Executive Guide to Managing Information Technology Portfolios

Stewardship of a Vital Public Asset in the 21st Century

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Purpose

An IT portfolio is a compilation of information about an agency's investments in its IT infrastructure. The information is organized to show how these investments support the agency's mission and programs and to demonstrate the relationships among current and planned investments. The portfolio enhances the ability of key decision-makers to assess the probable impact of investments on an agency's programs and infrastructure, as well as on the overall state IT infrastructure. These decision-makers include agency executives, Department of Information Services (DIS) management and staff, ISB members, and members of the Legislature.

Portfolio-based Information Technology (IT) Management and Oversight is intended to guide the stewardship of a vital public asset.

The Information Services Board (ISB) recognizes that IT is central to plans of the Governor and the Legislature to improve the delivery of public services. To realize the benefits they envision, and to protect a significant taxpayer investment, the environment within which IT assets are managed must be both disciplined and flexible.

To that end, a portfolio approach has emerged as a made-in Washington approach to managing the business of IT. This model draws on private-sector expertise, the experience of other jurisdictions, and extensive review and consultation with the public-sector IT community, Governor, and Legislature.

The portfolio approach recognizes the maturing capabilities of the public-sector IT community in Washington State. It also recognizes the continuous advance of technology and the need for agencies to see new initiatives in the context of their total operations, including their IT investments. The portfolio provides a process for coordinating new projects in the context of a business plan and with consideration of the larger IT portfolio.

The approach builds on the *1996 Washington State Strategic Plan* and includes the foundational policies, procedures, and processes necessary to make informed decisions about IT alternatives and achieve a very high rate of project success.

The IT portfolio:

- Discloses links among agency strategies and business plans and IT investments;
- Facilitates analysis of the risks associated with IT investments and helps ensure that appropriate risk mitigation strategies are adopted;
- Provides a baseline for agency and state-level performance reporting; and
- Helps ensure that the state IT infrastructure as a whole is effectively integrated.

Statutory Authority

The Revised Code of Washington (RCW) 43.105 defines specific authorities and responsibilities for the ISB, DIS, and the heads of individual agencies. In addition, the state's IT community has adopted a set of principles to guide planning and management of this vital public resource. The application of these principles varies from agency to agency and project to project; depending on each agency's delegated authority and an assessment of the associated risks.

The principles provide a framework for a graduated scale of oversight measures available to the ISB in meeting its statutory responsibilities to oversee "the acquisition and disposition of equipment, proprietary software and purchased services" (RCW 43.105.041). Such measures are subject to waiver or exemption by the ISB at its discretion.

Portfolio-based IT management is premised on stewardship obligations for the investments made and to be made in performing the work of the public. Stewardship also is expressed by the underlying responsibility for agency IT management and accountability. Nothing in the portfolio approach should be construed as diminishing agency executives' statutory authority and accountability. The ultimate decision to enhance agency resources through investments remains in the agency.

Scope

Guiding Principles

1. Technology Projects will be justified on the basis of a sound business case and as a prudent investment of taxpayer funds.
2. IT activities will be reviewed as part of the agency's overall technology portfolio.
3. Technology Projects meeting the requirements for oversight require active and continuing sponsorship of senior agency executives. Agency executives will consult with DIS executives on any proposals for new IT projects before authorizing feasibility studies.
4. The ISB will review feasibility studies of projects meeting the requirements for oversight prior to making a funding decision.
5. Projects will be short term in nature. Two years will be considered to be the maximum time duration in which to complete the system's development cycle (or stand-alone increment).
6. The business case justification for a project needs to demonstrate: how the project recovers cost; adds measurable value or positive cost benefit to the agency's business functions; or responds to legislative mandates within each development cycle.
7. Technology projects meeting the requirements for oversight will be funded by phase (or increment) with continued funding based on the achievement of phase objectives.

8. The ISB may require a prototype system as proof of concept and/or architecture in the feasibility study.
9. Unless an agency demonstrates a compelling case to do otherwise, technology projects with high risk and severity factors will be developed by the private sector, under fixed price contracts with payments tied to the delivery and acceptance of specific system results.
10. External quality assurance (QA) experts who provide reports to the ISB and agency directors will review IT projects subject to oversight throughout their life cycle.
11. Projects under oversight must measure their progress according to project risk, quality of finished product, customer satisfaction, schedule, and cost.
12. Technology projects under oversight may be subject to periodic peer reviews as directed by the ISB.
13. Annual independent verification audits of projects meeting the requirements of oversight may be conducted under the direction of the ISB.

Agency and ISB Roles

The guiding principles can be structured to distinguish the separate but complementary responsibilities of agencies and the ISB.

Agency Role	ISB Role
Create a sound business plan	
Link IT projects to the business plan	
Through consultation with DIS, agree on feasibility studies	
Report the results of feasibility studies to the ISB	Review and approve feasibility decisions
	Require prototypes to validate concepts/architecture where risk warrants
Submit business case justification to demonstrate how the project recovers costs or adds measurable value or positive cost- benefit to the business functions.	Make project funding recommendations
Define and manage projects to control inherent risks, where possible limiting projects to no more than two years duration	Identify projects requiring oversight
	Identify projects requiring private contractors under performance contracts
Facilitate ISB QA plans	Define when independent QA Experts should oversee and report to the ISB and the agency about high-risk projects. The experts will measure: • project risk • quality of products • customer satisfaction • schedule adherence • cost performance

I. Characteristics of Portfolio-Based IT Management

A. The Portfolio Concept

Portfolio-based IT management refines the oversight process codified in the *Information Technology Act of 1992* which has been used to shepherd a number of complex projects through the development process in recent years. Those experiences, coupled with extensive consultations with key stakeholders, made clear the need to redress shortcomings of the existing process.

The portfolio concept is grounded in the management principle that any significant investment requires careful stewardship to maximize its value and insulate it from threats to its integrity. This principle is well understood with respect to traditional investment categories – real property, commercial paper, and equity investments – all of which are commonly managed in portfolios. These portfolios allow decision-makers to view the range of investments as a whole but also consider discrete investments in context.

The need for an IT portfolio is less well understood with respect to IT investments but no less important. Agency IT investments involve significant taxpayer funds; are often mission-critical; and are increasingly interrelated in a digital, networked environment. IT investments can be leveraged with great effect if the portfolio is sufficiently flexible to adapt to changing business and service needs. Their value, on the other hand, can be undermined by rigid design, unsubstantiated claims about capabilities or performance, and neglect.

Portfolio-based IT management is a coordinated approach to the stewardship of the full range of technology investments. It ensures that new initiatives are seen both in the context of the statewide infrastructure and the respective agency-specific IT portfolios.

The portfolio-based framework changes and strengthens the relationships between and among stakeholders in the IT management structure. In addition to their established role in standards and guidelines development, the ISB and the planning and policy component of DIS are now able to consult with agencies early in the planning process, before significant commitments are made to specific investments. Further, DIS continues to support the ISB by streamlining agency reporting requirements and serving as a clearinghouse for project management expertise, project tools, and other resources. DIS senior executives work directly with agency senior executives in implementing the new streamlined and more responsive process.

Portfolio-based IT management and oversight requires a sound business case to justify the investment of taxpayer funds in any new project. It requires an assessment of the impact of the proposed system on the existing IT infrastructure. It involves the disciplined use of preventative measures to mitigate risk, and it argues for the leveraging of private-sector expertise as needed. IT Portfolios, as defined in the following pages, are reviewed to identify areas of duplication of effort or infrastructure and inconsistencies with the statewide direction. Portfolio-based oversight removes

much of the burden of a paper-intensive reporting process while placing a premium on activities that help ensure success.

In summary, portfolio-based IT management establishes a framework within which:

- Comprehensive information about the context of an agency's overall operations is readily available for decision-making
- The development and deployment of IT is driven by the clearly defined business needs of an agency in serving citizens and fulfilling its legislative mandate
- Agency heads bring executive focus to IT investments and will have new management tools for meeting statutory responsibilities for the stewardship of IT investments in their respective agencies
- A formal, objective process exists to evaluate whether a project should be initiated and by which to determine the most appropriate form of oversight based on a comprehensive risk analysis
- Large projects are broken into smaller, more easily managed projects with each phase adding value on its own without committing funding authorities to subsequent phases
- Agencies base procurements on the desired outcome or business solution, not specific technologies that may be outdated by the time they are deployed

B. Content of Portfolios

Portfolio-based IT management organizes information about all IT resources into the perspective of an investment portfolio. The portfolio is responsive to the needs of a variety of decision-makers, including agency executives, agency technical managers, agency program managers, DIS and Office of Financial Management (OFM) management and staff, members of the ISB, the Governor, and Legislature. Information is structured to facilitate recognition of trends, analysis of problems and opportunities, and the evaluation of alternatives within the context of an agency's overall IT investment.

As with any investment portfolio, an agency IT portfolio is comprised of information in a variety of formats: descriptive overviews, inventory lists, organization charts, spreadsheets, etc. It is the intent of the ISB that the creation and maintenance of portfolios not constitute a significant additional burden to agency management.

Included in the IT portfolio is information about an agency's:

- Mission, strategies, programs, and business processes
- Installed hardware, software, and networks and physical facilities
- Technical management and staff capabilities
- Applications that support agency programs and business processes
- Partnerships or interfaces with other organizations
- Current and planned projects

- Cost and benefits of current and planned investments
- Problems and opportunities involving IT

In conjunction with implementation of the portfolio concept, DIS provides IT investment analysis and portfolio planning tools that will ensure the strongest possible linkage between agency business strategies and business process requirements, and agency IT plans and capabilities.

C. Projects, Project Oversight, and Portfolio Management

The purpose of oversight within the portfolio model is to ensure agency business goals and IT goals are considered in assessing the relative merits of a proposed project, with informed agreement as to the merits and associated risks of the selected approach. A shared commitment helps ensure project success within the bounds defined by statute. The project moves forward with the support of a broad constituency, such that:

- Critical decisions are made collaboratively
- Issues and potential problems are identified and addressed early in the process
- Stakeholders share a commitment to, and accountability for, the successful development and deployment of agency IT projects
- Project requirements are balanced against the objectives of a shared, non-duplicative, statewide IT infrastructure
- When necessary, internal stakeholders advocate on behalf of the project with external stakeholders
- Stakeholders provide advice and expertise as needed or requested, including but not limited to providing a forum for discussing challenges to project success

The decision to embark on a new IT project or system refurbishment is made on the merits of the prospective project's business case, such that it justifies the investment and the acceptance of associated risk in the context of the agency's IT portfolio. Each proposed investment, project, or system refurbishment is considered in terms of its impact on the state's overall ability to conduct business and its specific impact on mission-critical systems. Each proposed investment is accompanied by an assessment of its associated risks and includes a risk mitigation plan.

D. Incremental Commitment

Based on the guiding principles of portfolio-based management, the ISB favors proposals within which:

- The investment lends itself to incremental development and deployment
- The investment (or phase of the investment) can be completed within a two-year period
- Each investment stands alone, delivering value or positive cost-benefit without reliance on subsequent phases

E. Paperwork Reduction

The portfolio approach is intended to eliminate many of the burdensome reporting requirements of the current process in favor of more disciplined planning and other measures that materially contribute to greater project success. In streamlining paper flow, the portfolio will capture only that information required to make sound decisions. To that end, the new structure will reduce and realign documents required in the policy and oversight process.

- Agency *IT strategic planning* and tactical planning now take place in the context of Portfolio. Assuming the legislation passes, submission of separate IT Strategic and Tactical Plans, and Project Agreements, therefore, are no longer required. *Feasibility Study* requirements will focus on the appropriateness of a given technological solution for a given business problem within the context of the agency's overall IT investment. The ISB will continue at its discretion to require prototyping in conjunction with higher risk projects.
- *Decision Package Reviews* are being integrated into the new portfolio assessment process such that the ISB, OFM, and Legislature are able to make decisions based on common information including clearly defined business cases.
- *Acquisition Plans* will be integrated into the portfolio assessment process such that an approved investment plan will include authorization to seek funding for specific projects.
- ISB *Project Reports, Key Decision Point Reviews,* and *Post Implementation Reviews* will be replaced by a new, flexible QA process that tailors reporting requirements to the specifics of each project.
- Agency *Security* and *Disaster Recovery Plans* will continue to be maintained and updated as essential tools for IT investment management.

Data collection for the baseline establishment of portfolios is being combined with data collection for biennial performance reports and will also leverage the extensive data already collected in conjunction with the state's Year 2000 program.

The ISB ultimately envisions an electronic portfolio management process. Portfolio data will be maintained by each individual agency and updated whenever significant changes in an agency's portfolio or investment plans occur. Access to the data will be tailored to meet the needs of specific groups or categories of individuals, such as agency executives, program managers, project managers, DIS oversight staff, and ISB members.

F. Just-In-Time Expertise

The portfolio-based approach to IT management streamlines and strengthens the oversight process. The changes in process require changes in personnel. DIS continues to develop its core team of Senior Technology Management Consultants to work with agencies in the management of their IT resources. Recognizing that the state does not have all the in-house expertise it needs for all projects at all times – particularly

in the area of emerging technologies – the core staff team will be augmented by private-sector expertise as needed.

II. The Business Case

IT is a vital public asset and needs to be managed as such. It is the intent of the ISB that the management and development of the state's information infrastructure be coordinated across agencies and among key stakeholders. It is also the intent of the ISB that clearly articulated business needs drive new investments in IT. Each will be discussed in turn.

A. Coordinated Stewardship

The portfolio is a powerful tool with which agency decision-makers can take a more comprehensive view of agency IT resources and meet their statutory responsibility as stewards of those assets. The portfolio is the primary management tool for maximizing technology-based resources – providing the information needed to make sound business decisions about IT investments, recommend funding for new projects or system refurbishments, and determine the appropriate level of project oversight.

The portfolio focuses agency attention on the relationship between its mission and contributions made by IT toward achieving that mission. The portfolio becomes the common reference point for planning among the agency director, assistant directors for affected business areas, and senior IT managers. Moreover, the portfolio also becomes the common reference point for the statewide planning process involving ISB and DIS executives, as well as, OFM and the Legislature.

When dealing with investments of any size, it is common to consult with advisors and seek the counsel of others. The IT portfolio builds in three sets of vital relationships:

Executive to Executive

Executive consultations are key to portfolio-based IT management. Under the portfolio approach, agency executives consult with DIS Senior Executives and the ISB on managing IT as a mission critical asset. A continuing dialogue among cabinet members about their respective IT portfolios engenders executive support for a flexible and robust statewide infrastructure and engages them in developing related implementation strategies.

Recognizing the importance of strong executive sponsorship to the success of this new, more responsive management model, DIS executives and the ISB are working with agency executives to implement the portfolio model. Once fully implemented, the portfolio provides agency heads with a set of management tools for meeting their statutory "responsibility for the management and use of information, information systems, telecommunications, equipment, software and services" for their respective agencies (RCW 43.105.017).

The intent of the ISB for such consultations is to bring executive focus to the agency's IT portfolio as a whole with particular attention to engaging projects in an informed internal review at the proposal stage.

This stage also includes meetings between the agency director, deputy director, and the assistant director of the affected business area and their counterparts at DIS to bring executive focus from a state-wide level to technology infrastructure and any new projects that require oversight. This step is available for both cabinet and non-cabinet agencies and includes the agency's senior IT manager or director.

Executive consultations take place at two key intervals – the beginning of the planning process as noted and, as discussed below, as the final administrative review prior to the funding decision.

Business and IT Managers

While the executive-to-executive liaison brings sustained focus to agency technology investments and related policy issues, DIS remains committed to working with the public sector IT community through the Customer Advisory Board (CAB) on issues of common concern. Further, through peer reviews, the CAB will have input in assessing agency readiness. DIS is also committed to supporting IT managers who are responsible for the day-to-day management of the portfolio.

The portfolio approach envisions an expanded role for agency business and IT managers in the IT planning process. These individuals may act as proponents of a project, first line reviewers, or both as circumstances warrant.

The DIS role in reviewing the portfolio with agency executives (including business and IT managers as appropriate) is to understand agency priorities and assess potential synergies and fit with established statewide strategies or direction for future development. The portfolio review process is also useful in identifying where needs can be met through strategic initiative assistance from DIS, and where there are inconsistencies, duplication of effort and resources, and areas for potential consolidation within the statewide IT portfolio.

Funding Authorities

Establishment of the business case and an assessment of technological feasibility are necessary precursors to making an IT investment. The funding for an approved IT investment in the public sector may come from one or more sources – direct legislative appropriations, federal grants and contracts, user fees, etc. Funding authorities have a reasonable expectation of being able to understand the merits of a proposed investment before authorizing the expenditures. Here again, the IT portfolio is a common reference point for demonstrating business values and impacts on infrastructure.

B. Balanced and Business-Driven Framework

The business case for IT investments will be established through a balanced assessment of their business value and financial justification. While the nature of some projects may lend itself to greater weighting of one criterion over another, the intent of the ISB is that all project proposals demonstrate some measure of both business value and financial justification.

Business Value

The first priority in demonstrating the business value of an IT investment is in its relationship to:

- Business requirements
- Mission criticality of the system
- Number of business rules impacted
- Complexity of the business process supported
- Refurbishment or creation of IT infrastructure
- Consequence to the agency, state, and citizens of not developing or modifying the system

Business value can also be demonstrated through an assessment of the value added through enhanced agency capacity to support the expansion of service delivery to the public or major changes in mission or operations mandated by the governor or the Legislature. At their discretion, agencies may also include soft benefits in those cases where there is limited expectation of hard-dollar benefits.

Financial Justification

Hard-dollar financial justification for a project will be based on a standard, recognized model of financial analysis, including but not limited to the following:

- *Net Present Value*
  Accounts for current capitalization; puts proposed spending in the context of IT spending as discounted over time.
- *Cost-Benefit Analysis*
  Identifies tangible and intangible benefits and estimated costs for given project alternatives.
- *Return on Investment*
  Provides an assessment and understanding of both the initial and ongoing technology costs and the expected financial benefits of newly enabled processes. (Mhotle, "Return-on-Investment Strategies for AD," Gartner Group Research Note, October 27, 1995).

Taken together, the business case includes (at a minimum) a statement of:

- Purpose or impetus for change
- Business value

  - Benefits and advantages
  - Cost
- Risk
- Fit with the portfolio view (business-centric, infrastructure-enhancing perspective)
- Fit with the agency's vision of the future (service delivery demands vs. IT capabilities)

The criteria for assessing business value and financial justification will be detailed in later sections.

III. The Portfolio Perspective

It is the intent of the ISB that the state's shared IT infrastructure be sufficiently adaptable and robust to respond to changing public expectations, gubernatorial initiatives, legislative priorities, and technological capabilities. The portfolio approach provides this wider perspective.

A. IT Planning Process

The portfolio-based approach to IT management is the natural extension of prior IT policies, representing both the evolution of and replacement for agency IT Strategic Plans. In the view of the ISB, the portfolio model is better able to meet the legislative intent for strategic planning than prior processes (RCW 43.105.170). The anticipated benefits and advantages of a given investment are best understood in the context of the current environment that may reveal otherwise unknown potentials or pitfalls. As discussed above, the reconstituted IT planning process brings together state executives, business and IT managers, and funding authorities to arrive at a shared understanding of the merits of new IT investments.

B. Baseline Assessment

As a benchmark for planning, a baseline assessment of an agency's IT portfolio assesses the level of fit between the agency's business requirements and its existing IT resources. In assessing their portfolios, agencies consider the current IT investment mix with a view to establishing an informed basis for future investments. Upon completion of the initial IT portfolio assessment and future assessments, better-informed decision-makers will be able to make adjustments that reflect changing agency needs. They will consider maturing investments for which they may need to design an exit or transition strategy. They will be better able to plan to take advantage of emerging opportunities that further the business mission of the agency.

Qualitative Assessment

An agency's IT portfolio reflects its current mix of investments and the potential impacts of any new initiatives that require oversight.

The portfolio:

- Provides an inventory of computing platforms, network infrastructure, applications, data, and emerging technologies;
- Profiles the organizational capabilities of the agency through which an investment would be made;
- Signals future directions, opportunities, and pitfalls; and
- Provides information about the internal and external safeguards in place to protect the investment of, in this case, public funds.

Prioritization of Projects

The portfolio reveals the respective life cycles of an agency's IT systems in juxtaposition with each other (e.g., in prioritizing funding requests, priority could be given to any mission-critical system nearing the end of its serviceable life). The portfolio approach also enables agencies to make purposeful choices about their priorities rather than funding projects in isolation from each other. The approach also allows planners to identify critical relationships between and among systems.

The portfolio serves as the basis for sound decision-making that maintains the proper IT balance between changing business needs and the infrastructure that supports the delivery of services.

Attributes of a Good IT Investment

Assessing current resources and planning for new IT investments is guided by the attributes of a good IT investment:

- Functionality – the proposed IT resource functions as expected;
- Interoperability – the proposed IT resource will minimize the additional support required to integrate it as a functioning component into the state IT portfolio;
- Scalability – the ability to add incremental capacity to the IT resource without replacing it;
- Portability – the ability to move an existing resource from one physical or logical position in the IT infrastructure with minimum impact on cost and service;
- Reusability – the ability to make repeated use of the IT resource for additional requirements with a minimum additional cost;
- Availability – IT assets that perform at the required level of service without disruption from software or hardware failure; and
- Serviceability (or maintainability) – ability to modify, repair or replace IT assets within defined tolerance for cost and service.

C. Enterprise-Wide Analysis

It is the intent of the ISB that agency-specific IT portfolios become the foundation for future statewide planning efforts such that existing resources can be fully leveraged and future capability can be developed to anticipate changing needs.

With the statewide information infrastructure reflected in the compilation of agency IT portfolios, a comparable discipline can be brought to interagency planning and coordination as is found within individual agencies.

Information gathered through the portfolio process provides the foundation for future generations of biennial state performance reports and strategic IT plans (RCW 43.105.160). The information will also further the ISB's efforts to "provide direction concerning strategic planning goals and objectives for the state" (RCW 43.105.041) and the DIS mandate to promulgate "policies, standards and guidelines adopted by the Board" (RCW 43.105.052). In sum, it is the intent of the ISB that the portfolio processes evolve into an iterative model of continuous strategic planning and IT initiatives.

IV. Project Management

The portfolio model provides a framework within which an agency can move forward with a new IT initiative as an interdependent part of its overall IT portfolio. Proposed projects are reviewed in this overall context.

A. Early ISB Review

The portfolio framework ensures that new initiatives are seen both in the context of the statewide infrastructure and the respective agency-specific IT portfolio. Under the portfolio approach, the ISB can give early consideration to alternatives in terms of their fit with agency goals, the statewide infrastructure, and the state's planning priorities.

B. Risk-Based Thresholds for Determining Oversight Levels

Through consultations with the public sector IT community, DIS, and ISB have developed a series of risk and severity thresholds that help determine the appropriate level of approval and oversight for any given project.

Risk criteria rank projects on four dimensions – organizational impact, development effort, technology, and organizational capability. Similarly, severity criteria rank projects on the four dimensions of impact on citizens, visibility to the public and Legislature, impact on state operations, and the consequences of doing nothing.

The two categories are brought together in a matrix that establishes three levels of oversight, with high risk/high severity projects receiving the highest level of scrutiny. Combinations of medium and high risk and severity place a project under either a mid-range or low level of oversight. Low risk, low severity projects are not subject to formal oversight.

The risk and severity criteria summarized below are general guidelines for assessing IT projects and are not intended to be exhaustive. Importantly, the provision of these criteria by the ISB shall not be construed as giving business, legal or other advise in isolation from the larger consultative process of IT portfolio management. Moreover,

the criteria shall not be construed as in any way limiting the ISB's discretion in taking whatever actions are necessary to meet its statutory responsibilities.

Project Oversight Matrix
The level of oversight required on a given project will be determined through an assessment of project risk and severity. The Severity and Risk matrix can be found in the IT Portfolio Management Standards; Appendix A - Severity & Risk Level Criteria and Oversight.

ISB Reservation on Mainframe Computers and Wide Area Networks
The ISB recognizes that mainframe computers, enterprise servers or their successors, and wide area networks (WAN) have a unique relationship to the statewide infrastructure and that their acquisition and deployment merit careful coordination. To that end, the ISB reserves the authority to review all mainframe computer, enterprise servers, and WAN initiatives to ensure non-duplication of scarce public resources.

The appropriate level of oversight for such initiatives will be determined through the risk-based thresholds outlined in this section only after an initial ISB review.

C. Feasibility Studies and Prototypes

The baseline assessment is instrumental in identifying needs and opportunities within an agency's IT portfolio. Agencies then consider their alternatives for meeting the need or exploiting an opportunity. This internal planning function, with consultations with DIS as needed, will result in the identification of a preferred approach. As with the prior process, the agency conducts a feasibility study on the preferred approach.

Recognizing that feasibility studies are often conceptual treatments of a proposed IT initiative – and tend to be completed without benefit of the rigors of a real world trial – the ISB at its discretion may require a prototyping process that demonstrates benefit to one or more lines of business within an agency as a precursor to its approval of the funding recommendation.

The purpose here is to demonstrate that the proposed idea works. Prototyping – iterative and often small scale with very short time horizons – provides an incubator for developing new capabilities and expanding agency competencies into new areas of IT. In sharp contrast to conventional waterfall development efforts, the iterative prototyping process allows a relatively rapid approach to testing whether a proposed project will do what it is intended to do, even on a small scale.

D. ISB Determination and Funding Recommendation

The ISB approves a project and makes its funding recommendation based on the project justification within the IT portfolio and the results of the agency's feasibility study and prototype (if required).

If the ISB does **not** approve the plan at this stage, the project stops.

If the ISB approves the plan at this stage, the completed decision package of an approved project is reviewed in the context of the agency IT portfolio through a second series of executive consultations. Senior executives from DIS and OFM, legislative leaders or staff, and the sponsoring agency affirm a common understanding of the proposed project's impact on the agency, including but not limited to the total cost of ownership, and the process to be followed to ensure success.

E. Toward an Iterative Oversight Process

Once a project is engaged, there is a disciplined approach to project management and QA throughout the project life cycle.

Risk management is intended to identify risks as early as possible, adjust the development strategy to mitigate those risks, and develop and implement a risk management process as an integral part of the organization's standard software development life cycle.

General Oversight

The preferred approach to risk management involves the adoption of standardized tools, methodologies, and measures. It is the intent of the ISB to move away from the so-called waterfall development approach to a more iterative approach to development efforts. In that context, the ISB places a premium on a disciplined yet flexible approach to the following measures or attributes:

- Project Management
- Systems Development Life Cycle
- QA
- IV&V Audits
- Post IT Delivery Assessment

Level 3 Oversight

If the ISB approves a plan for a Level 3 project, the agency develops a decision package for the project, predicated on these requirements:

- State agencies do not act as their own general contractors
- In the absence of a compelling case to do otherwise, state agencies contract with qualified private-sector developers, using:
  - Fixed price contracts
  - Payment tied to delivery and acceptance of specific components

The portfolio model includes a graduated scale of measures – the most remedial of which would not apply to well-planned, well-executed projects.

F. Integration of New Projects into Agency IT Portfolios

All of this is done with an eye toward the integration of new projects into the portfolio, anticipating its impacts and having that as the new benchmark.

The introduction of a new application will be best understood in the context of its impact on the IT portfolio. The changes directly related to the new application, and those introduced as matter of regular updates and improvements, can be mapped against the baseline assessment to identify priorities for any future iteration.

Integration necessarily includes the ability of the agency IT organization to operate and maintain any new application or infrastructure once developed and deployed. The planning process must include special provisions for technology transfers such that internal agency competencies are sufficient to manage the day-to-day operations of a new system, particularly when the system has been developed through the use of external resources.

Related Policies, Standards, and Guidelines

IT Portfolio Management Policy
IT Portfolio Management Standards

Definitions

IT Infrastructure

1. The computerized networks, intelligent terminals, and accompanying applications and services people use to access, create, disseminate, and utilize digital information
2. The equipment, software, services, and products used in storing, processing, transmitting, and displaying all forms of information. IT includes data processing, office automation, multimedia, and telecommunications
3. The knowledge and skills of the people who design and operate the technologies which supply business solutions

Mission Critical Systems

1. Automated systems that are essential to the agency to complete required legal obligations or legislatively mandated business functions
2. Any system that by failing could jeopardize the health, safety, or financial well being of the citizens or employees of the State of Washington
3. Systems responsible for the administration of benefits to the public, the exchange of data with other governmental jurisdictions and business taxpayers, or otherwise required for the state to meet its legal obligations to the public and its employees
4. Systems under the state's control that link to mission critical systems and that, if altered, could undermine the state's integrity