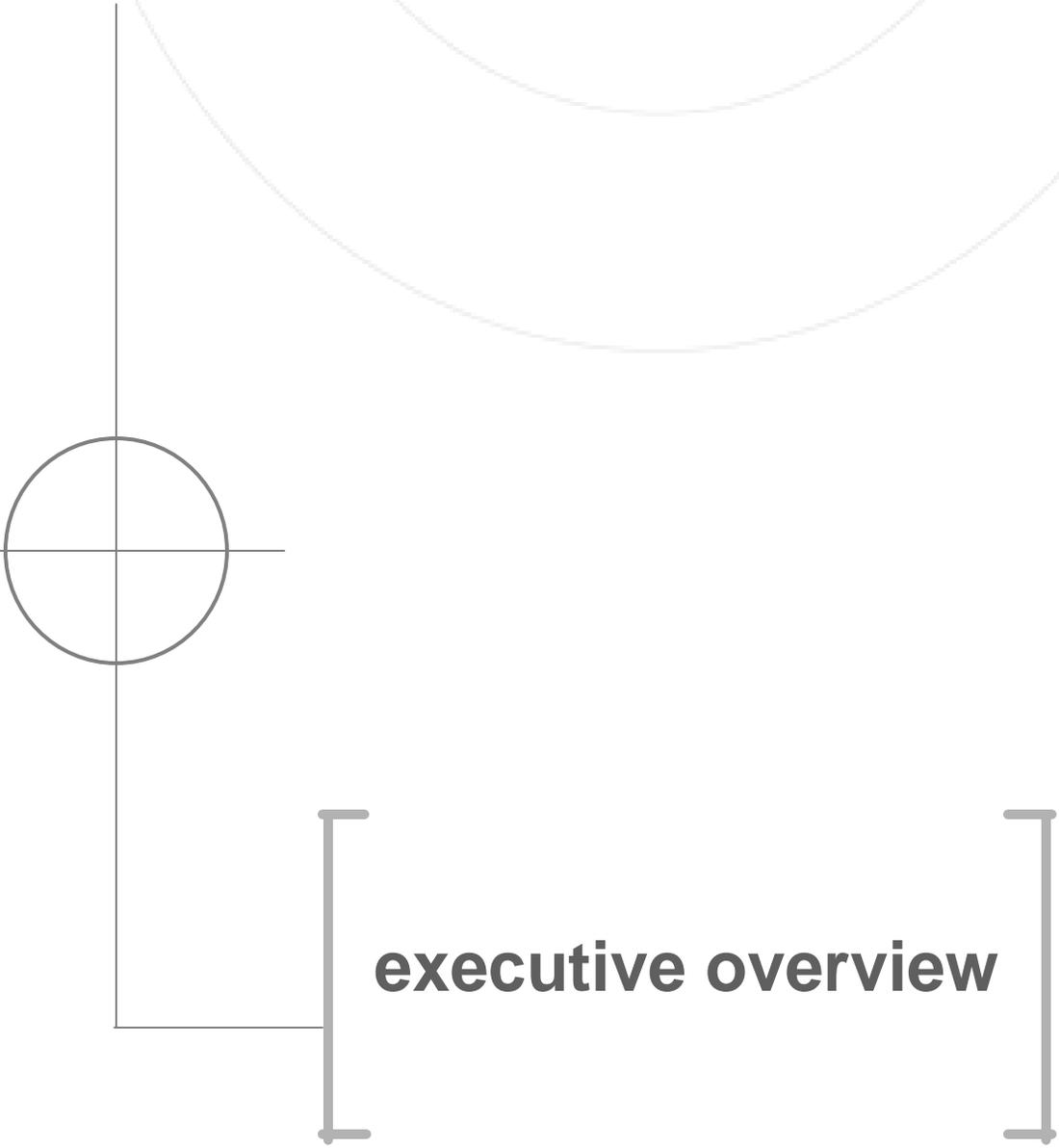


CHAPTER

1



executive overview

State of North Dakota
IT Organization & Management Study
February 2, 2004

**IT Organization
and Management
Study**

Chapter 1:
Executive
Overview

A. INTRODUCTION

In August of 2003, the Interim Information Technology Committee of the North Dakota Legislative Council engaged Pacific Technologies, Inc. (PTI) to conduct a state-wide information technology (IT) organization and management study.

The scope of work, as provided for in Section 13 of 2003 House Bill 1505, focused on:¹

- ◆ Analyzing the labor effort devoted to IT at the State of North Dakota (the State)
- ◆ Reviewing the State's approach to managing that labor effort
- ◆ Evaluating IT-related decision processes
- ◆ Reviewing state-wide IT initiatives
- ◆ Comparing North Dakota's IT service delivery approach and spending levels to other states
- ◆ Making recommendations intended to reduce long-term costs, improve service delivery, enhance visibility into and understanding of the State's IT labor effort, and position the State to effectively manage IT over the long term

Pacific Technologies supported the effort through interviewing representatives from over 35 state agencies, surveying other states, analyzing detailed information about state-wide IT labor effort and management structures, and reviewing relevant budget, planning, and operational documentation. We also provided monthly updates to the Interim Information Technology Committee and to the State Information Technology Advisory Committee (SITAC).

Several long-term IT goals for the State proved central to the study and should be kept in mind in when reviewing this report. The following strategic imperatives – rather than a singular focus on cost savings – drove our recommendations:

- ◆ *Provide basic IT services as a state-wide "utility" – highly available, consistent, and configured to maximize economies of scale*
- ◆ *Performance manage IT at both the agency and enterprise levels*
- ◆ *Adopt best practices, where they make sense*
- ◆ *Favor long-term improvement over short-term considerations*

Within this overall context, the table on the next page distills the major findings, recommendations, and benefits presented in this study.

¹ Note that the scope did not include reviewing the State's application software or technical infrastructure. Our analysis encompassed the Judicial, Legislative, and Executive branches. We did not receive data from the university system. Correspondingly, the university system was excluded from our analysis. Unless specifically noted otherwise, all results assume that staff transitions related to House Bill 1505's consolidation of server administration functions have already occurred.

IT Organization and Management Study Summary

IT Organization and Management Study

Chapter 1:
 Executive
 Overview

Key Findings	Major Recommendations	Primary Benefits
1. The State has a highly-fragmented approach to help desk services and workstation support	Consolidate all labor associated with installing, maintaining, and supporting personal computers within the Information Technology Department (ITD)	<ul style="list-style-type: none"> ◆ Positions the State’s computing environment for the long term ◆ Allows agencies to focus on core business needs – rather than technical infrastructure ◆ Leads to long-term labor cost savings
2. Inconsistent standards and policies surround workstation platforms, configurations, and replacement	Move to a highly standardized workstation environment on a state-wide basis – with ITD managing the replacement cycles	<ul style="list-style-type: none"> ◆ Improves State purchasing power and license management ◆ Enhances information sharing and staff productivity via common, current PC tools ◆ Promotes basic IT service provision as a “utility” across the State
3. The State can achieve additional savings and improve alignment with long-term goals (post-HB 1505) through continued server consolidation efforts	Consolidate all servers into ITD – reducing over 150 servers from the State’s inventory and making corresponding reductions to agency and ITD server administration labor	<ul style="list-style-type: none"> ◆ Allows agencies to focus on core business needs – rather than technical infrastructure ◆ Promotes basic IT service provision as a “utility” across the State ◆ Leads to long-term labor and hardware cost savings
4. The State lacks consistent methods, tools, and performance measures to assess and prioritize requests for major IT investments	Build on existing IT governance processes – including mechanisms for cost containment and meaningful state-wide IT management reporting	<ul style="list-style-type: none"> ◆ Better-informed IT decision making ◆ More equitable, business-based, and consistent evaluation of IT initiatives ◆ Best opportunity to manage application portfolio costs

While these recommendations centralize delivery of IT infrastructure-related services, they retain a federated IT service model at the State. In particular, ***this approach leaves the sourcing of business application service labor under the agencies’ control.***

The remainder of this chapter highlights associated results of the work, as follows:

- B. Strengths
- C. Current North Dakota Position
- D. Key Recommendations
- E. Transition and Implementation Plans
- F. Conclusion

B. STRENGTHS

Oftentimes, engagements of this nature focus exclusively on areas for improvement. It is worth noting that our work identified a variety of positive attributes surrounding IT at the State. This section briefly describes several key IT strengths that surfaced from our analysis.

THE STATE THOROUGHLY UNDERSTANDS ITS IT LABOR COSTS AND LABOR DISTRIBUTION

Largely as a result of this study, and building upon the work started by HB 1505, *North Dakota has an in-depth understanding of its IT labor expenditures*. This understanding provides a basis for making informed choices about changes to IT service delivery at the State. It can also serve as a starting point for establishing labor-based performance measures for information technology services. North Dakota is significantly ahead of most other states in this regard. Our external survey did not find any other states that had a complete model of their IT labor expenditures.

NORTH DAKOTA HAS A STRONG COMMITMENT TO INVESTING IN IT SUPPORT

Pacific Technologies analysis found that, on a state-wide basis, *North Dakota adequately staffs virtually all major IT functions*. This willingness to invest has reaped benefits for the State, including high levels of customer satisfaction and an ability to devote significant labor effort to the State's application portfolio.

THE STATE IS AHEAD OF MOST STATES ON A NUMBER OF ENTERPRISE IT INITIATIVES

North Dakota's *extensive wide area network and functional state-wide GIS* bring clear benefits to the State – and place North Dakota ahead of the curve in these areas on a national basis. The ConnectND project, once complete, will also be unique in the breadth of its scope. Our survey did not reveal any other states using a single, integrated, finance and human resources system across all three branches of government and the State University system.

NORTH DAKOTA HAS MADE POSITIVE, INITIAL STRIDES TOWARD EFFECTIVE IT GOVERNANCE

The recently-established State Information Technology Advisory Committee serves as an advisory body to the Chief Information Officer (CIO). This group includes selected agency heads from across the State as well as private sector and legislative representation. In addition, North Dakota has an enterprise architecture project under way. This effort will result in the definition of technical standards across the State. Both of these initiatives reflect *best practices in state IT governance*.

C. CURRENT NORTH DAKOTA POSITION

This section presents our findings regarding IT organization, service delivery, and governance at the State.

1. IT ORGANIZATION AND SERVICE DELIVERY

Pacific Technologies analyzed all IT labor costs at the State (including full-time, part-time, "shadow," and contract effort) and reviewed the distribution of that labor across agencies. We also compared North Dakota's IT operating cost and labor distribution to other states. This section summarizes our findings.

To conduct the labor analysis, we gathered data on IT labor related to over 25 IT activities (e.g., workstation administration, database administration, etc.) based on a staffing model provided by Pacific Technologies and completed by agency personnel.² Appendices to this report present the

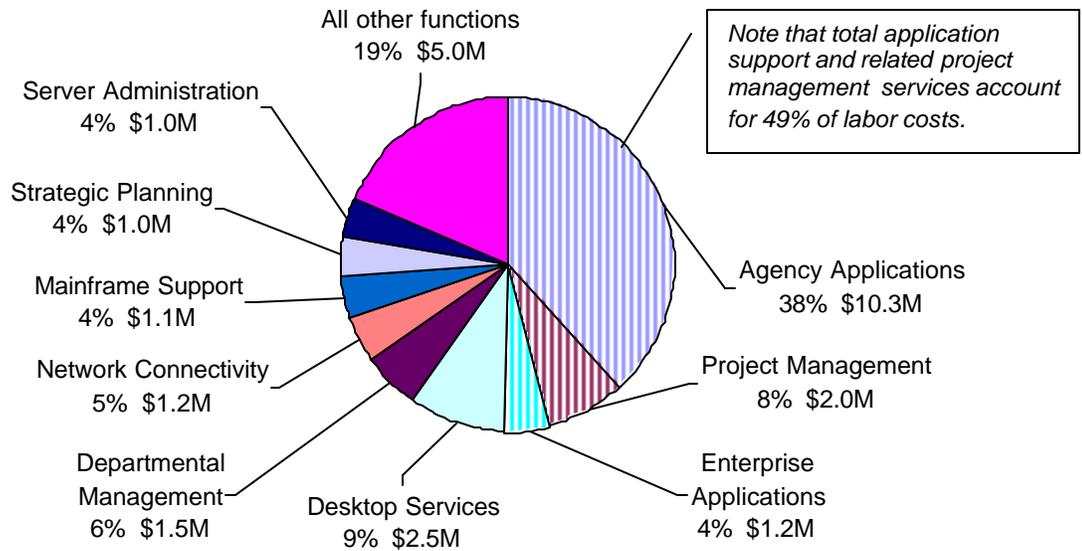
² Of the 52 agencies contacted, we received 40 responses. The non-responding agencies were small, no more than 350 FTE in total, so their absence from the analysis does not have a material impact on the results.

detailed labor data. *Please note that this analysis relies on self-reported agency information – and is best viewed as an approximation. The associated figures are likely to change as implementation of our recommendations progresses.*

NORTH DAKOTA IT LABOR COSTS

Pacific Technologies found that the State’s annual IT labor expenditure is approximately \$26.9 million – split almost evenly between ITD at \$13.1 million and the agencies at \$13.8 million. The following table summarizes the IT labor cost data:

IT Labor Cost by Category



As the call-out box indicates, almost 50% of the State’s IT labor goes toward application development and maintenance (i.e., the combined totals of the Agency Applications, Project Management, and Enterprise Applications categories depicted above). This percentage is higher than our typical experience in the public sector, where we usually see between 35 and 45 percent of IT labor effort devoted to application support.

Labor costs in this area have two primary drivers: agency business need and the architecture of the State’s application portfolio. Since IT governance processes serve as the primary mechanism for evaluating agency business need, **North Dakota will need to streamline its application portfolio and refine its approach to IT project approval processes to significantly impact application-related labor expenditures – currently totaling more than \$13 million on an annual basis.** As previously indicated, a review of the State’s application portfolio was not within Pacific Technologies’ scope of work for this study.

Desktop Services, a category that includes all labor associated with installing, maintaining, and supporting the use of the State’s personal computers, forms the second largest expenditure area. Our analysis indicated that this labor effort totals approximately 52 full time equivalents (FTEs), representing the full or part-time work of approximately 152 separate individuals spread across virtually all of the responding agencies.

When we consider the number of workstations at the State (approximately 7,700), we find a ratio of 149 PCs to each FTE of support effort. This number falls in the typical range that we observe in the public sector, where we usually see support ratios ranging from 100 to 150 workstations per support FTE. **Given the highly-fragmented nature of the delivery of this service, and the wide variety of**

**IT Organization
 and Management
 Study**

Chapter 1:
 Executive
 Overview

workstation configurations deployed, Pacific Technologies does not believe significant efficiencies can be achieved in this area without radically changing both the service delivery approach and the State’s mechanisms for refreshing its workstation inventory.

The remaining spending categories encompass relatively small individual expenditures spread across a large number of agencies. Potential savings in these areas may not justify the effort required to achieve them.

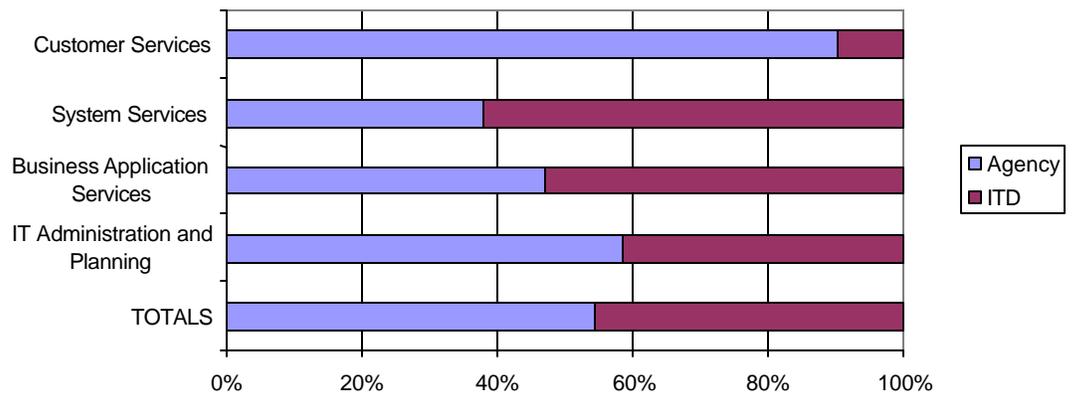
DISTRIBUTION OF IT LABOR

To analyze the State’s level of IT labor centralization, we summarized the labor data into four major categories, or IT functional areas:

- ◆ Customer Services – functions related to directly supporting users of IT systems and services
- ◆ System Services – functions related to implementing, maintaining, and supporting the organization’s computers, systems software, and network connectivity
- ◆ Business Application Services – functions related to providing, maintaining, and supporting the use of software needed to meet the operational, management, and reporting requirements of the organization
- ◆ IT Administration and Planning – functions related to the planning, oversight, security, and day-to-day operations of the technology function at the organization

The following two exhibits compare agency versus ITD labor effort across the above categories.

Percentage ITD Versus Agency Labor Effort by IT Functional Area



Distribution of FTE’s³ by IT Functional Area

IT Functional Area	Agency FTE's	ITD FTE's	Total FTE's
Customer Services	67	7	74
System Services	33	59	93
Business Application Services	91	101	192
IT Administration and Planning	54	38	92
TOTALS	246	205	451

Note: Values in table rounded to whole numbers

As the tables indicate, significant IT support effort occurs in the agencies. **Of the approximately 451 total FTEs of IT labor, agencies deliver approximately 55%, or about 246 FTEs of staffing.**

³ The FTE levels presented in this table, as well as the rest of this document, refer to the complete level of effort encompassing full-time and part-time staff, as well as shadow and contract labor.

Clearly, Customer Services appears heavily decentralized, while Business Application Services and IT Administration and Planning are more evenly split. It is worth noting that the server consolidation effort resulting from House Bill 1505 has reduced total server administration labor costs by approximately 6 FTEs, with further reductions anticipated as ITD consolidates servers and reduces the associated workload. Approximately 30% of server support effort remains in the agencies, a percentage that will increase as ITD reduces servers and associated support staff.

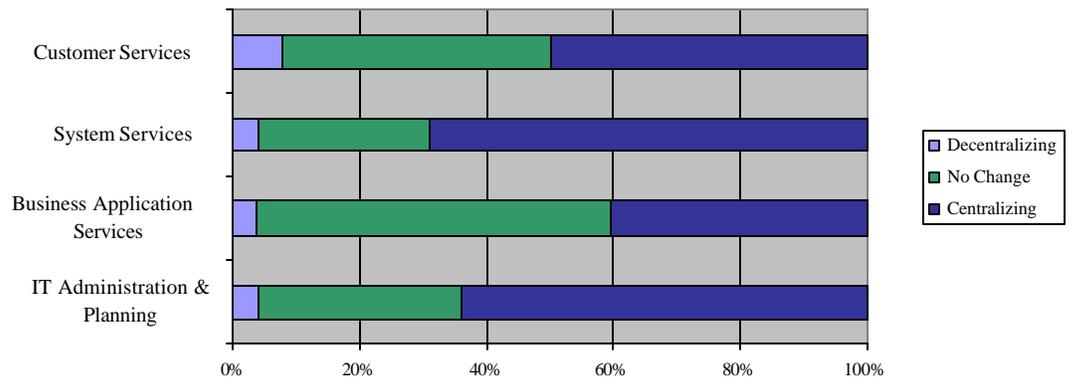
COMPARISON WITH OTHER STATES

PTI received data from 31 other states regarding trends in IT service delivery related to Customer Services, System Services, Business Application Services, and IT Administration and Planning. We also received more detailed financial and IT labor data from six states, which we used for additional comparisons.

Trends in IT Service Delivery

Overall, the survey results indicate that **IT service delivery is either remaining as-is or is becoming more consolidated** in all but a handful of circumstances, as indicated in the chart below:

State IT Service Delivery Consolidation Trends



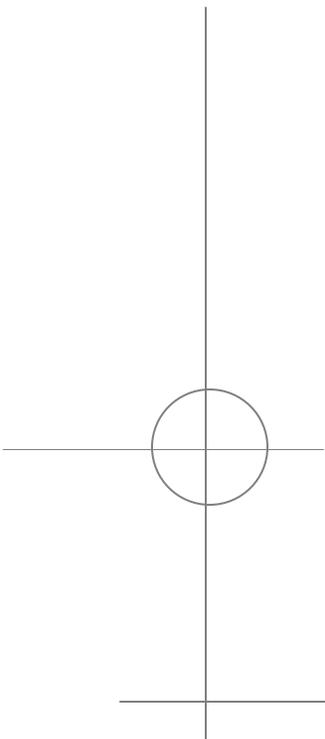
A central focus of this study surrounded the question: “Where is North Dakota on the decentralized-to-centralized continuum?” Overall, the survey indicated that:

- ◆ **North Dakota’s approach to Application Services is already more centralized than many states**
- ◆ **North Dakota’s approach to Systems Services is on par with survey averages**
- ◆ **Both Customer Service and IT Administration and Planning represent areas in which North Dakota is significantly less centralized than other states**

Chapter 2 presents additional supporting information for the above results.

Comparison of Financial and IT Labor Information

Initially, 13 states agreed to provide more detailed information for benchmarking purposes. Ultimately, we received data from the executive branches of six entities. Based on the limited data received, most IT staffing and spending measures ranked North Dakota higher than the other respondents. Please refer to Chapter 2 and Appendix C for more detail. Additionally, it is worth noting that the preponderance of the non-responding states simply were unable to provide the requested information and, correspondingly, could not participate. This represents a finding in itself.



2. IT GOVERNANCE

From a state-wide perspective, Pacific Technologies found that IT governance processes are just beginning to emerge. Recent legislation created the State Information Technology Advisory Committee, and chartered that group to prioritize the State's major IT projects. **SITAC is now developing the methods and tools to accomplish this – and these efforts appear to be on-track.**

At the agency level, we found tremendous variation in formality of IT governance processes. Some agencies have highly-structured approaches that align IT investments with business priorities. Others take less formal routes. All agencies submit IT plans, however most view this as an exercise focused primarily on budget preparation rather than development of strategic IT direction for the agencies.

Three specific areas of IT governance concern surround:

- ◆ **The lack of standard processes and tools for project evaluation** – a factor that contributes to the fragmentation of the State's application architecture and creates a barrier to managing the State's application investments from a portfolio view
- ◆ **Inconsistent performance measures for IT projects** – making it difficult to quantify the value received for technology-related investments
- ◆ **Insufficient IT management and performance reporting mechanisms for the Legislature** – impacting the State's efforts to make informed IT decisions

D. KEY RECOMMENDATIONS

This study identifies four major recommendations:

- ◆ **Consolidate Desktop Services within ITD**
- ◆ **Standardize workstations across the State**
- ◆ **Continue to consolidate servers and server administration in ITD**
- ◆ **Improve IT governance processes**

It bears repeating that the strategic IT goals outlined in the introduction of this report served as the guiding force for these recommendations – rather than a sole concentration on cost reduction. In addition, please note that projections of potential labor savings represent estimates derived from a staffing matrix populated by agency personnel. The stated figures represent approximations that most likely will need to be adjusted as implementation proceeds.

Separating operational practice from analytical theory, Pacific Technologies believes that it is unrealistic to expect that the full amount of the potential savings will be achieved in the form of dollars returned to the State's budget. In particular, partial-FTE labor savings will likely be realized as additional productive labor available to the agencies. In addition, these savings will be off-set by some start-up costs and associated ongoing costs. The table at the conclusion of this section summarizes these projections.

These recommendations apply across the State to the Executive, Legislative, and Judicial branches of government. While such an approach has the potential to yield the greatest overall efficiency improvements and possible cost savings for the State, it has raised policy issues regarding separation of powers for some.

As a recommendation, this is not precedent setting – several other states have some aspect of IT service delivery to judicial and legislative branches provided by an executive based IT agency. Indeed, North Dakota already has such an arrangement for networking service provision with StageNet, and will also have all three branches served by ConnectND. What's more, this recommendation focuses on consolidating and streamlining infrastructure support – branch and agency application development,

**IT Organization
 and Management
 Study**

Chapter 1:
 Executive
 Overview

support, and maintenance remain outside the control of ITD. Nevertheless, the implementation needs to provide mechanisms through which the impacted parties can:

- ◆ Effectively elevate service delivery problems and issues for prompt resolution
- ◆ Resume provision of their own IT services if ITD proves unable to meet agency needs

The remainder of this section briefly describes each recommendation.

CONSOLIDATE DESKTOP SERVICES WITHIN ITD

Pacific Technologies recommends that the State consolidate all workstation support and associated help desk labor in ITD, including responsibility for:

- ◆ Initial problem reporting and resolution
- ◆ Maintenance and support of the State’s personal computers, personal productivity software (e.g., Microsoft Office), network applications (e.g., calendaring, email, etc.), and related peripherals
- ◆ Adds, moves, and changes
- ◆ Managing the associated hardware replacement
- ◆ Tracking the associated performance measures

Major benefits:

- ◆ *Consistency of service and potential for improved service levels*
- ◆ *Greater specialization of IT skill sets, removing small fractional FTE labor efforts from many agencies*
- ◆ *Removes IT infrastructure responsibilities from the agencies, allowing them to concentrate resources on business operations*
- ◆ *Positions the State for provision of IT services as a utility*
- ◆ *Potential labor savings of up to \$519,000 per year*

Note that the potential savings assume a significant productivity increase as a result of the centralization and improvements to the State’s desktop environment and associated management tools. The saving projections are based on a ratio of approximately 200 workstations per support FTE, in contrast to the State’s current ration of approximately 149:1. In practice, the State’s ability to capture the full amount of the savings will depend upon several key factors:

- ◆ How aggressively the State pursues incremental labor savings associated with removing this labor effort from the small and mid-size agencies
- ◆ How successful ITD is at delivering high-quality service
- ◆ The State’s success at standardizing its desktops
- ◆ How many exceptions the State grants that allow agencies to continue providing their own support
- ◆ How efficiently the State can provide service to sites outside of Bismarck – accounting for over one-fifth of the State’s workstations

Also note that the projected savings do not include reductions in agency IT management labor. It is likely that some savings will also be realized in this area.

STANDARDIZE WORKSTATIONS ACROSS THE STATE

Pacific Technologies recommends that the State move to a highly-standardized workstation environment, limiting the brands and models of workstations installed and tightly controlling the associated configurations.

We recommend making no more than two or three hardware options available, and that the agencies select either a three- or four-year replacement cycle for each machine. We also recommend that ITD manage the replacement cycle, including collecting the necessary funds from the agencies through workstation charges, procuring, configuring, and installing the workstations.

This recommendation is critical to the State's ability to achieve the productivity increase assumed in the consolidation of Desktop Services, as it will greatly reduce the workload associated with desktop support.

Major benefits:

- ◆ **A key component of the State's move to *providing basic IT services as a utility***
- ◆ ***Reduced support costs* as workstation services staff can more effectively and efficiently implement, manage, and troubleshoot a simple environment – thereby requiring fewer FTEs**
- ◆ ***Reduced training costs* through limiting the number of technology skills support staff and users must possess**
- ◆ ***Reduced workstation costs* through economies of scale in purchasing**
- ◆ ***Opportunities for license savings* through economies of scale in purchasing, particularly via the ability to better identify and utilize site licensing opportunities**
- ◆ ***Opportunities for outsourcing* will be potentially cost-effective only in a standardized environment**

The State was unable to provide Pacific Technologies with a figure that represents current spending for workstation replacement. **Nevertheless, we believe agency budgets will likely need to be increased to allow for more frequent workstation upgrades.**

Assuming an average workstation cost ranging between \$1,100 and over \$1,400 per workstation (including workstation, personal productivity software, and monitor) and an average replacement cycle of slightly over three years, this recommendation will cost between \$3 million and \$3.7 million per year. With an inventory of approximately 7,700 workstations, the monthly per-workstation charge would range from \$32 to \$40. *The exact configuration options and agency choices will significantly impact the actual cost of this recommendation.*

It is worth noting that several “non-networked” and “non-desktop” computing devices (such as personal digital assistants (PDAs), standalone laptops, etc.) are not included in our analysis and recommendations surrounding workstation standardization and consolidated support.

CONTINUE TO CONSOLIDATE SERVERS AND SERVER ADMINISTRATION IN ITD

We estimate annual labor cost savings of \$294K from the first stage of server consolidation accomplished via HB 1505. Our analysis shows that up to \$162K of potential additional annual labor savings is available through continued consolidation efforts, building to that number over the next several years.

To accomplish this, we recommend that ITD:

- ◆ Assume responsibility for hosting and administering the remaining servers still under agency control, based on a consolidation schedule developed in partnership with the affected areas
- ◆ Reduce the total number of servers through aggressive consolidation of similar platforms and sharing applications on servers where possible

**IT Organization
 and Management
 Study**

Chapter 1:
 Executive
 Overview

- ◆ Reduce staff as needed to keep a ratio of approximately 29 servers per administrator
- ◆ Establish related performance measures

Major benefits:

- ◆ **In combination with the Desktop Services consolidation, removes IT infrastructure responsibilities from the agencies, allowing them to *concentrate resources on business operations***
- ◆ **Positions the State for *provision of IT services as a utility***
- ◆ ***Greater specialization of IT skill sets, removing small fractional FTE labor efforts from many agencies***
- ◆ **Improves the State's *ability to manage IT security***
- ◆ ***Enhanced service consistency and potential for improved service levels***
- ◆ **Potential labor *savings of up to \$162,000 per year***
- ◆ **Potential additional hardware cost savings due to a reduction in the number of installed servers**

Note that the calculated savings assume a consolidation of all servers into ITD and a related reduction of approximately 150 servers from the State's inventory. Corresponding reductions to both agency and ITD server administration labor would occur. Similar to Desktop Services consolidation efforts, the State's ability to capture the full amount of the savings will depend upon:

- ◆ How aggressively the State pursues incremental labor savings associated with removing this labor effort from the small and mid-size agencies
- ◆ How successful ITD is at delivering high-quality service
- ◆ The State's success at consolidating the servers into ITD and reducing the total server inventory
- ◆ How amenable the servers are to standardization– highly standardized servers for email and file/print services may allow further improvements in labor efficiency; a large variety of unique configurations may require labor beyond the projections presented here

Please note that estimated savings do not include recurring hardware savings associated with reducing the number of servers currently in operation. Additionally, projected savings do not count reductions in agency IT labor related to security administration, storage management, or database administration, or IT management activities. It is likely that some economies of scale would also be realized in these areas.

IMPROVE IT GOVERNANCE PROCESSES

Pacific Technologies recommends that the State build on existing IT governance processes by:

- ◆ Improving the processes and tools for IT project evaluation
- ◆ Improving mechanisms to support cost containment
- ◆ Developing meaningful state-wide management and reporting views of IT initiatives
- ◆ Implementing IT performance measures
- ◆ Establishing an IT innovation fund

Section E of Chapter 3 provides more detailed descriptions of our recommended process adjustments, including related roles and responsibilities. It also contains suggested contents for a standard business case that will help the State consistently evaluate IT projects, as well as recommendations regarding an IT "report card" and related performance measures.

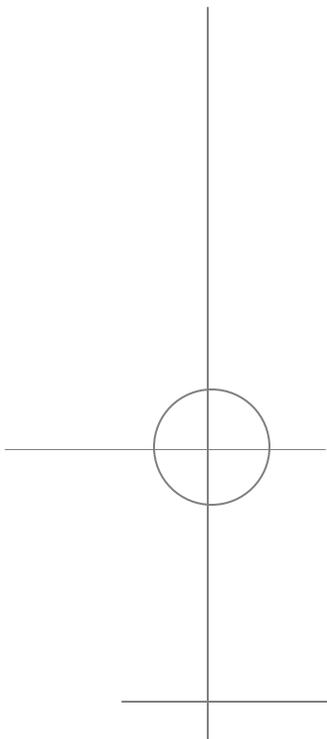
**IT Organization
and Management
Study**

Chapter 1:
Executive
Overview

Major benefits:

- ◆ **Better-informed IT decision-making**
- ◆ **A consistent, structured, business-based approach for evaluating IT initiatives**
- ◆ **Provides a mechanism for managing application portfolio costs**
- ◆ **Enhanced communication around major IT initiatives**

The following exhibit highlights estimated costs and potential savings associated with each recommended initiative. Refer to Chapter 3, section H for additional detail.



Summary of Estimated Costs and Savings

Consolidate Provision of Desktop Services

Potential Annual Labor Savings:	\$519,000
Recurring annual expenditures for related goods and services estimated at:	\$60,000-\$260,000
One-time costs for software, hardware, phone systems, etc. estimated at:	\$160,000-\$1,010,000
<ul style="list-style-type: none"> ◆ Yields a net potential annual savings of \$259,000 to \$459,000 – depending upon the magnitude of the recurring costs and on how aggressively the State pursues reductions. ◆ The low-end estimate includes one-time costs of \$100,000 for phone system upgrades, along with some monies for procurement assistance and training. Associated recurring costs are likely to be at the upper-end of the range, as the State might have to lease help desk and remote management software. ◆ The high-end estimate includes system management software costs of \$360,000, phone system upgrades for \$150,000, and monies for software implementation assistance, training, and procurement. Software maintenance would make up the lion's share of the recurring costs. 	

Standardize Workstations

Potential Annual Savings:	Unknown
Recurring annual expenditures for workstation replacement estimated at:	\$2,950,000-\$3,680,000
One-time costs for consulting assistance estimated at:	\$20,000-\$430,000
<ul style="list-style-type: none"> ◆ Current annual workstation replacement spending is not known, so incremental investment over today's expenditures could not be calculated. Replacement costs presented are based on conservative estimates and may be lower than indicated. ◆ Assumptions include a total PC count for the State of 7,700. Replacement costs for PCs used in our estimates are \$750, \$1,200, or \$2,500. Assumed refresh interval is a little over three years. ◆ The low-end workstation replacement figure assumes 25% are low-cost, 70% are mid-level, and 5% are high-end; while the upper end assumes 5% low-cost, 75% mid-level, and 20% high-end. ◆ One-time cost range assumes varying levels of outside assistance with workstation standards. 	

Continue Server Consolidation

Potential Annual Labor Savings:	\$162,000
One-time costs for consulting assistance estimated at:	\$0-\$20,000
<ul style="list-style-type: none"> ◆ Savings are predicated on how aggressively the State pursues reductions. Savings do not include anticipated hardware savings related to a reduction in total servers. ◆ Upper end of one-time cost assumes some consulting assistance in developing a consolidation approach and schedule. 	

Implement IT Governance Recommendations

Potential Annual Savings:	Unknown
Recurring annual expenditures for goods, services, and innovation funding:	\$200,000-\$340,000
One-time costs for software and services estimated at:	\$480,000-\$1,010,000
<ul style="list-style-type: none"> ◆ Savings are largely dependent upon the State's focus on cost containment. ◆ Low-end of one-time estimate assumes purchase of less expensive portfolio management software and little assistance with implementing the software or the governance recommendations. ◆ Recurring cost estimate reflects a potential range of software maintenance fees and innovation funding of \$137,000 at the low end and \$275,000 at the upper end. 	

E. TRANSITION AND IMPLEMENTATION PLANS

This section outlines the major transition and implementation activities that will be required to actualize each of the study's key recommendations.

CONSOLIDATE PROVISION OF DESKTOP SERVICES WITHIN ITD

We recommend funding these services on a cost-recovery basis, in line with current ITD practices. Customer service targets must be clearly defined, monitored, and managed. ITD will need to develop estimated workstation rates and per-agency charges. The agencies, in turn, must determine the requisite budget reductions to pay the charges.

Our implementation plan asks the state to consider outsourcing as an alternative, although preliminary pricing seemed quite high. If the service is to be delivered in-house, ITD would need to post new position openings, with preferential treatment made for staff reduced from the agencies' workforce. Along the same lines, we envision additional one-time costs related to hiring new staff, setting up the Desktop Services facility, and implementing necessary support tools. These costs should be incorporated in the rate structure and amortized over the first two or three years. As performance improves over time, rate reductions might be possible due to increased service efficiency.

STANDARDIZE WORKSTATIONS ACROSS THE STATE

Because we do not know the status of the current PC inventory or existing replacement expenditures and plans, we cannot recommend the best start-up approach (i.e., wholesale replacement or replacement through attrition). Similar to the previous initiative, our implementation plan asks the State to study the best sourcing alternative. Regardless, it is almost a certainty that budgets will need to increase. This initiative represents a major shift in the desktop funding for the agencies. Rather than a one-time expenditure, PCs will become standard items with a monthly charge. The Legislature may need to provide monetary assistance to some agencies in making the transition to this new funding model. Once accomplished, agencies should be expected and able to budget for PC expenditures in a planned and consistent manner.

CONTINUE SERVER CONSOLIDATION

Post HB 1505, only a few agencies remain where server support levels are a concern. For these agencies, replacement cycle timing will serve as the primary driver for centralization. ITD must work cooperatively with the agencies to identify the specific schedule for these transitions. The affected agencies can then plan for and, where appropriate, make associated staff reductions. As ITD reduces the total server inventory, the agency should be able to lower rates based on related staff reductions and smaller equipment replacement costs.

IMPROVE IT GOVERNANCE PROCESSES

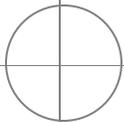
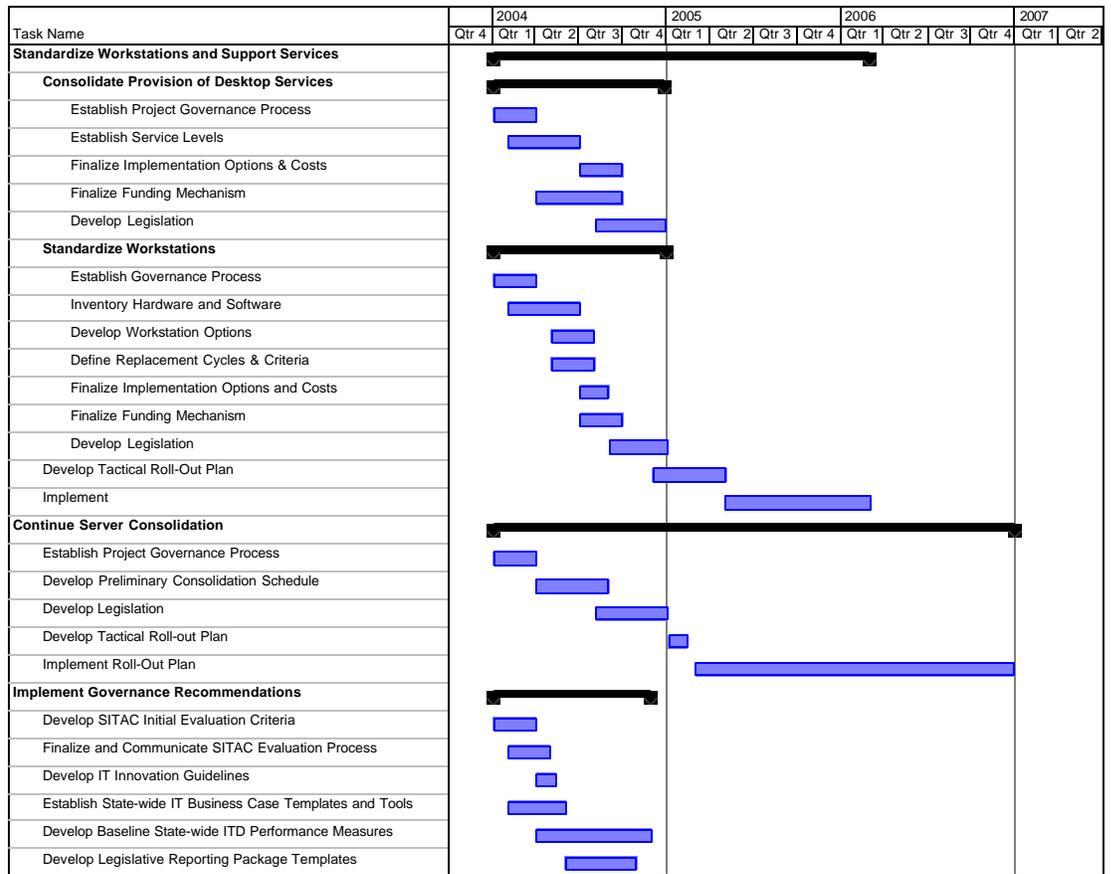
The transition and implementation activities surrounding this recommendation build upon and integrate many sound practices already in place at the State. Primary future efforts must focus on establishing more formal and consistent SITAC evaluation criteria (an activity already underway), guidelines and funding mechanisms for innovation, a state-wide business case template and tools, and meaningful management reports. With respect to the last item, the State will need to baseline a core set of key IT performance indicators and develop associated reporting views of those measures for presentation to the Legislature on a periodic basis (e.g., quarterly or semi-annually).

The following Gantt chart presents a suggested implementation schedule for the activities outlined above. The State will need to refine the overall timeline predicated on more in-depth analysis, other State initiatives, and resource constraints.

Recommended Project Schedule

IT Organization and Management Study

Chapter 1: Executive Overview



F. CONCLUSION

Earlier in this executive overview, we presented several core IT goals for the State that focus on providing basic IT services as a state-wide “utility,” performance managing IT, adopting best practices, and favoring long-term improvement over short-term considerations. To put it another way, while cost-savings and efficiency improvements are the ultimate goal, short-term investments will be required to reap any long-term benefit. By implementing the strategic recommendations outlined in this report, the State can expect to make demonstrable progress toward that end. In fact, our recommendations will fundamentally shift the dynamics of IT service delivery in North Dakota. At a basic level, our work transitions IT infrastructure responsibilities out of the agencies and re-focuses their IT efforts on business applications – where they receive the largest return on their investment.

In many respects, however, this study represents the “easy part.” The real work lies ahead: translating these recommendations into *results*. Beyond making staff allocation changes and developing better management tools, these recommendations point toward a significant culture shift – moving to a performance managed environment. This is not a trivial task.

To successfully move forward and realize the benefits of these projects, the State must make a commitment to change – to build upon its successes, learn from its mistakes, and work cooperatively toward becoming more efficient and effective than ever before in its delivery and management of information technology. **This effort ultimately belongs to the State; it will require the active involvement of legislators, management, and staff to see these initiatives to their fruition.**

