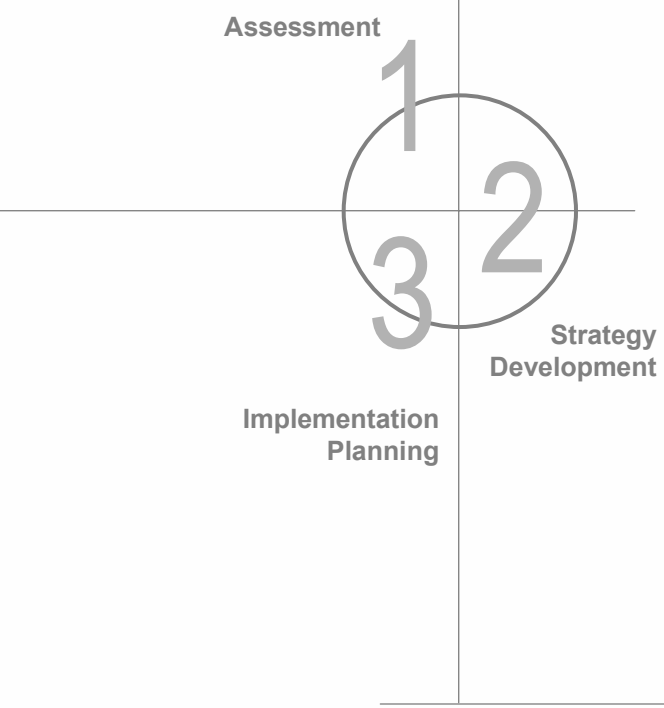
CHAPTER 1



executive summary

State of Alaska
Statewide Information Technology Plan
October 31, 2002

PTI
Pacific Technologies, Inc.

BACKGROUND

In early 2002, the State of Alaska (the State) engaged Pacific Technologies, Inc. to conduct a State-wide information technology (IT) strategic planning effort.

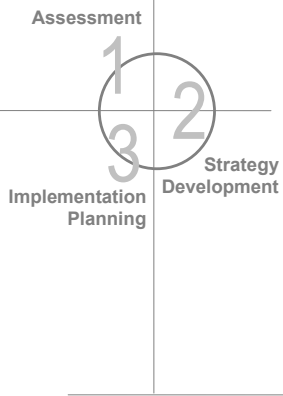
The State undertook this planning effort to understand how it can more efficiently and effectively utilize information technology, and to help determine a vision and direction for future enterprise IT activities.

The plan was managed out of the Information Technology Group (ITG) in the Department of Administration, and was led by a cross-organizational steering committee consisting of executive managers from many of the key departments across the State.

It is critical to understand that this planning effort presents a State-wide IT direction. While the project was administered by ITG, Pacific Technologies' efforts took input and direction from numerous State departments. In total, we directly contacted over 125 individuals while conducting this project.

The remainder of this chapter is organized as follows:

- Methodology
- Strengths
- Strategic IT Issues
- Major Recommendations
- IT Goal State: A Vision for the Future
- Projects, Costs, and Timing
- Conclusion



METHODOLOGY

Pacific Technologies' approach to strategic technology planning examines four critical dimensions of IT:

- **Service Delivery** – the IT organizational structure and staffing approach employed to support applications and infrastructure
- **IT Decision Making** – the processes and participants for making IT investment decisions
- **Applications** – the software used to support State business functions
- **Technical Infrastructure** – the hardware, networks, and system software deployed to support the applications

These four dimensions served as a common thread through the project's three major phases:

❶ **Assessment** – comprehensively evaluated the State's IT position across the four dimensions and identified major strategic IT issues that the plan must resolve

❷ **Strategy Development** – crafted strategic recommendations for addressing the State's principle IT challenges, leveraging the information collected in the assessment

❸ **Implementation Planning** – created a costed workplan describing projects needed to achieve the State's technology objectives, based on the strategies developed in the previous phase

STRENGTHS

Projects of this nature often tend to focus exclusively on areas of concern, disregarding positive elements that currently exist in an organization's IT environment. Pacific Technologies' assessment identified a variety of IT strengths worth noting and building upon, including:

- Skilled and capable IT personnel
- WAN and LAN infrastructures that are reliable and well-supported
- The establishment of an IT decision-making committee that involves the highest levels of State government
- A significant and innovative step toward public/private telecommunications partnership with Alaska Communications Systems (ACS)
- A technically sound data center maintained by ITG

STRATEGIC IT ISSUES

Strategic IT issues identify the most important challenges this planning effort must address. Pacific Technologies' assessment identified the following key issues for the State of Alaska:

- **What are appropriate IT service delivery roles for:**
  - **ITG?**
  - **Departments and divisions?**
  - **ACS?**

The State's operational IT roles and responsibilities, distributed among the departments/divisions and ITG, have not historically been well-defined – and are presently in flux. With the advent of the State's telecommunications partnership with ACS, roles of the current players will require more clarification. As the State moves forward with substantial IT investments, it will be critical to determine appropriate IT service delivery responsibilities for ITG, the departments and divisions, and ACS.

- **What major State-wide applications need investment?**

The State's core enterprise software functionality (e.g., financial management, payroll, etc.) is provided through aging applications with dim prospects for future growth and viable support. Other critical areas (e.g., human resources management) significantly lack automated support. The State must determine the most effective approach for replacing or upgrading these enterprise systems.

- **How can IT leadership and decision making better support future IT needs?**

Alaska already has a key State-wide IT decision-making body in place: the Telecommunications Information Council (TIC). This group is composed of the Governor, the principle head of each executive branch agency, high level decision makers from the University and Legislative branches, and a member of the public. No full-time staff support the TIC in carrying out its duties of overseeing telecommunications activities across the State. The workload associated with this need will only become exacerbated in the face of increasing IT needs, expectations, and attendant issues. Additionally, it is worth noting that 40 out of 50 states have a cabinet-level position to provide leadership for State-wide IT strategic direction. The State does not currently have resource such as this. With a single focal point for State-wide IT leadership, the State could better address opportunities for cross-departmental cooperation and IT innovation on an enterprise-wide basis – reducing the possibility of redundant effort and unnecessary expense.

- **What opportunities exist, if any, for realizing IT economies of scale?**

The State would benefit from improved tools and channels for evaluating IT spending on an enterprise-wide basis. Alaska does not have a standard technology refresh cycle – an area that would likely provide opportunities for realizing economies of scale from a group purchasing perspective. Additionally, increased coordination on GIS efforts would better leverage base mapping efforts and associated data across the enterprise.

- **How can the State most effectively utilize, classify, and develop IT staff in a challenging labor environment?**

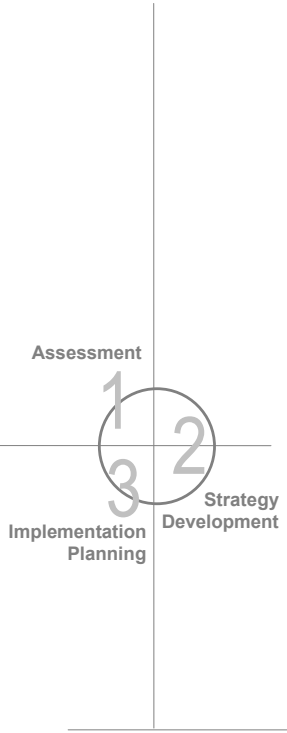
Staff with key IT skills, needed to support the State's aging application environment, will soon be retiring from the workforce in significant numbers. Furthermore, several issues have led to many existing IT staff working outside their defined job classifications. Poor alignment between job classifications and staff responsibilities creates frustration for staff, and inhibits the State's ability to attract candidates possessing the requisite skills for a given position.

- **What can the State do to improve its approach to IT funding?**

The State's existing chargeback mechanisms for centrally-provided services are poorly understood by the departments and are not perceived to be meaningfully aligned with the services provided. Additionally, information technology replacement often occurs in an uncoordinated manner – sometimes as an afterthought – even though these tools (i.e., workstations, servers, mission-critical applications) are essential to key job functions. The State must work to clarify IT charges and develop a feasible approach to technology refresh.

- **How, and to what degree, should departmental IT initiatives align with the overall State-wide plan?**

Lack of coordination across divisions, between departments, and with State-wide efforts, results in lost opportunities and inefficiencies. Alaska needs an agreed-upon approach to identify departments' IT needs and improve attendant communication on a State-wide basis.



MAJOR RECOMMENDATIONS

To address the issues identified in the previous section, the following summarizes Pacific Technologies' primary strategic recommendations:

- **Create Dedicated Staffing for the TIC and Plan the Creation of an Office of the CIO**

The State requires full-time, enterprise IT leadership. The Telecommunications Information Council (TIC) has served as a decision-making body for addressing occasional, specific IT questions. TIC membership, however, does not include any single individual who focuses solely on State-wide IT issues, nor does it possess staff dedicated to supporting its operation. As a result, the State is not reaping the benefits associated with best practices and has no single point of accountability for overall IT direction. In short, Alaska would benefit from a permanent, funded resource for setting and achieving State-wide IT strategy, and coordinating IT efforts across State entities.

We recommend that the State create up to three permanent positions to support the activities of the TIC. These positions could be staffed by current ITG personnel, fully dedicated to TIC support. This approach will help ensure that the TIC is well-positioned to address the increasing complexity of telecommunications issues in a timely manner.

In addition to strengthening the capabilities of the TIC, we recommend planning for the creation of an Office of the Chief Information Officer (CIO). Led by a technology visionary and staffed with five to ten experts[1] in key fields (e.g., GIS, project management, procurement, etc.), this cabinet-level office will be responsible for driving the State's overall IT vision, and recommending and enforcing State-wide policies and procedures. It will also ensure that IT projects are well-coordinated, providing the State with the greatest benefit from its IT expenditures. As previously indicated, the current absence of a CIO does not align with best practices – 80% of the states in this country have a CIO providing State-wide IT leadership[2].

- **Replace the State's major enterprise applications – Finance, Payroll, Human Resources, and Timekeeping**

The State's existing enterprise applications (AKSAS, AKPAY, etc.) are old and in need of replacement. They cover only basic financial and payroll activities, leaving more advanced human

[1] Primarily transferred from ITG and other departments
[2] Appendix D provides a compilation of our research regarding trends for State CIOs.

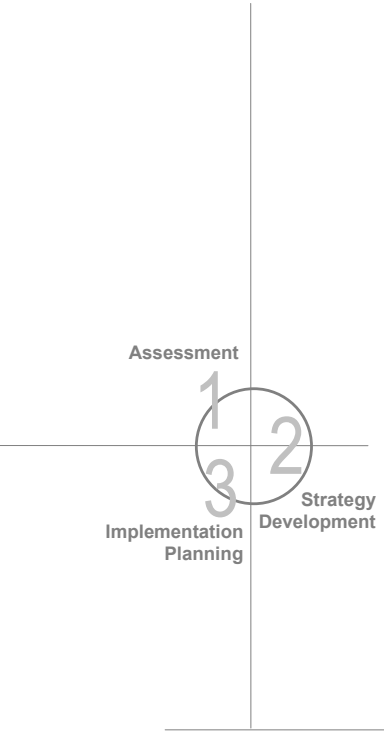
resources and timekeeping functionality to largely manual efforts or local applications. Existing automation cannot support most of the more complex functions common in modern financial management systems (FMS) and human resources information systems (HRIS) software packages. In addition, the State's applications were developed years ago using technologies that require support skills which are becoming increasingly scarce in an already- challenging job market.

This recommendation calls for the State to procure replacement FMS and HRIS applications to meet new functional requirements (e.g., compliance with GASB 34) and to provide improved efficiency to end users. The State should replace its budget system (ABS) in coordination with this procurement as well. While ABS is not outdated, the State will clearly benefit from the enhanced integration available by procuring a new budget module as part of a complete suite of financial management applications.

♦ **Develop departmental strategic IT plans**

Currently, the State lacks a consistent approach to documenting the IT direction for individual departments and aligning technology-related strategies with overall business objectives. In some cases, departments have strategic plans for IT in place. On the whole, however, an opportunity for improved coordination exists within and between departments regarding strategic direction for IT.

This recommendation calls for departments to develop their own IT strategic plans, following direction for content and objectives provided by the CIO and/or the TIC. Topics addressed by each departmental plan would include IT staffing, software, hardware, networking, IT funding and decision making, priority setting for IT investment, and alignment with State-wide direction.



♦ **Implement a technology refresh funding mechanism**

Currently replacement of the State's information technology infrastructure occurs in a reactive manner. While some technologies are managed to ensure that replacement funds exist when the time for replacement comes, most are not. Instead, replacement occurs when funds become available or when the need becomes too acute to ignore. Moreover, while most departments expressed interest in pursuing some mechanism for replacement funding, there is no direction regarding which replacement schedule would be appropriate for the various technologies – or what technologies should be subject to a standard replacement cycle. The result is a non-standard, often outdated equipment base that does not provide a sufficient foundation for current and future State-wide applications.

This recommendation puts in place both the policy and the mechanism for refreshing the State's IT assets on a reasonable schedule. It appears that the Information Services Fund (ISF) could be used to accomplish this goal, although departmental details would need to be worked out – ideally within each departmental strategic IT plan. If the ISF could allow departments to determine their individual refresh timelines, and was independent of the ITG chargeback, it would work most effectively. If it cannot be used in this fashion, the State will need to create a new fund specifically targeted at technology refresh.

♦ **Invest in e-Government**

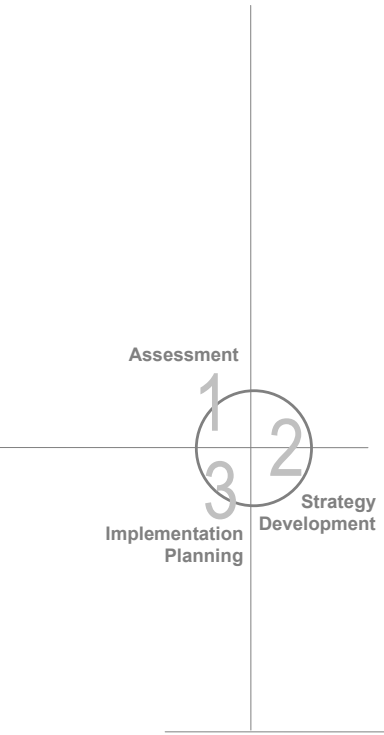
The State has put a significant effort into providing services via the Internet. It has done so with a minimum of coordination or enterprise strategic direction. Accordingly, the State's online presence lacks indicators of common best practices for e-Government. These include unified "branding" and a single "look and feel" across the site, a "customer-centric" website organization that focuses on customer usage patterns and interests in lieu of enterprise organizational structures, and the use of a common development toolset to reduce support and implementation costs.

This recommendation calls for the State to continue its efforts to realize the benefits of e-Government, but in a more coordinated manner. Accordingly, the State must develop standards for its Web presence, as well as the associated policies and procedures. In addition, the State needs to create an overarching Web architecture within which both departmental and State-wide Web development can grow. Finally, this recommendation calls for the State to invest in the tools and the assistance necessary to ultimately put forward a single, unified presence.

♦ **Implement an improved State-wide IT decision-making mechanism**

During the assessment, Pacific Technologies conducted a workshop with the project's steering team that modeled the current decision-making process for IT investments. That effort identified several areas for improvement within the current process. Notably, while the TIC is comprised of high-level decision makers, these individuals have little time to devote to regular TIC meetings, impacting TIC effectiveness. In addition, without a CIO, the State lacks a single point of awareness and accountability for State-wide IT issues.

In the strategy development phase, Pacific Technologies conducted a workshop with steering members to design a new process for making IT investment decisions. This new process, along with the roles and responsibilities for each of its participants, is presented in Chapter 3 of this document. The process incorporates the TIC (along with recommended staff), and is potentially chaired by the CIO. The presence of the CIO should facilitate an enterprise view of IT, and the recommended support staff will improve the TIC's ability to fulfill its charter.



IT GOAL STATE: A VISION FOR THE FUTURE

In a strategic planning workshop facilitated by Pacific Technologies, steering members developed an IT Goal State for the State of Alaska. This goal state represents a future vision for using IT across the enterprise. We employed the SMART criteria to guide the workshop, ensuring that the target is **S**pecific, **M**easurable, **A**greed-upon, **R**ealistic and **T**imely. Steering members developed the following enterprise goal state for IT:

- **Regarding the Web:**
  - **100% of all public information is available over the Web**
  - **90% of high priority business transactions are available via the Web**
  - **The State's website:**
    - **Has a common look and feel**
    - **Offers alternative navigational paths**
    - **Incorporates an effective search engine**
    - **Utilizes a common authentication schema**
- **The State effectively attracts and retains qualified staff**
- **Customer satisfaction with IT service remains high**
- **The State's application portfolio, infrastructure, and staffing is:**
  - **Funded at a level that keeps it current**
  - **Optimized to deliver maximum efficiency and value**
- **Where appropriate, applications are shared at the enterprise level**
- **Effective governance processes are in place, resulting in IT decisions that:**
  - **Are well informed**
  - **Occur in a timely fashion**
  - **Are made with involvement at appropriate levels**
- **The State examines opportunities for partnership, both internally and externally**

The projects defined in this report position the State to realize this vision.

PROJECTS, COSTS AND TIMING

The third phase of the planning effort focused on defining a specific set of projects, cost estimates, and timelines aimed at moving Alaska toward its defined IT goal state. The following table presents a summary description of each project, along with attendant key benefits.

ID	Project Name/Description	Benefits
A.	**Provide Dedicated Staffing to the TIC –** provides up to three permanent staff to support the IT governance duties of the TIC	♦ Helps ensure that the State's primary IT governance body is positioned to address complex IT initiatives on a timely basis
B.	**Plan the Creation of an Office of the CIO –** plans for the creation of a cabinet-level office of the CIO (5 to 10 FTEs) to enhance and focus enterprise-level IT leadership; also charters GIS and e-Government coordinator positions to work within this office	♦ Addresses the opportunity for improved State-wide IT leadership and coordination ♦ Aligns Alaska with best practices ♦ Establishes State-wide GIS standards, and facilitates coordination of efforts ♦ Improves IT cost and labor efficiency
C.	**Revise ITG Chargeback Model –** clarifies the chargeback model to improve communication and increase understanding of services offered; and provide direct linkages between ITG services and charges	♦ Improves customer understanding and acceptance of ITG offerings; accommodates new ACS services ♦ Promotes accountability
D.	**Develop Department IT Strategic Plans –** documents and improves alignment of departmental IT priorities and IT investments with business objectives, working within the overall framework of (and providing input to) the State-wide IT plan	♦ Ensures a consistent approach to documenting IT needs ♦ Fosters more informed IT decision making ♦ Improves efficiency and effectiveness of IT investments at departments, and State-wide ♦ Aligns departmental IT investments with department business needs
E.	**Develop State-wide IT Refresh Funding Approach –** initiates and funds a proactive State-wide refresh of technology infrastructure at predictable intervals, including desktop PCs, servers, and personal productivity software	♦ Offers potential for economies of scale ♦ Reduces support costs ♦ Ensures up-to-date IT tools for users ♦ Makes IT refresh a predictable business expense

F.	**Develop an Enterprise e-Government Approach** – implements the framework and infrastructure to facilitate Alaska's defined goal state for the Web (including more services on the Web, increased availability of documents, greater efficiency in doing business with the State, and improved navigation and a common "look and feel" for the website across all departments)	♦ Improves customer service and availability of key services ♦ Establishes an enterprise architecture for e-Government at the State ♦ Reduces costs associated with providing some services ♦ Promotes a positive State image ♦ Creates a "customer-centric" website that is easier to use and navigate
G.	**Implement New State-wide IT Decision-Making Model – puts into place the new decision-making process modeled by the steering committee during the planning process**	♦ Improves decision making around technology investments ♦ Enhances communication and participation surrounding the IT decision-making process ♦ Ensures IT investments are aligned with business needs
H.	**Select New Financial Management/HR Software –** defines requirements and develops RFP, conducts evaluation, and selects a software solution for the State's payroll, financial management, asset management, timekeeping, and human resources management functionality	♦ Positions Alaska to invest in State-wide timekeeping, payroll, and human resources applications to address under-automated areas, and replace aging applications that lack functionality ♦ Creates consensus on requirements ♦ Clarifies understanding of costs ♦ Improves ability to generate meaningful management information in a timely fashion ♦ Improves productivity and efficiency in financial management efforts
I.	**Plan Integrated Email and Calendaring Approach–** updates the State's standard email and calendaring system to offer users an integrated, more functional package	♦ Positions the State to improve email/calendaring functionality ♦ Fosters enhanced communication statewide
J.	**Develop State-wide IT Security Plan –** completes the effort initiated by the State and includes a review by a third-party IT security specialist	♦ Protects the State's valuable information technology assets ♦ Addresses heightened concerns regarding homeland security
K.	**Develop State-wide IT Disaster Recovery Plan –** prepares a plan for IT disaster recovery at the State-wide level, including responsible parties, costs, and overall approach	♦ Prepares the State to rapidly redeploy information technology resources following a catastrophic event ♦ Addresses heightened concerns regarding homeland security
L.	**Conduct Mainframe Impact Analysis –** analyzes the long-term impact on the mainframe and its customers replacing the State's core software, and makes associated recommendations; this effort also drafts a transition plan for staff impacted by this transition	♦ Clarifies the options and ramifications of the various scenarios involving the State's mainframe resources ♦ Articulates an agreed-upon direction for the State's core computing platform

M.	**Conduct IT Job Classification Study –** conducts a classification study to align job responsibilities with job descriptions and review IT compensation strategies at the State, including defining major issues, developing new job classifications (if needed), and reclassification of staff (if needed); also includes a staff transition plan to implement the study's recommendations	♦ Ensures staff are appropriately classed and compensated ♦ Improves IT recruiting process ♦ Creates and documents a proactive approach to changes in the IT staff environment at the State

The table below summarizes one-time cost estimates for each project.

One-Time Cost Estimates

Projects		One-Time Costs Lower	Upper
A	Provide Dedicated Staffing to the TIC	$ -	$ -
B	Plan the Creation of an Office of the CIO	$ -	$ 100
C	Revise ITG Chargeback Model	$ -	$ 90
D	Develop Department IT Strategic Plans	$ 500	$ 2,700
E	Develop State-wide IT Refresh Funding Approach	$ -	$ 60
F	Develop an Enterprise e-Government Approach	$ 38	$ 500
G	Implement New State-wide IT Decision-Making Model	$ -	$ 36
H	Select New Financial Management/HR Software	$ 300	$ 750
I	Plan Integrated Email and Calendaring Approach	$ -	$ 100
J	Develop State-wide IT Security Plan	$ 12	$ 51
K	Develop State-wide IT Disaster Recovery Plan	$ 120	$ 240
L	Conduct Mainframe Impact Analysis	$ 161	$ 266
M	Conduct IT Job Classification Study	$ 161	$ 281
Total - All Projects		**$ 1,292**	**$ 5,175**

Note: Costs are in thousands

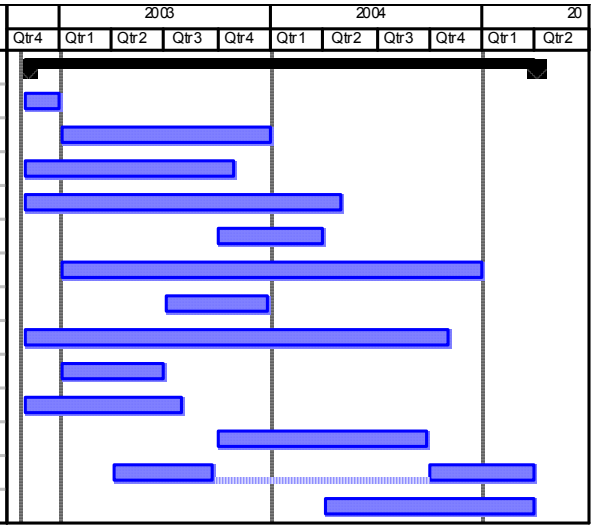
Please note the following:

- Project H – Select New Financial Management/HR Software does not include software purchase or implementation costs — a significant expenditure
- Cost estimates include funding that may already be budgeted
- Appendix A provides more detailed descriptions and cost assumptions for each project

A Gantt chart depicting recommended project timelines follows.

Recommended Project Schedule

Task Name	Start	Finish
Projects	**Fri 11/1/02**	**Fri 4/1/05**
A. Provide Dedicated Staffing to the TIC	Fri 11/1/02	Fri 1/3/03
B. Plan the Creation of an Office of the CIO	Wed 1/1/03	Wed 12/31/03
C. Revise ITG Chargeback Model	Fri 11/1/02	Fri 10/31/03
D. Develop Department Strategic IT Plans	Fri 11/1/02	Mon 5/3/04
E. Develop Statewide Technology Refresh Funding Approach	Wed 10/1/03	Thu 4/1/04
F. Develop an Enterprise E-Government Approach	Wed 1/1/03	Fri 12/31/04
G. Implement New State-wide IT Decision-Making Model	Tue 7/1/03	Mon 12/29/03
H. Select New Financial Management/HR Software	Fri 11/1/02	Tue 11/2/04
I. Plan Integrated Email and Calendaring Approach	Wed 1/1/03	Tue 7/1/03
J. Develop Statewide IT Security Plan	Fri 11/1/02	Fri 8/1/03
K. Develop Statewide IT Disaster Recovery Plan	Wed 10/1/03	Thu 9/30/04
L. Conduct Mainframe Impact Analysis	Tue 4/1/03	Thu 3/31/05
M. Conduct IT Job Classification Study	Thu 4/1/04	Fri 4/1/05



Note: The majority of these projects lay the strategic groundwork for additional IT effort and investment. To provide the State a more comprehensive picture of downstream investment requirements, the table on the following page highlights the major long-term cost estimates associated with implementing these initial, foundation-building projects.

The table below articulates the major ***long-term cost*** estimates and labor impacts associated with implementing the projects in this plan. For example, Project I – Plan Integrated Email and Calendaring Approach, actually represents a two-phase effort. The first phase focuses on developing an agreed-upon path for improving integration across the State's email and calendaring systems. One-time costs presented on page 1-8 provide an estimate for that effort. The following table presents estimates for *implementing* that approach (e.g., one-time costs of $1,876,000 to $8,737,000 and annual software maintenance costs of $181,000 – along with associated one-time and annual labor estimates). The reader should bear in mind that these are preliminary estimates, provided purely for planning purposes, and will require revision as implementation of the plan progresses.

Estimated Long-Term Project Costs and Labor Impacts

Projects		Implementation Costs *Lower*	Implementation Costs *Upper*	Annual Costs	Duration	Implementation Staff Hours	Recurring Staff Hours
A	Ongoing Operation of the TIC*	$ -	$ -	$ 195	duration	0	6,000
B	Ongoing Operation of the Office of the CIO	$ -	$ 46	$ 1,500	ongoing	0	12,600
C	Revise ITG Chargeback Model	$ -	$ -	$ -	none	0	0
D	Ongoing Development of Department IT Strategic Plans**	$ -	$ -	TBD	5 years	TBD	TBD
E	Implement State-wide IT Refresh Funding***	$ -	$ 20,000	$ 10,000	ongoing	150	35,000
F	Implement an Enterprise E-Government Approach	$ 2,300	$ 4,500	$ 250	2 years	100,000	15,000
G	Implement New State-wide IT Decision-Making Model	$ -	$ -	$ -	none	0	0
H	Implement New Financial Management/HR Software	$ 40,000	$ 90,000	$ 10,000	3 years	300,000	40,000
I	Implement Integrated Email and Calendaring Approach	$ 1,876	$ 8,737	$ 181	ongoing	12,387	TBD
J	Implement State-wide IT Security Plan	$ 110	$ 225	$ 90	ongoing	500	500
K	Implement State-wide IT Disaster Recovery Plan	$ 325	$ 500	$ 500	ongoing	520	0
L	Implement Mainframe Impact Analysis Recommendations	$ 30,000	$ 40,000	$ 3,000	5 years	156,000	TBD
M	Implement IT Job Classification Study Recommendations	$ -	$ 2,144	$ 2,144	none	0	0
Total - All Projects		**$ 74,611**	**$ 166,153**	**$ 27,666**		**569,557**	**103,100**

Note: Costs (not hours) are in thousands

*In the event positions to support the TIC cannot be found internally, this table presents incremental annual costs

**Dependent on specific department needs

***May require significant upfront investment to fund departments that have not recently made these upgrades

CONCLUSION

Though comprehensive, this planning effort represents the "easy part" – the *real* work lies ahead: translating recommendations into *results*. Implementing the State-wide Information Technology Plan as outlined in this document is crucial to realizing the following benefits for the State of Alaska:

- **Strengthened IT leadership and coordination, across the State and within the departments**
- **Economies of scale and reduced support costs for State desktops**
- **A solid foundation for future e-Government initiatives**
- **Improved IT decision making that aligns department and State IT investments with key business priorities**
- **Upgraded software applications that improve staff efficiency and service to the State's customers**
- **A more secure and recoverable technical infrastructure**
- **A proactive approach to IT staffing**