategic Plan
    - Develop questionnaire to specify how projects support objectives and strategies
- The agency assesses, manages, and mitigates risk using proven risk identification and mitigation tools
    - Evaluate by percentage of agency projects utilizing continuous risk management tools, track trend of issues resolved that presented need for corrective action
- The agency uses appropriate project management techniques
    - Develop questionnaire to evaluate usage, specify how Capability
    - Maturity Model level 2 Key Process Areas are satisfied
- The agency executive(s) support the portfolio because they have become more involved in IT policy and investment decisions
    - Measures can be changes in amount of time executives spend with IT managers, changes in dollars committed to improve processes
- The agency investment policy is demonstrably improved as a result of portfolio analysis

- Develop questionnaire, identify what savings have been achieved as a result of the analysis
- The amount of defect densities, schedule slips, and cost overruns have been significantly reduced, as well as the number, size, and frequency of IT project failures, since the portfolio requirements have been implemented
  - Measure change in all areas over time

Appendix B: Assessment Tools

Information Economics

Information economics provides a means to analyze and select technology investments. Information economics examines investments from both the perspectives of the business and technology domains. Examined in this method include the following:

Business domain factors:

- Return on investment (ROI) assesses the costs and benefits of a technology investment on other departments of the agency
- Strategic match (SM) assesses the degree to which the proposed project corresponds to established agency strategic goals. Projects that are an essential part of the corporate strategy receive a higher score than those that are not
- Competitive advantage (CA) assesses the degree to which projects create new business opportunities, facilitate business transformation, and improve agency's reputation or image
- Management information (MI) assesses a project's contribution to management's need for information about core activities that involve the direct realization of the mission versus support activities
- Legislative implementation (LI) assesses the degree to which the project implements legislation, executive orders and regulations
- Organizational risk (OR) assesses the degree to which an information system project depends on new or untested corporate skill, management capabilities and experience. Organizational risk focuses on the extent to which the organization is capable of carrying out the changes required by the project from both user and business perspectives.

Technology domain factors:

- Strategic architecture (SA) assesses the degree to which the proposed project fits into the overall information systems direction and conforms to open-systems standards
- Definitional uncertainty (DU) is a negatively weighted factor that assesses the degree of specificity of the user objectives, as communicated to the information systems project staff. Large and complex projects that entail extensive software development or require many years to deliver have higher risks compared to those projects segmented into modules with near-term objectives.
- Technical uncertainty (TU) assesses a project's dependence on new or untried technologies

Infrastructure risk (IR) assesses the degree to which the entire technology organization is both required to support the project, and prepared to do so. It assesses the environment, such as data administration, communications and distributed systems. A project requiring the support of many functional areas is inherently more complex and difficult to manage.

To evaluate each project, the portfolio planning team assigns a score ranging from zero to five for each domain factor and a corresponding weighting factor of zero to ten. The sum of the value factor scores multiplied by the factor weights constitutes the project value. The sum of the risk factor scores multiplied by the factor weights constitutes the project risks. In the example below, the total value score is 66. (ROI + SM + CA + MI + LI + OR = value). Risk score is 27. (SA + DU + TU + IR = risk)

APPENDIX B: Assessment Tools

	Business Domain						**Technology Domain**				**Project Score**	
Factor	ROI	SM	CA	MI	LI	OR	SA	DU	TU	IR	Value	Risk
Score	4	2	0	4	0	3	4	2	1	3		
Weight	10	5	0	2	1	5	2	2	2	2	66	27

In this hypothetical example, the planning team placed the highest weight, 10, on ROI; and 5, or half the importance of ROI, on SM. They also rated the project high (4) on ROI because the project projected high labor savings. However on strategic match, the team assigned a score of 2 because it did not contribute significantly to the organizational goals. With respect to organizational risk, the team assigned a score of 3 because the operating division did not make adequate plans to integrate the new project into its operations. For each factor, the planning team sets a weight and assigns a score. In this hypothetical example, the total value score is 66 and risk score is 27. Applying this method to all proposed new projects, selection would be based on those receiving the highest overall value and risk scores.

Federal Assessment Model

The federal model weighs costs, benefits and risks for proposed projects and scores them based on five categories: linkage to the business plan, mission effectiveness, organizational impact, risk, and benefit cost ratio. A total of 100 points are possible in the example. A range of points can be assigned depending on the relative value of the project in relationship to the category. In the example below, "link to business plan" is assigned a total of 25 points. Each project is scored from 0-25 depending upon the judgment of the portfolio steering committee (or other group of senior managers) rating proposed new investments or assessing existing ones.

Definitions of the categories and scoring criteria are provided below.

Example of Ranking List of Technology Investments

Project name	Estimated project cost	Link to business plan 25 pts.	Mission effective-ness 20 pts.	Organization Impact 10 pts.	Risk 20 pts.	Benefit-Cost Ratio 25 pts.	Total Score 100 pts.
Proj A	800K	23	18	8	18	20	87
Proj B	620K	23	15	9	16	15	77
Proj C	582K	18	14	7	14	15	68
Proj D	500K	16	16	7	16	10	65
Proj E	1698K	15	18	6	9	15	63

APPENDIX B: Assessment Tools

Scoring Criteria

Each factor is assigned a maximum number of points to be awarded to projects that most closely meet the criteria. Scoring can vary from zero to the maximum allowed for each factor. Some of the examples give specific guidance in the allocation for points.

Linkage to Business Plan *(*25 pts.) The strength of linkage of the investment to the business plan. Scoring is based on documentation of need for the investment.

Business Model (7 pts. max.) Assess the degree of alignment with the business plan/priorities. Example scores:

Zero pts.: project does not support agency products/services or processes

1-4 pts.: project is specifically mentioned in business plan and supports agency products/services or processes

5-7 pts.: project is specifically mentioned in business plan and supports products/services or processes identified in the plan and the project has been coordinated with all organizational entities impacted by the project

Level of Interest (12 pts. max.) Assess the level of interest by agency senior managers, ISB and/or the legislature. Example scores:

Zero pts.: no expressed support for this project

12 pts.: strongly supported by senior managers, agency head, ISB and/or legislature

Business Process Redesign (6 pts. max.) Assess the degree the project enables the organization to do business in a better way. Example scores:

Zero pts.: automates an existing business process with little improvement of the process

6 pts.: enables significant improvement in way business is conducted.

Mission Effectiveness (20 pts.) Measure the impact of the system on both external and internal customers. Measure the project's ability to improve the performance of support or operational programs. Quantify the improvement if possible.

Improve Internal Program Services (10 pts. max.) Assess the expected improvement in service to internal customers. Example scores:

Zero pts.: does not appear to solve a problem defined by an internal customer. Little improvement in important customer service criteria, such as timeliness, quality, or availability is expected.

10 pts.: significant improvement expected in areas such as timeliness, quality or availability, and improvement is quantified. Improvement also addresses an important problem or area of service improvement defined by the customer.

Improved Service to the Public (10 pts. max.) Assess the expected improvement in service to the public. Example scores:

Zero pts.: project appears to provide little or no direct improvement in service to the public. Project makes a small improvement in timeliness, quality, or availability, but no documented need for such improvement is quantified.

10 pts.: project significantly improves service to the public in a mission where need is demonstrated or provides a new type of service to meet changing demands. Improvement is quantified.

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Organizational Impact (10 pts.) Measures the impact on technology personnel.

Personnel and Training (3 pts. max.) Assess the impact of the system on the knowledge, skill, and training of technology personnel. Example scores:

Zero pts.: project likely to require significant new skills to operate and support and project does not appear to mitigate this impact through appropriate training, or other personnel related remedies.

3 pts.: project is an improvement to an existing system and will require relatively little new skill and/or knowledge to operate or support. If project is new, it will introduce valuable new skills and knowledge to the organization and the project will mitigate any adverse impact through appropriate training, or other personnel related remedies.

Scope of Beneficiaries (4 pts. max.) Assess a higher score, the broader the scope of beneficiaries. Example scores:

Zero pts.: limited number of beneficiaries. Project will be used by only one office in the agency. Not a cross-functional system.

4 pts.: project is cross-functional and serves a number of offices, areas, and/or districts. Large number of organizational units will use project. Project will be used by the public.

Quality of Work Life (3 pts. max.) Measures the improvement in quality of work life expected. Example scores:

Zero pts.: little if any positive impact on the quality of work life. Project may increase work required.

3 pts.: positive contribution to the quality of work life. For example, project allows job to be done much faster and job satisfaction is expected to increase.

Risk (20 pts.) Measures the risk resulting from uncertainty, with a project that is totally lacking in risk scored 20. (The more risk carried by the project, the lower the risk score.)

Schedule Risk (4 pts. max.) Evaluate the probability this project can be completed on schedule. Score from 0-4 pts. based on where the project best fits on a scale from very risky to low risk. Example scores:

Zero pts.: very risky. Execution of project is likely to slip; acquisition strategy indicates contract may not be awarded on time to meet schedule or obligate budget year dollars. Project is understaffed and/or inexperienced and project is complex. Accelerated project schedule was imposed rather than developed from project planning.

4 pts.: low risk. Execution of project is not likely to slip; acquisition strategy should result in timely contract award such that funds can be obligated as planned. Adequate project staff is available and has requisite experience to execute the project; project complexity is documented. Project schedule has not been accelerated to meet artificial deadlines.

Cost Sensitivity (4 pts. max.) Evaluate the sensitivity or quality of the cost estimates. Example scores:

Zero pts.: very risky. Project is complex and cost estimates appear to require additional refinement. Software development is required and represents more than 50 percent of the predicted cost.

4 pts.: low risk. Cost estimates are well supported. Little software development required or a software cost estimating technique has been used to produce a reasonably reliable cost estimate.

APPENDIX B: Assessment Tools

Technical Risk (4 pts. max.) Evaluate the risk to complete the system from a technical point of view. Example scores:

Zero pts.: very risky. Hardware and/or software solution does not conform to agency's technical architecture and/or there is little or no experience with this technology in the agency. Hardware, software, or support is not now available commercially and requires development specifically for the agency.

4 pts.: low risk. Planned hardware and software conform to organization's technical architecture and there is successful experience in using this technology in the agency. Hardware, software, and support are commercially available and do not have to be developed for use in the agency.

Organizational Risk (4 pts. max.) Assess the risk that the proposed system will fail due to organizational disruption. Example scores:

Zero points: very risky. Project implementation requires significant organizational change, process redesign, and/or people's jobs to be done differently and the project is not proactively seeking to mitigate this risk.

4 pts.: low risk. System has little impact on the organization or the project is mitigating this risk through training and/or investment in a business process redesign effort that builds commitment to the project.

Risk of Not Doing It (4 pts. max.) Assess the risk to the organization of not proceeding with project. Example scores:

Zero pts.: low risk. Project is incremental improvement to existing system. Impact of this project can be achieved by other means.

4 pts.: very risky. The project is important to provide future opportunities for cost savings and/or improved customer service. If system is not built or delayed for a year or more, the agency will probably fail to meet customer demands in the near future.

Benefit-Cost Ratio (25 pts.) Measures the value of the system in dollar terms. This ratio is developed using standard benefit-cost methods. Alternative methods to benefit-cost analysis include return of investment or net present value calculations. If using benefit-cost analysis, the higher the ratio, the better the score.

• Zero pts.	benefit-cost ratio less than one (costs exceed the benefits)
• 1-5 pts.	low benefit-cost ratio
• 5-20 pts.	medium benefit-cost ratio
• 20-25 pts.	high benefit-cost

Balanced Scorecard

The balanced scorecard is a result-oriented planning and assessment approach that integrates the business, technology and financial planning processes. The balanced scorecard translates business strategies into technology objectives, measures and performance targets from the perspectives of the financial, internal business processes, customer, and learning and growth interests of the agency. Proposed new investments are assessed to determine which have the greatest value for achieving the objectives.

APPENDIX B: Assessment Tools

The balanced scorecard addresses how well technology is:

- Achieving the strategic needs of the agency as a whole
- Satisfying the needs of individual customers with technology products and services
- Delivering quality products and services (effectiveness and efficiency of technology organization)
- Accomplishing ongoing technology innovation and learning

Objectives and corresponding performance measures are developed from four perspectives. By examining the resulting performance data, decision-makers can determine which projects have the greatest value for the agency.

Achieving the Strategic Needs of the Agency as a Whole

In the chart below the performance of the technology portfolio is assessed for its contribution to the agency's strategic business plan.

Objectives	Sample Measures
Linkage to business mission, goals, objectives	• percent mission improvements (costs, time, quality, quantity) attributable to technology solutions and services • percent planned technology benefits projected vs. realized
Portfolio analysis and management	• percent technology portfolio assessed and disposed • percent applications retirement plan achieved • percent reusability of core applications • percent new technology investments vs. total technology spending
Financial and investment performance	• return on investment, net present value • technology budget as percentage of operational budget compared to other agencies or the state as a whole
Technology resource use	• percent shared/consolidated resources • percent cross-unit shared databases and applications • percent hardware/software with interoperability capabilities

Agencies using these approaches believe consistency requires choosing an approach and conforming to it over time.

Satisfying the Needs of Customers

This perspective is designed to assess the impact technology has on customer satisfaction. Some questions that can help to define the objectives include:

- How well are the business and technology domains integrated in the portfolio planning and selection process?
- Are customers satisfied with technology products and services?
- Are technology resources supporting major process improvement efforts?

Objectives	Sample Measures
Customer/technology partnership	• percent projects using integrated project teams • percent joint technology customer/supplier service level agreements
Customer satisfaction	• percent customers satisfied with technology product delivery • percent customers satisfied with technology problem resolution • percent customers satisfied with technology maintenance and support • percent customers satisfied with technology training • percent products launched on time • percent service level agreements met
Business process improvement	• percent technology solutions supporting process improvement projects • percent users covered by training to use new technology solutions • percent new users able to use applications unaided after initial training

Delivering Quality Products

This perspective is designed to assess the ability of the technology organization to deliver quality products and services. Some questions to consider in developing the objectives:

• Are quality products delivered within general industry standards?

• Are quality products being delivered using acceptable methods and tools?

• Is our infrastructure providing reliable support for business needs?

• Is the enterprise architecture being maintained and sustained?

Objectives	Sample Measures
Applications, development and maintenance	• percent decrease in application software failures, problems • average time to resolve critical defects • cycle time for development
Project performance	• percent projects on time, on budget • percent projects meeting functionality requirements • percent projects using standard methodology for systems analysis and design
Infrastructure availability	• percent computer availability • percent communications availability • percent applications availability • on-line system availability
Architecture standards compliance	• number of variations from standards detected by review and audit per year • percent increase in systems using architecture • percent staff trained in relevant standards

Innovation and Learning

This perspective assesses the technology organization's ability to deliver quality results. Some questions to ask in developing the objectives:

• Do we have the right skills and qualified staff to ensure quality results?

• Are we tracking the development of new technology important to our business needs?

• Are we using recognized approaches and methods for building and managing technology projects?

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- Are we providing our staff the proper tools, training, and incentives to perform their tasks?

Objectives	Sample Measures
Workforce competency and development	- percent staff trained in use of new technologies - percent staff professionally certified - percent technology management staff trained in management skills - percent technology budget allocated to training and staff development
Advanced technology use	- percent employees skilled in advanced technology applications - number of dollars available to support advanced technology skill development
Methodology currency	- currency of application development methods in use - percent employees skilled in advanced application development methods - percent projects developed using recognized methods and tools
Employee satisfaction and retention	- percent employee satisfaction with the capability of the existing technical and operating environment to support mission - percent employee turnover by function

Appendix A: Agency Portfolio Overview

A. Purpose
Describe the purpose or value of the portfolio to your executive management in managing IT as a vital agency resource.

B. Convergence of Business Mission and IT Vision
[Links IT to the strategic business plan.]

Describe your agency's mission and its primary business objectives. What business is your agency in? What legislative mandates does your agency have? What is your agency's vision to accomplish its mission? How well do your current IT investments support the business objectives? How important is IT in helping you meet your agency's business goals? What future investments or changes in investment strategy need to be made (if any) in order to strengthen IT support of the agency's mission?

C. IT Plans, Proposals, and Acquisitions Process
The agency should describe the following:
1. The process for reviewing its IT plans, proposals, and acquisitions from a financial and management perspective as part of the budget process.
2. Its acquisition process and how the process provides competition and accountability for purchases and expenditures and adheres to the provisions of the Information Technology Investment Policy.
3. Awareness and adherence to state technical standards for IT, and any exceptions to or deviations from the standards.
4. Awareness and adherence to state complaint and protest procedures as outlined in the IT Investment Policy and Standards documents.

D. Overview of Infrastructure
[High level view of data from Agency Technology Infrastructure and Technology Investment/Project Summaries combined with a summary of staff resources.]

Provide a high level, enterprise-wide view of the current IT investment (hardware, software, networks, and critical applications), and the schematic of IT structures (locations/nodes, physical facilities, networks, etc.). Who is doing the work (number of people, Full-Time Equivalents, etc.) and how (copy of IT organizational chart – centralized vs. decentralized)?

E. Analysis
[Use data from Agency Technology Infrastructure and Technology Investment/Project Summaries.]

Describe as a percentage (and/or represent graphically) current and projected allocation of resources by category or functional unit. Examples: application development, infrastructure development, major systems, maintenance costs, and/or functional distinctions that reflect the

agency's structure and business model. The term "resources" includes labor, contractual services, infrastructure, and overhead, measured in dollars.

F. Challenges and Opportunities

Given the state of technology used by agencies today, what challenges does your agency face? What does your agency need to succeed? Are there opportunities for data or resource sharing that could be explored? How can your agency contribute to achieving the state's IT plan?

G. Solutions: Current and Future IT Investments

[Narrative overview of Technology Investment/Project Summaries and Planned Investments/Projects, tied back to Agency Strategic Business Plan.]

In addressing this subject, consider the following: How can your agency apply IT to achieve its business objectives now and in the future? What does success look like? How will the challenges be addressed? Provide an overview of current "In-development" projects (number and nature). Describe planned projects in terms of: a) meeting business objectives; b) impact on existing investments (changes to applications, networks, etc.); c) consistency with state's IT strategic plan; and d) priority of project or cluster of projects, and justification of this priority.

H. Prioritization Process

Describe your agency's management process for prioritizing IT resources.

Appendix B - Agency Technology Infrastructure

The information described in the following sub-sections **must** be provided to OCIO using the web ePortfolio application.

Section 3
A. Current and Projected IT Budget
B. IT Personnel
C. Personal and Workgroup Computing
D. Geographic Information Systems (GIS) Resources

For access to and assistance in using the web application, contact your agency's OCIO IT Consultant.

A. Current and Projected IT Budget

IT expenses should reflect the entire agency, not just the IT division.

Provide budget details in the following categories (Descriptions of each category are included below):

Reporting Period	Total Agency IT Budget	Hardware Purchase and/or Lease	Software Purchase and/or Lease	H/W Repairs and Maintenance	S/W Enhancements and Maintenance
Indicate Current Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)
Indicate Current Fiscal Year	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Actuals)
Indicate Next Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)

Reporting Period	Telecommunications	Data Processing Services (e.g. CTS services)	If applicable, list & identify other major IT expenses here
Indicate Current Fiscal Year	(Projected)	(Projected)	(Projected)
Indicated Current Fiscal Year	(Actuals)	(Actuals)	(Actuals)
Indicated Next Fiscal Year	(Projected)	(Projected)	(Projected)

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B. IT Personnel

Reporting Period	Total Agency IT FTEs (include WMS positions)	Salaries and Benefits	Personal and Purchased Services	Professional Development of IT Staff
Indicate Current Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)
Indicate Current Fiscal Year	(Actuals)	(Actuals)	(Actuals)	(Actuals)
Next Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)

Category Descriptions

Hardware purchase and/or lease - Purchase or lease payments for machines, devices, and transmission facilities used in information processing, such as servers, routers, personal computers, laptops, terminals, personal digital assistants, printers, and cables. Do not include multi-purpose machines that are predominately used as copiers.

Software purchase and/or lease - Purchase or lease payments for the object code version of computer programs and any related documentation, and/or licenses for use of software products (e.g. Microsoft Select Agreement). Software also means the source code version, where provided by vendor.

Hardware repairs and maintenance - Payments made to external providers for repairs, preventive maintenance, and/or support for hardware.

Software enhancements and maintenance - Payments made to external providers for enhancements, maintenance, and/or support for software.

Telecommunications - Telecommunications services and equipment for voice, including telephones and local service (e.g. Centrex, PBX, voice mail, IVR) and long distance (SCAN, 800 number), wireless (cellular phones, pagers); videoconferencing services and equipment; and telecommunications services and equipment for data (e.g. modems, routers, gateways, transport, Internet).

Data processing/information technology services - Payments made to a third party (e.g. CTS) for services that assist the agency in the electronic capture, collection, storage, manipulation, transmission, retrieval, presentation, and distribution of information in the form of data, text, or image, and/or facilities management of agency equipment.

APPENDIX B: Agency Technology Infrastructure

Other - IT resources or special projects that may not be captured in the categories listed here.

Agency IT FTE - Total number of staff in IT job classifications. Include other staff (e.g. WMS) whose responsibilities are mostly IT-related.

Salaries and benefits - Total salaries and benefits for agency IT FTEs.

Personal and Purchased Services - Personal Services are professional or other technical expertise provided by a consultant to accomplish a specific study, project, task, or other work statement. Purchased Services are provided by a vendor to accomplish routine, continuing, and necessary functions such as data entry, scanning and indexing, programming services and analysis. Do not include hardware and software repairs and maintenance in this category.

Technical and professional development of IT staff - Tuition/fees, travel, per diem, and materials for classes, seminars, conferences, and online courses that contribute to the development of agency IT personnel.

C. Personal and Workgroup Computing
Provide details in the following categories (Descriptions of each category are included below):

Indicate the fiscal year being reported: FY_____

Personal Computers

1. Total Agency FTEs	2. Total number of PCs (exclude servers)	3. Planned number of PCs replacements next fiscal year	4. Agency intended refresh cycle in months	5. PCs donated to schools in last 12 months

Servers

6. Total number of servers	7. Number of servers to be replaced next fiscal year	8. Number of servers planned to be added in next fiscal year	9. Factors driving server acquisition strategy

Network Connectivity	
10. % agency staff with Inside WA (intranet) access	11. Agency primary network operating system
Desktop Office Suite	
12. Primary desktop office product suite?	13. If not XML enabled do you plan to be within 12 months? (yes/no)

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Category Descriptions

Personal Computers
1. What is the total agency FTE count?
2. How many personal computers (PCs) does the agency currently have (excluding servers)?
3. How many of these PCs does the agency plan on replacing in the next fiscal year?
4. If your agency has an established PC refresh cycle, what is the length of that cycle?
5. If your agency donates used PCs to schools, approximately how many were donated in the past 12 months?

Servers
6. How many servers does your agency currently lease or own?
7. How many of these current servers do you plan on replacing during the next fiscal year?
8. How many additional servers do you plan to purchase or lease during the next fiscal year?
9. Which of the following are driving your server acquisition strategy? (pick one or more)
   - Server consolidation
   - Increased application utilization
   - New application deployment
   - Disaster Recovery/Redundancy
   - Other

Networks
10. What percent of agency staff have access to the state intranet portal (Inside WA)?
11. What is your agency's primary network operating system?

Desktop Office Suite
12. What office product suite does your agency use as its primary desktop tool?
13. If desktop office suite is not XML enabled, do you plan on migrating to a version that is within the coming biennium? (yes/no)

D. Geographic Information Systems (GIS) Resources
Provide details in the following categories (Descriptions of each category are included below):

Indicate the fiscal year being reported: FY_____

	1. Number of GIS Staff (FTEs)	Indicate here if included in 3.B.1 "Total Agency IT FTEs"
Central Support		(yes/no)
Program Area Support		(yes/no)

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	2. GIS Software
Vendor Name	
Product Name	
Number of Licenses	

	3. Hardware
Make/Model	
How Many	
Is this equipment included in Section 3C.2 "Total Number of PCs?	(yes/no)
Is this equipment included in Section 3C.6 "Total Number of Servers?	(yes/no)

	4. Major GIS Application(s)
Application Name / Description	

	1. GIS Database(s) Environment
Vendor Name	
Number of applications	

	2. Critical GIS Datasets
Name(s)	

Category Descriptions

Many agencies have a significant investment in GIS technology or rely on the technology to meet mission critical information requirements. If your agency uses GIS in this context, please respond to the following.

1. GIS Staffing (FTEs) - (Please indicate if these FTEs are reflected in Section 3.B.1 "Total Agency IT FTEs")

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- Centralized support - indicate FTEs currently devoted to a corporate or centralized GIS support effort.
- Program area support - indicate FTEs currently attached to program areas for GIS support.

2. Software - identify GIS software packages and number of licenses currently maintained for each.
3. Hardware - identify hardware platforms used to support GIS.
4. Major applications - identify and provide brief description of major/mission critical GIS applications.
5. GIS Database Environment - identify vendor databases (e.g. ARC SDE, Oracle, etc.) used to support mission critical GIS effort and indicate number of GIS application supported by each database.
6. Critical GIS Datasets - identify GIS datasets that are critical to support of agency's mission.

The information described in the following sub-sections is **not** provided to OCIO using the web ePortfolio application.

Section 3:
E. Security and Disaster Recovery/Business Resumption Plans
F. Public Access
G. Application (Systems) Information
H. Database Information

E. Security and Disaster Recovery/Business Resumption Plans
Agency heads are responsible for the oversight of their respective agency's Information Technology (IT) security and disaster recovery and will confirm in writing that the agency is in compliance with the IT Security and Disaster Recovery/Business Resumption Policies and Standards.

- Security - The annual security verification letter due August 31 per the IT Security Policy and Standards must be included in Annual Technology Investment and Project Reviews and submitted to the Technology Services Board. The verification indicates review and acceptance of agency security processes, procedures and practices, as well as updates to them since the last review.
- Disaster Recovery/Business Resumption - The annual disaster recovery/business resumption verification letter due August 31 must be included in Annual Technology Investment and Project Reviews and submitted to the Technology Services Board. The verification indicates review and acceptance of agency disaster recovery/business resumption processes, procedures, and practices as well as updates to them since the last review.

These certification letters may be submitted as one document.

The Security Program and Disaster Recovery/Business Resumption Plans are included in the portfolio by reference. Agencies are not required to submit them to OCIO. Instead, agencies will indicate the physical location of the unique authoritative copies of the plans and indicate

contact information for the steward of those plans (and stipulate that they were developed/ maintained in accordance with published OCIO policy.)

F. Public Access

Describe the agency's "progress toward [providing] electronic access to public information and enabling citizens to have two-way interaction …for obtaining information and services…" (RCW 43.105.270).

G. Application (Systems) Information

This section is useful in providing information about the production applications existing at an agency. For the purpose of the portfolio, an application or system is a group of related automated procedures that support a business objective.

In this section, provide information for each mission critical IT application.

Mission critical applications are high risk application systems. With a mission critical application, even short-term loss of the functionality provided by the application would have significant negative impact on:

- The health or safety of the public or state workers;
- Income maintenance for citizens or government employees;
- Payments to vendors for goods and services; or
- The legal or fiscal integrity of state operations.

In addition to mission critical applications, agencies are encouraged to include information in their portfolios about any application deemed important to the agency or to other stakeholders. Agencies are also encouraged to include supplemental information in their portfolios if useful for managing or reporting.

The following list, while not exhaustive nor mandatory, is encouraged. Agencies may indicate in their portfolios if they do not currently capture an element listed below:

1. Provide name of application.
2. Provide name and title of application owner (e.g. IS Mgr./owner).
3. Provide name and title of customer/business area owner.
4. Indicate type of application (accounting, human resource, program or agency specific such as claims management, tax collection, etc.)
5. Provide a brief description of the application.
6. Provide an estimate of the number of users.
7. Indicate which agency strategies, programs, and business processes are supported by the application.
8. Indicate when the application was originally implemented.
9. If the application has been significantly modified, indicate when.
10. Indicate how many technical staff FTEs are required to maintain and support the application.

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11. Indicate if replacement or major modification of the application is planned. If so, briefly describe the modification and indicate its planned start date.

12. Indicate ownership of application (owned by agency, leased from vendor, owned and operated by vendor)

13. Provide application size and technical characteristics (number of lines of code or function points, primary technology platform, site of platform (agency, OCIO, etc.), operating system, primary language (COBOL, Natural, etc.), and database management system used.

14. List interfaces to other major systems.

It is important for executive management of the agency to understand the current application portfolio in order to manage current activities and plan for the future. Agencies are encouraged to use the application information to assist with the management of IT.

Suggested summary reports to include in the portfolio include:
- Statistics comparing applications from year to year
- Age of applications
- Commercial applications supported
- Number of platforms used by applications
- Operating systems in use
- Languages used by applications
- Database types used
- Applications by customer/business area
- Applications by manager/owner
- Number of FTEs providing maintenance and support
- Estimated cost of maintenance & support

H. Database Information
The purpose of this section is to provide information about existing databases in the agency. Provide the following information for each mission critical database.

Mission critical databases support high risk application systems. With a mission critical database, even short-term loss of the functionality provided by the application and database would have significant negative impact on:
- The health or safety of the public or state workers;
- Income maintenance for citizens or government employees,
- Payments to vendors for goods and services; or
- The legal or fiscal integrity of state operations.

In addition to mission critical databases, agencies are encouraged to include information in their portfolios about any database deemed important to the agency or to other stakeholders. Agencies are also encouraged to include supplemental information in their portfolios if useful for managing or reporting. The following list, while not exhaustive nor mandatory, is encouraged. Agencies may indicate in their portfolios if they do not currently capture an element listed below.

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1. Database commercial name (DB2, ADABAS, Oracle, etc.)
2. List of applications supported
3. High-level description (what type of data does it collect)
4. Location (Agency, OCIO, vendor facility)
5. Ownership of database (e.g. IS Mgr./owner).
6. Size of database in terms of data storage requirements
7. Number of records in the database
8. Frequency with which records are added, modified, and deleted
9. Backup frequency

It is important for executive management of the agency to understand the current database portfolio in order to manage current activities and plan for the future. Agencies are encouraged to use the database information to assist with the management of IT. <u>Suggested</u> summary reports to include in the portfolio include:

- Statistics comparing databases from year to year
- Age of databases
- Number of platforms
- Database by manager/owner
- Number of FTEs providing maintenance and support
- Estimated cost of maintenance & support

Appendix C - Technology Investment/Project Summaries

Provide a summary of each current technology investment.

Title	Description/Purpose	Cost Estimate	FTEs	Schedule	Scope	Business Driver/Strategy Supported	Executive Sponsor	Project Manager
Project, investment, acquisition name (ranked by priority)	A brief, non-technical description of the purpose of the project, application or asset.	Total project costs including development and implementation, by phase, as appropriate.	Include both state and contractors, reported separately.	Start and completion dates, by phase, as appropriate.	Organizational context (work group, agency-wide, statewide). Related functional areas outside the project scope. Risk (low, medium, high). Impact on, or relationship to, statewide infrastructure.	Major business functions or processes supported. Measurable benefits (and/or mandated by statute. Cite RCW).	Name Title Phone E-mail	Name Title Phone E-mail

Appendix D - Planned Investments/Projects

Provide a summary of each planned or proposed technology investment.

Title	Description/ Purpose	Cost Estimate	FTEs	Schedule	Impact on existing investments	Scope	Business Driver/ Strategy Supported	Executive Sponsor	Project Manager
Project, investment, acquisition name (ranked by priority).	A brief, non-technical description of the purpose of the project, application or asset.	Total project costs including development and implementation, by phase as appropriate	Include both state and contractors, reported separately.	Start and completion dates, by phase, as appropriate.	Changes to agency applications, and systems. Impact on, or relationship to, statewide infrastructure.	Organizational context (work group, agency-wide, statewide). Related functional areas outside the project scope. Risk (low, medium, high).	Major business functions or processes supported. The measurable results that will be achieved as a result of completing this project (and/or mandated by statute. Cite RCW). Summary of tangible and intangible benefits for the project.	Name Title Phone E-mail	Name Title Phone E-mail

Appendix E - Annual Technology Investment and Project Reviews

Post Implementation Review

The post implementation review must document practices and procedures that lead to project successes and make recommendations for applying them to similar future projects, and make recommendations for improving the planning, management, and quality control of future, similar investments or projects. It should assess the causes and impacts of any significant reductions in benefits, increases in one-time or continuing costs, problems with project management, or increases in project risk during the course of the project.

Purpose

The major purpose of a Post Implementation Review (PIR) is to determine if the expectations established for an information technology system were met. The PIR essentially documents the comparison between the *actual* results of a system and the *estimates* contained in the acquisition plan or project agreement. It also establishes a baseline for similar acquisitions or projects to assist in shaping more accurate estimates for future information technology planning so that state agencies can benefit from experience. Ideally, the PIR should be conducted by an objective third party such as a private contractor, the State Auditor's Office, internal auditor, or other neutral party.

Scope

The PIR complements previous project documentation. It is not a requirement to provide the level of detail which may be found in the agency's project definitions, decisions packages, conceptual/detailed design, and feasibility study. What is sufficient – and necessary – is the level of detail that will enable meaningful analysis of events, and conclusions to be drawn regarding those events.

The comparisons of interest in a PIR are:

Estimated and actual schedule;

Estimated and actual costs;

Expected and actual functionality;

Projected and actual benefits.

Guidance

It is vital that the PIR include what is perceived to have occurred, and why. However, it is recognized that not all events are explainable in terms of measurable "cause and effect" rationale, yet there may be "lessons learned" in the perception of events even though the "measurement" cannot be ascertained. Also, there can be valid reasons why costs – for example – have increased, such as an expansion of the system's original functional requirements or an increase in technical staffing.

"Knowns" (e.g., acquisition costs, personnel, schedule) are traditionally tracked because the information is available. However, a particular project's "unknowns" (during development) can create implementation risks, and it is these unknowns which can in hindsight offer valuable lessons for project lifecycle planning (e.g., additional functionality added, training, maintenance of new code, unforeseen additional personnel or technical skills needed.)

Appendix E: Annual Technology Investment and Project Reviews

In addition to a value expressing differences such as "cost was X dollars over estimates," it is also useful to express differences in terms of percentages when comparing estimates with actuals since it lends insight into the project's complexity. For example, a greater percent difference – 10% above cost estimates – may be more acceptable for an innovative, higher-risk project than for a project with lower risk since the latter should have less uncertainty in performance information. The following are some points to consider when addressing schedule, costs, functionality, and benefits of the completed project.

a) Schedule: The PIR should describe the original and actual milestones, deliverables, products, or processes effected and the reasons for any significant differences. For example, the trade-off between elapsed time and the desire for rigorous functional requirements could affect critical paths and thus, delivery dates. If a project missed a schedule by two months, this information by itself is not sufficient for the PIR. Since a task that takes longer sometimes results in a better system, schedule aspects of the PIR must make clear whether schedule changes were due to engineering necessity, uncertainty, assumptions during estimation, or other reasons.

b) Costs: Project costs should be categorized to illustrate whether savings or overruns occurred as a result of software design, hardware changes, additional personnel, or other combination of factors. For example, the estimated (original) cost may be lower than the actual cost because the estimate did not include subsequent changes to the specifications. Or a particular technology did not turn out to be as mature as anticipated requiring other hardware or software solutions. What is important is to capture the reasons for differences between the estimated and actual costs, and what the specific cost categories were that contributed to the differences.

c) Functionality: The comparison between expected and actual functionality essentially addresses project technical feasibility in two ways: (a) does it meet specification, and (b) does it work satisfactorily?

Technical specifications are addressed via requirements analysis (during the project life cycle), and may be derived from agency, state, federal, and industry (de facto) standards. The PIR should address whether technical requirements were sufficient to fully realize the required – and desired – functionality of key hardware and software components of the system, and of the system as a whole. The point is to discuss whether the system works as *specified.*

The PIR should also address whether the system works as *intended* by management and/or users. If it does not, this may be due to insufficient requirements, engineering trade-off, cost, complexity of the technical problem, etc. These reasons need to be captured because they indicate that some technical specifications may need to be tightened, or that they need to be used in combination with other factors. Comments from system users are a critical part in establishing whether the system really works as intended: if there is no user support, the positive aspects of meeting specification are diluted.

d) Benefits: The benefits section is not a repetition of the agency's cost/benefit analysis. Since the project was funded through implementation, it is assumed that there were projected benefits. Rather, the PIR documents whether the projected benefits match the actual benefits as a result of the project's implementation. Benefits need not be defined in

terms of cost savings or cost avoidance. They may include "public good" (e.g., enhanced safety), increased agency throughput for workload, enhanced agency capability for additional responsibilities, future potential of the system or agency, consistency with the technical direction of the state, agency, and industry, or lessons learned by the agency in meeting its technical goals.

Sample Post Implementation Review (PIR) Table of Contents

Executive Summary
Background
Project Goals and Objectives
PIR Measurement Criteria
Estimated and Actual Schedule
Estimated and Actual Costs
Expected and Actual Functionality
Projected and Actual Benefit
Lessons Learned
Solicitation Process and Vendor Selection
Contract Negotiation and Management
Technology
Project Management
Communications Plan
Technical Design Specifications
Data Conversion
Testing
Training
Implementation
Production / Operations
Appendix
Final QA Report

Office of the Chief Information Officer (OCIO)	STANDARD NO. 112.10
	Managing Information Technology Portfolios Standards

Purpose: To provide specific direction for carrying out the Managing Information Technology Portfolios policy.	**Effective Date:** October 1, 2011

	See Also: Appendix A Appendix D
	            Appendix B Appendix E
	            Appendix C Appendix F

STANDARDS

1. **The required content of each section below represents the minimum information that must be included in each agency's portfolio. Agency executives may choose to include additional information at their discretion.**

   1.1. Agency Portfolio Overview

   1.1.1. The Agency Portfolio Overview provides a high level description and analysis of the agency IT portfolio. The portfolio overview addresses the following topics: portfolio support of the agency's mission; summary of IT plans, proposals, and acquisition process; an enterprise view of information technology infrastructure; IT challenges and opportunities faced by the agency; high-level view of current and future IT investments; and a description of the agency's prioritization process for selecting IT projects. (see Appendix B for details)

   1.2. Agency Strategic Business Plan

   1.2.1. The Agency Strategic Business Plan is prepared in accordance with the biennial budget instruction issued by the Office of Financial Management (OFM). A copy of, or hyperlink to, that submittal will suffice to provide the data required in this section.

   Note: Agencies with separately elected officials are not required to prepare a Strategic Business Plan.

   - The Agency Strategic Business Plan helps ensure that current and proposed technology investments are aligned with the agency's vision for the future and directly support its business processes.

   - The summary information included in the plan duplicates the information that each agency must currently provide in conjunction with its biennial budget proposals.

   1.3. Agency Technology Infrastructure

   1.3.1. This information defines the current inventory of systems, defines their functionality, describes the architecture and provides the core of IT capacity in the current period.   It also addresses operating environment requirements including planning related to IT security and disaster recovery and business resumption.

      - An agency's technical infrastructure is a platform for future technology investments and a constraint limiting the investments that can be cost-

      effectively pursued. This section of the portfolio provides a convenient reference for executives engaged in planning and managing their agency's use of IT.

- 1.3.2.   In addition to providing the infrastructure information described above, Agency Technology Infrastructure includes an inventory of specific components in the agency's IT infrastructure. The required inventory information is itemized in [Appendix C](#).

- 1.4.   Technology Investment/Project Summaries

  - 1.4.1.   The Technology Investment/Project Summaries are based on documentation routinely required for effective project management. The information is a summary of key information extracted from project documentation, including but not limited to project feasibility study reports, and project quality assurance plans.

  - 1.4.2.   Project managers are responsible for the project itself and for related documentation. Such documentation -- feasibility studies, investment plans, implementation plans, project plans, risk assessment and mitigation plans, quality assurance (QA) plans and project status reports, as appropriate -- are included in agency portfolios by reference. Agencies are not required to submit them with the portfolio. The portfolio model assumes that projects, investments, acquisitions and assets have current documentation available and accessible for use by agency executives, IT personnel, QA professionals, OCIO staff, and those acting on behalf of the ISB. This section also provides the opportunity to document formal project acceptance by key stakeholders.

  - 1.4.3.   The Technology Investment/Project Summaries information is comprised of a summary analysis of each current project and technology investment, including when applicable, information about web-based transactional applications, as required by the IT Security Policy and Standards.

  - 1.4.4.   The required information is itemized in Appendix D.

- 1.5.   Planned Investments/Projects

  - 1.5.1.   Planned Investments/Projects provides an opportunity for agency executives to view IT investment alternatives in context, rather than as isolated projects. The contents of the portfolio are drawn from documents that have already been created by each agency in conjunction with its regular management processes.

  - 1.5.2.   Each investment in IT must be viewed in relation to:

    - Its impact on the business of the agency - as represented by the Agency Strategic Business Plan and included with the portfolio.

    - Its impact on the agency's technical environment - the Agency Technical Infrastructure.

    - Its priority as measured against current investments and other proposed investments, and other proposed investment included in the portfolio.

    - The impact, if any, on the statewide IT infrastructure.

  - 1.5.3.   The Planned Projects/Investments information is comprised of a summary analysis of each project and proposed technology investment, including when applicable, information about web-based transactional applications, as required by the IT Security Policy and Standards.

1.5.4.   The required information is itemized in [Appendix E](#).

1.6.   Annual Technology Investment and Project Reviews

1.6.1.   Annual Technology Investment and Project Reviews consists of a review and update of each ongoing level 2 and 3 investment or project, and a post-implementation review of any level 2 or 3 investment or project completed since the previous annual update. This information can also be considered the historical portion of the portfolio, and is the logical section for submitting copies of the required annual portfolio certification as well as security and disaster recovery certification letter(s) from the agency head.

1.6.2.   The project review of each ongoing level 2 and 3 investment or project is performed as part of the annual update of the IT portfolio. The purpose of the review is to compare expectations for the investment or project as documented in the original investment analysis and project plan, and compare the assessment of project risk against the actual course and results of the project. The review should also reflect the status of the project(s) prior to undertaking the annual portfolio update.

1.6.3.   For projects that have completed since the last annual portfolio update, the agency must include a post-implementation review. The review should assess the causes and impacts of any significant reductions in benefits, increases in one-time or continuing costs, problems with project management, or increases in project risk during the course of the project. It must document practices and procedures that lead to project successes and make recommendations for applying them to similar future projects, and make recommendations for improving the planning, management, and quality control of future, similar investments or projects.

1.6.4.   In addition to documenting the post-implementation reviews in, the results of the project review included with the Technology Investment/Project Summaries information. This must be updated to show: the current status of the project, actual project costs and benefits, and a reevaluation of the risk level of the project. The review should also be maintained with the project records and a copy should be submitted to the OCIO on request or if required to do so in the approved project plan.

1.6.5.   The appropriate information must be updated to show any change in the scope of the investment and/or revised costs and benefits over the expected life of the IT asset resulting from the project.

1.6.6.   The requirements for completing the post implementation reviews are itemized in [Appendix F](#).

DEFINITIONS

Portfolio: Demonstrates the relationships between and among current and planned investments and allows agencies to manage investments in IT as one would manage a portfolio of investments of assets such as real estate or financial instruments (for example, a stock portfolio).

REVISION HISTORY

Date	Action taken
October 2011	Standards reformatted for migration to Office of Chief Information Officer.
April 2002	
May 1999	Standards adopted.

CONTACT INFORMATION

For questions about this policy, please contact your OCIO Information Technology Consultant.

APPROVING AUTHORITY

Chief Information Officer   Date
Chair, Technology Services Board

Office of the Chief Information Officer (OCIO)	POLICY NO. 112
	Managing Information Technology Portfolios
Purpose: Establish the agency Information Technology (IT) portfolio as a primary tool to support IT decision-making.	**Effective Date:** October 1, 2011 **See Also:** Managing Information Technology Portfolios Standards

POLICY STATEMENT

1. **Agencies will document the investment, acquisition, and use of IT via the IT portfolio.**

   1.1. The IT portfolio documentation will comply with statutory and policy requirements and provide sufficient detail for effective IT planning and management.

   1.2. IT documentation will include:

   - Descriptions of the relationships between and among the investments in the portfolio.
   - Plans relating to current and proposed IT investments in support of the agency mission, strategies, and business processes.
   - IT investment analysis and justification documents, including feasibility studies.
   - Risk assessment and risk management plans.
   - Project plans and project management reports.
   - Application documentation and user training materials.
   - Hardware, software, network, and facilities inventories.
   - Budgetary and financial records and reports, including annual agency IT spending.
   - References to the existing Security and Disaster Recovery/Business Resumption plans.

   1.3. The specific content and format of IT documentation may be determined by the agency.

   1.4. Submission of the summary information, as detailed in the Managing IT Portfolios Standards, is required.

   1.5. The agency will make supporting documentation available to the OCIO upon request.

   - Supporting documentation should be maintained by the agency and made available upon request or hyperlinked in the portfolio. The OCIO may require an agency to provide additional information to supplement its portfolio.

2. **Agencies will provide completed agency IT portfolio information to the OCIO in the manner required.**

3. **Agencies will conduct an annual update of the IT portfolio in conjunction with the agency planning and budget processes, and make whatever revisions are necessary for the portfolio to continue to reflect the agency's management and use of IT.**

   - The annual update provides agency executives the opportunity to perform a comprehensive review of IT management and operations, and evaluate the

relationship between IT investments, agency strategies and programs, and the agency budget.

3.1. Agencies will review and update each ongoing level 2 and 3 investment or project, and complete a post-implementation review of any level 2 or 3 investment or project completed since the previous annual update.

3.1.1. Proposed IT applications are initially evaluated in terms of their merits as potential investments of limited public funds and then, if approved, undergo detailed feasibility study, project planning, and risk assessment before the actual development or acquisition of the IT capability. The scope of these analyses must be commensurate with the nature and scope of the proposed investment.

3.1.2. Investments that involve significant risk are subject to OCIO or Technology Services Board approval in addition to agency executive approval.

3.1.3. Projects are continually monitored until they are completed, with summary information about the status of each project included in the project section of the agency's portfolio.

3.2. Agencies will update the portfolio to reflect IT activity within the agency and to support executive decision making within and outside the agency. The following changes should be noted:

- Mission, strategies, programs, business processes, and project changes that affect the agency's use of IT or its plans for IT.
- IT infrastructure changes.
- Significant changes to existing investments/projects.

4. **The head of each agency will provide certification to the Technology Services Board by August 31 of each year, or by the due date of its budget to the Office of Financial Management (whichever is later), that the annual IT Portfolio update has been completed.**

4.1. The letter confirming the annual portfolio update will be included in the agency IT portfolio. It indicates completion of the annual review.

5. **OCIO assessment and approval of agency investment and project proposals will be based primarily on the information included in the agency's IT portfolio and the detailed analyses supporting those major investments and projects.**

- Agencies should exercise due diligence in ensuring that their portfolios remain current between annual IT portfolio updates.

RESPONSIBILITIES

Chief Information Officer (or designee)
- Interpret the policy.
- Ensure policy content is kept current.
- Recommend updates to this policy and related resources as needed.
- Use agency portfolios to assess agency investment and project proposals.

Technology Services Board (TSB)
- Review and approve major policy changes.

Agency Heads
- Responsible for the oversight of their respective agency's management and use of IT resources.
- Ensure annual update of IT portfolio is conducted.
- Submit portfolio update confirmation letter to the TSB by the due date.

DEFINITIONS

Portfolio: Demonstrates the relationships between and among current and planned investments and allows agencies to manage investments in IT as one would manage a portfolio of investments of assets such as real estate or financial instruments (for example, a stock portfolio).

RELATED LAWS AND OTHER RESOURCES

Planning Information Technology Portfolios Policy (111)
Securing Information Technology Assets (141)
Executive Guide to Managing Information Technology Portfolios

REVISION HISTORY

Date	Action taken
October 2011	Policy reformatted for migration to Office of Chief Information Officer.
April 2010	Policy adopted.

CONTACT INFORMATION

For questions about this policy, please contact your OCIO Information Technology Consultant.

APPROVING AUTHORITY

Chief Information Officer   Date
Chair, Technology Services Board