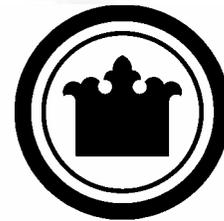


KING COUNTY



King County

**TOTAL OPERATING
COST OF TECHNOLOGY
- FINAL REPORT -**

May 26, 2004

May 26, 2004

Ms. Zlata Kauzlaric
King County, Department of Executive Services
Exchange Building
821 Second Ave., Room 720
Seattle, WA 98104

Dear Zlata:

Pacific Technologies, Inc. is pleased to present the final version of the *King County Total Operating Cost of Technology Report*. The report documents the findings resulting from our work at the County, begun in January, 2004.

I would like to take this opportunity to thank you, the members of the County's Quantified Business Case team, and the agency total cost of ownership leads for your efforts and participation in this project.

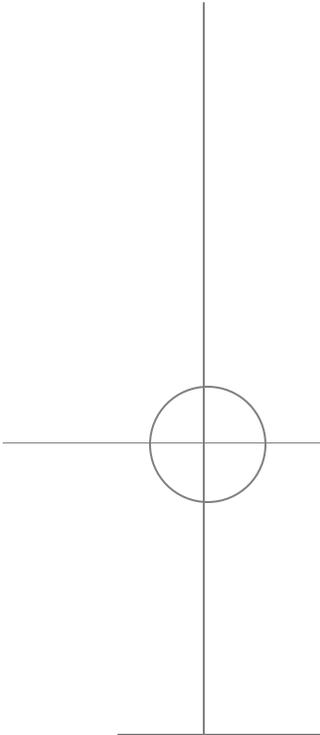
Please call me at (425) 881-3991 if you have any questions about this deliverable.

Sincerely,

Michael Silverman
Co-CEO
Pacific Technologies, Inc.

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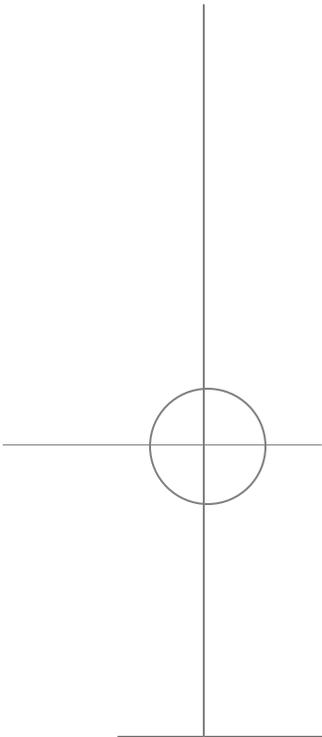


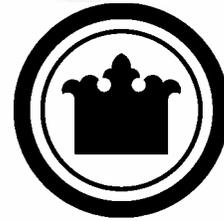


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**Total Operating
Cost of
Technology
Final Report**

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King County

executive summary

King County, Washington
May 26, 2004

A. INTRODUCTION

King County, Washington (the County) is under severe financial pressure as revenues decline without a corresponding decrease in service delivery expectations. As a result, the County is examining its spending in a number of areas.

In December of 2003, the County engaged Pacific Technologies, Inc. (PTI) through a subcontract with Dye Management Group to conduct a county-wide information technology (IT) total cost of ownership (TCO) study. This work provides an in-depth look at the County's IT spending – answering fundamental questions about the County's investment in information technology.

The scope of work focused on:

- ◆ Evaluating the County's IT goods & services operating spending
- ◆ Analyzing the actual operating labor effort devoted to IT at the County
- ◆ Providing related performance measure information
- ◆ Collecting IT capital and operating budget information

An organization's financial and labor focus often reflects its priorities. By examining IT effort and spending and tracking these levels over time – the County can more efficiently and effectively allocate limited IT resources to its core business goals and services. This report serves as a baseline to support future measurement and management of these IT resources.

It is important to note that this engagement is not intended to be an audit, nor is there an expectation that all the collected data will align exactly with the County's accounting and personnel systems .

The primary emphasis of the analysis was on IT operating costs – helping the County understand the ongoing resources required to sustain operation of existing information technology applications and infrastructure. Capital and operating budget information was requested, but was not analyzed to any degree of detail.

The work did not include gathering benchmark data from similar organizations for comparison purposes – an exercise that may help provide perspective on these results. It also did not include analysis of the geographic distribution of IT resources, a step that should be taken before making significant changes to the organization of IT service delivery.

The County divided itself into 19 organizational areas for data collection purposes. These areas correspond to the County's elected agencies and executive departments, with the exception of Executive Services and the Department of Transportation, which were further subdivided.¹ *For simplicity's sake, we refer to the 19 organization areas as "agencies" for the remainder of this report.* To help analyze centralized IT support costs, in many instances we also identify the Information and Telecommunication Services Division (ITS) of the Executive Services Department separately.

We collected data through representatives from each of these 19 agencies using spreadsheets that gathered IT spending, staffing levels, budget, and inventory information. Appendix C contains samples of these forms. As the forms indicated, our collection effort focused on information technology only –tangentially related costs and effort (e.g., phone bills, radio system costs, etc.) are not part of this analysis.

¹ Executive Services information was collected in four separate areas: Finance; Human Resources; Information and Telecommunications Services; and Other (which includes Facilities Management; Records, Elections, and Licensing Services; CAO Administration; Office of Risk Management; Office of Emergency Management; and Office of Civil Rights). Department of Transportation information was collected in two separate areas: Airport, Fleet Administration and Road Services; and Transit.

In reviewing this report, the reader should bear in mind that King County is a complex organization. The County has a diverse set of responsibilities, and over 13,000 staff are dispersed across numerous facilities located throughout the County's 2,130 square miles. Seven of its agencies and departments are run by independently-elected officials – a factor that further complicates cross-agency planning.

In addition, the County has never taken a centralized approach to managing information technology. Historically, the County's agencies and departments have evolved their approaches to IT over time, and with very little inter-agency coordination. The resulting environment has few universal standards in place. Rather, the County has deployed a wide range of desktop environments, uses a number of different programming languages, and has a highly-distributed server environment.

Appendix A describes PTI's methodology, including our process for data collection and validation, in more detail. The remainder of this chapter defines major assumptions and presents key results from the IT total cost of ownership effort. The body of the report summarizes much of the information collected as part of this project. Appendix B presents agency detail. Refer to Appendix F for a glossary that defines the terms used within this document.

B. ASSUMPTIONS

Several assumptions regarding the data and our analysis approach are critical to the work contained in this document. These include:

- ◆ The data provided by the agencies is accurate enough for TCO analysis purposes
- ◆ Our method for approximating labor costs (described in Appendix A) is reasonable – note that Pacific Technologies has been successfully using this procedure for over eight years
- ◆ Overall, the quality of the data is sufficient to support future modeling of alternative structures for delivering IT services at the County

In addition, PTI made some adjustments to data received to facilitate clarity of presentation and avoid double-counting of some costs. Appendix A details these changes.

C. SUMMARY RESULTS

This section provides an overview of the County's total annual IT operating costs, along with information about labor effort, agency costs, and key performance measures.

TOTAL OPERATING COSTS

As the following graphic indicates, **the County spent approximately \$66.3 million in FY2003 IT operating costs:**

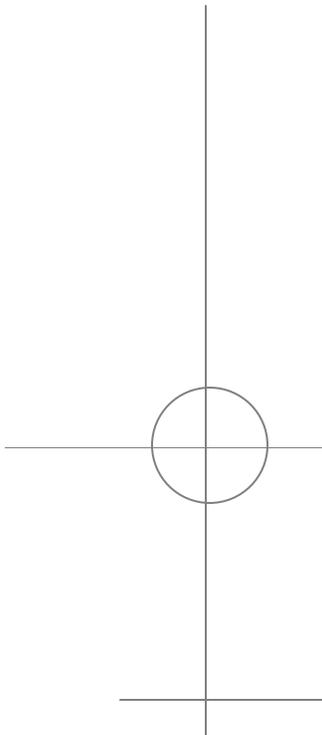


Exhibit 1-1: Total County IT Operating Costs



TOTAL: \$66.3 Million

As the graphic indicates, approximately two-thirds of the County’s IT spending is on labor – making this the area most likely to yield cost savings.

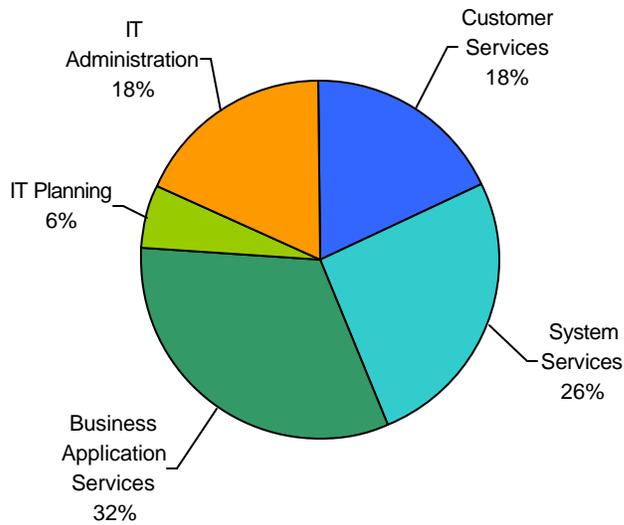
The remainder of this sub-section further analyzes the labor and goods & services costs.

To support our analysis of the County’s IT labor effort, we summarized the labor data into five major categories, or IT functional areas:

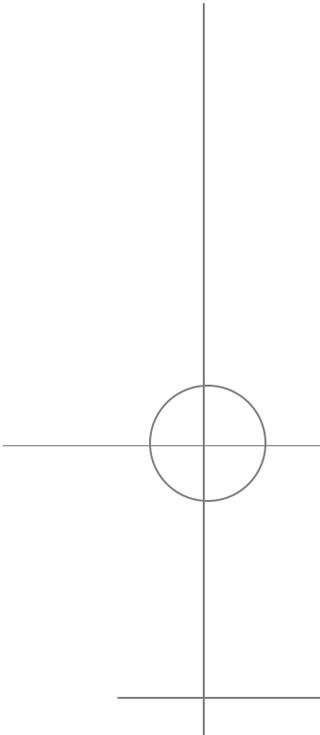
- ◆ **Customer Services** – labor related to directly supporting users of IT systems and services
- ◆ **System Services** – labor related to implementing, maintaining, and supporting the organization’s computers, systems software, and network connectivity
- ◆ **Business Application Services** – labor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

The following pie chart presents County IT labor costs, using these categories:

Exhibit 1-2: Total County IT Labor Costs by Functional Area



TOTAL: \$43.27 Million



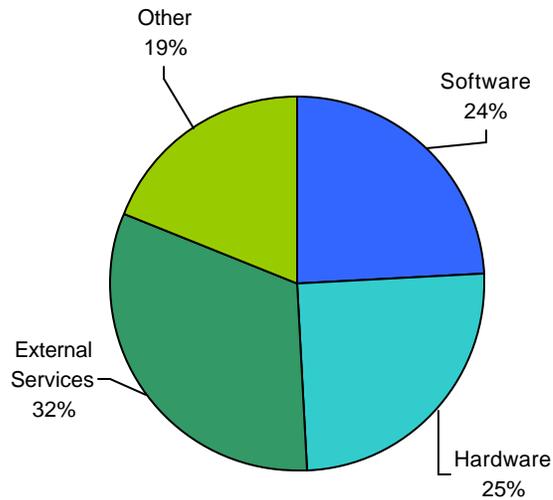
Customer Services and *Business Application Services* represent the two labor areas that provide direct support to end users. Together, these activities account for 50% of the County’s labor effort. Organizations often try to maximize the labor spent in these areas, as it offers the clearest and most direct business benefit.

We also summarize goods & services expenditures into four major categories:

- ◆ **Software** – county-wide applications, agency-specific applications, personal productivity software, and supporting software such as databases, operating systems, etc.
- ◆ **Hardware** – workstations, servers, mid-range and mainframe computers, telecommunications and networking equipment, printers, etc.
- ◆ **External Services** – support for the County's hardware and software provided by external vendors; along with consulting, training, and similar services
- ◆ **Other** – ITS facilities, central rate, and administrative costs; IT-related debt service; and IT expenditures not otherwise classified

The chart below shows the total County goods & services costs, allocated to the four categories presented above.

Exhibit 1-3: Total County IT Goods & Services Costs by Category



TOTAL: \$23.06 Million

MAJOR COST DRIVERS

The following chart provides a view of the County’s largest IT cost drivers by combining labor and goods & services costs into several major categories. It offers insight into potential areas of focus for cost management efforts. Appendix E details the composition of the cost driver categories.

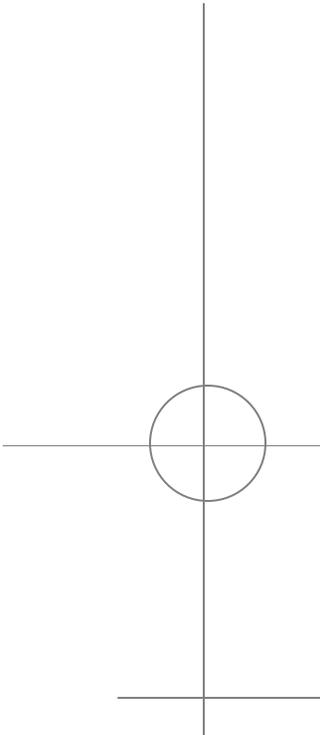
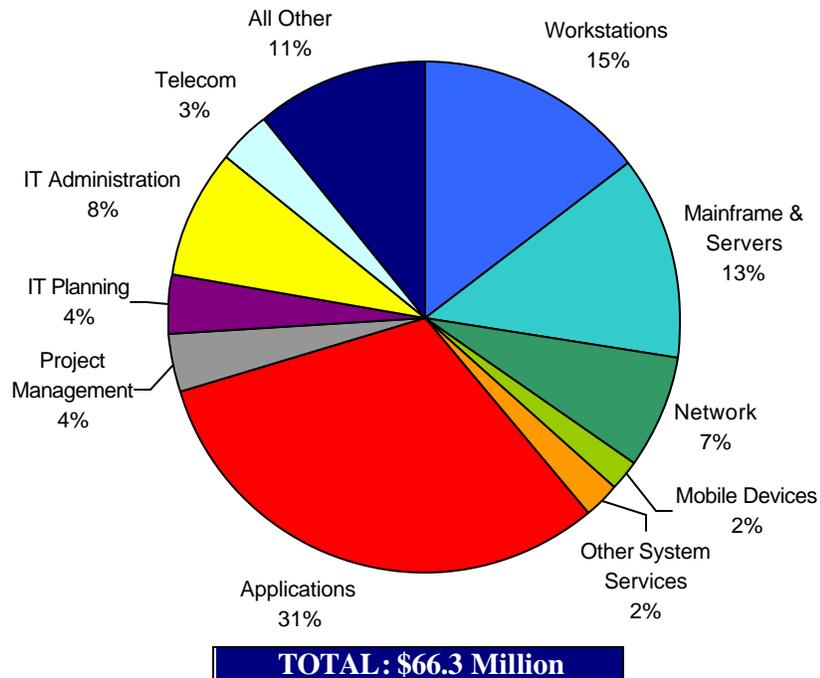


Exhibit 1-4: Major County IT Cost Drivers



At 31% of costs, *applications* represent the largest IT cost component for the County. Approximately half of that amount is dedicated to the operations and maintenance of the County’s custom application portfolio, while a relatively small portion goes to direct support of the County’s packaged applications.

DISTRIBUTION OF IT LABOR

To provide insight into the current level of IT support staff centralization at the County, we analyzed the allocation of IT labor effort using Pacific Technologies’ standard functional areas (Customer Services, System Services, Business Application Services, IT Planning, and IT Administration).³

The following two exhibits show the current allocation of IT labor effort within the County. The charts distinguish between:

- ◆ **ITS labor effort** – work provided by ITS staff
- ◆ **Agency IT Unit labor effort** – work provide by IT staff in the business units who report to IT sections or units
- ◆ **Business Unit IT labor effort** – work provided by IT staff in the business units who do not report to IT sections or units
- ◆ **Shadow Staff** – work provided by individuals who do not have IT job titles, but spend 10% or more of their time providing IT support to other County staff

³ Where labor effort figures refer to FTEs, this number represents full time equivalent (FTE) effort associated with each activity. **It is important to note that, as used in this report, the term FTE does not necessarily refer to an individual County employee.** Rather, one FTE may be composed of the effort from one or more individuals, including work from full-time and part-time employees, as well as shadow (i.e., IT labor performed by staff that do not have IT job titles) and contract labor. Please see Appendix A for a more detailed explanation of how we arrived at these figures.

Exhibit 1-5: Comparative Allocation of IT Labor

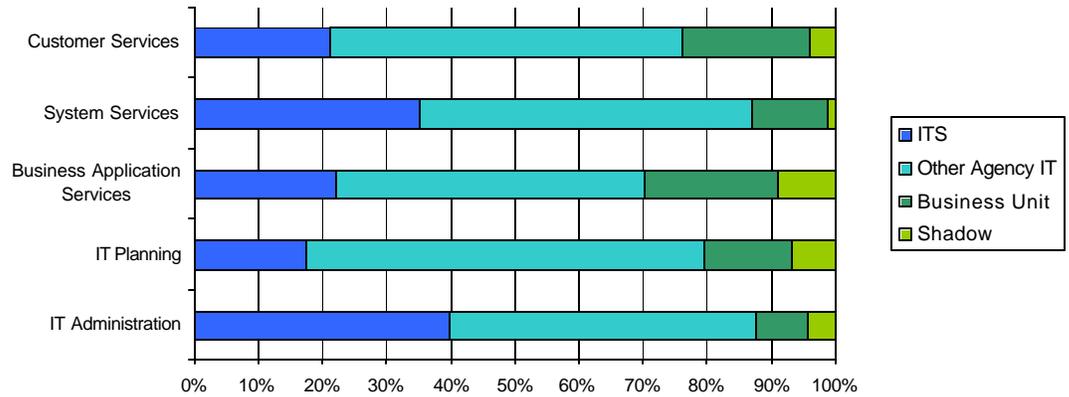


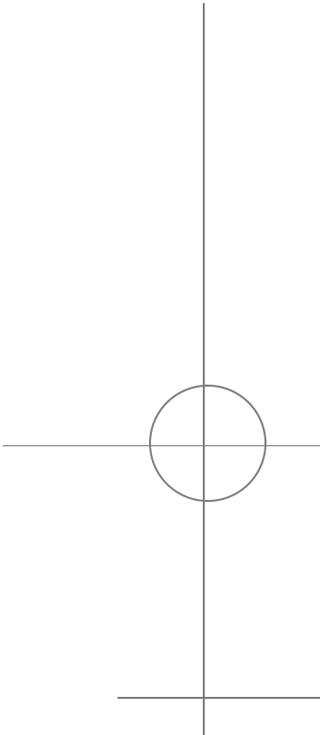
Exhibit 1-6: Distribution of FTEs by IT Functional Area

IT Function	Centralized (ITS) FTE	Distributed IT Unit FTE	Distributed Business Unit FTE	Distributed Shadow FTE	TOTAL
Customer Services	21.00	55.01	19.85	3.88	99.74
System Services	45.95	68.00	15.70	1.42	131.07
Business Application Services	36.16	79.15	34.20	14.61	164.12
IT Planning	4.40	15.73	3.46	1.71	25.29
IT Administration	34.52	41.66	7.22	3.52	86.92
TOTAL	142.03	259.55	80.42	25.14	507.14

Note that only 28% of the total IT effort is delivered by centralized ITS staff. *From an enterprise perspective, the County has a relatively decentralized approach to providing IT services.*

AGENCY IT OPERATING COSTS

In addition to looking at the County as a whole, our work also gathered information about IT operating costs in the 19 agencies. The following two tables present IT operating cost and labor effort information for each agency. The first table does not distribute the ITS costs – it attributes them all directly to ITS. The second table uses information provided by ITS to allocate ITS’ chargebacks to the agencies along goods & services and labor lines. This allowed us to present a more accurate picture of actual agency IT operating costs. Note that we removed ITS from the second table to avoid double counting the costs. See Appendix G for details related to the allocation of ITS charges.



**Exhibit 1-7: Agency IT Labor Effort and Cost Totals
 Without ITS Chargebacks⁴**

Agency	Total FTEs	Total IT FTEs	Total IT Labor Cost	Total IT Goods and Services Cost	Total FY03 IT Operating Cost
Adult & Juvenile Detention	917	6.25	\$ 521,715	\$ 295,160	\$ 816,875
Assessor	229	14.00	\$ 1,016,975	\$ 92,707	\$ 1,109,682
Community & Human Services	308	19.35	\$ 1,502,161	\$ 1,054,505	\$ 2,556,666
Council	157	2.00	\$ 172,996	\$ 62,701	\$ 235,697
DES Finance	206	20.65	\$ 1,802,682	\$ 1,462,660	\$ 3,265,342
DES HR	96	7.47	\$ 603,558	\$ 58,350	\$ 661,908
DES ITS	185	142.03	\$ 12,252,990	\$ 10,082,923	\$ 22,335,913
DES Other	504	15.54	\$ 1,258,762	\$ 969,088	\$ 2,227,849
Development & Environmental Services	243	16.00	\$ 1,348,541	\$ 460,353	\$ 1,808,894
District Court	235	4.22	\$ 345,006	\$ 411,134	\$ 756,140
DOT Airport, Fleet, Roads	769	23.80	\$ 2,032,163	\$ 431,417	\$ 2,463,580
DOT Transit	3,567	59.04	\$ 5,454,198	\$ 1,199,922	\$ 6,654,120
Executive (B/E/E/O)	87	9.39	\$ 994,737	\$ 210,239	\$ 1,204,976
Judicial Administration	202	8.25	\$ 664,967	\$ 588,379	\$ 1,253,347
Natural Resources & Parks	1,686	54.15	\$ 4,779,911	\$ 1,252,312	\$ 6,032,223
Prosecuting Attorney	505	9.15	\$ 806,934	\$ 103,361	\$ 910,295
Public Health	2,000	56.86	\$ 4,743,767	\$ 2,885,000	\$ 7,628,767
Sheriff	995	29.00	\$ 2,161,449	\$ 804,978	\$ 2,966,427
Superior Court	435	10.00	\$ 807,223	\$ 631,022	\$ 1,438,245
TOTAL	13,325	507.14	\$ 43,270,735	\$ 23,056,211	\$ 66,326,946

**Exhibit 1-8: Agency IT Labor Effort and Cost Totals
 Including ITS Chargebacks**

Agency	Total IT Labor Cost	Total IT Goods and Services Cost	Total FY03 IT Operating Cost
Adult & Juvenile Detention	\$ 1,847,983	\$ 1,491,154	\$ 3,339,137
Assessor	\$ 1,210,272	\$ 335,622	\$ 1,545,894
Community & Human Services	\$ 1,806,925	\$ 1,317,810	\$ 3,124,735
Council	\$ 241,187	\$ 153,320	\$ 394,507
DES Finance	\$ 3,918,978	\$ 2,860,881	\$ 6,779,859
DES HR	\$ 776,626	\$ 208,232	\$ 984,858
DES Other	\$ 2,253,585	\$ 1,469,781	\$ 3,723,366
Development & Environmental Services	\$ 1,471,103	\$ 619,065	\$ 2,090,168
District Court	\$ 472,738	\$ 560,803	\$ 1,033,541
DOT Airport, Fleet, Roads	\$ 2,695,449	\$ 932,384	\$ 3,627,833
DOT Transit	\$ 7,039,032	\$ 3,185,145	\$ 10,224,177
Executive (B/E/E/O)	\$ 1,377,016	\$ 322,306	\$ 1,699,322
Judicial Administration	\$ 760,257	\$ 724,505	\$ 1,484,763
Natural Resources & Parks	\$ 5,617,759	\$ 2,211,623	\$ 7,829,382
Prosecuting Attorney	\$ 1,178,537	\$ 502,153	\$ 1,680,690
Public Health	\$ 5,469,110	\$ 3,802,597	\$ 9,271,707
Sheriff	\$ 2,794,199	\$ 1,530,203	\$ 4,324,402
Superior Court	\$ 1,095,061	\$ 884,363	\$ 1,979,424
TOTAL	\$ 42,025,819	\$ 23,111,947	\$ 65,137,766

⁴ The total IT operating spending figure for Natural Resources and Parks includes all DNRP GIS-related IT costs. As DNRP provides GIS services to other County agencies, some of these costs are recovered through chargebacks. Similarly, the figures for the Sheriff include the cost of technology required to support jurisdictions that contract with the County for police services. As a result, some of the Sheriff's IT costs are also recovered through these contract payments. Also, the sheriff, figures do not include any Automated Fingerprint Identification system costs, as these were not provided. Finally, note that the figures for the Executive include OIRM expenditures, all of which are for county-wide IT services that are recovered through chargebacks. **The fact that these agencies provide services to other organizations needs to be considered when interpreting their respective IT expenditures.**

Note that the total lines between the last two tables differ. This results from the fact that the total labor and goods and services *costs* calculated for ITS were not the same as the total *agency chargebacks* reported by ITS. Some of the differences (explained further in Chapters 4 & 5 and Appendix A) appear to represent ITS costs that are recovered through sources other than chargebacks to agencies (e.g., external customers, etc.). Additionally, the approximation we used to arrive at ITS' annual labor cost may have exceeded ITS' actual labor charges. Further analysis of this disparity was not within the scope of this project. *We do not believe that the differences materially impact conclusions drawn from this report.*

KEY IT PERFORMANCE INDICATORS

Performance metrics can serve as a useful tool to inform the effective management of IT. This section presents typical measures the County might employ to benchmark IT operating costs or for comparison with other organizations. The indicators include:

- ◆ **Workstation support staffing and costs** – compares the County's total number of workstations with the labor effort and cost required to support these devices
- ◆ **Server administration staffing and costs** – compares the County's total number of servers with the labor effort and cost required to support these devices
- ◆ **Overall IT operating budget and staffing metrics:**
 - *IT operating budget as a percentage of total operating budget* – indicates how much of the County's operating budget goes to IT support, representing a common point of comparison with other organizations
 - *IT operating budget per County FTE* – can be used in combination with other labor productivity measures to help provide insight into the benefits of IT spending
 - *IT operating budget per citizen* – in combination with other per citizen outcome measures, this figure can help provide insight into the benefits of IT spending
 - *IT FTEs as a percentage of County FTEs* – indicates how much of the County's labor effort goes to IT support; it is also a common point of comparison with other organizations

The discussion includes some comparative metrics based on Pacific Technologies' prior experience. We have provided this data to offer an initial frame of reference for the County's relative performance – and we believe that it is valid for this purpose. **Please be aware that the figures cited do not represent best practices. They merely reflect the “as is” condition of public sector entities that have either hired PTI to perform IT planning work or have responded to PTI's prior performance measure surveys. These are not the result of a County-specific benchmarking effort, as our scope of work did not include this step.**

It should also be noted that the County is larger than most jurisdictions in Pacific Technologies' metrics database. In addition, the majority of the entities used for contrast are cities or states – jurisdictions that do not make ideal comparisons for King County. *The County may wish to pursue independent benchmarking as the best means of providing comparables.* Appendix H lists the organizations included for financial and overall staffing comparisons, along with some of their performance metric results.

The exhibit below presents performance indicators related to the County' desktop and laptop computers.

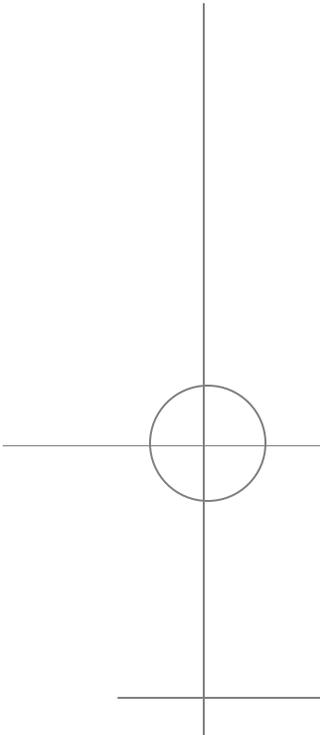


Exhibit 1-9: Desktop Services⁵ Staffing and Costs

Total County Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
11,656	84.76	138	\$ 6,727,156	\$ 577.14

With a workstation-to-workstation support effort ratio of 138:1, the County falls near the median of organizations we have seen (137:1). In environments with a diversity of desktop configurations (such as the County), our experience indicates that this is typical. In addition, note that, over the life of a workstation, the County's support labor costs easily exceed the asset purchase price.

Exhibit 1-10: Server Administration Staffing and Costs

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	14	2.12	7	\$ 175,435	\$ 12,531
File & Print	224	12.43	18	\$ 1,051,709	\$ 4,695
Application	137	11.58	12	\$ 1,002,008	\$ 7,314
Other	457	15.50	29	\$ 1,338,230	\$ 2,928
TOTAL	832	41.62	20	\$ 3,567,383	\$ 4,288

With a server-to-server support effort ratio of 20:1, the County falls below the median of what we have seen in other organizations (27:1). As with workstations, lifetime support costs again exceed the asset purchase price.

While not within the scope of our cost analysis, we also note two other items regarding the County's servers:

- ◆ At 832, the County appears to have a high number of servers relative to organizations that have undergone an architecture optimization process and chosen to pursue server consolidation
- ◆ File & print servers appear to be particularly numerous: the County has a ratio of approximately 52 workstations per file & print server – a low number by today's standards

Exhibit 1-11: IT Operating Expenditure and Staffing Metrics

County Population	1,741,785
Total County FY03 Operating Expenditures	\$1,639,939,023
Total County FY03 FTEs	13,325
Total County FY03 IT FTEs	507
Total County FY03 IT Operating Expenditures	\$ 66,326,946
IT Operating Expenditures Percent of Total Operating Expenditures	4.04%
IT FTEs Percent of Total FTEs	3.80%
IT Operating Expenditures Per FTE	\$ 4,978
IT Operating Expenditures Per Citizen	\$ 38

Prior experiences with government organizations that employ more than 1,000 FTEs indicate that IT operating expenditures as a percentage of total operating expenditures typically range from 1.5% to 3.2%. For the same size organizations, IT FTEs usually comprise approximately 2% to 5% of the work force. The County's spending appears to be above the expected range, while its staffing is in the middle of the range.

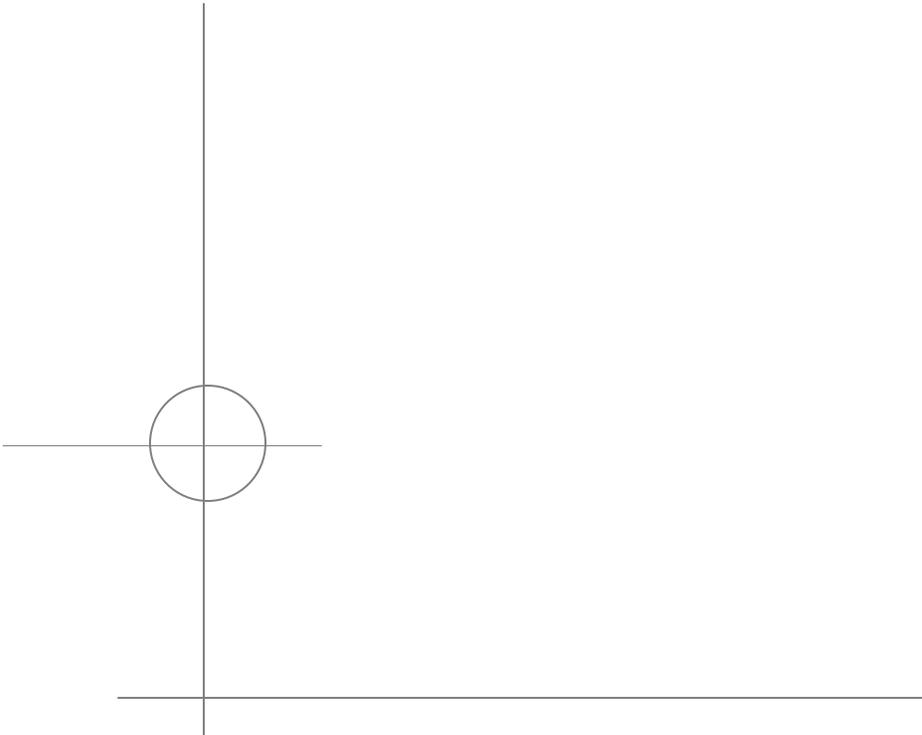
⁵ "Desktop Services" includes the effort associated with Tier 1 (first call) help desk support, Tier 2 desk-side workstation and personal productivity support, and workstation administration only.

We would caution strongly against concluding immediately that the 4.04% IT operating expenditures number indicates that the County is overspending. Sophisticated organizations that have made large technology investments frequently appear at, or above, the high end of the typical range. In addition, circumstances that might drive the County toward the upper end of the scale include:

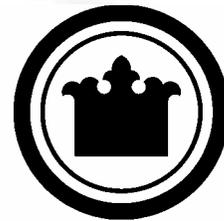
- ◆ The fact that the County relies on two finance systems, two payroll systems, and two human resource systems – a situation identified as a significant cost driver in the County’s ongoing quantified business case effort
- ◆ The County employs ORACLE and PeopleSoft as enterprise applications – we often see organizations with high-end packages such as these at the upper end of the spending range
- ◆ Economic differences between the County and our other data sources – the Pacific Northwest has a relatively high cost of living, and the data has not been adjusted to reflect this
- ◆ Differences in labor cost calculations – for a variety of reasons (e.g., composition of overhead calculation, economic differences, etc.) the County’s average IT labor cost was approximately 20% higher than the average of jurisdictions in PTI’s experience base
- ◆ The wide geographic distribution of the County’s labor force may also cause higher IT support costs

D. CONCLUSION

This study represents the County’s first complete picture of its IT spending. It serves as a useful *starting point* for evaluating what the County is doing well, and where room for improvement exists. It will also provide a solid foundation for evaluating potential changes to the County’s approach to managing information technology. **In the years ahead, it will help the County make informed decisions around IT investments**, particularly in cost-constrained times such as these.



CHAPTER **2**



King County

overall IT costs

King County, Washington
May 26, 2004

This chapter summarizes County expenditures on IT-related goods & services (e.g., computers, software and hardware, professional services, etc.) as well as labor required to maintain and operate the County's IT applications and infrastructure. In analyzing this information, we provide the County with a high-level summary of its IT spending, and lay the groundwork for identifying areas for further analysis. Subsequent chapters examine each of the cost areas presented here in more detail, along with the corresponding labor effort.

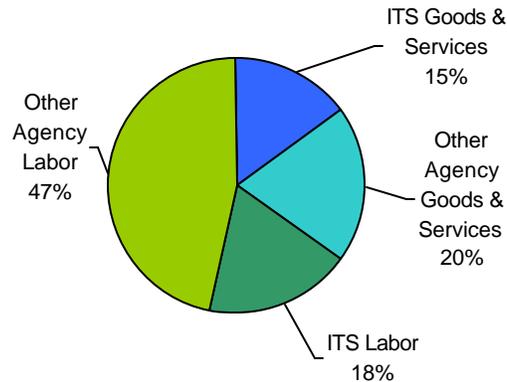
Sections in this chapter cover:

- ◆ A. IT Costs by Category
- ◆ B. IT Costs by Program
- ◆ C. IT Costs by Agency

A. IT COSTS BY CATEGORY

The County spent approximately \$66.3 million on information technology in FY2003. The table and graphic below show how this is divided between labor costs and goods & services costs.

Exhibit 2-1: Total County IT Cost by Category



Category	IT Expenditures
ITS Goods & Services	\$ 10,082,923
Other Agency Goods & Services	\$ 12,973,288
Goods & Service Subtotals	\$ 23,056,211
ITS Labor	\$ 12,252,990
Other Agency Labor	\$ 31,017,745
Labor Subtotal	\$ 43,270,735
TOTAL	\$ 66,326,946

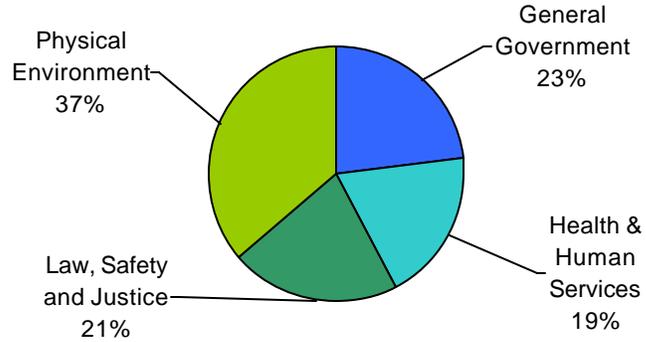
While ITS costs comprise about one-third of County IT costs, virtually all of these costs are passed on to County departments, divisions, and branches, through a cost-distribution algorithm.¹ IT labor in the other agencies comprises nearly half of the County's IT costs. **For the remainder of this report, charts and tables will explicitly indicate when ITS charges have been included in agency costs.**

¹ The cost allocation process involves identifying all expenses for a given ITS cost center (e.g., mainframe support) to establish a total cost for that area. Formulas are then used to allocate that cost to each agency as appropriate.

B. IT COSTS BY PROGRAM

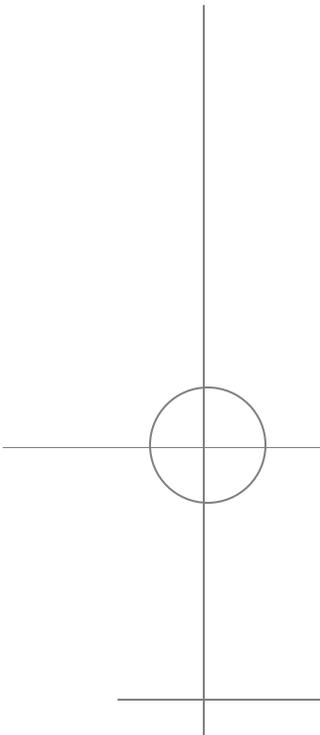
To provide a business context for these IT costs, the graphic and table below group the County's IT expenditures by County budget program areas. As the graphic title indicates, ITS charges are allocated to the budget program to provide a more accurate picture of total program spending.

Exhibit 2-2: IT Costs plus ITS Charges by Budget Program



Program	IT Expenditures
General Government	\$ 15,127,807
Health & Human Services	\$ 12,396,442
Law, Safety and Justice	\$ 13,841,957
Physical Environment	\$ 23,771,560
TOTAL	\$ 65,137,766

At 37%, the physical environment represents the County's largest budget program area expenditure.



C. IT COSTS BY AGENCY

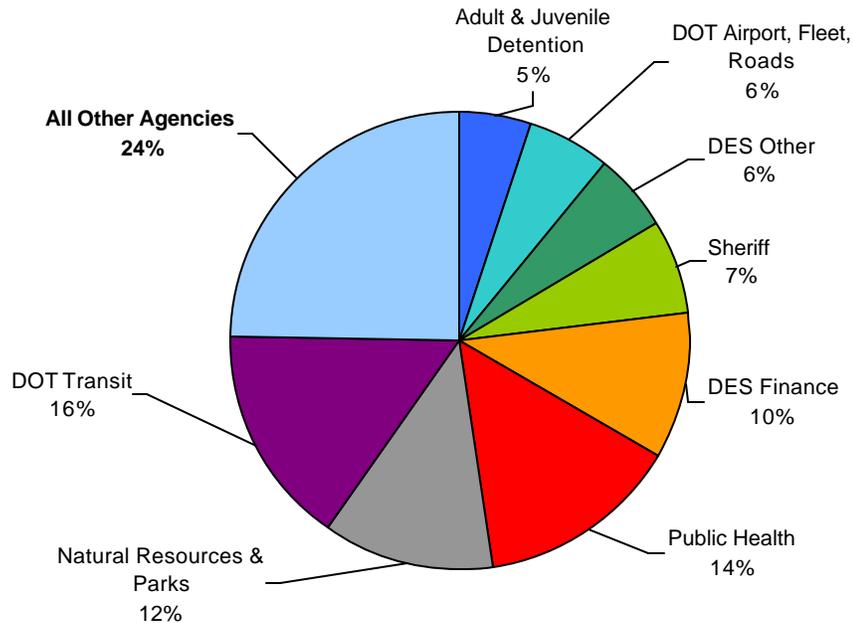
This final section on overall expenditures summarizes IT costs for each of the agencies. *Note that these costs include ITS charges.* Correspondingly, ITS does not appear in the tables or charts.

**Total Operating
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CHAPTER 2:
 Overall IT
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Exhibit 2-3: Total County IT Cost by Agency Including ITS Charges

Agency	IT Expenditures
Adult and Juvenile Detention	\$ 3,339,137
Assessor	\$ 1,545,894
Community and Human Services	\$ 3,124,735
Council	\$ 394,507
Development and Environmental Services	\$ 2,090,168
District Court	\$ 1,033,541
Executive (Budget, Executive, Economic Development, OIRM)	\$ 1,699,322
Executive Services: Finance	\$ 6,779,859
Executive Services: Human Resources	\$ 984,858
Executive Services: Other	\$ 3,723,366
Judicial Administration	\$ 1,484,763
Natural Resources and Parks	\$ 7,829,382
Prosecuting Attorney	\$ 1,680,690
Public Health	\$ 9,271,707
Sheriff	\$ 4,324,402
Superior Court	\$ 1,979,424
Transportation: Airport, Fleet Administration, and Road Services	\$ 3,627,833
Transportation: Transit	\$ 10,224,177
TOTAL	\$ 65,137,766



DOT Transit, Natural Resources and Parks, and Public Health represent the three agencies with the highest IT costs. Chapter 3 provides additional detail on the composition of those costs.

The table below compares agency IT operating spending with total agency operating spending. While using this metric to compare different agencies has little meaning, **this metric can serve as an important benchmark in comparisons with similar agencies elsewhere. In total, it also provides a gauge of overall IT investment at the County.**

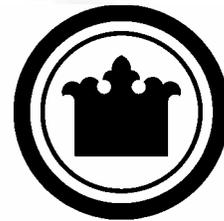
**Total Operating
 Cost of
 Technology
 Final Report**

**CHAPTER 2:
 Overall IT
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**Exhibit 2-4: Agency IT Operating Spending Including ITS Charges as a
 Percentage of Total Operating Spending²**

Agency	Overall Expenditures	IT Expenditures	IT as Percent of Overall
Adult and Juvenile Detention	\$ 103,011,019	\$ 3,339,137	3.2%
Assessor	\$ 16,679,530	\$ 1,545,894	9.3%
Community and Human Services	\$ 178,948,000	\$ 3,124,735	1.7%
Council	\$ 14,118,451	\$ 394,507	2.8%
Development and Environmental Services	\$ 29,000,000	\$ 2,090,168	7.2%
District Court	\$ 20,505,790	\$ 1,033,541	5.0%
Executive (Budget, Executive, Economic Development, OIRM)	\$ 10,211,043	\$ 1,699,322	16.6%
Executive Services: Finance	\$ 23,700,382	\$ 6,779,859	28.6%
Executive Services: Human Resources	\$ 9,111,408	\$ 984,858	10.8%
Executive Services: Other	\$ 56,263,733	\$ 3,723,366	6.6%
Judicial Administration	\$ 14,045,911	\$ 1,484,763	10.6%
Natural Resources and Parks	\$ 236,821,019	\$ 7,829,382	3.3%
Prosecuting Attorney	\$ 43,500,000	\$ 1,680,690	3.9%
Public Health	\$ 250,000,000	\$ 9,271,707	3.7%
Sheriff	\$ 99,503,862	\$ 4,324,402	4.3%
Superior Court	\$ 40,691,998	\$ 1,979,424	4.9%
Transportation: Airport, Fleet Administration, and Road Services	\$ 104,565,477	\$ 3,627,833	3.5%
Transportation: Transit	\$ 389,261,400	\$ 10,224,177	2.6%
TOTAL	\$ 1,639,939,023	\$ 65,137,766	4.0%

² Note that some spending data may be missing for a few agencies. Refer to Appendix D for additional information. Secondly, Executive includes OIRM, a county-wide IT service provider. This increased their expenses accordingly. Refer to Appendix A for additional information.



King County

**centralized versus
distributed IT costs**

King County, Washington
May 26, 2004

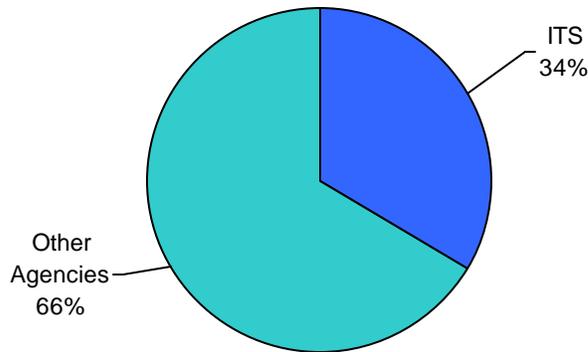
This chapter analyzes current IT costs within the County by provider, comparing the County’s central service provider (i.e., ITS) with distributed service providers (e.g., IT effort within the other agencies). We have defined classifications of IT service provision as follows:

- ◆ **Centralized** – IT effort and associated costs provided by ITS
- ◆ **Distributed IT Unit** – IT effort and associated costs within a formal IT organization that resides in an agency other than ITS
- ◆ **Distributed Business Unit** – IT effort and associated costs provided by IT-titled staff that do not report to a formal IT organization
- ◆ **Shadow Effort** – IT effort and associated costs provided by non-IT-titled staff who spend 10% or more of their time performing those tasks on behalf of other staff

This sort of analysis potentially helps an organization identify centers of excellence, as well as opportunities for efficiency improvements.

The chart below presents a summary of IT spending by ITS compared to the 18 other agencies analyzed in this report. As the chart indicates, approximately one-third of the County’s total IT cost is represented by ITS – its central IT service provider.

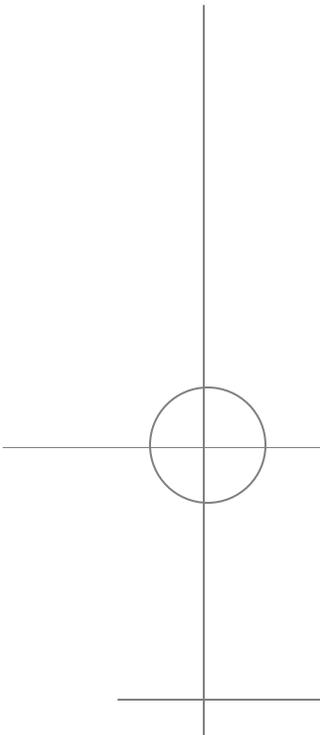
Exhibit 3-1: Total County IT Costs: Centralized vs. Distributed



TOTAL: \$66.3 Million

The remainder of this chapter summarizes centralized and distributed costs along the following lines:

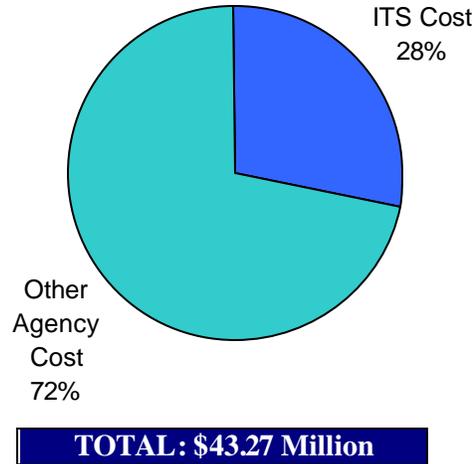
- ◆ A. Distribution of IT Labor Costs
- ◆ B. Distribution of IT Labor Effort
- ◆ C. Distribution of IT Goods & Services Costs



A. DISTRIBUTION OF IT LABOR COSTS

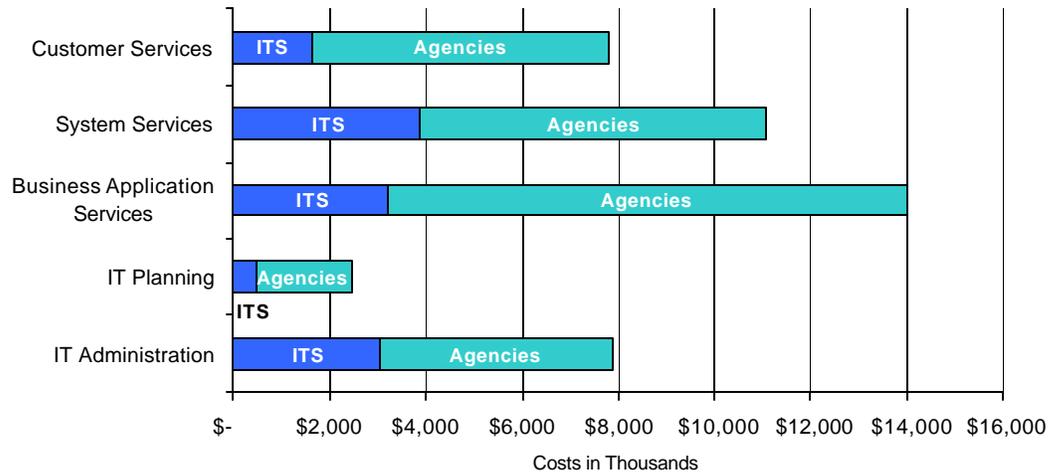
The following graph contrasts ITS and other agency labor costs .

Exhibit 3-2: ITS Labor Costs Compared to Other Agency IT Labor Costs



The chart and table below summarize ITS and other agency labor costs for the IT functions they provide.

Exhibit 3-3: ITS and Other Agency Labor Costs by IT Function



IT Function	ITS Cost	Other Agency Cost	TOTAL
Customer Services	\$ 1,631,493	\$ 6,166,271	\$ 7,797,765
System Services	\$ 3,891,713	\$ 7,177,351	\$ 11,069,064
Business Application Services	\$ 3,219,329	\$ 10,792,230	\$ 14,011,559
IT Planning	\$ 461,559	\$ 2,033,394	\$ 2,494,954
IT Administration	\$ 3,048,895	\$ 4,848,498	\$ 7,897,393
TOTAL	\$ 12,252,990	\$ 31,017,745	\$ 43,270,735

The following chart presents the level of effort associated with each functional area. Dividing the labor cost by the total FTE of effort for each IT function allows us to calculate the *average cost per FTE of effort* for ITS and the agencies.

Exhibit 3-4: Cost per FTE of Effort Comparison

IT Function	Agency	
	Average FTE Cost	ITS Average FTE Cost
Customer Services	\$ 78,313	\$ 77,690
System Services	\$ 84,320	\$ 84,695
Business Application Services	\$ 84,340	\$ 89,030
IT Planning	\$ 97,328	\$ 104,900
IT Administration	\$ 92,532	\$ 88,323
OVERALL	\$ 84,955	\$ 86,270

There is little difference in overall average labor cost between ITS and the agencies. Since IT labor effort and cost proportions are virtually identical, the graphics in the next section relating to IT labor *effort* can also be applied to IT labor *cost*.

B. DISTRIBUTION OF IT LABOR EFFORT

This section further refines our assessment of centralized versus distributed labor. It analyzes the allocation of labor effort across different service provider types in the County, organized as follows:

- ◆ Summary of Labor Allocation
- ◆ Analysis of Agencies with More Than 25 IT FTEs

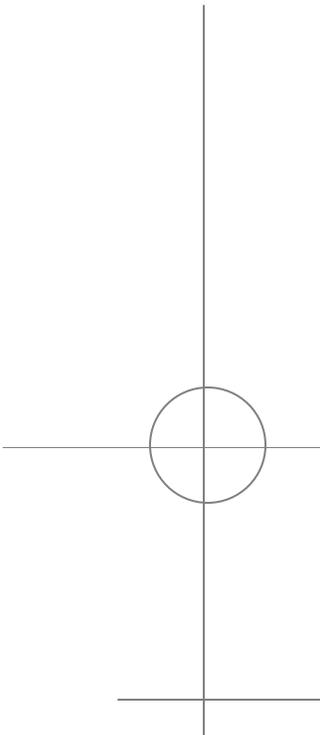
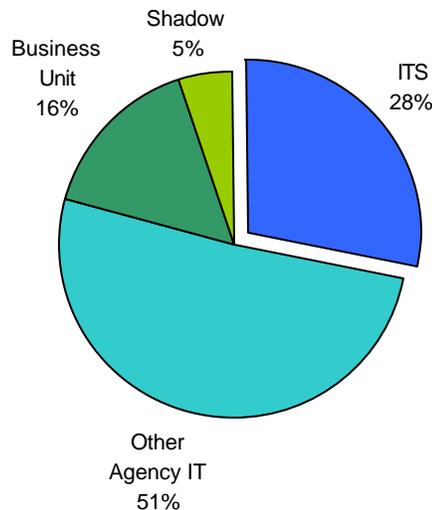
SUMMARY OF LABOR ALLOCATION

We asked the agencies to characterize their IT labor effort as being performed by:

- ◆ Their central IT organization
- ◆ IT staff within the business units
- ◆ Shadow staff

The chart below shows the percentage of each category.

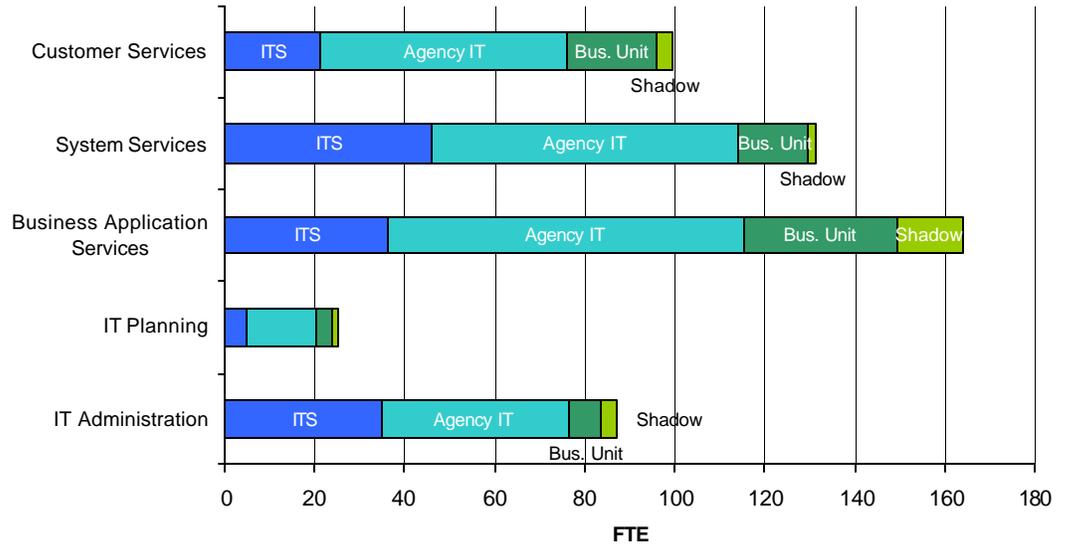
Exhibit 3-5: IT Labor Effort by Provider



Nearly 70% of all IT effort occurs within a formal IT agency – either in ITS or the distributed IT units. From an enterprise view, **the County has a distributed IT model, with over 70% of IT labor effort originating in agencies other than ITS.**

The following graphic and subsequent table provide more detail on the FTE levels of effort for IT functions by service provider category.

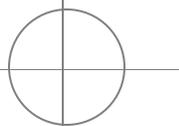
Exhibit 3-6: Level of Effort per IT Function by Service Provider



IT Function	Centralized (ITS) FTE	Distributed IT Unit FTE	Distributed Business Unit FTE	Distributed Shadow FTE	TOTAL
Customer Services	21.00	55.01	19.85	3.88	99.74
System Services	45.95	68.00	15.70	1.42	131.07
Business Application Services	36.16	79.15	34.20	14.61	164.12
IT Planning	4.40	15.73	3.46	1.71	25.29
IT Administration	34.52	41.66	7.22	3.52	86.92
TOTAL	142.03	259.55	80.42	25.14	507.14

ANALYSIS OF AGENCIES WITH MORE THAN 25 IT FTES

The previous subsection compared and contrasted labor effort provided by ITS, the other agency business units, other agency IT units, and shadow staff. This subsection examines the distribution of effort in the three agencies with comparatively large IT labor units (i.e., greater than 25 FTE) along similar lines of analysis. These agencies – Public Health, Natural Resources & Parks, and DOT Transit – comprise the three largest IT service providers outside of ITS.

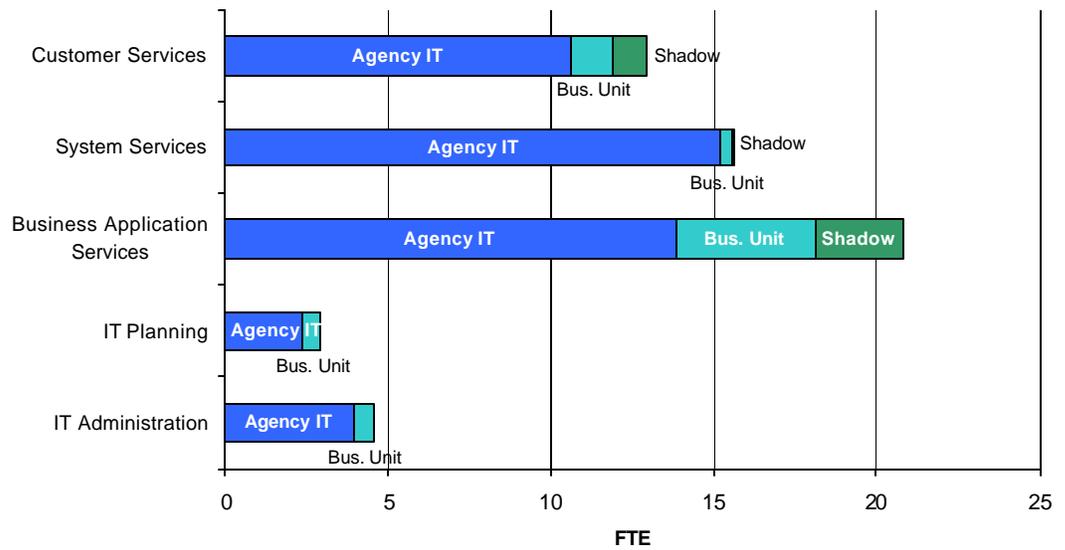


PUBLIC HEALTH

Exhibit 3-7: Public Health – Level of Effort per IT Function

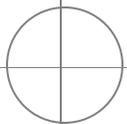
**Total Operating
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**CHAPTER 3:
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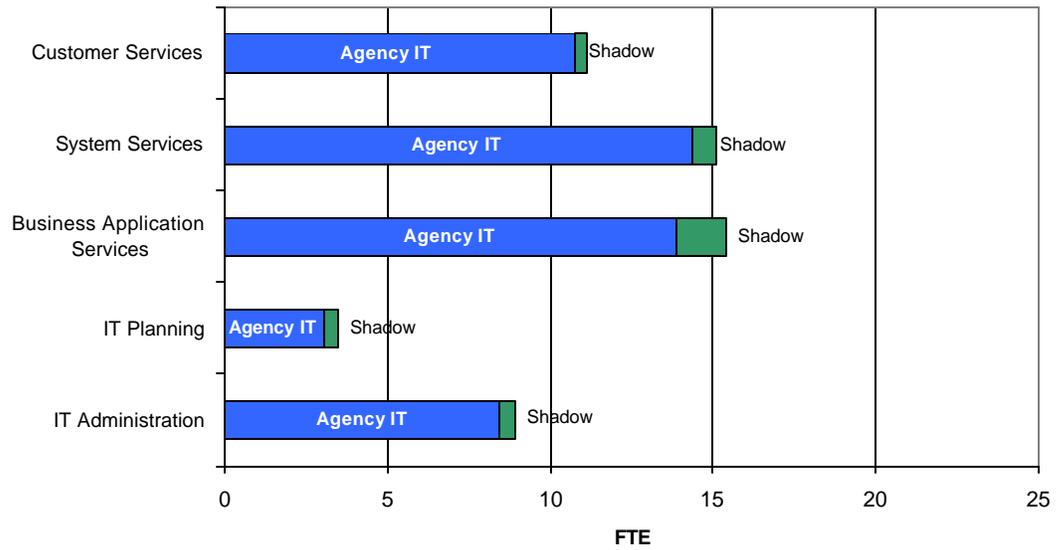
IT Function	Agency IT Unit FTE	Agency Business Unit FTE	Agency Shadow FTE	TOTAL
Customer Services	10.60	1.30	1.06	12.96
System Services	15.23	0.30	0.10	15.63
Business Application Services	13.82	4.30	2.70	20.82
IT Planning	2.40	0.50	0.00	2.90
IT Administration	3.95	0.60	0.00	4.55
TOTAL	46.00	7.00	3.86	56.86

The charts above indicate that IT service delivery at Public Health is largely consolidated within the agency's formal IT organization, with approximately 80% of the effort originating within the agency's IT unit.



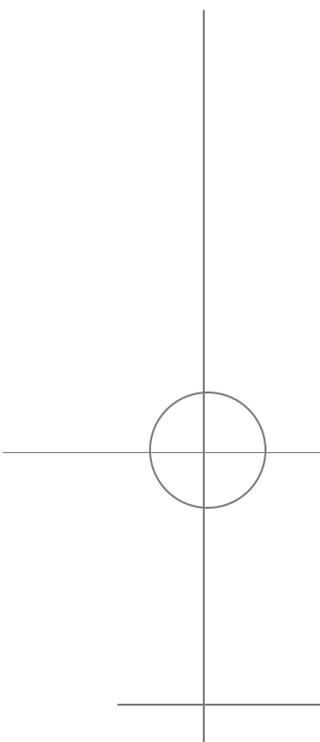
NATURAL RESOURCES AND PARKS

Exhibit 3-8: Natural Resources & Park's – Level of Effort per IT Function



IT Function	Agency IT Unit FTE	Agency Business Unit FTE	Agency Shadow FTE	TOTAL
Customer Services	10.74	0.00	0.40	11.14
System Services	14.35	0.00	0.80	15.15
Business Application Services	13.90	0.00	1.55	15.45
IT Planning	3.04	0.00	0.45	3.49
IT Administration	8.47	0.00	0.45	8.92
TOTAL	50.50	0.00	3.65	54.15

For DNRP, the majority of the IT effort is located in the agency's IT units. **It should be noted that a portion of the IT effort within DNRP is in support of the GIS function.** DNRP provides this service for the entire County – charging users accordingly.

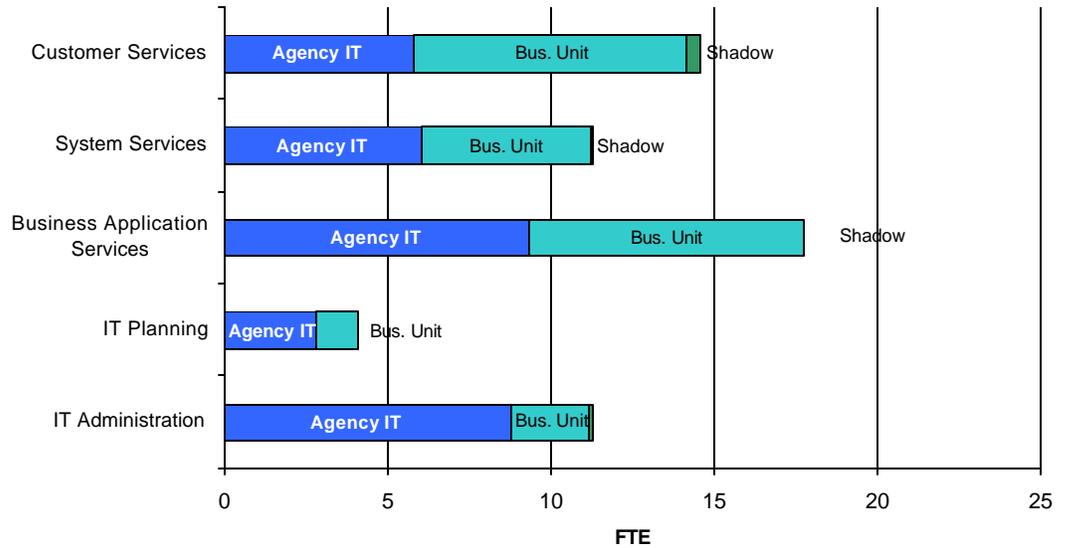


DOT TRANSIT

Exhibit 3-9: DOT Transit – Level of Effort per IT Function

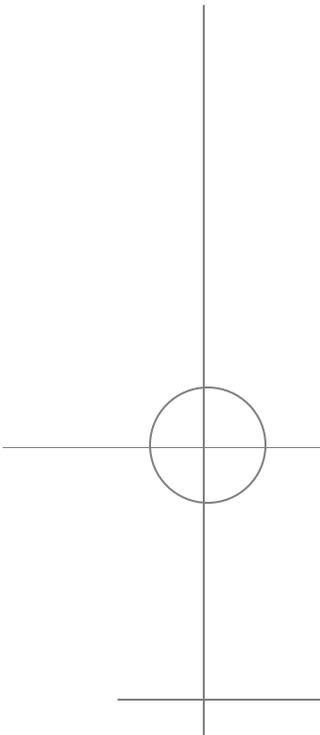
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IT Function	Agency IT Unit FTE	Agency Business Unit FTE	Agency Shadow FTE	TOTAL
Customer Services	5.82	8.36	0.40	14.58
System Services	6.05	5.19	0.05	11.29
Business Application Services	9.35	8.43	0.00	17.78
IT Planning	2.81	1.32	0.00	4.13
IT Administration	8.76	2.40	0.10	11.26
TOTAL	32.79	25.70	0.55	59.04

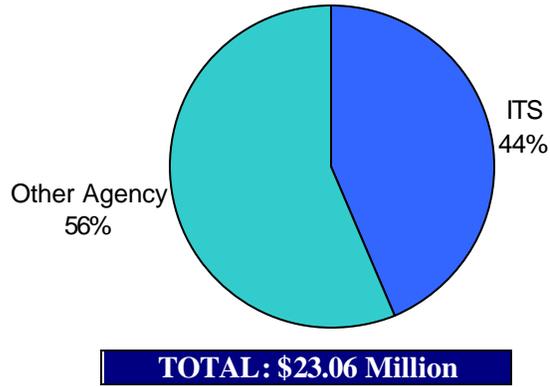
For DOT Transit, the agency’s provision of effort is spread throughout the organization.



C. DISTRIBUTION OF IT GOODS & SERVICES COSTS

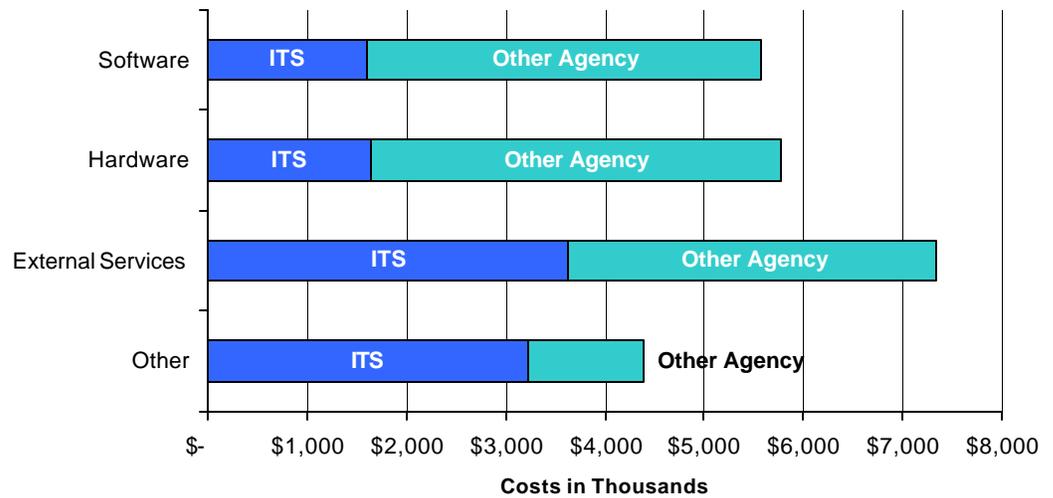
We asked ITS and the other agencies for summary-level information on FY2003 IT goods & services expenditures. The chart that follows graphically displays this expenditure information.

Exhibit 3-10: Goods & Services Expenditures by ITS and the Other Agencies¹



The following bar chart summarizes the County's goods & services expenditures by cost category and provider.

Exhibit 3-11: Goods & Services Expenditures by Category and Service Provider²

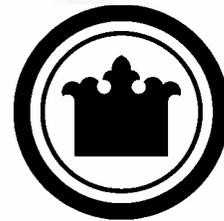


The final table in this chapter provides more detailed information for each cost category, again broken down by service provider. Note that ITS charges have been removed from the agency costs to avoid double counting.

¹ Note that we have removed ITS charges from the agency totals to avoid double counting.
² The "Other" Category includes debt service and O&M spending that could not be cleanly allocated to the other categories. ITS' "Other" costs also include their own administrative expenses, including facilities, internal service charges paid to other agencies, etc. We again removed ITS charges from the agency costs to avoid double counting.

Exhibit 3-12: Detailed Goods & Services Expenditures by Provider

Goods & Services Expenditures	ITS	Other Agency	TOTAL
Software			
MSA system maintenance	\$ 95,405	\$ 43,451	\$ 138,856
PeopleSoft system maintenance	\$ -	\$ 341,982	\$ 341,982
Fixed Asset system maintenance	\$ -	\$ -	\$ -
Other FMS maintenance	\$ -	\$ 4,570	\$ 4,570
Other payroll system maintenance	\$ -	\$ 113,989	\$ 113,989
Other budget system maintenance	\$ -	\$ 31,000	\$ 31,000
Other HR system maintenance	\$ -	\$ 2,654	\$ 2,654
Agency Packaged Applications	\$ -	\$ 589,939	\$ 589,939
DBMS maintenance/license	\$ 7,102	\$ 552,282	\$ 559,384
System software licenses	\$ 688,270	\$ 475,107	\$ 1,163,377
Mainframe OS & utilities	\$ 661,193	\$ 6,500	\$ 667,693
Desktop operating systems	\$ 132,663	\$ 263,075	\$ 395,738
Telco software	\$ -	\$ -	\$ -
Personal productivity licenses	\$ 18,065	\$ 1,387,085	\$ 1,405,150
Other	\$ -	\$ 139,885	\$ 139,885
Software Totals	\$ 1,602,698	\$ 3,951,519	\$ 5,554,218
Hardware			
Workstations	\$ 108,729	\$ 1,668,863	\$ 1,777,592
Servers	\$ 106,650	\$ 572,252	\$ 678,902
Mainframe computers	\$ 522,701	\$ 108,100	\$ 630,801
Mid-range computers	\$ 8,502	\$ 54,540	\$ 63,042
Mobile devices	\$ 52,508	\$ 500,232	\$ 552,740
Storage	\$ 1,433	\$ 173,561	\$ 174,994
Network equipment/infrastructure	\$ 484,610	\$ 256,121	\$ 740,731
Telco back-end	\$ 349,124	\$ 29,000	\$ 378,124
Printers	\$ 4,589	\$ 248,257	\$ 252,846
Other	\$ -	\$ 527,283	\$ 527,283
Hardware Totals	\$ 1,638,846	\$ 4,138,208	\$ 5,777,054
External Services			
Application development	\$ -	\$ 592,494	\$ 592,494
Application maintenance	\$ -	\$ 1,487,091	\$ 1,487,091
Workstation support	\$ -	\$ 110,053	\$ 110,053
Server support	\$ -	\$ 176,354	\$ 176,354
Telecom:	\$ -	\$ -	\$ -
Land-line related	\$ 250,102	\$ 453,172	\$ 703,274
Cellular & pager related	\$ 23,409	\$ 368,494	\$ 391,903
Networking	\$ 1,829,830	\$ 72,621	\$ 1,902,451
IT training	\$ 382,720	\$ 239,694	\$ 622,414
Management consulting	\$ 63,107	\$ 107,054	\$ 170,161
Other	\$ 1,082,750	\$ 102,308	\$ 1,185,058
External Services Totals	\$ 3,631,918	\$ 3,709,336	\$ 7,341,253
Other			
IT-related debt service	\$ -	\$ 400,000	\$ 400,000
All other O & M IT spending	\$ 3,363,641	\$ 774,225	\$ 3,983,686
Other Totals	\$ 3,363,641	\$ 1,174,225	\$ 4,383,686
TOTAL	\$ 10,237,103	\$ 12,973,288	\$ 23,056,211



King County

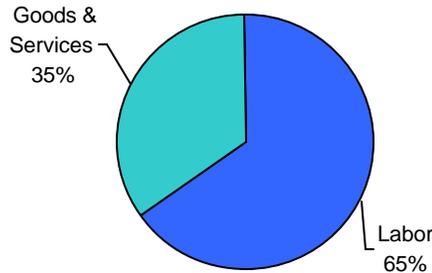
**IT labor cost and
effort analysis**

King County, Washington
May 26, 2004

This chapter examines the County’s IT labor effort. When discussing IT labor effort, we consider both the actual FTE level of effort, and the cost associated with that effort. This analysis allows insight into County and agency priorities based on level of effort and promotes an understanding of where the greatest opportunities for savings may be.

As shown by the chart below, labor accounts for approximately two-thirds of the County’s IT costs.

Exhibit 4-1: Total County IT Costs – Labor vs. Goods & Services



TOTAL: \$66.3 Million

We organized our analysis as follows:

- ◆ A. IT Labor Costs
- ◆ B. IT Labor Effort

A. IT LABOR COSTS

The table below summarizes the total IT labor cost by agency.

Exhibit 4-2: Agency IT Labor Cost

Agency	IT Labor Cost
Adult and Juvenile Detention	\$ 521,715
Assessor	\$ 1,016,975
Community and Human Services	\$ 1,502,161
Council	\$ 172,996
Development and Environmental Services	\$ 1,348,541
District Court	\$ 345,006
Executive (Budget, Executive, Economic Development, OIRM)	\$ 994,737
Executive Services: Finance	\$ 1,802,682
Executive Services: Human Resources	\$ 603,558
Executive Services: Information and Telecommunications Services	\$ 12,252,990
Executive Services: Other	\$ 1,258,762
Judicial Administration	\$ 664,967
Natural Resources and Parks	\$ 4,779,911
Prosecuting Attorney	\$ 806,934
Public Health	\$ 4,743,767
Sheriff	\$ 2,161,449
Superior Court	\$ 807,223
Transportation: Airport, Fleet Administration, and Road Services	\$ 2,032,163
Transportation: Transit	\$ 5,454,198
TOTAL	\$ 43,270,735

As previously indicated, virtually all ITS costs are charged back to the other agencies through cost allocation formulas. The following table presents an estimate¹ of the labor portion of that allocation to each agency, providing an approximation of the total of labor expenditure (internal and through ITS) for each agency.

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CHAPTER 4:
 IT Labor Cost and
 Effort Analysis

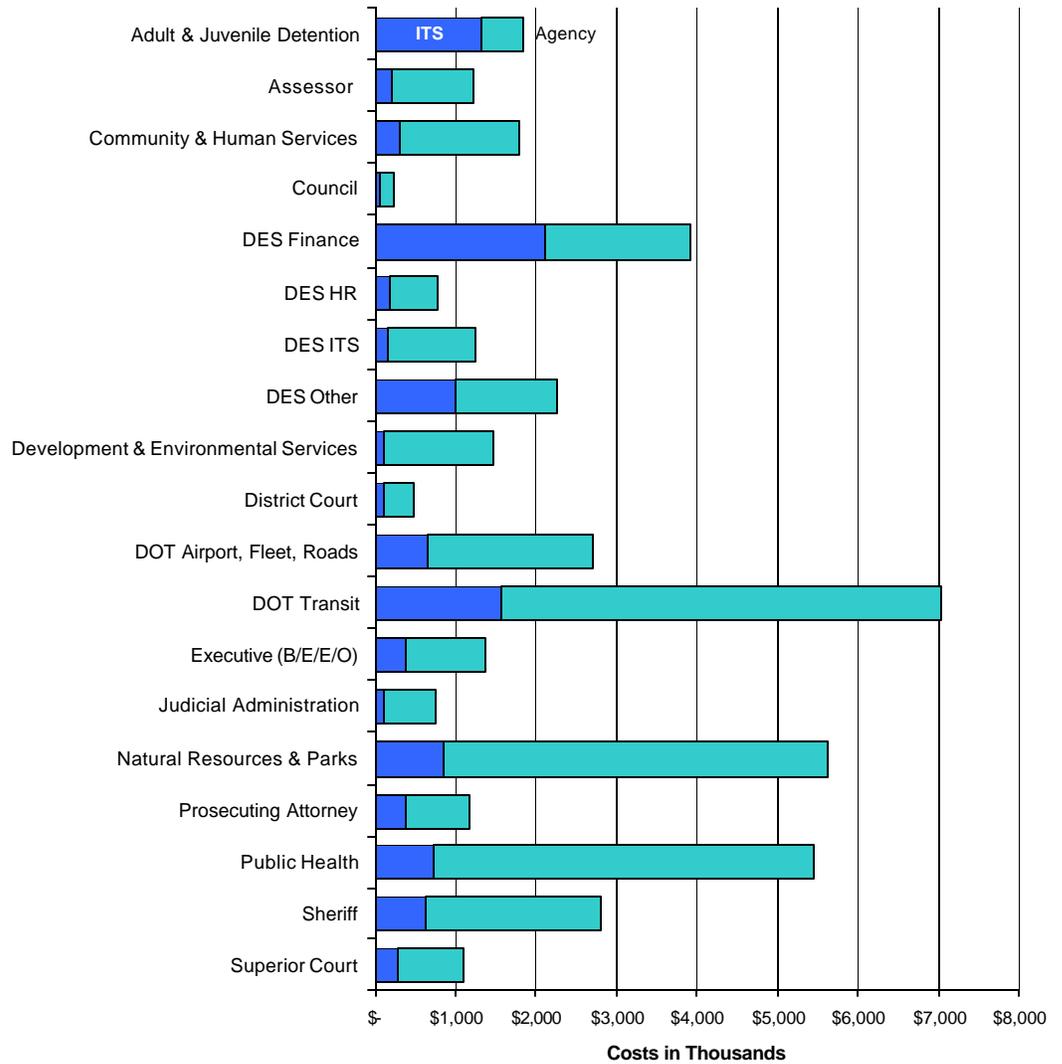
Exhibit 4-3: Agency IT Labor Costs with ITS Labor Charges

Agency	IT Labor Cost Without ITS \$	ITS Labor Charges	IT Labor Cost With ITS \$
Adult & Juvenile Detention	\$ 521,715	\$ 1,326,268	\$ 1,847,983
Assessor	\$ 1,016,975	\$ 193,297	\$ 1,210,272
Community & Human Services	\$ 1,502,161	\$ 304,764	\$ 1,806,925
Council	\$ 172,996	\$ 68,191	\$ 241,187
DES Finance	\$ 1,802,682	\$ 2,116,296	\$ 3,918,978
DES HR	\$ 603,558	\$ 173,068	\$ 776,626
DES Other	\$ 1,258,762	\$ 994,824	\$ 2,253,585
Development & Environmental Services	\$ 1,348,541	\$ 122,562	\$ 1,471,103
District Court	\$ 345,006	\$ 127,732	\$ 472,738
DOT Airport, Fleet, Roads	\$ 2,032,163	\$ 663,287	\$ 2,695,449
DOT Transit	\$ 5,454,198	\$ 1,584,834	\$ 7,039,032
Executive (B/E/E/O)	\$ 994,737	\$ 382,279	\$ 1,377,016
Judicial Administration	\$ 664,967	\$ 95,290	\$ 760,257
Natural Resources & Parks	\$ 4,779,911	\$ 837,848	\$ 5,617,759
Prosecuting Attorney	\$ 806,934	\$ 371,603	\$ 1,178,537
Public Health	\$ 4,743,767	\$ 725,343	\$ 5,469,110
Sheriff	\$ 2,161,449	\$ 632,750	\$ 2,794,199
Superior Court	\$ 807,223	\$ 287,838	\$ 1,095,061
TOTAL	\$ 31,017,745	\$ 11,008,074	\$ 42,025,819

The following bar chart graphically presents the data in this table.

¹ ITS labor charges are estimated in this report due to two accounting constraints faced by ITS. First, ITS often does not charge the other agencies directly for labor. Rather, ITS labor and goods & services costs are combined into cost centers within ITS. Actual ITS chargebacks are driven by these cost center totals. Additionally, ITS is a “straddle agency” – it uses both of the County’s payroll systems making it difficult to effectively report on and provide accurate labor allocation information for this study. Accordingly, ITS was only able to estimate the labor portion of each agency’s total charge.

Exhibit 4-4: Agency IT Labor Costs with ITS Labor Charges



The remainder of this section examines labor cost by functional area. The following graphic presents the distribution of effort across the five major IT functional areas of analysis .

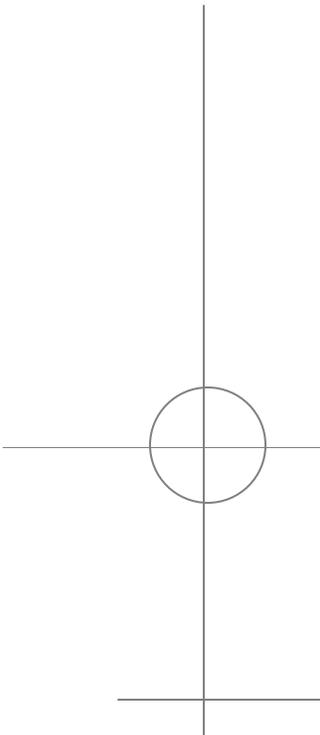
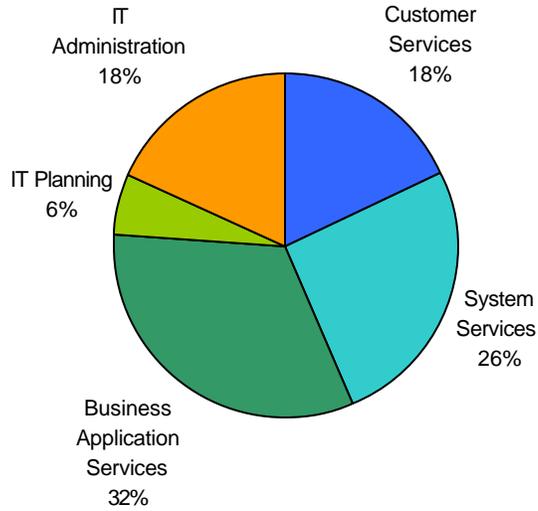


Exhibit 4-5: IT Labor Costs by Functional Area



The next two tables outline agency costs per labor function area. For more information on each agency's cost at the detailed level, please see Appendix B.

The first table looks at total costs for each agency, without allocating ITS labor.

Exhibit 4-6: Agency IT Labor Costs by Functional Area

Agency	Customer Services	System Services	Business Application Services	IT Planning	IT Administration	TOTAL
Adult & Juvenile Detention	\$ 180,582	\$ 91,783	\$ 149,617	\$ 29,086	\$ 70,647	\$ 521,715
Assessor	\$ 175,721	\$ 79,663	\$ 610,530	\$ 30,674	\$ 120,387	\$ 1,016,975
Community & Human Services	\$ 173,601	\$ 462,080	\$ 598,821	\$ 114,511	\$ 153,149	\$ 1,502,161
Council	\$ 100,198	\$ 63,549	\$ -	\$ 9,250	\$ -	\$ 172,996
DES Finance	\$ 105,407	\$ 202,368	\$ 1,314,365	\$ 1,162	\$ 179,380	\$ 1,802,682
DES HR	\$ 56,831	\$ 139,437	\$ 274,075	\$ 63,698	\$ 69,517	\$ 603,558
DES ITS	\$ 1,631,493	\$ 3,891,713	\$ 3,219,329	\$ 461,559	\$ 3,048,895	\$ 12,252,990
DES Other	\$ 356,963	\$ 307,520	\$ 374,976	\$ 83,636	\$ 135,666	\$ 1,258,762
Development & Environmental Services	\$ 114,582	\$ 225,100	\$ 836,355	\$ 37,463	\$ 135,041	\$ 1,348,541
District Court	\$ 104,044	\$ 70,357	\$ 77,756	\$ 33,320	\$ 59,528	\$ 345,006
DOT Airport, Fleet, Roads	\$ 205,237	\$ 480,803	\$ 836,306	\$ 211,129	\$ 298,688	\$ 2,032,163
DOT Transit	\$ 1,286,634	\$ 1,091,452	\$ 1,613,572	\$ 402,870	\$ 1,059,670	\$ 5,454,198
Executive (B/E/E/O)	\$ 85,198	\$ 50,834	\$ 100,754	\$ 272,267	\$ 485,683	\$ 994,737
Judicial Administration	\$ 92,214	\$ 122,144	\$ 226,923	\$ 49,603	\$ 174,084	\$ 664,967
Natural Resources & Parks	\$ 919,219	\$ 1,291,424	\$ 1,360,258	\$ 329,322	\$ 879,688	\$ 4,779,911
Prosecuting Attorney	\$ 287,135	\$ 249,625	\$ 118,309	\$ 54,168	\$ 97,697	\$ 806,934
Public Health	\$ 956,580	\$ 1,280,010	\$ 1,800,204	\$ 279,137	\$ 427,836	\$ 4,743,767
Sheriff	\$ 827,729	\$ 635,836	\$ 265,594	\$ -	\$ 432,290	\$ 2,161,449
Superior Court	\$ 138,396	\$ 333,366	\$ 233,816	\$ 32,099	\$ 69,547	\$ 807,223
TOTAL	\$ 7,797,765	\$ 11,069,064	\$ 14,011,559	\$ 2,494,954	\$ 7,897,393	\$ 43,270,735

The second table removes ITS by allocating its labor charges to each of the other agencies across the functional areas, providing an individual agency's perspective.

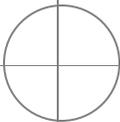


Exhibit 4-7: Agency Labor Costs by IT Functional Area with ITS Allocations

Agency	Customer Services		System Services		Business Application Services		IT Administration		TOTAL
Adult & Juvenile Detention	\$ 193,287	\$ 606,572	\$ 634,373	\$ 47,769	\$ 365,982	\$ 1,847,983			
Assessor	\$ 178,679	\$ 156,435	\$ 672,116	\$ 33,767	\$ 169,276	\$ 1,210,272			
Community & Human Services	\$ 178,143	\$ 558,965	\$ 745,100	\$ 117,906	\$ 206,811	\$ 1,806,925			
Council	\$ 102,225	\$ 95,936	\$ 10,427	\$ 10,639	\$ 21,960	\$ 241,187			
DES Finance	\$ 108,071	\$ 1,005,876	\$ 2,256,460	\$ 23,059	\$ 525,513	\$ 3,918,978			
DES HR	\$ 57,906	\$ 195,555	\$ 351,431	\$ 65,989	\$ 105,743	\$ 776,626			
DES Other	\$ 363,869	\$ 696,471	\$ 798,999	\$ 94,044	\$ 300,202	\$ 2,253,585			
Development & Environmental Services	\$ 117,531	\$ 291,445	\$ 849,042	\$ 39,877	\$ 173,208	\$ 1,471,103			
District Court	\$ 106,953	\$ 128,477	\$ 105,679	\$ 35,627	\$ 96,001	\$ 472,738			
DOT Airport, Fleet, Roads	\$ 214,758	\$ 642,401	\$ 1,171,801	\$ 220,451	\$ 446,039	\$ 2,695,449			
DOT Transit	\$ 1,333,074	\$ 1,986,755	\$ 1,748,181	\$ 433,123	\$ 1,537,900	\$ 7,039,032			
Executive (B/E/E/O)	\$ 86,397	\$ 258,401	\$ 208,603	\$ 276,174	\$ 547,442	\$ 1,377,016			
Judicial Administration	\$ 94,982	\$ 176,255	\$ 236,314	\$ 51,329	\$ 201,377	\$ 760,257			
Natural Resources & Parks	\$ 943,954	\$ 1,739,656	\$ 1,480,632	\$ 343,869	\$ 1,109,648	\$ 5,617,759			
Prosecuting Attorney	\$ 293,391	\$ 408,551	\$ 222,856	\$ 60,229	\$ 193,508	\$ 1,178,537			
Public Health	\$ 975,860	\$ 1,656,527	\$ 1,893,047	\$ 293,220	\$ 650,456	\$ 5,469,110			
Sheriff	\$ 841,253	\$ 899,996	\$ 431,626	\$ 11,247	\$ 610,077	\$ 2,794,199			
Superior Court	\$ 143,538	\$ 441,644	\$ 335,321	\$ 36,437	\$ 138,122	\$ 1,095,061			
TOTAL	\$ 6,333,872	\$ 11,945,919	\$ 14,152,008	\$ 2,194,757	\$ 7,399,264	\$ 42,025,819			

Shifting from ITS labor costs in Exhibit 4-6 to ITS labor charges in Exhibit 4-7 drops the total by nearly \$1 million due to a difference between the costs we collected from ITS, and their charges to the other agencies for 2003. Two primary factors appear to drive the differences:

- ◆ Some ITS labor is charged to parties outside the County (e.g., I-Net) – we collected this cost, but our analysis does not reflect the associated offsetting revenue
- ◆ The approximation we used to arrive at annual labor costs (see Appendix A) may have exceeded ITS' actual labor charges

The final chart in this section depicts the total cost and unit cost per IT function for each functional area. The table presents the total County cost, total FTE level of effort, and cost per FTE of effort for each of the functions analyzed.

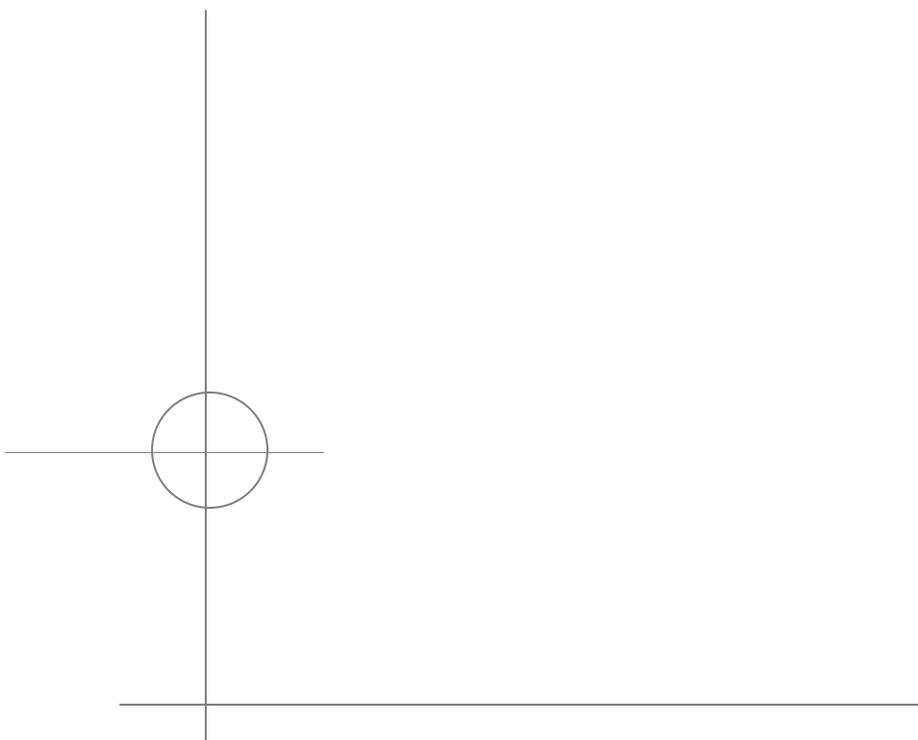


Exhibit 4-8: IT Labor Cost Per Function

**Total Operating
 Cost of
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**CHAPTER 4:
 IT Labor Cost and
 Effort Analysis**

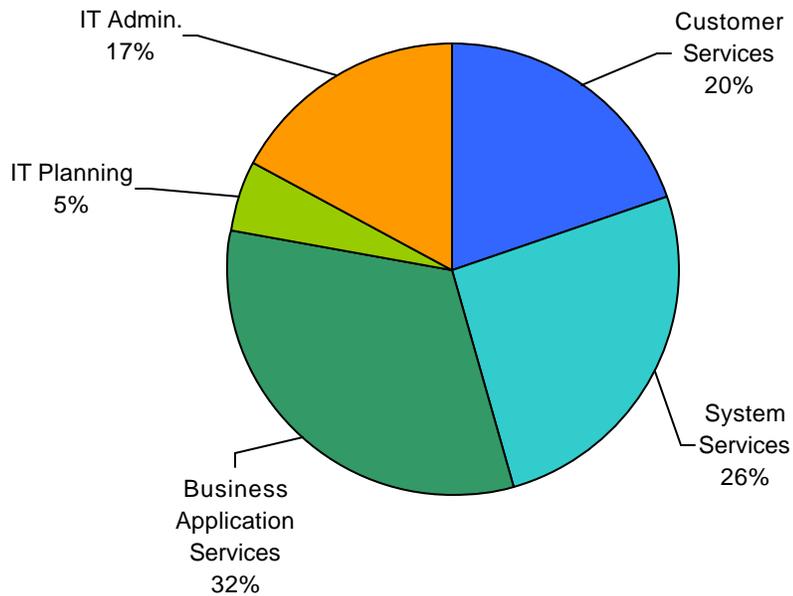
IT Function	Cost	FTE	Cost per FTE
Customer Services	\$ 7,797,765	99.74	\$ 78,182
Help Desk (Tier 1)	\$ 1,534,006	19.94	\$ 76,944
<i>Tier 2 support:</i>			
Desktop PC support	\$ 3,079,208	40.23	\$ 76,540
PDA support	\$ 182,190	2.27	\$ 80,437
Other portable/specialized device support	\$ 474,331	5.91	\$ 80,259
Personal productivity tool support	\$ 414,788	5.21	\$ 79,690
Business application support	\$ 1,364,737	16.92	\$ 80,648
Training	\$ 748,504	9.27	\$ 80,745
System Services	\$ 11,069,064	131.07	\$ 84,452
Network connectivity (WAN/LAN/wireless)	\$ 2,193,135	25.68	\$ 85,402
Workstation administration	\$ 1,032,233	13.48	\$ 76,575
<i>Server administration:</i>			
Email administration	\$ 175,435	2.12	\$ 82,753
File/print administration	\$ 1,051,709	12.43	\$ 84,633
GIS server administration	\$ 147,002	1.67	\$ 88,025
Application server administration	\$ 1,002,008	11.58	\$ 86,554
Other server administration	\$ 1,191,228	13.83	\$ 86,154
Mainframe operations & administration	\$ 669,011	8.08	\$ 82,798
Data center operations	\$ 720,601	9.65	\$ 74,674
Database administration	\$ 1,487,740	16.66	\$ 89,300
Security administration	\$ 791,179	8.85	\$ 89,399
Telephone systems support	\$ 607,783	7.05	\$ 86,210
Business Application Services	\$ 14,011,559	164.12	\$ 85,374
<i>Application development:</i>			
Website design/maintenance	\$ 1,424,366	17.59	\$ 80,976
Desktop application development/maintenance	\$ 779,854	9.05	\$ 86,204
GIS application development/maintenance	\$ 741,206	9.29	\$ 79,785
All other development	\$ 1,317,573	15.91	\$ 82,814
Requirements analysis	\$ 1,298,760	15.74	\$ 82,531
Data administration	\$ 1,020,292	12.00	\$ 85,048
Application administration	\$ 588,494	6.97	\$ 84,388
<i>Custom application maintenance:</i>			
ARMS	\$ 355,472	4.28	\$ 83,151
IBIS	\$ 399,886	4.10	\$ 97,533
EssBase	\$ 53,457	0.64	\$ 83,527
Other finance	\$ 522,769	5.48	\$ 95,396
Other HR	\$ 3,904	0.05	\$ 78,084
Other payroll	\$ 76,864	0.84	\$ 91,505
Other budget	\$ 15,564	0.21	\$ 74,116
Agency app 1	\$ 943,953	11.51	\$ 82,047
Agency app 2	\$ 347,574	4.03	\$ 86,247
All other	\$ 2,475,699	27.96	\$ 88,555
<i>Package application maintenance:</i>			
PeopleSoft	\$ 424,931	4.69	\$ 90,700
MSA	\$ 270,234	2.95	\$ 91,760
Fixed Asset	\$ 28,402	0.25	\$ 113,608
Other finance	\$ 6,271	0.08	\$ 78,389
Other HR	\$ 43,447	0.45	\$ 96,549
Other payroll	\$ 90,419	0.95	\$ 95,178
Other budget	\$ 7,097	0.10	\$ 70,973
Agency app 1	\$ 297,106	3.55	\$ 83,692
Agency app 2	\$ 149,949	1.74	\$ 86,178
All other	\$ 328,014	3.74	\$ 87,704
IT Planning	\$ 2,494,954	25.29	\$ 98,645
Strategic planning & governance	\$ 1,300,285	12.50	\$ 103,991
Research and development	\$ 812,695	8.63	\$ 94,207
Disaster recovery/planning	\$ 381,974	4.16	\$ 91,784
IT Administration	\$ 7,897,393	86.92	\$ 90,860
Asset management	\$ 501,294	5.88	\$ 85,302
IT procurement	\$ 761,855	8.72	\$ 87,402
Project management	\$ 2,442,050	26.30	\$ 92,854
Standards and policies development	\$ 616,174	6.36	\$ 96,857
Administrative support	\$ 1,163,848	15.53	\$ 74,958
Departmental management	\$ 2,412,173	24.14	\$ 99,938
TOTALS	\$ 43,270,735	507.14	\$ 85,323

B. IT LABOR EFFORT

This section presents a summary of agency labor effort by IT functional area, and by the categories of IT unit, business unit, and shadow staff. While PTI received an allocation of ITS labor *cost* to the agencies, we did not obtain a breakdown from ITS of how their labor *effort* should be allocated to the agencies.² Accordingly, the tables here do not attempt to allocate ITS effort to the agencies, as we did with ITS charges in Section A of this chapter.

The graphic below presents overall FTE levels by IT functional area. The table that follows presents this information by agency. Additional detail for each agency can be found in Appendix B.

Exhibit 4-9: Total County IT Labor Effort by Function



Agency	Customer Services	System Services	Business Application Services	IT Planning	IT Admin.	TOTAL	% of Total
Adult & Juvenile Detention	2.30	1.13	1.67	0.35	0.80	6.25	1.2%
Assessor	2.45	1.13	8.49	0.35	1.58	14.00	2.8%
Community & Human Services	2.40	6.00	7.80	1.30	1.85	19.35	3.8%
Council	1.20	0.70	0.00	0.10	0.00	2.00	0.4%
DES Finance	1.36	2.21	15.13	0.02	1.94	20.65	4.1%
DES HR	0.80	1.70	3.52	0.70	0.75	7.47	1.5%
DES ITS	21.00	45.95	36.16	4.40	34.52	142.03	28.0%
DES Other	4.17	3.82	4.73	1.06	1.76	15.54	3.1%
Development & Environmental Services	1.65	2.50	9.95	0.40	1.50	16.00	3.2%
District Court	1.37	0.85	0.99	0.36	0.65	4.22	0.8%
DOT Airport, Fleet, Roads	2.68	5.76	9.91	2.26	3.19	23.80	4.7%
DOT Transit	14.58	11.29	17.78	4.13	11.26	59.04	11.6%
Executive (B/E/E/O)	1.06	0.57	1.46	2.00	4.30	9.39	1.9%
Judicial Administration	1.21	1.59	2.81	0.63	2.01	8.25	1.6%
Natural Resources & Parks	11.14	15.15	15.45	3.49	8.92	54.15	10.7%
Prosecuting Attorney	3.66	2.94	1.10	0.55	0.90	9.15	1.8%
Public Health	12.96	15.63	20.82	2.90	4.55	56.86	11.2%
Sheriff	11.70	7.90	3.60	0.00	5.80	29.00	5.7%
Superior Court	2.05	4.25	2.75	0.30	0.65	10.00	2.0%
TOTAL	99.74	131.07	164.12	25.29	86.92	507.14	100%

At 32%, Business Application Services represent the largest area of IT effort at the County.

² As noted previously, ITS uses both of the County’s payroll systems, making effective time reporting and labor effort allocation difficult.

The next table summarizes each agency's IT unit staff, business unit staff, and shadow staff.

Exhibit 4-10: Allocation of Labor Effort by Service Providers

Total Operating
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Agency	IT Unit	Business Unit	Shadow Staff	TOTAL
Adult & Juvenile Detention	5.00	1.00	0.25	6.25
Assessor	14.00	0.00	0.00	14.00
Community & Human Services	18.75	0.00	0.60	19.35
Council	2.00	0.00	0.00	2.00
DES Finance	0.00	13.90	6.75	20.65
DES HR	5.00	2.47	0.00	7.47
DES ITS	142.03	0.00	0.00	142.03
DES Other	4.10	9.00	2.44	15.54
Development & Environmental Services	16.00	0.00	0.00	16.00
District Court	4.02	0.00	0.20	4.22
DOT Airport, Fleet, Roads	9.90	10.35	3.55	23.80
DOT Transit	32.79	25.70	0.55	59.04
Executive (B/E/E/O)	7.00	0.00	2.39	9.39
Judicial Administration	7.00	1.00	0.25	8.25
Natural Resources & Parks	50.50	0.00	3.65	54.15
Prosecuting Attorney	6.50	2.00	0.65	9.15
Public Health	46.00	7.00	3.86	56.86
Sheriff	21.00	8.00	0.00	29.00
Superior Court	10.00	0.00	0.00	10.00
TOTAL	401.58	80.42	25.14	507.14

The next series of tables analyzes each agency's allocation of effort across the IT functional areas for each of the service providers (e.g., IT Unit, Business Unit, etc.).

Exhibit 4-11: IT Labor Effort by Functional Area
IT Unit Staff

Agency	Business Application Services						TOTAL	% of Total
	Customer Services	System Services	IT Planning	IT Admin.	IT Planning	IT Admin.		
Adult & Juvenile Detention	2.20	1.13	0.80	0.35	0.52	5.00	1.2%	
Assessor	2.45	1.13	8.49	0.35	1.58	14.00	3.5%	
Community & Human Services	2.40	6.00	7.70	1.00	1.65	18.75	4.7%	
Council	1.20	0.70	0.00	0.10	0.00	2.00	0.5%	
DES Finance	0.00	0.00	0.00	0.00	0.00	0.00	0.0%	
DES HR	0.80	1.60	1.15	0.70	0.75	5.00	1.2%	
DES ITS	21.00	45.95	36.16	4.40	34.52	142.03	35.4%	
DES Other	2.15	1.29	0.54	0.03	0.09	4.10	1.0%	
Development & Environmental Services	1.65	2.50	9.95	0.40	1.50	16.00	4.0%	
District Court	1.37	0.85	0.99	0.36	0.45	4.02	1.0%	
DOT Airport, Fleet, Roads	1.47	2.84	3.35	0.73	1.51	9.90	2.5%	
DOT Transit	5.82	6.05	9.35	2.81	8.76	32.79	8.2%	
Executive (B/E/E/O)	0.50	0.50	0.00	2.00	4.00	7.00	1.7%	
Judicial Administration	1.15	1.59	2.46	0.61	1.19	7.00	1.7%	
Natural Resources & Parks	10.74	14.35	13.90	3.04	8.47	50.50	12.6%	
Prosecuting Attorney	2.76	2.09	0.30	0.55	0.80	6.50	1.6%	
Public Health	10.60	15.23	13.82	2.40	3.95	46.00	11.5%	
Sheriff	5.70	5.90	3.60	0.00	5.80	21.00	5.2%	
Superior Court	2.05	4.25	2.75	0.30	0.65	10.00	2.5%	
TOTAL	76.01	113.95	115.31	20.13	76.18	401.58	100.0%	

As one would expect, ITS contains more IT unit staff than any other agency, with a total of almost 40% of that effort.

**Exhibit 4-12: IT Labor Effort by Functional Area
 Business Unit Staff**

Agency	Customer Services	System Services	Business Application Services	IT Planning	IT Admin.	TOTAL	% of Total
Adult & Juvenile Detention	0.00	0.00	0.76	0.00	0.24	1.00	1.2%
Assessor	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Community & Human Services	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Council	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
DES Finance	1.16	2.21	9.43	0.02	1.09	13.90	17.3%
DES HR	0.00	0.10	2.37	0.00	0.00	2.47	3.1%
DES ITS	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
DES Other	1.38	2.41	3.63	0.59	0.99	9.00	11.2%
Development & Environmental Services	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
District Court	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
DOT Airport, Fleet, Roads	1.05	2.84	4.45	1.03	0.98	10.35	12.9%
DOT Transit	8.36	5.19	8.43	1.32	2.40	25.70	32.0%
Executive (B/E/E/O)	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Judicial Administration	0.00	0.00	0.18	0.00	0.82	1.00	1.2%
Natural Resources & Parks	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Prosecuting Attorney	0.60	0.65	0.65	0.00	0.10	2.00	2.5%
Public Health	1.30	0.30	4.30	0.50	0.60	7.00	8.7%
Sheriff	6.00	2.00	0.00	0.00	0.00	8.00	9.9%
Superior Court	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
TOTAL	19.85	15.70	34.20	3.46	7.22	80.42	100.0%

DOT Transit, with a little over 25 FTE of effort, leads the total of business unit IT Staff.

**Exhibit 4-13: IT Labor Effort by Functional Area
 Shadow Staff**

Agency	Customer Services	System Services	Business Application Services	IT Planning	IT Admin.	TOTAL	% of Total
Adult & Juvenile Detention	0.10	0.00	0.11	0.00	0.04	0.25	1.0%
Assessor	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Community & Human Services	0.00	0.00	0.10	0.30	0.20	0.60	2.4%
Council	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
DES Finance	0.20	0.00	5.70	0.00	0.85	6.75	26.8%
DES HR	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
DES ITS	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
DES Other	0.64	0.12	0.56	0.44	0.68	2.44	9.7%
Development & Environmental Services	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
District Court	0.00	0.00	0.00	0.00	0.20	0.20	0.8%
DOT Airport, Fleet, Roads	0.16	0.08	2.11	0.50	0.70	3.55	14.1%
DOT Transit	0.40	0.05	0.00	0.00	0.10	0.55	2.2%
Executive (B/E/E/O)	0.56	0.07	1.46	0.00	0.30	2.39	9.5%
Judicial Administration	0.06	0.00	0.17	0.02	0.00	0.25	1.0%
Natural Resources & Parks	0.40	0.80	1.55	0.45	0.45	3.65	14.5%
Prosecuting Attorney	0.30	0.20	0.15	0.00	0.00	0.65	2.6%
Public Health	1.06	0.10	2.70	0.00	0.00	3.86	15.4%
Sheriff	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
Superior Court	0.00	0.00	0.00	0.00	0.00	0.00	0.0%
TOTAL	3.88	1.42	14.61	1.71	3.52	25.14	100.0%

DES Finance leads the total of shadow IT staff at approximately 7 FTE of effort.

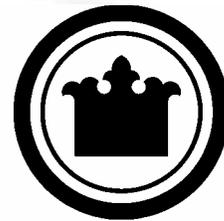
The final table in this section details at a functional level the total IT labor effort by service provider. Refer to Appendix B for individual agency detail.

Exhibit 4-14: IT Labor Effort Per Function by Employee Type

**Total Operating
 Cost of
 Technology
 Final Report**

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 Effort Analysis**

IT Function	Employee Type				TOTAL
	ITS	Agency IT	Business Unit	Shadow	
Customer Services	21.00	55.01	19.85	3.88	99.74
Help Desk (Tier 1)	8.95	7.92	2.51	0.56	19.94
<i>Tier 2 support:</i>					
Desktop PC support	2.85	25.78	10.38	1.22	40.23
PDA support	0.30	1.71	0.26	0.00	2.27
Other portable/specialized device support	1.30	3.65	0.87	0.09	5.91
Personal productivity tool support	0.95	3.40	0.61	0.25	5.21
Business application support	4.60	7.89	3.46	0.97	16.92
Training	2.05	4.66	1.77	0.79	9.27
System Services	45.95	68.00	15.70	1.42	131.07
Network connectivity (WAN/LAN/wireless)	11.00	11.99	2.24	0.45	25.68
Workstation administration	0.05	11.04	2.17	0.22	13.48
<i>Server administration:</i>					
Email administration	1.50	0.57	0.05	0.00	2.12
File/print administration	1.15	9.70	1.18	0.40	12.43
GIS server administration	0.00	1.42	0.25	0.00	1.67
Application server administration	3.65	7.20	0.73	0.00	11.58
Other server administration	3.50	7.66	2.65	0.02	13.83
Mainframe operations & administration	7.70	0.28	0.08	0.02	8.08
Data center operations	8.35	1.02	0.22	0.06	9.65
Database administration	2.50	10.39	3.58	0.19	16.66
Security administration	0.80	6.63	1.40	0.02	8.85
Telephone systems support	5.75	0.10	1.16	0.04	7.05
Business Application Services	36.16	79.15	34.20	14.61	164.12
<i>Application development:</i>					
Website design/maintenance	1.15	10.28	1.88	4.28	17.59
Desktop application development/maintenance	0.00	6.35	2.09	0.61	9.05
GIS application development/maintenance	0.00	6.08	2.80	0.41	9.29
All other development	0.00	14.34	1.02	0.55	15.91
Requirements analysis	0.05	11.57	3.04	1.08	15.74
Data administration	0.00	8.04	2.97	0.99	12.00
Application administration	2.38	2.49	1.92	0.19	6.97
<i>Custom application maintenance:</i>					
ARMS	1.48	0.12	0.03	2.65	4.28
IBIS	3.00	0.00	0.10	1.00	4.10
EssBase	0.00	0.01	0.01	0.62	0.64
Other finance	2.54	0.40	2.14	0.40	5.48
Other HR	0.00	0.00	0.00	0.05	0.05
Other payroll	0.84	0.00	0.00	0.00	0.84
Other budget	0.16	0.00	0.00	0.05	0.21
Agency app 1	0.00	8.75	2.55	0.21	11.51
Agency app 2	0.00	2.98	0.80	0.25	4.03
All other	20.01	3.80	4.15	0.00	27.96
<i>Package application maintenance:</i>					
PeopleSoft	0.00	0.00	4.69	0.00	4.69
MSA	2.82	0.00	0.08	0.05	2.95
Fixed Asset	0.25	0.00	0.00	0.00	0.25
Other finance	0.00	0.01	0.07	0.00	0.08
Other HR	0.00	0.00	0.45	0.00	0.45
Other payroll	0.00	0.10	0.85	0.00	0.95
Other budget	0.00	0.00	0.05	0.05	0.10
Agency app 1	0.00	1.82	0.71	1.02	3.55
Agency app 2	0.00	0.90	0.69	0.15	1.74
All other	1.48	1.12	1.14	0.00	3.74
IT Planning	4.40	15.73	3.46	1.71	25.29
Strategic planning & governance	2.95	7.15	1.46	0.95	12.50
Research and development	1.25	5.98	1.06	0.34	8.63
Disaster recovery/planning	0.20	2.60	0.94	0.42	4.16
IT Administration	34.52	41.66	7.22	3.52	86.92
Asset management	1.90	3.09	0.66	0.23	5.88
IT procurement	3.53	3.22	0.86	1.11	8.72
Project management	5.88	16.28	3.48	0.66	26.30
Standards and policies development	1.51	3.87	0.63	0.35	6.36
Administrative support	10.22	4.80	0.19	0.32	15.53
Departmental management	11.48	10.40	1.41	0.85	24.14
TOTALS	142.03	259.55	80.42	25.14	507.14



King County

**IT goods & services
cost analysis**

King County, Washington
May 26, 2004

**Total Operating
 Cost of Technology
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**CHAPTER 5
 IT Goods & Services
 Cost Analysis**

This chapter summarizes overall IT goods & services spending by agency. It analyzes software, hardware, and services (both external and internal to the County). This analysis can identify areas of heavy spending, as well as areas of underinvestment.

For more detailed information, please see Chapter 6 for additional information on goods & services spending for application software, and Chapter 7 for more specifics on IT infrastructure costs.

The table below shows goods & services expenditures across the major categories of software, hardware, external service, and other IT costs. Note that ITS chargebacks have been removed from the other agencies' costs to avoid double counting.

Exhibit 5-1: Agency Goods & Services O&M Spending

Agency	Software	Hardware	External Services	Other	TOTAL
Adult & Juvenile Detention	\$ 73,680	\$ 166,230	\$ 55,250	\$ -	\$ 295,160
Assessor	\$ 92,707	\$ -	\$ -	\$ -	\$ 92,707
Community & Human Services	\$ 286,967	\$ 367,294	\$ 10,708	\$ 389,536	\$ 1,054,505
Council	\$ 2,000	\$ 44,106	\$ 16,595	\$ -	\$ 62,701
DES Finance	\$ 611,118	\$ 226,671	\$ 624,871	\$ -	\$ 1,462,660
DES HR	\$ -	\$ 38,600	\$ 19,750	\$ -	\$ 58,350
DES ITS	\$ 1,602,698	\$ 1,638,846	\$ 3,631,918	\$ 3,363,641	\$ 10,237,103
DES Other	\$ 122,707	\$ 360,197	\$ 472,925	\$ 13,260	\$ 969,088
Development & Environmental Services	\$ 147,025	\$ 207,882	\$ 105,446	\$ -	\$ 460,353
District Court	\$ 94,945	\$ 187,650	\$ 50,200	\$ 78,339	\$ 411,134
DOT Airport, Fleet, Roads	\$ 157,950	\$ 253,971	\$ 19,496	\$ -	\$ 431,417
DOT Transit	\$ 360,000	\$ 225,122	\$ 576,800	\$ 38,000	\$ 1,199,922
Executive (B/E/E/O)	\$ 59,067	\$ 61,130	\$ 72,354	\$ 17,688	\$ 210,239
Judicial Administration	\$ 277,184	\$ 72,976	\$ 238,220	\$ -	\$ 588,379
Natural Resources & Parks	\$ 630,297	\$ 511,825	\$ 110,190	\$ -	\$ 1,252,312
Prosecuting Attorney	\$ 93,361	\$ 10,000	\$ -	\$ -	\$ 103,361
Public Health	\$ 450,000	\$ 850,000	\$ 1,185,000	\$ 400,000	\$ 2,885,000
Sheriff	\$ 337,618	\$ 406,175	\$ 61,185	\$ -	\$ 804,978
Superior Court	\$ 154,894	\$ 148,380	\$ 90,346	\$ 237,402	\$ 631,022
TOTAL	\$ 5,554,218	\$ 5,777,054	\$ 7,341,253	\$ 4,537,866	\$ 23,210,391

We asked ITS to report goods & services charges by agency, allowing us to create a total spending model for each agency. The table below removes ITS and adds their charges to the agencies, as allocated by ITS.

Exhibit 5-2: Agency Goods & Services O&M Spending, including ITS Charges

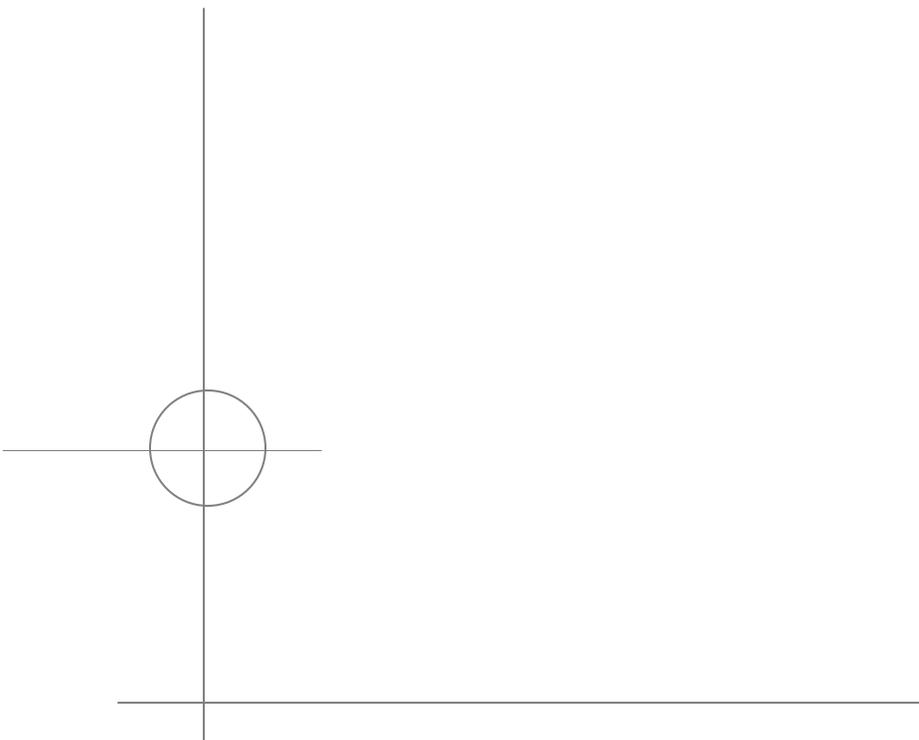
Agency	Software	Hardware	External Services	Other	TOTAL
Adult & Juvenile Detention	\$ 73,680	\$ 1,191,829	\$ 121,817	\$ 103,828	\$ 1,491,154
Assessor	\$ 92,707	\$ 166,348	\$ 9,152	\$ 67,415	\$ 335,622
Community & Human Services	\$ 286,967	\$ 584,644	\$ 27,008	\$ 419,191	\$ 1,317,810
Council	\$ 2,000	\$ 122,066	\$ 17,534	\$ 11,720	\$ 153,320
DES Finance	\$ 671,118	\$ 1,241,380	\$ 803,080	\$ 145,303	\$ 2,860,881
DES HR	\$ -	\$ 149,989	\$ 34,025	\$ 24,218	\$ 208,232
DES Other	\$ 122,707	\$ 759,345	\$ 525,490	\$ 62,240	\$ 1,469,781
Development & Environmental Services	\$ 147,025	\$ 348,659	\$ 106,336	\$ 17,045	\$ 619,065
District Court	\$ 94,945	\$ 316,171	\$ 54,528	\$ 95,159	\$ 560,803
DOT Airport, Fleet, Roads	\$ 157,950	\$ 639,606	\$ 78,334	\$ 56,494	\$ 932,384
DOT Transit	\$ 360,000	\$ 1,865,421	\$ 576,800	\$ 382,924	\$ 3,185,145
Executive (B/E/E/O)	\$ 59,067	\$ 139,661	\$ 90,189	\$ 33,389	\$ 322,306
Judicial Administration	\$ 277,184	\$ 170,607	\$ 238,572	\$ 38,143	\$ 724,505
Natural Resources & Parks	\$ 630,297	\$ 1,337,948	\$ 119,215	\$ 124,163	\$ 2,211,623
Prosecuting Attorney	\$ 93,361	\$ 339,087	\$ 16,779	\$ 52,926	\$ 502,153
Public Health	\$ 450,000	\$ 1,644,782	\$ 1,191,600	\$ 516,215	\$ 3,802,597
Sheriff	\$ 337,618	\$ 1,010,853	\$ 85,952	\$ 95,780	\$ 1,530,203
Superior Court	\$ 154,894	\$ 352,448	\$ 107,125	\$ 269,896	\$ 884,363
TOTAL	\$ 4,011,519	\$ 12,380,843	\$ 4,203,536	\$ 2,516,049	\$ 23,111,947

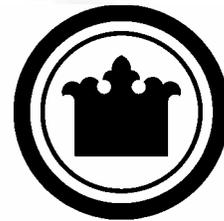
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CHAPTER 5
IT Goods & Services
Cost Analysis

Notice that the values in the “Total” line differ, in some cases significantly, with the previous table. The slight difference between the grand totals of the two tables is likely to stem from ITS costs recovered from parties outside the County (e.g., I-Net customers). Correspondingly, these costs are not charged back to other County agencies.

The larger discrepancies between the individual cost category totals appear to result from differences in the way PTI collected the goods & services cost data and the method that ITS uses to calculate charge backs. Further analysis of this difference was not within the scope of this project.





King County

IT application costs

King County, Washington
May 26, 2004

This chapter summarizes the County’s costs for applications. The analysis includes both the goods & services expenditures associated with an application, as well as the attendant labor effort necessary to maintain the application and support users. Where appropriate, we also include ITS charges.

Applications are an important area of focus. They comprise the County’s largest single IT cost (30% of the total) – and represent the primary objective for investing in IT in the first place.

The chapter is arranged as follows:

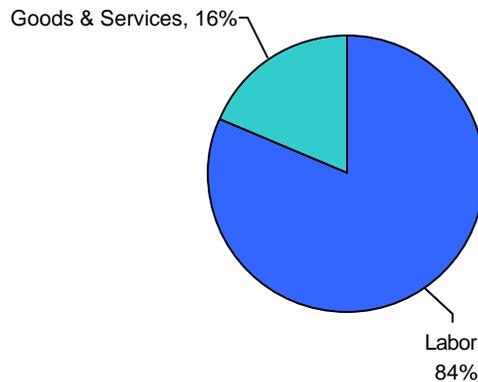
- ◆ A. Application Cost Summary
- ◆ B. Expenditures by Budget Program
- ◆ C. Direct Expenditures by Major Application
- ◆ D. Expenditures by Agency
- ◆ E. Custom Versus Packaged Application Costs

Please note that, for non-mainframe applications, we did not have the data necessary to allocate server, server administration, and network costs to the business software they support. **As a result, the figures shown in this chapter for non-mainframe applications should be viewed as *minimum costs*. Actual costs per application will be higher, depending upon the allocation of server, server administration, and networking costs.**

A. APPLICATION COST SUMMARY

The following graphic summarizes the County’s overall spending on software applications.

Exhibit 6-1: County Application Costs



Labor	Goods & Services	Total
\$16,864,036	\$3,861,959	\$20,725,995

Included in the costs presented above are:

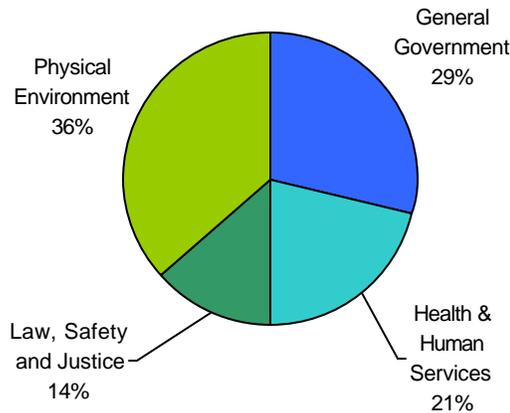
- ◆ **Labor:** all business application services effort, plus Tier 2 (desk-side business application support) and database administration
- ◆ **Goods & Services:** software maintenance fees, DBMS license fees, and application development and maintenance services

It is clear from the chart above that **the lion’s share of the County’s application costs are labor-related.**

B. EXPENDITURES BY BUDGET PROGRAM

This section summarizes the County’s spending on major applications by budget program. As elsewhere in this document, we included each program’s ITS charges and removed ITS as a component of general government to avoid double counting.

Exhibit 6-2: Application Spending Including ITS Charges by Budget Program¹



Budget Program	Agency Goods			TOTAL
	Agency Labor	& Services	ITS Charges	
General Government	\$ 3,069,127	\$ 1,131,322	\$ 1,623,335	\$ 5,823,784
Health & Human Services	\$ 2,881,530	\$ 1,110,000	\$ 239,122	\$ 4,230,652
Law, Safety and Justice	\$ 1,273,816	\$ 580,577	\$ 894,155	\$ 2,748,547
Physical Environment	\$ 5,820,806	\$ 937,553	\$ 603,166	\$ 7,361,526
TOTAL	\$ 13,045,278	\$ 3,759,452	\$ 3,359,778	\$ 20,164,508

The General Government and Physical Environment programs are each responsible for approximately one third of the County’s application spending. The other two programs split the remaining third almost equally.

C. DIRECT EXPENDITURES BY MAJOR APPLICATION

This section summarizes the application-specific data collected as part of this project. Bear in mind that server, server administration, and network costs to the non-mainframe applications are not included. Accordingly, the true cost of the applications discussed below will be higher than indicated.

We group the County’s major applications into four categories:

- ◆ **Enterprise** – applications such as PeopleSoft that are utilized by all agencies across the County, typically for financial or general government functions
- ◆ **Ancillary** – applications that supplement or substitute for the enterprise applications and that vary between agencies (e.g., supporting budget tools)
- ◆ **Desktop** – applications tied to the use of desktop PC’s such as e-mail, word processing, etc.
- ◆ **Agency-specific** – applications that directly support a specific agency’s delivery of business services

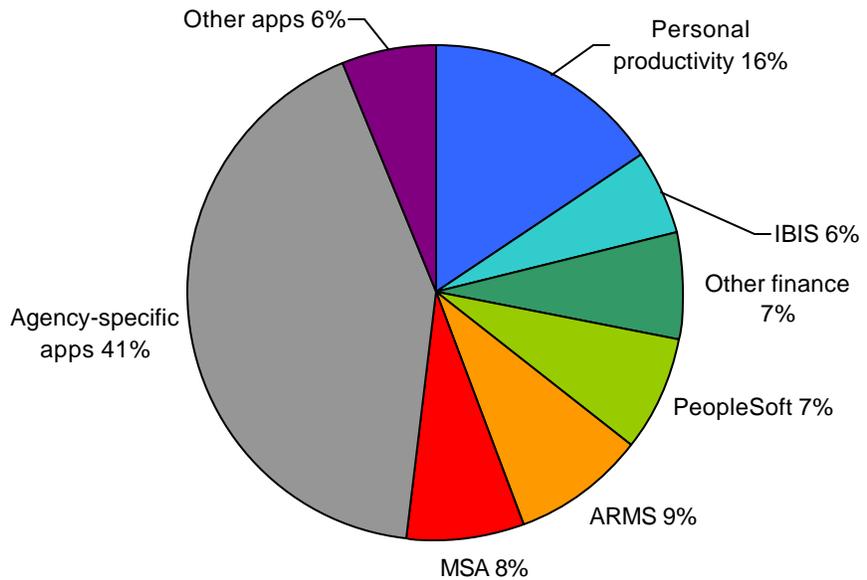
¹ As elsewhere in this report, the variation between ITS charges and ITS costs is responsible for the difference in totals between the table in Section A and the tables in Sections B & D of this chapter.

The graphic and chart below provide more detail on the County's costs by major application.

Exhibit 6-3: Direct Expenditures by Major Application²

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**CHAPTER 6:
 IT Application
 Costs**



Application	Agency Goods & Services			TOTAL
	Agency Labor	& Services	ITS Charges	
ARMS	\$ 209,511	\$ -	\$ 760,804	\$ 970,315
IBIS	\$ 116,193	\$ -	\$ 498,841	\$ 615,034
EssBase	\$ 53,457	\$ -	\$ 125,814	\$ 179,271
PeopleSoft	\$ 424,931	\$ 341,982	\$ 63,442	\$ 830,355
MSA	\$ 11,066	\$ 43,451	\$ 785,981	\$ 840,498
Fixed Asset	\$ -	\$ -	\$ 91,981	\$ 91,981
Enterprise	\$ 815,157	\$ 385,433	\$ 2,326,863	\$ 3,527,454
Other finance	\$ 295,125	\$ 4,570	\$ 493,763	\$ 793,458
Other HR	\$ 47,351	\$ 2,654	\$ -	\$ 50,005
Other payroll	\$ 90,419	\$ 113,989	\$ 61,693	\$ 266,101
Other budget	\$ 9,085	\$ 31,000	\$ 8,875	\$ 48,960
Ancillary	\$ 441,980	\$ 152,213	\$ 564,331	\$ 1,158,524
Email/calendaring	\$ 47,091	\$ -	\$ -	\$ 47,091
Personal productivity	\$ 342,204	\$ 1,387,085	\$ -	\$ 1,729,289
Desktop	\$ 389,295	\$ 1,387,085	\$ -	\$ 1,776,380
Agency-specific apps	\$ 2,659,811	\$ 2,026,788	\$ -	\$ 4,686,599
TOTAL	\$ 4,306,244	\$ 3,951,519	\$ 2,891,194	\$ 11,148,957

The costs presented for personal productivity include approximately \$983,000 spent by ITS for CX agencies on enterprise licenses for personal productivity software. These amounts are not actually expended by these agencies; but for understandability and comparability, we have included them in the agency goods & services.

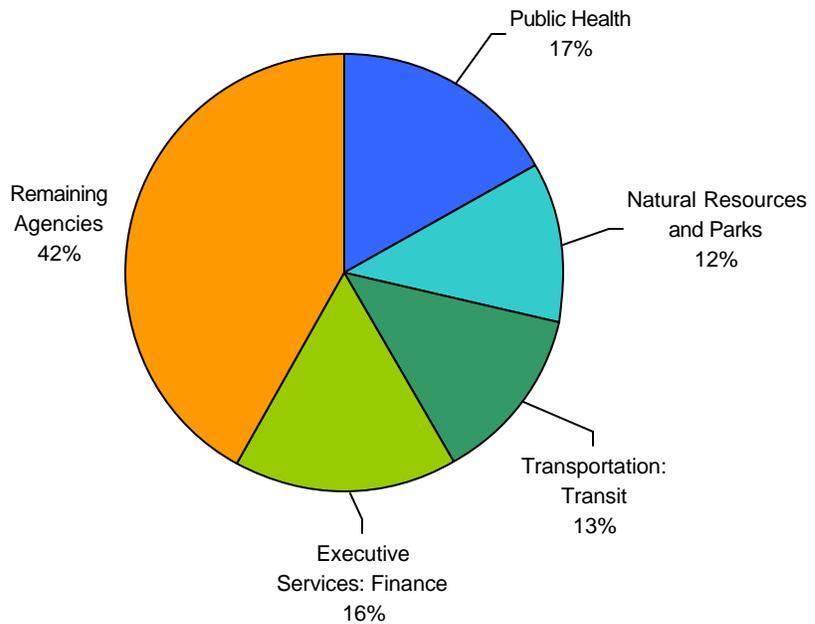
Also note that the costs presented for email/calendaring are known to be low as some of those costs are absorbed in user access licenses that are part of server licensing and not accounted for in this table.

² The ITS charges presented in the table are different than those discussed elsewhere in this report. For each of the major applications listed above, ITS estimated the total charge – including both labor and goods & services. That number, not a calculation based on the detailed charge breakdown presented everywhere else in this document, is the ITS charge presented in this section.

D. EXPENDITURES BY AGENCY

This section presents application expenditures, including associated ITS charges, by agency. The graphic and corresponding table show each agency’s expenditures on major applications. These include enterprise applications, ancillary applications needed to supplement enterprise functions such as HR or finance, and agency-specific applications which directly support agency services. Again, ITS has been removed from the table and chart to avoid double counting.

Exhibit 6-4: Total Application Expenditures Including ITS Charges by Agency



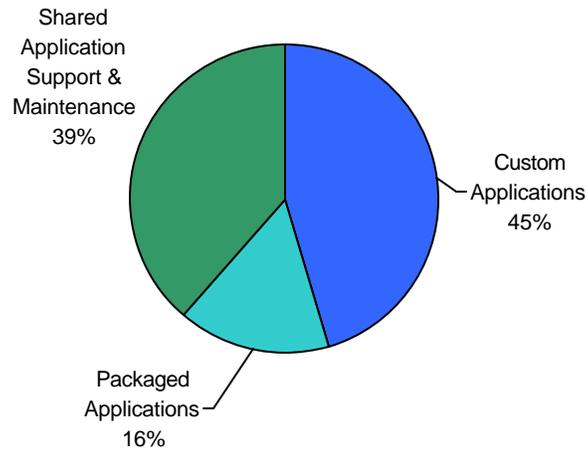
Agency	Agency Labor	Agency Goods & Services	ITS Charges	Total	% of County Total
Adult and Juvenile Detention	\$ 211,486	\$ 55,250	\$ 484,756	\$ 751,492	4%
Assessor	\$ 683,848	\$ -	\$ 61,586	\$ 745,434	4%
Community and Human Services	\$ 656,640	\$ -	\$ 146,279	\$ 802,919	4%
Council	\$ 12,675	\$ 16,595	\$ 10,427	\$ 39,697	0%
Development and Environmental Services	\$ 910,818	\$ 63,303	\$ 12,688	\$ 986,808	5%
District Court	\$ 106,210	\$ 50,352	\$ 27,923	\$ 184,485	1%
Executive (Budget, Executive, Economic Development, OIRM)	\$ 118,479	\$ 31,000	\$ 107,849	\$ 257,328	1%
Executive Services: Finance	\$ 1,451,355	\$ 897,957	\$ 942,095	\$ 3,291,407	16%
Executive Services: Human Resources	\$ 319,362	\$ 13,338	\$ 77,356	\$ 410,056	2%
Executive Services: Other	\$ 483,407	\$ 172,432	\$ 424,023	\$ 1,079,862	5%
Judicial Administration	\$ 256,694	\$ 362,856	\$ 9,391	\$ 628,941	3%
Natural Resources and Parks	\$ 1,819,761	\$ 403,232	\$ 120,374	\$ 2,343,367	12%
Prosecuting Attorney	\$ 118,309	\$ 500	\$ 104,547	\$ 223,356	1%
Public Health	\$ 2,224,890	\$ 1,110,000	\$ 92,843	\$ 3,427,733	17%
Sheriff	\$ 324,942	\$ -	\$ 166,032	\$ 490,975	2%
Superior Court	\$ 256,175	\$ 111,619	\$ 101,505	\$ 469,299	2%
Transportation: Airport, Fleet Administration, and Road Services	\$ 941,415	\$ 129,518	\$ 335,495	\$ 1,406,428	7%
Transportation: Transit	\$ 2,148,813	\$ 341,500	\$ 134,609	\$ 2,624,922	13%
TOTAL	\$ 13,045,278	\$ 3,759,452	\$ 3,359,778	\$ 20,164,508	100%

E. CUSTOM VERSUS PACKAGED APPLICATION COSTS

This final section looks at the distribution of costs between the County’s custom applications and its packaged, commercial “off-the-shelf” solutions. We also identify shared costs: expenditures that cannot be allocated individually to custom or packaged solutions, such as database administration labor and license costs.

The chart and table on the following page summarize these expenditures.

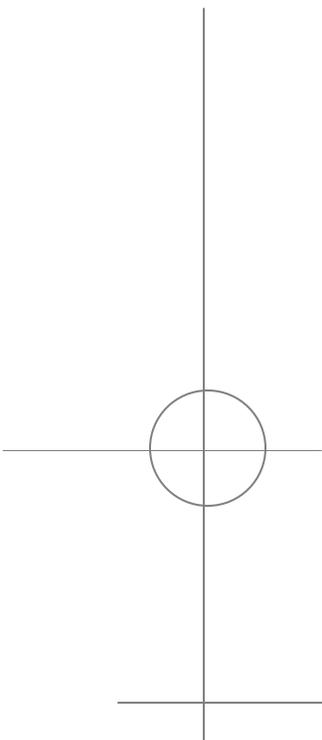
Exhibit 6-5: Package, Custom, and Shared Application Costs

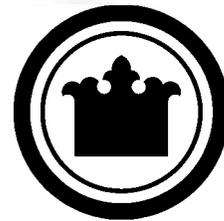


Application Type	Cost
Custom Applications	\$ 10,050,637
Packaged Applications	\$ 3,491,275
Shared Application Support & Maintenance	\$ 8,555,003
TOTAL	\$ 22,096,914

Nearly half of the County’s application costs stem directly from custom application support and maintenance, while less than 20% of costs derive from supporting and maintaining *packaged* applications. Bear in mind that much of the shared costs also relate to the packaged applications, and that approximately \$1.5 million of the custom application costs are associated with development of applications around packaged software (e.g., business-specific MS Access tools) – specifically GIS and the desktop personal productivity suite.

It is also worth noting that the costs represented above are limited to those that can be tied directly to County applications (e.g., direct support, maintenance fees, database-related costs, etc.). These costs exclude other related expenditures required to run the software (e.g., server costs, network costs, etc.).





King County



**IT infrastructure
costs**

King County, Washington
May 26, 2004

This chapter presents additional detail on the County’s IT infrastructure costs. – including workstations, servers, network devices, and other components that support the County’s applications. Analyzing this data provides insight into areas of significant spending which might offer opportunities for cost savings. It can also identify areas of underinvestment.

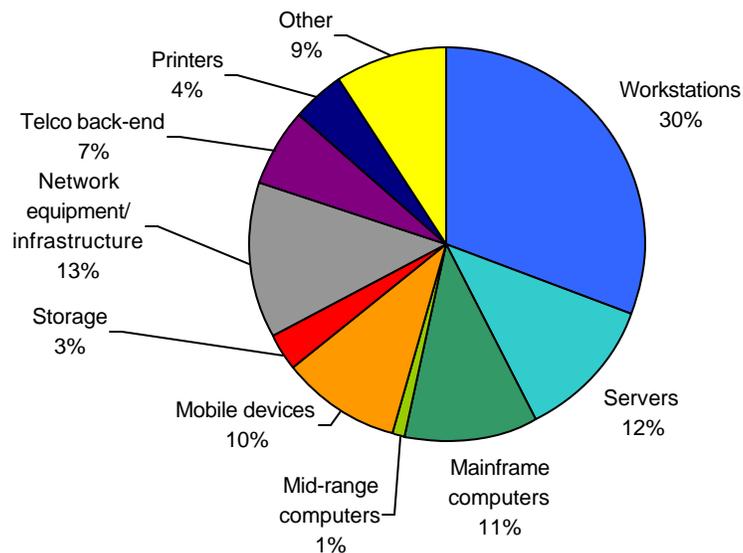
We divide the chapter as follows:

- ◆ A. Infrastructure Goods & Services Costs
- ◆ B. Workstation Costs
- ◆ C. Server Costs
- ◆ D. Networking Costs

A. INFRASTRUCTURE GOODS & SERVICES COSTS

The graphic and table below summarize ITS and other agency goods & services expenditures on the County’s IT infrastructure.

Exhibit 7-1: Infrastructure Goods & Services Expenditures



Infrastructure Category	ITS	Other Agencies	TOTAL
Workstations	\$ 108,729	\$ 1,668,863	\$ 1,777,592
Servers	\$ 106,650	\$ 572,252	\$ 678,902
Mainframe computers	\$ 522,701	\$ 108,100	\$ 630,801
Mid-range computers	\$ 8,502	\$ 54,540	\$ 63,042
Mobile devices	\$ 52,508	\$ 500,232	\$ 552,740
Storage	\$ 1,433	\$ 173,561	\$ 174,994
Network equipment/ infrastructure	\$ 484,610	\$ 256,121	\$ 740,731
Telco back-end	\$ 349,124	\$ 29,000	\$ 378,124
Printers	\$ 4,589	\$ 248,257	\$ 252,846
Other	\$ -	\$ 527,283	\$ 527,283
TOTAL	\$ 1,638,846	\$ 4,138,208	\$ 5,777,054

At 30%, workstations represent the largest IT infrastructure-related goods & services expenditure.

With the data we have collected as part of this exercise, it is not possible to accurately calculate the labor support associated with every hardware category, nor to calculate the associated ITS charges. However, we are able to provide this analysis across three areas of interest, as presented in the next three sections: workstations, servers, and network infrastructure.

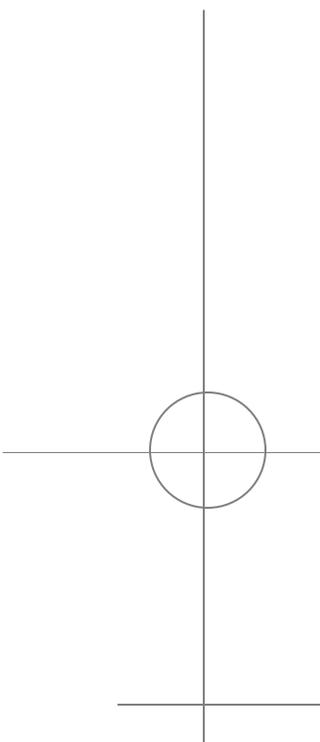
B. WORKSTATION COSTS

This section provides two tables which summarize the desktop workstation support cost for each agency and calculate the per-workstation amount, respectively.

The first table calculates the desktop support labor cost by summing agency costs for help desk, desktop support, personal productivity tools support, and workstation administration. It then adds to this figure an allocation of ITS labor costs for these services – approximately \$47 per workstation – which covers the cost of the ITS help desk and related services. In total, these figures comprise the “labor” column. We then add agency goods & services costs for workstations (including personal productivity licenses and ITS workstation charges) to arrive at an approximation of the total support cost per agency.

Exhibit 7-2: Desktop Workstation Support Costs by Agency including ITS Charges

Agency	Labor	Goods & Services	TOTAL
Adult and Juvenile Detention	\$ 181,695	\$ 184,567	\$ 366,262
Assessor	\$ 129,930	\$ 107,375	\$ 237,305
Community and Human Services	\$ 281,810	\$ 537,669	\$ 819,479
Council	\$ 103,394	\$ 26,882	\$ 130,276
Development and Environmental Services	\$ 162,140	\$ 43,732	\$ 205,872
District Court	\$ 88,544	\$ 152,777	\$ 241,321
Executive (Budget, Executive, Economic Development, OIRM)	\$ 238,690	\$ 84,643	\$ 323,333
Executive Services: Finance	\$ 93,134	\$ 88,749	\$ 181,884
Executive Services: Human Resources	\$ 71,981	\$ 30,272	\$ 102,253
Executive Services: Information and Telecommunications Services	\$ 225,248	\$ 34,001	\$ 259,249
Executive Services: Other	\$ 514,473	\$ 156,971	\$ 671,444
Judicial Administration	\$ 115,080	\$ 152,679	\$ 267,759
Natural Resources and Parks	\$ 1,083,508	\$ 341,797	\$ 1,425,305
Prosecuting Attorney	\$ 290,350	\$ 133,738	\$ 424,088
Public Health	\$ 599,580	\$ 1,004,099	\$ 1,603,679
Sheriff	\$ 874,203	\$ 271,733	\$ 1,145,936
Superior Court	\$ 237,762	\$ 172,501	\$ 410,263
Transportation: Airport, Fleet Administration, and Road Services	\$ 265,114	\$ 193,462	\$ 458,576
Transportation: Transit	\$ 1,170,520	\$ 81,162	\$ 1,251,682
TOTAL	\$ 6,727,156	\$ 3,798,809	\$ 10,525,965



Taking the total labor cost and dividing by the number of workstations per agency gives us a per-workstation labor cost for each agency, as displayed below.

Exhibit 7-3: Support Cost Per Workstation by Agency¹

**Total Operating
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CHAPTER 7:
 IT Infrastructure
 Costs

Agency	Total Labor Support	Number of Workstations	Cost Per Workstation
Adult and Juvenile Detention	\$ 181,695	541	\$ 336
Assessor	\$ 129,930	270	\$ 481
Community and Human Services	\$ 281,810	491	\$ 574
Council	\$ 103,394	202	\$ 512
Development and Environmental Services	\$ 162,140	382	\$ 424
District Court	\$ 88,544	391	\$ 226
Executive (Budget, Executive, Economic Development, OIRM)	\$ 238,690	121	\$ 1,973
Executive Services: Finance	\$ 93,134	292	\$ 319
Executive Services: Human Resources	\$ 71,981	105	\$ 686
Executive Services: Information and Telecommunications Services	\$ 225,248	193	\$ 1,167
Executive Services: Other	\$ 514,473	623	\$ 826
Judicial Administration	\$ 115,080	323	\$ 356
Natural Resources and Parks	\$ 1,083,508	1,637	\$ 662
Prosecuting Attorney	\$ 290,350	550	\$ 528
Public Health	\$ 599,580	1,749	\$ 343
Sheriff	\$ 874,203	1,412	\$ 619
Superior Court	\$ 237,762	631	\$ 377
Transportation: Airport, Fleet Administration, and Road Services	\$ 265,114	641	\$ 414
Transportation: Transit	\$ 1,170,520	1,102	\$ 1,062
TOTAL	\$ 6,727,156	11,656	\$ 577

With an average annual labor support cost of approximately \$580, it is worth noting that, over the life of a personal computer, support expenditures significantly exceed the purchase price.

Alternatively, taking the total goods & services expenditures and dividing by the number of workstations per agency gives us a per-workstation goods & services cost for each agency, displayed below.

Exhibit 7-4: Goods & Services Expenditures Per Workstation by Agency²

Agency	Total G&S Expenditures	Number of Workstations	Cost Per Workstation
Adult and Juvenile Detention	\$ 184,567	541	\$ 341
Assessor	\$ 107,375	270	\$ 398
Community and Human Services	\$ 537,669	491	\$ 1,095
Council	\$ 26,882	202	\$ 133
Development and Environmental Services	\$ 43,732	382	\$ 114
District Court	\$ 152,777	391	\$ 391
Executive (Budget, Executive, Economic Development, OIRM)	\$ 84,643	121	\$ 700
Executive Services: Finance	\$ 88,749	292	\$ 304
Executive Services: Human Resources	\$ 30,272	105	\$ 288
Executive Services: Information and Telecommunications Services	\$ 34,001	193	\$ 176
Executive Services: Other	\$ 156,971	623	\$ 252
Judicial Administration	\$ 152,679	323	\$ 473
Natural Resources and Parks	\$ 341,797	1,637	\$ 209
Prosecuting Attorney	\$ 133,738	550	\$ 243
Public Health	\$ 1,004,099	1,749	\$ 574
Sheriff	\$ 271,733	1,412	\$ 192
Superior Court	\$ 172,501	631	\$ 273
Transportation: Airport, Fleet Administration, and Road Services	\$ 193,462	641	\$ 302
Transportation: Transit	\$ 81,162	1,102	\$ 74
TOTAL	\$ 3,798,809	11,656	\$ 326

¹ Note that these counts include workstation PCs and networked laptops – they do not include other PCs or computing devices (e.g., kiosks, test and development, etc.).

² Note that these counts include workstation PCs and networked laptops – they do not include other PCs or computing devices (e.g., kiosks, test and development, etc.).

C. SERVER COSTS

In this section we calculate the total server cost from a non-ITS agency perspective, and the per-server labor support cost. The table below presents the total server costs (excluding the mainframe) for each agency other than ITS. As in other parts of this report, we allocated the server-related ITS charges for labor and goods & services to the agencies as appropriate. We removed ITS as a row in the table to avoid double counting.

Exhibit 7-5: Server Costs by Agency Including ITS Charges

Agency	Labor	Goods & Services	TOTAL
Adult and Juvenile Detention	\$ 91,986	\$ 3,010	\$ 94,996
Assessor	\$ 11,623	\$ -	\$ 11,623
Community and Human Services	\$ 292,212	\$ 590	\$ 292,802
Council	\$ 25,269	\$ 3,200	\$ 28,469
Development and Environmental Services	\$ 101,237	\$ -	\$ 101,237
District Court	\$ 37,233	\$ 8,980	\$ 46,213
Executive (Budget, Executive, Economic Development, OIRM)	\$ 27,498	\$ 12,940	\$ 40,438
Executive Services: Finance	\$ 381,462	\$ 267,807	\$ 649,269
Executive Services: Human Resources	\$ 42,473	\$ 11,290	\$ 53,763
Executive Services: Other	\$ 137,092	\$ 58,329	\$ 195,421
Judicial Administration	\$ 50,930	\$ -	\$ 50,930
Natural Resources and Parks	\$ 654,254	\$ 77,648	\$ 731,902
Prosecuting Attorney	\$ 149,284	\$ 7,027	\$ 156,311
Public Health	\$ 463,640	\$ 209,310	\$ 672,950
Sheriff	\$ 354,006	\$ -	\$ 354,006
Superior Court	\$ 192,352	\$ 6,446	\$ 198,798
Transportation: Airport, Fleet Administration, and Road Services	\$ 185,257	\$ 13,500	\$ 198,757
Transportation: Transit	\$ 734,023	\$ 151,820	\$ 885,843
TOTAL	\$ 3,931,831	\$ 831,897	\$ 4,763,727

The next table takes the actual cost of labor expended in each agency on server support and divides it by the total number of servers supported by that agency to calculate a per-server labor support cost.

Exhibit 7-6: Labor Cost Per Server by Agency³

Agency	Labor Support Cost	Number of Servers	Cost Per Server
Adult and Juvenile Detention	\$ 34,989	4	\$ 8,747
Assessor	\$ 2,820	8	\$ 352
Executive (Budget, Executive, Economic Development, OIRM)	\$ 1,641	6	\$ 274
Community and Human Services	\$ 256,615	44	\$ 5,832
Council	\$ 18,500	4	\$ 4,625
Development and Environmental Services	\$ 91,611	13	\$ 7,047
District Court	\$ 27,300	12	\$ 2,275
Executive Services: Finance	\$ 49,676	17	\$ 2,922
Executive Services: Human Resources	\$ 38,023	14	\$ 2,716
Executive Services: Information and Telecommunications Services	\$ 846,780	135	\$ 6,272
Executive Services: Other	\$ 111,198	81	\$ 1,373
Judicial Administration	\$ 26,394	40	\$ 660
Natural Resources and Parks	\$ 567,471	127	\$ 4,468
Prosecuting Attorney	\$ 112,944	14	\$ 8,067
Public Health	\$ 364,604	82	\$ 4,446
Sheriff	\$ 310,243	46	\$ 6,744
Superior Court	\$ 146,668	59	\$ 2,486
Transportation: Airport, Fleet Administration, and Road Services	\$ 163,162	51	\$ 3,199
Transportation: Transit	\$ 396,744	75	\$ 5,290
TOTAL	\$ 3,567,383	832	\$ 4,288

³ Server totals are based on inventory information provided by the agencies and ITS, and reflect administration responsibilities – not ownership or location. See Appendix G for more information.

Note that the labor total in this column is approximately \$364,000 less than the previous table. This is a result of the ITS server labor charge exceeding the server labor cost as calculated by PTI. This difference is at least partially explained by the different cost basis used by ITS and PTI in calculating labor costs. ITS used 2003 annualized pay for charges while PTI's labor cost estimates rely on allocation of actual labor effort and annualized pay as indicated in the 2004 budget. Further investigating the source of this difference was outside of the scope of this contract.

Again it is worth noting that, **with an annual labor support cost of approximately \$4,300 per server**, the labor expenditures required to support each server will exceed the purchase price over the life of the server in most cases.

In addition to overall cost data, we collected labor cost and inventory data based on the type of server being supported (e.g., email, file and print, etc.). The table below summarizes the server support costs on that basis.

Exhibit 7-7: Server Support Labor Costs by Type

Server Type	Number of Servers	ITS Labor Cost	Other Agency Labor Cost	Total	Cost Per Server
Email administration	14	\$ 128,344	\$ 47,091	\$ 175,435	\$ 12,531
File/print administration	224	\$ 94,650	\$ 957,059	\$ 1,051,709	\$ 4,695
Application server administration (Includes GIS)	195	\$ 331,207	\$ 817,803	\$ 1,149,010	\$ 5,892
Other server administration	399	\$ 292,579	\$ 898,650	\$ 1,191,228	\$ 2,986
TOTAL	832	\$ 846,780	\$ 2,720,603	\$ 3,567,383	\$ 4,288

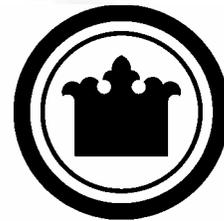
D. NETWORKING COSTS

This section summarizes the County's network-related spending. The following table summarizes the labor effort allocated to network connectivity, as well as goods & services costs associated with network hardware and third-party network services. The numbers presented do not include software costs associated with network management, as the collected data did not allow us to isolate and analyze all of those costs.

Exhibit 7-8: Agency Network-Related Spending

Agency	Goods & Services	Labor	Total
Adult and Juvenile Detention	\$ 12,000	\$ 28,671	\$ 40,671
Assessor	\$ -	\$ 705	\$ 705
Community and Human Services	\$ 186	\$ 97,850	\$ 98,036
Council	\$ 500	\$ 18,500	\$ 19,000
Development and Environmental Services	\$ -	\$ 28,560	\$ 28,560
District Court	\$ 15,850	\$ 1,111	\$ 16,961
Executive (Budget, Executive, Economic Development, OIRM)	\$ -	\$ 45,089	\$ 45,089
Executive Services: Finance	\$ 1,029	\$ 7,744	\$ 8,773
Executive Services: Human Resources	\$ -	\$ 17,549	\$ 17,549
Executive Services: Information and Telecommunications Services	\$ 2,314,440	\$ 974,232	\$ 3,288,671
Executive Services: Other	\$ 31,250	\$ 76,266	\$ 107,516
Judicial Administration	\$ -	\$ 31,962	\$ 31,962
Natural Resources and Parks	\$ 105,863	\$ 264,694	\$ 370,557
Prosecuting Attorney	\$ 1,000	\$ 47,061	\$ 48,061
Public Health	\$ 50,000	\$ 161,063	\$ 211,063
Sheriff	\$ 97,456	\$ 84,998	\$ 182,454
Superior Court	\$ 6,608	\$ 73,334	\$ 79,942
Transportation: Airport, Fleet Administration, and Road Services	\$ 7,000	\$ 68,580	\$ 75,580
Transportation: Transit	\$ -	\$ 165,167	\$ 165,167
Totals	\$ 2,643,182	\$ 2,193,135	\$ 4,836,317

As one may expect given their role as the County's enterprise network provider, the vast majority of these costs reside in ITS.



King County

**IT performance
measures**

King County, Washington
May 26, 2004

This project collected significant amounts of IT staffing, spending, and inventory information at a county-wide and agency-specific level. While the focus of this contract was to summarize the County's total operating cost across several dimensions, the data also presents the opportunity to examine IT performance in several areas.

In most cases, the measures on their own do not provide insight into efficiency or quality of service. But, the measures can serve as a baseline to be monitored – and in some cases managed to – over time. This would be particularly true if the County moves toward collecting this cost information on a repeatable basis. Additionally, the measures could provide a tool for comparing the County to other jurisdictions.

The discussion includes some comparative metrics based on Pacific Technologies' prior experience. We have provided this data to offer an initial frame of reference for the County's relative performance – and we believe that it is valid for this purpose. **Please be aware that the figures cited do not represent best practices. They merely reflect the “as is” condition of public sector entities that have either hired PTI to perform IT planning work or have responded to PTI's prior performance measure surveys.** These are not the result of a County-specific benchmarking effort, as our scope of work did not include this step.

It should also be noted that the County is larger than most jurisdictions in Pacific Technologies' metrics database. In addition, the majority of the entities used for contrast are cities or states – jurisdictions that do not make ideal comparisons for King County. *The County may wish to pursue independent benchmarking as the best means of providing comparables.* Appendix H lists the organizations whose data we used for financial and overall staffing comparisons, along with some of their performance metric results.

The remainder of this chapter presents a set of IT performance indicators based on the data collected in this cost study, organized as follows:

- ◆ A. Support Level Measures
- ◆ B. Key Spending and Staffing Ratios
- ◆ C. Staffing Allocations
- ◆ D. Support Costs for Specific Components

A. SUPPORT LEVEL MEASURES

The amount of support required to maintain IT infrastructure elements can be indicative of the complexity of an environment and the efficiency of the support mechanisms in place. A fairly straightforward measure examines workstation¹ support efficiency by dividing the number of workstations in an organization by the amount of effort (measured in FTEs) required to support those workstations.

With a workstation to workstation support effort ratio of 138:1, the County falls near the median of organizations PTI has seen (137:1). In environments with a diversity of desktop configurations (such as the County), our experience indicates that this is typical.

¹ Note that these counts do not include labor or goods & services costs associated with mobile computers or PDAs. A similar analysis for those devices has not yet been completed, in part due to limited data.

The table below looks at this support level on an agency-by-agency basis.

Exhibit 8-1: Ratio of Workstations to Workstation-Support Effort by Agency

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Agency	ITS Support FTE	Other Agency Support FTE	Number of Desktop Workstations	Workstations per Support FTE
Adult & Juvenile Detention	0.36	1.70	541	263
Assessor	0.18	1.84	270	134
Community & Human Services	0.33	2.45	491	177
Council	0.13	1.20	202	151
DES Finance	0.19	1.09	292	228
DES HR	0.07	1.00	105	98
DES ITS	3.00	0.00	193	64
DES Other	2.25	3.30	623	112
Development & Environmental Services	0.25	1.80	382	186
District Court	0.26	1.14	391	279
DOT Airport, Fleet, Roads	0.42	3.67	641	157
DOT Transit	0.73	11.87	1,102	87
Executive (B/E/E/O)	1.75	0.76	121	48
Judicial Administration	0.21	1.26	323	219
Natural Resources & Parks	1.08	9.69	1,637	152
Prosecuting Attorney	0.36	3.65	550	137
Public Health	1.16	10.85	1,749	146
Sheriff	0.94	11.40	1,412	114
Superior Court	0.42	2.00	631	261
TOTAL	14.10	70.66	11,656	138

This same approach can be applied to server support. **With a server to server support effort ratio of 20:1, the County falls below the median of what we have seen in other organizations (27:1).**

Exhibit 8-2: Ratio of Servers to Server Support-Effort by Agency

Agency	Agency Support FTE	Number of Servers	Servers per Support FTE
Adult & Juvenile Detention	0.43	4	9
Assessor	0.04	8	200
Community & Human Services	3.35	44	13
Council	0.20	4	20
DES Finance	0.63	17	27
DES HR	0.45	14	31
DES ITS	9.80	135	14
DES Other	1.31	81	62
Development & Environmental Services	1.05	13	12
District Court	0.35	12	34
DOT Airport, Fleet, Roads	1.90	51	27
DOT Transit	4.01	75	19
Executive (B/E/E/O)	0.02	6	300
Judicial Administration	0.35	40	114
Natural Resources & Parks	6.53	127	19
Prosecuting Attorney	1.20	14	12
Public Health	4.10	82	20
Sheriff	3.90	46	12
Superior Court	2.00	59	30
TOTAL	41.62	832	20

While not within the scope of our cost analysis, we also note two other items regarding the County’s servers:

- ◆ At 832, the County appears to have a high number of servers relative to organizations that have undergone an architecture optimization process and chosen to pursue server consolidation
- ◆ File & Print servers appear to be particularly numerous: the County has a ratio of approximately 52 workstations per file & print server – a low number by today’s standards

B. KEY SPENDING AND STAFFING RATIOS

An organization’s financial and labor focus often reflects its priorities. By examining the allocation of IT effort and spending in comparison to overall effort and spending – and tracking these levels over time – the County can more efficiently and effectively allocate limited IT resources to its core business goals and objectives.

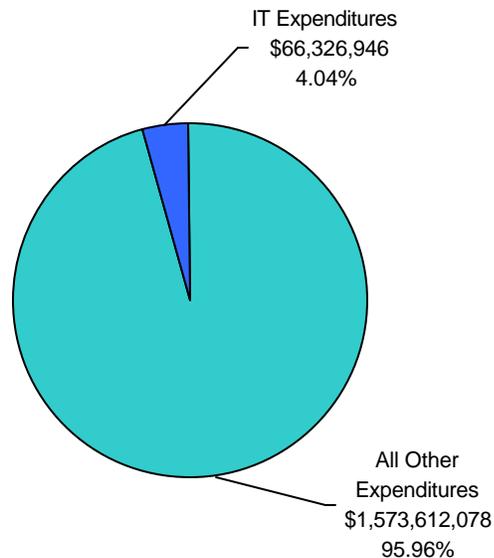
The remainder of this section examines these metrics as follows:

- ◆ IT Spending Ratios
- ◆ IT Staffing Ratios

IT SPENDING RATIOS

The graphic below depicts the percentage of IT operating spending compared to the overall County operating expenditures, based on FY03 data provided by the agencies.

Exhibit 8-3: County-Wide IT Spending as a Percentage of Overall Expenditures



The following table examines this information on an agency-by-agency basis (with ITS charges allocated to each agency).

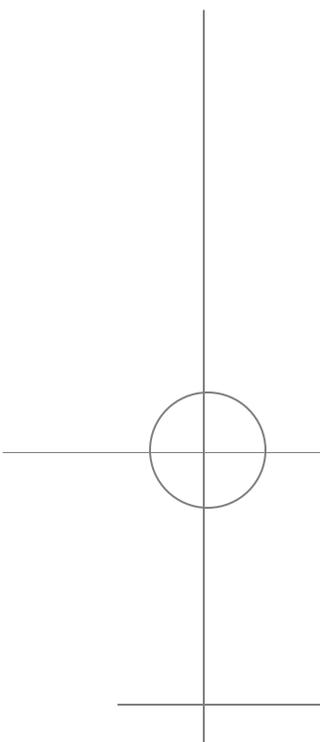


Exhibit 8-4: Agency IT Spending plus ITS Charges as a Percentage of Overall Expenditures²

Agency	Overall Expenditures	IT Expenditures	IT as Percent of Overall
Adult and Juvenile Detention	\$ 103,011,019	\$ 3,339,137	3.2%
Assessor	\$ 16,679,530	\$ 1,545,894	9.3%
Community and Human Services	\$ 178,948,000	\$ 3,124,735	1.7%
Council	\$ 14,118,451	\$ 394,507	2.8%
Development and Environmental Services	\$ 29,000,000	\$ 2,090,168	7.2%
District Court	\$ 20,505,790	\$ 1,033,541	5.0%
Executive (Budget, Executive, Economic Development, OIRM)	\$ 10,211,043	\$ 1,699,322	16.6%
Executive Services: Finance	\$ 23,700,382	\$ 6,779,859	28.6%
Executive Services: Human Resources	\$ 9,111,408	\$ 984,858	10.8%
Executive Services: Other	\$ 56,263,733	\$ 3,723,366	6.6%
Judicial Administration	\$ 14,045,911	\$ 1,484,763	10.6%
Natural Resources and Parks	\$ 236,821,019	\$ 7,829,382	3.3%
Prosecuting Attorney	\$ 43,500,000	\$ 1,680,690	3.9%
Public Health	\$ 250,000,000	\$ 9,271,707	3.7%
Sheriff	\$ 99,503,862	\$ 4,324,402	4.3%
Superior Court	\$ 40,691,998	\$ 1,979,424	4.9%
Transportation: Airport, Fleet Administration, and Road Services	\$ 104,565,477	\$ 3,627,833	3.5%
Transportation: Transit	\$ 389,261,400	\$ 10,224,177	2.6%
TOTAL	\$ 1,639,939,023	\$ 65,137,766	4.0%

Prior experiences with government organizations employing more than 1,000 FTEs indicate that IT operating expenditures as a percentage of total operating expenditures typically range from 1.5% to 3.2%. The County's spending appears to be above that expected range.

We would caution strongly against concluding that the 4.0% IT operating expenditures number indicates that the County is overspending. Sophisticated organizations that have made large technology investments frequently appear at, or above, the high end of the typical range. In addition, circumstances that might drive the County toward the upper end of the scale include:

- ◆ The fact that the County relies on two finance systems, two payroll systems, and two human resource systems – a situation identified as a significant cost driver in the County's ongoing quantified business case effort
- ◆ The County employs ORACLE and PeopleSoft as enterprise applications – we often see organizations with high-end packages such as these at the upper end of the spending range
- ◆ Economic differences between the County and our other data sources – the Pacific Northwest has a relatively high cost of living, and the data has not been adjusted to reflect this
- ◆ Differences in labor cost calculations – for a variety of reasons (e.g., composition of overhead calculation, economic differences, etc.) the County's average IT labor cost was approximately 20% higher than the average of PTI's experience base
- ◆ The wide geographic distribution of the County's labor force may also cause higher IT support costs

Understanding the level of spending per employee or citizen can also provide a long-term measure of the role of IT in supporting business operations. The tables below present those numbers.

² Note that the Executive includes OIRM, a county-wide IT service provider, all of whose spending is considered to be IT-related.

Exhibit 8-5: Total IT Spending Per FTE

Category	Amount
County IT expenditures	\$ 66,326,946
County FTE total	13,325
IT spending per County FTE	\$ 4,978

Exhibit 8-6: Total IT Spending per Capita

Category	Amount
County IT expenditures	\$ 66,326,946
County population	1,741,785
IT spending per citizen	\$ 38

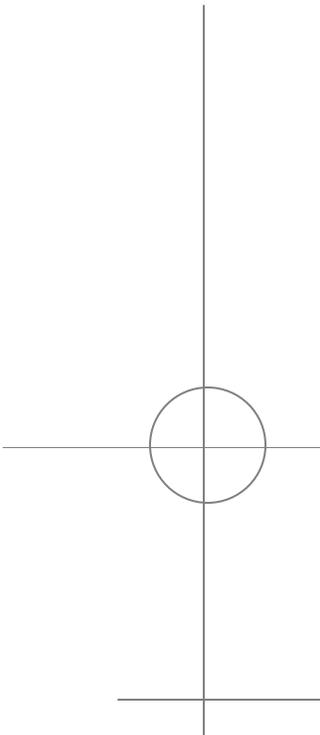
The above information is most useful in combination with other correlative measures. For instance, if the County had a goal of using technology to improve the efficiency of citizen service delivery, one might expect the per-citizen IT operating spending to increase, while the per-citizen total operating spending decreased.

IT STAFFING RATIOS

Similar to the previous analysis of spending, the table below depicts the portion of effort at the County devoted to IT support.

Exhibit 8-7: County-Wide IT Effort as a Percentage of Overall Staffing

Category	Amount
County FTE total	13,325
IT FTE total	507
IT FTE as percent of total	3.8%



The table below expands on this analysis, presenting the data on a per agency basis .

Exhibit 8-8: Comparison of Agency IT FTE Effort to Total Agency FTE³

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Agency	Overall Agency FTE	IT FTE	IT FTE as % of Overall
Adult & Juvenile Detention	917	6.25	0.7%
Assessor	229	14.00	6.1%
Community & Human Services	308	19.35	6.3%
Council	157	2.00	1.3%
DES Finance	206	20.65	10.0%
DES HR	96	7.47	7.8%
DES ITS	185	142.03	77.0%
DES Other	504	15.54	3.1%
Development & Environmental Services	243	16.00	6.6%
District Court	235	4.22	1.8%
DOT Airport, Fleet, Roads	769	23.80	3.1%
DOT Transit	3,567	59.04	1.7%
Executive (B/E/E/O)	87	9.39	10.9%
Judicial Administration	202	8.25	4.1%
Natural Resources & Parks	1,686	54.15	3.2%
Prosecuting Attorney	505	9.15	1.8%
Public Health	2,000	56.86	2.8%
Sheriff	995	29.00	2.9%
Superior Court	435	10.00	2.3%
TOTAL	13,325	507.14	3.8%

Prior experiences with government organizations having more than 1,000 FTEs indicate that IT FTEs usually comprise 2% to 5% of the work force. **The County’s IT operating staffing level is toward the middle of this range.**

C. STAFFING ALLOCATIONS

Collecting effort and cost by function for each IT staff person at the County allows us to calculate a variety of staffing measures.

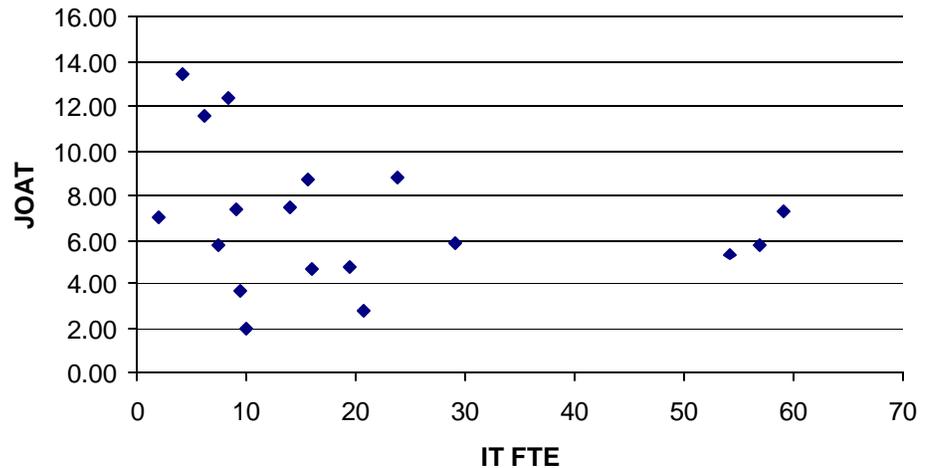
One key measure, developed by PTI, is the “**Jack Of All Trades**” (JOAT) factor, which focuses on staff skill specialization. This measure counts the number of IT service functions performed by each individual. For instance, one person might perform e-mail administration, database administration, help desk, and project management; giving that individual a JOAT number of 4. The overall JOAT number for an agency is the average JOAT number for all of its staff. Simply, this number provides an indication of how many multiple IT service “hats” are worn by each individual within an organization.

In our experience, organizations with few IT staff often exhibit high JOAT, reflecting the need of each individual to support multiple IT functions. Entities with more IT staff usually display lower JOAT, an indicator that they have been able to specialize and allowing them to offer a greater depth of expertise

The graphic below plots the JOAT level for each agency against total IT FTE levels. Note that we have excluded ITS in this chart because, with approximately 142 FTE of effort, they would skew the chart’s X axis (IT FTEs), masking the results at the low FTE levels. PTI calculated ITS’ JOAT as 3.38.

³ As previously noted, Executive includes OIRM, a county-wide IT service provider, all of whose labor effort is considered to be IT-related

Exhibit 8-9: JOAT Levels per Agency (excluding ITS)



Typically, as IT staff size increases, JOAT begins to decrease. This does not appear to be the case at the County. For the smaller agencies at the left of the chart, there is no correlation between IT staff levels and JOAT. This is likely due to some smaller agencies choosing to provide a wide range of IT functions with low staff levels (thus leading to high JOAT) while other small agencies choose to only provide a subset of IT services with their own staff and look to ITS or outside vendors for their remaining needs. The chart also indicates that the larger agencies have chosen not to specialize their IT professionals within a small number of IT disciplines.

The table below presents the data used in the graphic.

Exhibit 8-10: Average JOAT

Agency	IT FTE TOTAL	Average JOAT
Council	2.00	7.00
District Court	4.22	13.40
Adult and Juvenile Detention	6.25	11.57
Judicial Administration	8.25	12.40
Executive Services: Human Resources	7.47	5.80
Prosecuting Attorney	9.15	7.36
Executive (B/E/E/O)	9.39	3.67
Superior Court	10.00	2.00
Assessor	14.00	7.43
Executive Services: Other	15.54	8.72
Development and Environmental Services	16.00	4.65
Community and Human Services	19.35	4.70
Executive Services: Finance	20.65	2.78
Transportation: Airports, Fleet, Roads	23.80	8.77
Sheriff	29.00	5.86
Natural Resources and Parks	54.15	5.37
Public Health	56.86	5.73
Transportation: Transit	59.04	7.25
Executive Services: ITS	142.03	3.38

D. SUPPORT COSTS FOR SPECIFIC COMPONENTS

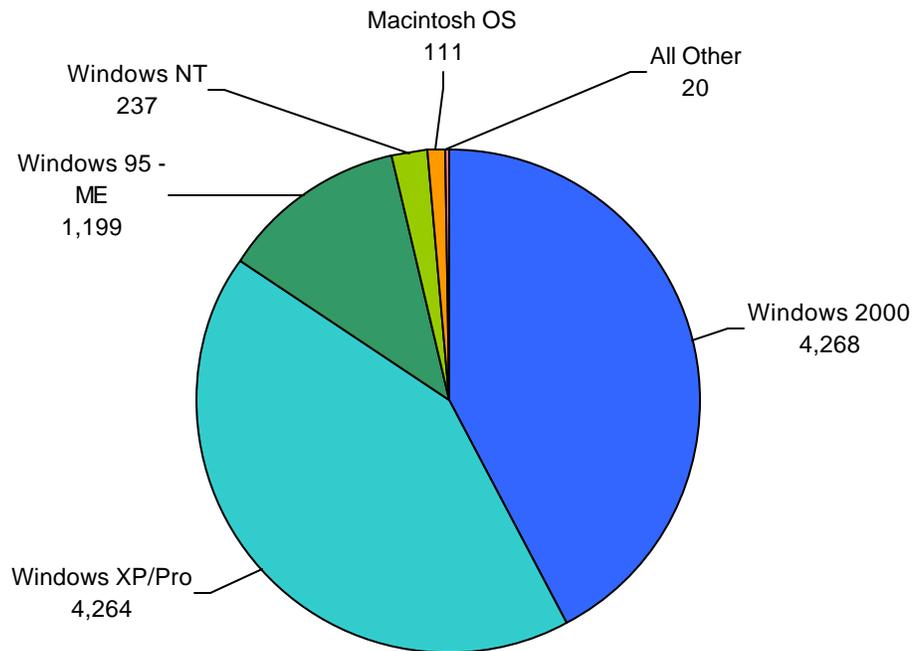
This section drills down into the data collected for this project in an attempt to identify IT cost drivers that the County could potentially manage in an effort to improve efficiency. It is organized as follows:

- ◆ Workstation Analysis
- ◆ Server Analysis

WORKSTATION ANALYSIS

The first workstation analysis chart looks at the distribution of operating systems by number of workstations.

Exhibit 8-11: Workstations per Operating System⁴

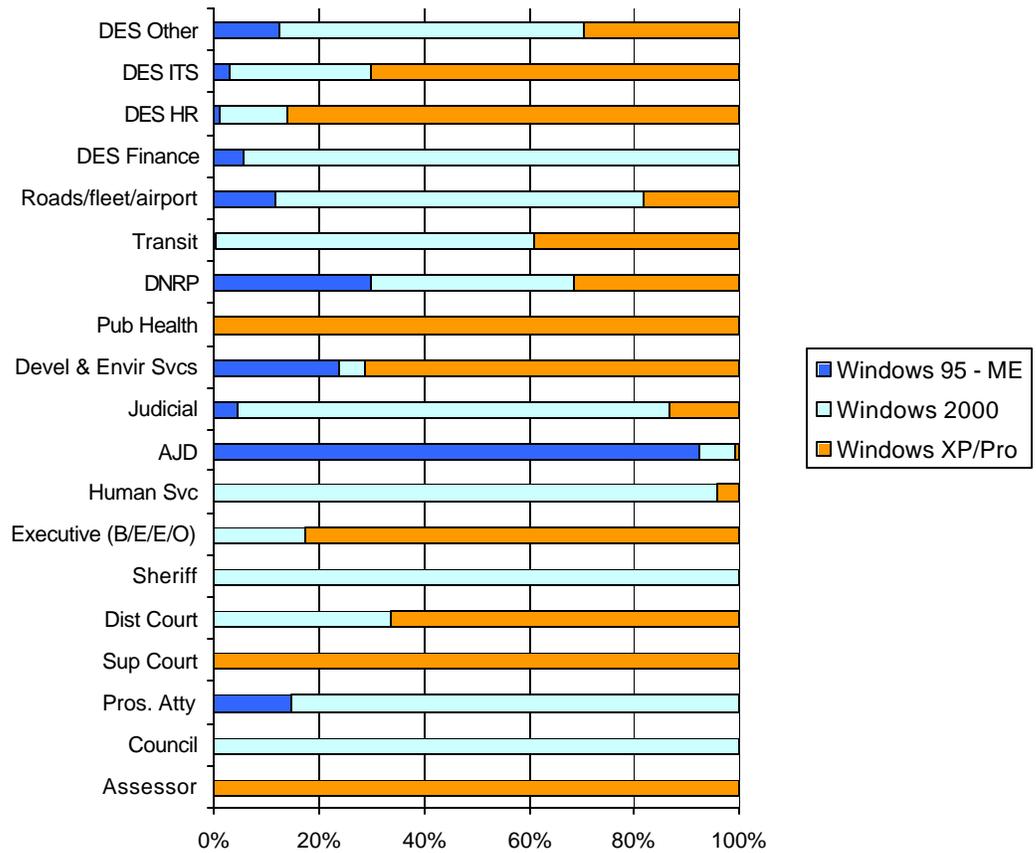


The vast majority (84%) of the County’s workstations run a current release of the Windows operating system, though that number is split nearly evenly between Windows 2000 and Windows XP. Supporting two different operating systems could potentially lead to increased maintenance and support costs (e.g., higher training costs for end users and IT support staff, increased number of application versions to support, etc.). It should be noted that the County’s current approach avoids a significant one-time expenditure in implementation (and potentially licensing) costs necessary to move all workstations to the same operating system.

⁴ Note that these counts do not include networked laptops, mobile computers, or PDAs

The next exhibit presents the same information, per agency.

Exhibit 8-12: Agency Workstations per Operating System



We also examined distribution of processor classes along the same dimensions. The next chart looks at the workstation processor classes throughout the County.

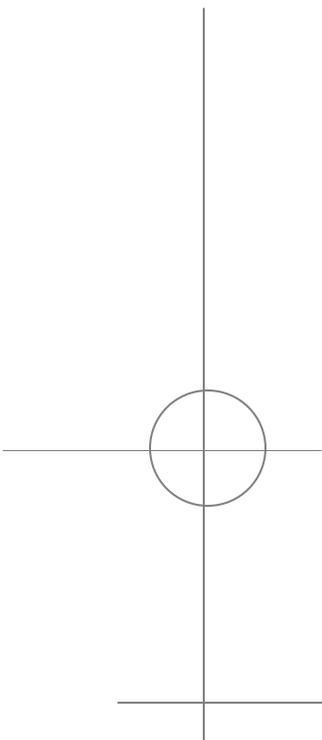
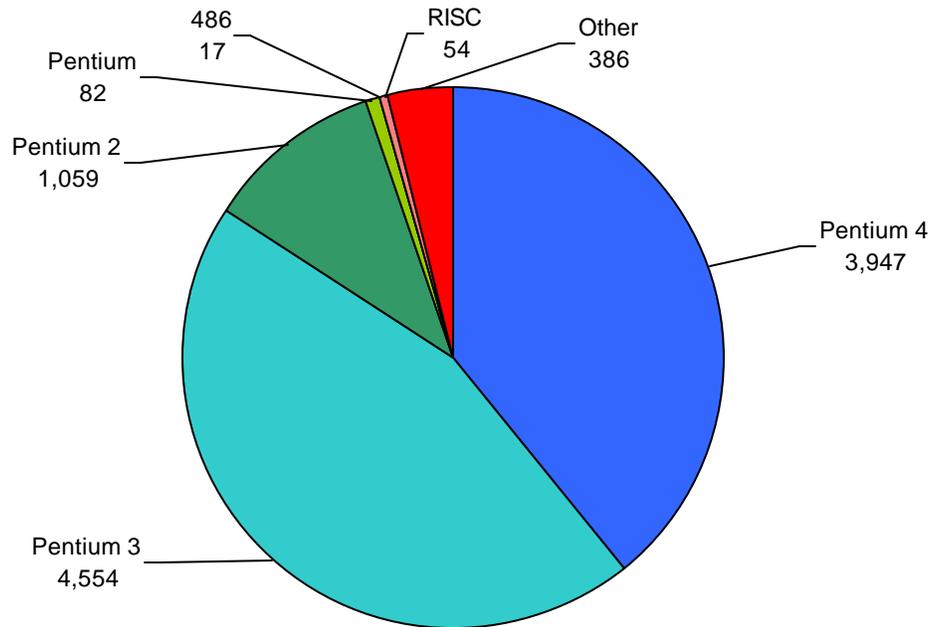


Exhibit 8-13: Workstations per Processor Class⁵

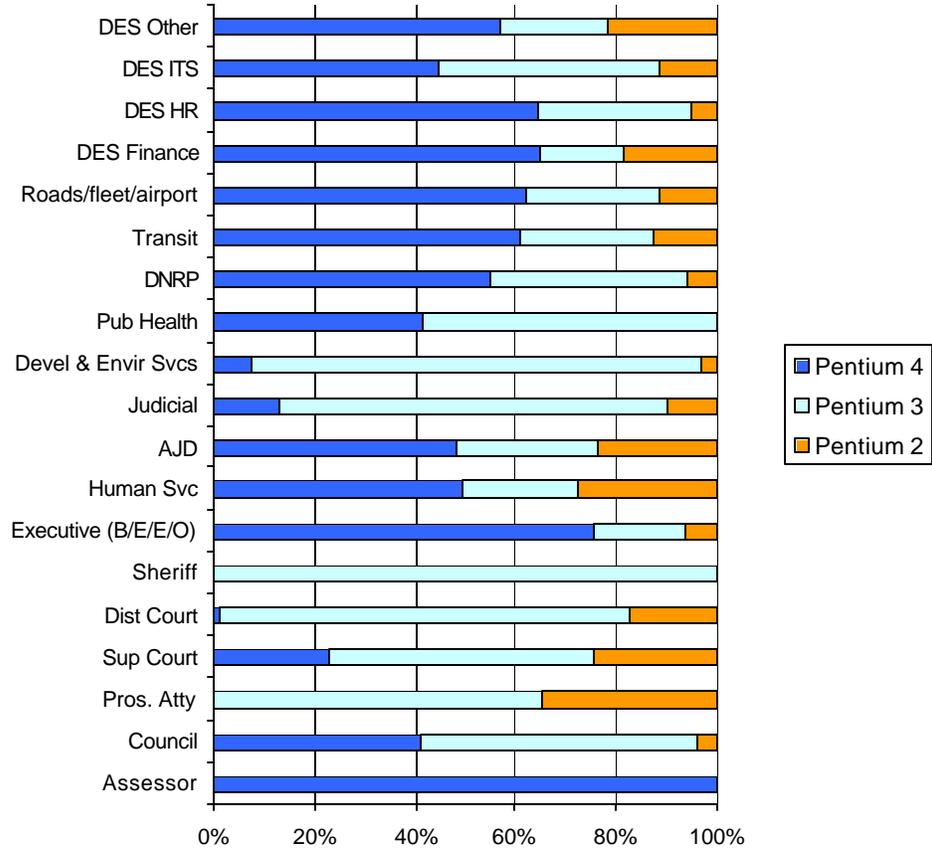


Approximately 60% percent of the County’s workstations use processors one generation or more behind current technology. While not necessarily directly correlated, CPU class serves as a good proxy for computer age. Older processors rarely require maintenance themselves, however the aging computers that use them generally have greater support costs, often have difficulty running current software, and are ultimately more likely to fail. Accordingly, the County’s existing workstation inventory will likely require significant investment in the near future.

The next chart presents the same information per agency.

⁵ Note that the total count of workstations represented in this chart only includes desktop workstations. We did not collect processor information for laptops, mobiles devices, etc.

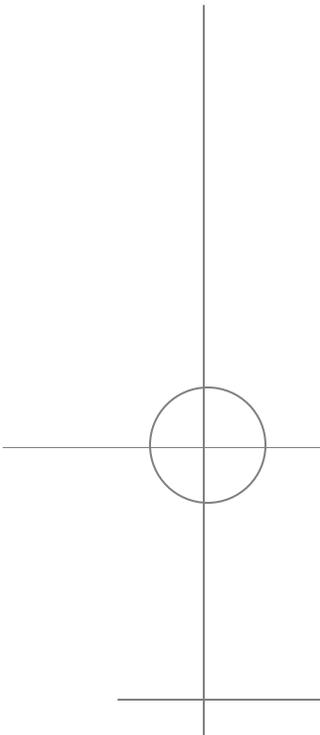
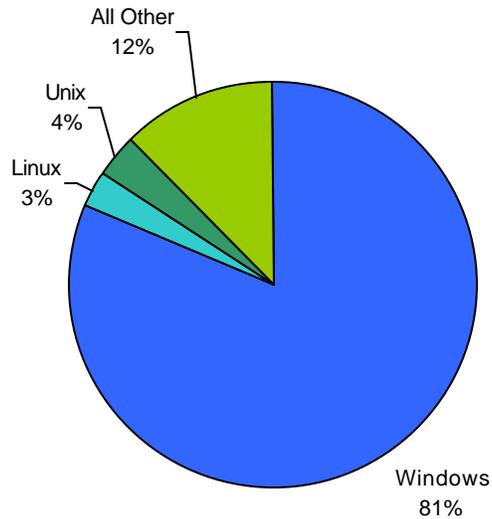
Exhibit 8-14: Agency Workstations per Processor Class



SERVER ANALYSIS

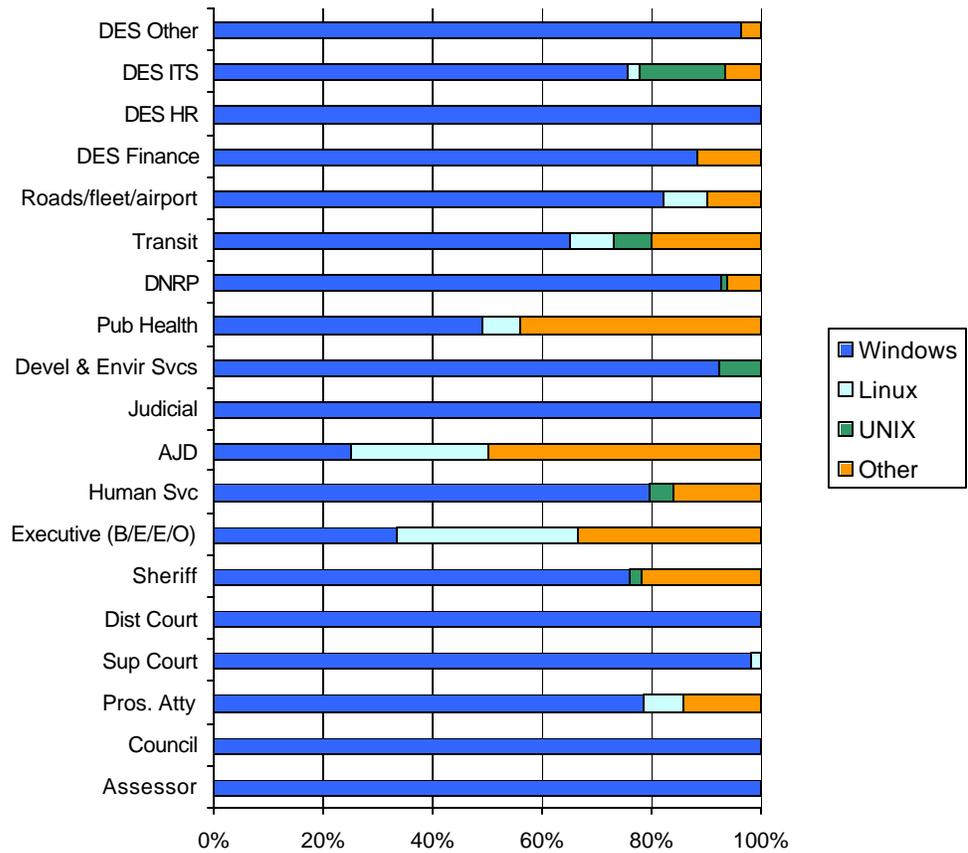
The first server analysis chart below looks at the distribution of operating systems by number of servers.

Exhibit 8-15: Servers per Operating System



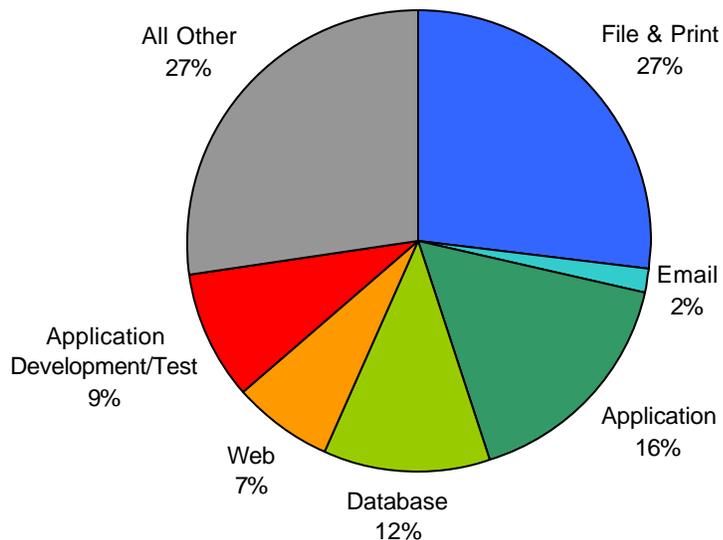
The next exhibit presents the same information, per agency.

Exhibit 8-16: Agency Servers by Operating System



We also examined server use. The next chart looks at the number of servers, by use, throughout the County.

Exhibit 8-17: Servers by Use



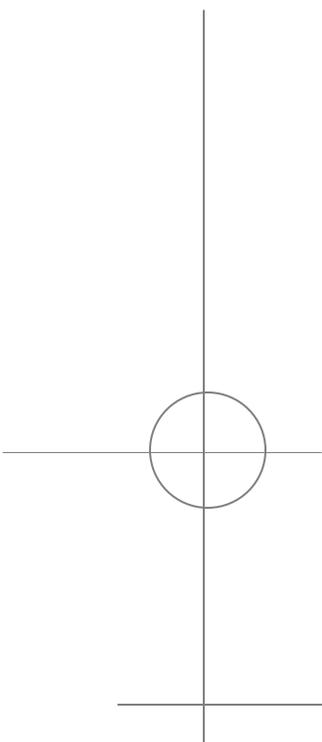
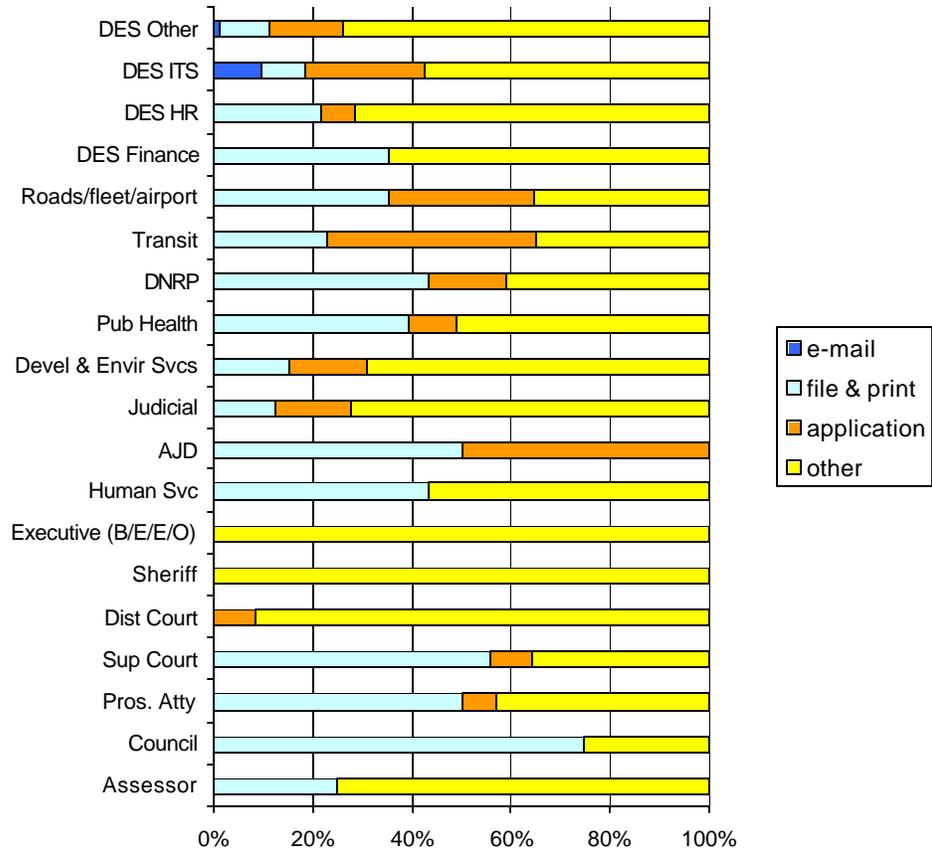
Note that the “All Other” category includes a significant number of mixed use servers that did not fit cleanly into any of the other categories.

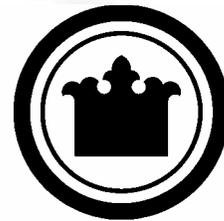
The final chart presents the same information per agency.

**Total Operating
 Cost of
 Technology
 Final Report**

**CHAPTER 8:
 IT Performance
 Measures**

Exhibit 8-18: Agency Servers by Use





King County

**IT operating and
capital budgets**

King County, Washington
May 26, 2004

This chapter summarizes additional information regarding IT budgets and capital spending, organized as follows:

- ◆ IT O&M Budgets
- ◆ IT Capital Budgets

A. IT O&M BUDGETS

The majority of our analysis in this document focuses on actual O&M spending during FY2003. Additionally, we collected data on budgeted O&M spending for FY2003. The following table summarizes the responses from each agency.

Exhibit 9-1: Agency IT O&M Budgets for FY 2003

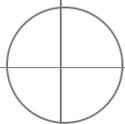
Agency	Software	Hardware	Services	Other	Total
Adult & Juvenile Detention	\$ 67,000	\$ 264,000	\$ 95,000	\$ 210,000	\$ 636,000
Assessor	\$ -	\$ 86,263	\$ 125,690	\$ -	\$ 211,953
Community & Human Services	\$ 84,200	\$ 592,112	\$ 591	\$ -	\$ 676,903
Council	\$ -	\$ -	\$ 37,000	\$ -	\$ 37,000
DES Finance	\$ 110,000	\$ 225,047	\$ 1,161,948	\$ -	\$ 1,496,995
DES HR	\$ -	\$ 68,004	\$ 40,500	\$ -	\$ 108,504
DES ITS	\$ 2,576,414	\$ 1,325,209	\$ 2,440,698	\$ 1,100,000	\$ 7,442,321
DES Other	\$ 118,054	\$ 330,083	\$ 387,047	\$ 313,459	\$ 1,148,643
Development & Environmental Services	\$ 91,000	\$ -	\$ 375,170	\$ -	\$ 466,170
District Court	\$ -	\$ 86,263	\$ 125,690	\$ -	\$ 211,953
DOT Airport, Fleet, Roads	\$ 157,582	\$ 406,848	\$ 18,108	\$ -	\$ 582,538
DOT Transit	\$ 13,700	\$ 267,600	\$ 544,000	\$ -	\$ 825,300
Executive (B/E/E/O)	\$ 17,180	\$ 15,169	\$ 59,510	\$ -	\$ 91,859
Judicial Administration	\$ 169,093	\$ -	\$ 130,000	\$ -	\$ 299,093
Natural Resources & Parks	\$ 465,724	\$ 1,163,814	\$ 304,695	\$ -	\$ 1,934,233
Prosecuting Attorney	\$ 1,788	\$ 159,194	\$ 19,090	\$ -	\$ 180,072
Public Health	\$ 754,102	\$ 1,684,178	\$ 1,841,213	\$ 429,584	\$ 4,709,077
Sheriff	\$ 138,000	\$ 421,842	\$ 134,318	\$ -	\$ 694,160
Superior Court	\$ 14,387	\$ 109,607	\$ 166,707	\$ -	\$ 290,701
TOTALS	\$ 4,778,224	\$ 7,205,233	\$ 8,006,975	\$ 2,053,043	\$ 22,043,475

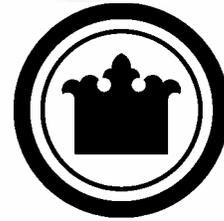
B. IT CAPITAL BUDGETS

Significant amounts in the County are spent on capital IT projects – one-time endeavors that put in place new and updated technologies that do not represent funds that will be necessary to spend year after year. The following table summarizes the FY03 and FY04 IT capital budgets for each agency, as reported to PTI by the agencies.

Exhibit 9-2: Agency Capital Budgets for FY 2003 and FY 2004

Agency	FY 2003	FY 2004
Adult & Juvenile Detention	\$ 2,710	\$ -
Assessor	\$ 18,488	\$ -
Community & Human Services	\$ 350,189	\$ 43,401
Council	\$ 17,765	\$ 58,705
DES Finance	\$ 450,000	\$ 423,836
DES HR	\$ 64,500	\$ 65,000
DES ITS	\$ 4,244,430	\$ 1,211,996
DES Other	\$ 2,391,888	\$ 3,100,658
Development & Environmental Services	\$ 262,350	\$ 302,000
District Court	\$ 128,000	\$ 1,280,000
DOT Airport, Fleet, Roads	\$ -	\$ -
DOT Transit	\$ 9,855,500	\$ 10,278,100
Executive (B/E/E/O)	\$ 20,584	\$ 20,584
Judicial Administration	\$ 13,500	\$ 13,500
Natural Resources & Parks	\$ 1,813,357	\$ 2,081,278
Prosecuting Attorney	\$ 7,300	\$ 7,300
Public Health	\$ 3,616,801	\$ 3,154,275
Sheriff	\$ -	\$ -
Superior Court	\$ 285,783	\$ 206,658
TOTALS	\$ 23,543,145	\$ 22,247,291





King County

methodology

King County, Washington
May 26, 2004

This appendix presents PTI's methodology, including an explanation of our approach to gathering the data and a description of the steps taken to validate the information provided, organized as follows:

- ◆ A. Agency Definition
- ◆ B. Data Collection
- ◆ C. Data Completeness and Validation
- ◆ D. Overhead Allocation

A. AGENCY DEFINITION

The County requested that we analyze IT spending in total, and by agency – with the exception of Executive Services and Transportation, which were divided into smaller units for the purposes of this engagement. The following list identifies the organizational areas that provided data. Abbreviations for the organization name, if used in the report, are indicated in parenthesis.

- ◆ Adult and Juvenile Detention
- ◆ Assessor
- ◆ Community and Human Services
- ◆ Council
- ◆ Development and Environmental Services
- ◆ District Court
- ◆ Executive (Budget/Executive/Economic Development/OIRM or Executive (B/E/E/O))
- ◆ Executive Services: Finance (DES Finance)
- ◆ Executive Services: Human Resources (DES HR)
- ◆ Executive Services : Information and Telecommunications Services (ITS)
- ◆ Executive Services: Other (DES Other)
- ◆ Judicial Administration
- ◆ Natural Resources and Parks
- ◆ Prosecuting Attorney
- ◆ Public Health
- ◆ Sheriff
- ◆ Superior Court
- ◆ Transportation: (DOT Transit)
- ◆ Transportation: Airport, Fleet Administration, and Road Services (DOT Airport, Fleet, Roads)

For simplicity's sake, the report refers to the above as "agencies" in the aggregate.

B. DATA COLLECTION

Each agency designated an individual to serve as its lead (TCO Lead) for gathering the technology cost information. These individuals were asked to complete data collection forms for:

- ◆ FY03 IT staffing allocations as of December 31, 2003
- ◆ FY03 actual IT goods & services spending and deployed inventory

- ◆ FY03 and FY04 IT budget information

Appendix C contains samples of the data collection forms.

The IT staffing allocation form collected information about all individuals providing IT services at the County, including full-time employees, term-limited temporary employees, true temporary employees, contractors, and shadow staff¹. This form asked the TCO leads to apportion each individual's time across a pre-defined set of IT activities and to provide information about their annual salary or wages. Because staffing levels vary over the course of a year, we asked the TCO leads to provide this information as of December 31, 2003. The 2004 PONS file served as the source for compensation information. The County was comfortable that the 2004 PONS data reasonably approximated 2003 wages and salaries.

PTI used the allocation of time across the IT service activities to calculate the full-time-equivalent (FTE) effort associated with each activity. **Note that, as used in this report, the term FTE does not necessarily refer to an individual County employee.** Rather, one FTE may be composed of the effort from one or more individuals, including work from full-time and part-time employees, as well as shadow and contract labor. Positions identified as vacant were only included in this calculation where labor effort was ascribed to the vacant position.

The consulting team used the annualized salary or wage information, in combination with an overhead factor provided by the Office of Management and Budget, to calculate an estimated annual IT *operating* labor cost for the County. *Note that this cost represents an approximation; it assumes that the staffing levels as of December 31, 2003 represent a reasonable proxy for the entire year.* Once again, positions identified as vacant were not included in this calculation unless effort allocations were provided by the agencies. Costs were calculated in total, as well as at the individual IT activity level. PTI has used this technique for developing annual labor costs for over eight years. We find it to be a reasonable surrogate for actual annual IT labor cost. Section D of this appendix describes the overhead allocation used for this project as well as for the Quantified Business Case for Financial Systems effort.

In addition to calculating an annual labor cost, PTI made the following data adjustments:

- ◆ We substituted ITS chargeback information for the figures provided by the agency TCO leads – as the next section explains
- ◆ We removed OIRM and Natural Resources and Parks (DNRP) GIS charge information supplied by the agencies, and used data supplied by OIRM and DNRP – as the next section explains
- ◆ We adjusted the facilities cost provided by ITS to account for the fact that our labor calculation included an allotment for space and utilities, resulting in a reduction of approximately \$556,000 to the ITS space and utilities costs
- ◆ We removed operating labor effort and associated cost where that effort was attributed to capital projects – note that this amounted to fewer than four FTEs in total
- ◆ We removed approximately \$983,000 spent by ITS on enterprise personal productivity licenses for CX agencies (and funded by a direct CX allotment) from the ITS goods & services costs and allocated it to the goods & services costs of the appropriate agencies based on ITS-supplied data
- ◆ We moved ITS labor effort listed as business unit effort to IT staff effort
- ◆ We combined all of the data into a single master cost model to support our analysis– the body of this report and the subsequent appendices present the results of this work

¹ Shadow staff refer to individuals who do not have IT job titles, but who spend 10% or more of their time providing IT support to other County staff

CHARGEBACKS

ITS, OIRM, and Natural Resources and Parks all charge other agencies for IT-related services. As the remainder of this subsection explains, the report handles ITS charges differently than charges from OIRM and Natural Resources and Parks.

At \$22 million, the ITS charges are quite material to this analysis. As a result, in addition to providing us with their cost data, we asked ITS to supply more detail surrounding their chargebacks to the other agencies. This analysis allocated ITS' charges to the appropriate IT labor activities or goods & services category for each agency. Appendix G contains the data supplied by ITS.

The allocation data allowed us to combine ITS charges with the other agencies' information to give a total cost picture on a per-agency basis, and in the aggregate. It also left us working with two different sets of ITS data:

- ◆ The IT operating cost information derived from the staffing and goods & services expenditure figures ITS provided
- ◆ The chargeback data – an amount that represents the costs recovered by ITS from other County agencies

Exhibit titles in the report explicitly note the inclusion of the ITS chargeback allocation in every instance where we distributed the ITS charges to the agencies. These exhibits do not include a separate row for ITS. We have removed the ITS cost row from these tables to avoid “double counting” of ITS dollars.

As the body of this report notes, the total lines of the exhibits that allocate the ITS charges and those that rely on the ITS IT operating cost information calculated from the staffing and goods & services data differ by approximately \$1 million – with the cost calculation exceeding the recovered charges by that amount. Almost all of the difference occurs in the labor columns. While a detailed analysis of this lack of alignment is beyond the scope of this agreement, contributing factors likely include:

- ◆ Some ITS labor is charged to parties outside the County (e.g., I-Net, etc.) – we collected this cost, but our analysis does not reflect the associated offsetting revenue
- ◆ The approximation we used to arrive at annual labor costs (i.e., basing annual labor costs on a snapshot of labor as of December 31, 2003 as described in the previous section) may have exceeded ITS' actual labor charges

We took a more straightforward approach to the OIRM and DNRP chargebacks. To avoid double-counting these IT costs, we removed these charges from the agencies that provided them.²

In general, the effort required to handle the removal of direct cost and re-allocation of chargebacks to the agencies (as we did with ITS) is quite significant. It also complicates presentation of the material. Given these circumstances, in combination with the fact that the magnitude of the OIRM and Natural Resources and Parks chargebacks are relatively small in comparison to the overall IT costs (approximately \$1.2 million each) and the likelihood that treating them in the same manner might cloud the ITS picture, the County agreed that redistributing the costs from these agencies would not be necessary. Note that this decision does have the impact of under-reporting total agency IT costs by some amount. The agency costs in this report do not include their OIRM allocation. For agencies that use Natural Resources and Parks GIS services, IT operating costs also do not include any IT-related charges.

² OIRM charges were removed from Executive, Community and Human Services, Development and Environmental Services, Executive Services: Other, Natural Resources and Parks, Transportation, and Transportation: Airports, Fleet Maintenance, and Roads.

DNRP charges were removed from Executive, Development and Environmental Services, Natural Resources and Parks.

C. DATA COMPLETENESS AND VALIDATION

It is important to note that this engagement is not intended to be an audit, nor is there an expectation that all the data we collect will foot exactly to the County's accounting and personnel systems. In fact, our methodology for calculating the County's annual IT costs is, by definition, an approximation. Some inaccuracy in the data is expected at a level that will not impact the validity of our work.

While not all the information gathered was to the level of detail that we requested, we received relatively complete FY03 staffing, goods & services expenditure, and inventory figures from all the agencies.

Within that context, our team undertook a number of steps to provide a basis for validating the information we received. These included:

Information Received	Compared To
FY03 total budget and staff counts supplied by the agencies	Total operating budgets and staff counts included in Addendum 2 to the RFP for this project
Count of total IT staff as supplied by the agencies	IT staff counts provided from the 2004 PONS file
ITS charges for agencies that only use ARMS for accounting	ITS charges as listed in ARMS
FY03 IT goods & services expenditures for agencies that only use ARMS	FY03 goods & services expenditures listed in ARMS for those agencies

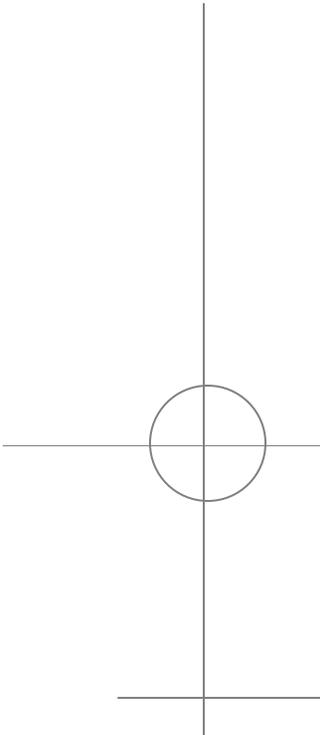
These exercises identified some potential inconsistencies in the IT operating spending and staffing areas. The scope of our contract did not include analyzing the reasons behind these discrepancies. Our team brought them to the attention of the County's project manager. **We understand that the County will provide a separate report on alignment of the IT TCO data with information available from the County's accounting and human resource systems.**

D. OVERHEAD ALLOCATION

This section documents the staff overhead allocation methodologies and costs developed for this project and the County's Quantified Business Case for Financial Systems project. PTI added the Technology Costs total in the table at the end of this section to the staff wage/salary information provided by the County.

We are presenting the document created by Dye Management for the County, verbatim.

King County, State of Washington
Quantified Business Case for Financial Systems
Overhead Costs for TCO and Business Process Costs





This document identifies the overhead rates that were applied to the Technology and Business Process costs for the Quantifiable Business Case. These rates do not include department administration or the cost of Council and Executive since they this cost pool will not change as a result of reducing number of technology groups or by combining business processes.

Department administration costs were collected separately through the Technology cost and Business Process cost surveys. Technology cost surveys provided the opportunity for agencies to allocate department administration to the TCO elements. The business process cost forms included an allocation of departmental overhead to budget, financials, human resource, and payroll activities. The two cost collection surveys collected costs in a consistent manor.

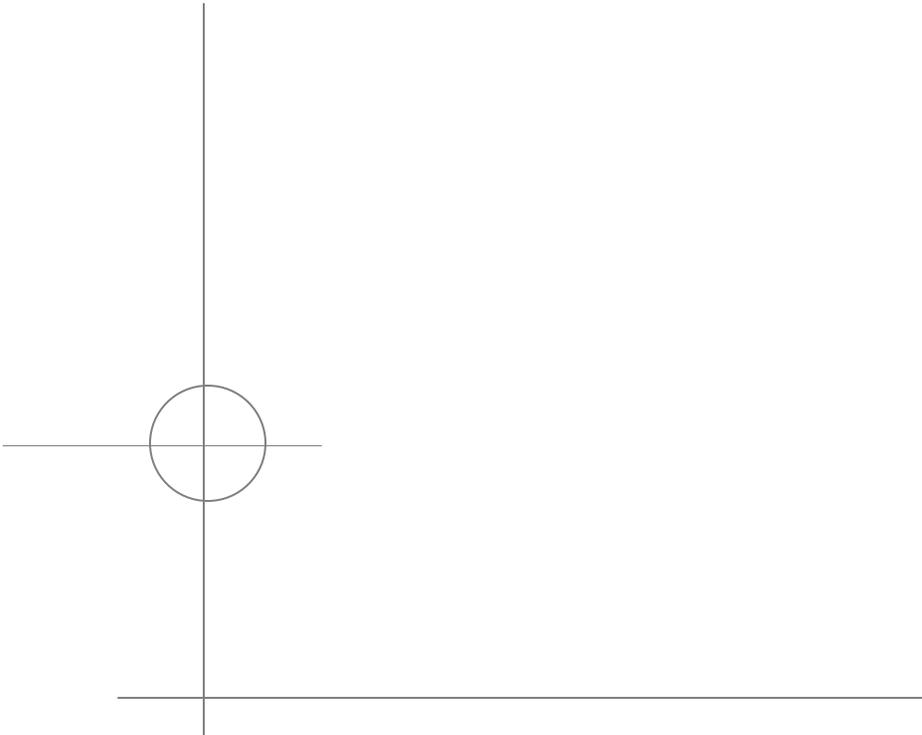
Two overhead rates were needed to prevent double counting of technology costs. The overhead rate structure is presented in the following table.

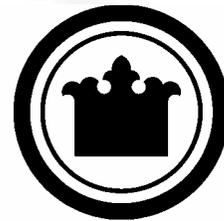
Element	Technology Costs	Business Process Costs
Employee benefits as described in option B. (Fixed health amount per FTE plus percentage for FUTA, SUTA, Retirement, and the like). <ul style="list-style-type: none"> ▪ Federal Tax based on \$60,000 average salary ▪ PERS ▪ Flex Rate 	\$ 4,590 \$ 1,032 \$ 9,575	\$ 4,590 \$ 1,032 \$ 9,575
Floor space charge based on space plan costing and square feet.	\$ 3,920	\$ 3,920
Desk top - based on ITS rates.		\$ 710
Email account - based on ITS rates.		\$ 106
Distributed Computing - based on ITS rates.		\$ 2,380
Bus Pass - based on the actual costs in the CX overhead model.	\$ 236	\$ 236
Utilities	Included in the floor space per square foot rent charge	Included in the floor space per square foot rent charge
Telephone	\$ 737	\$ 737
Copiers (unless used as a network printer)	\$ 298	\$ 298
Printing and other interdepartmental	\$ 110	\$ 110

**Total Operating
 Cost of
 Technology
 Final Report**

Appendix A:
 Methodology

Element	Technology Costs	Business Process Costs
payments (excluding ITS, OIRM, Budget, Finance, HR, Payroll)		
Total	20,498	\$ 23,694





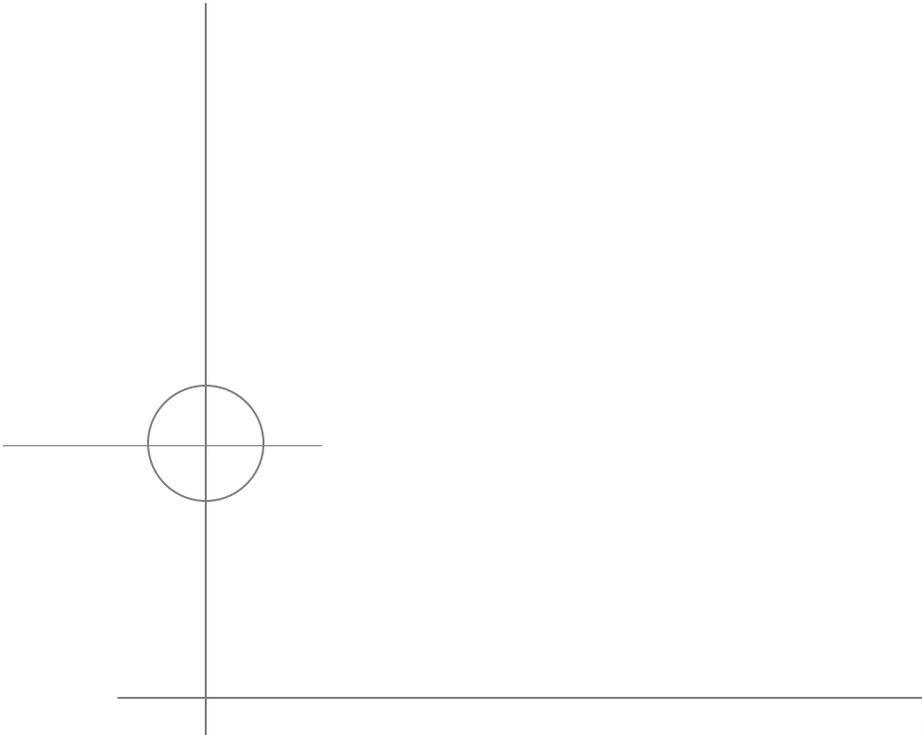
King County

agency detail

King County, Washington
May 26, 2004

This appendix provides a summary of the labor effort and cost data at the agency level. Note that, with the exception of ITS, the agency figures include ITS charges.

We present the agency data as used in the report. Accordingly, it includes some changes to the materials provided by the TCO leads. Please see Appendix A for a complete list of adjustments.



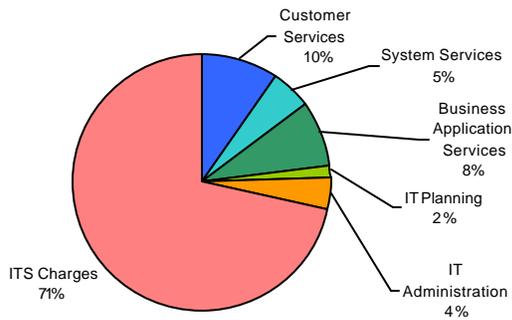
ADULT AND JUVENILE DETENTION

Total IT Operating Costs



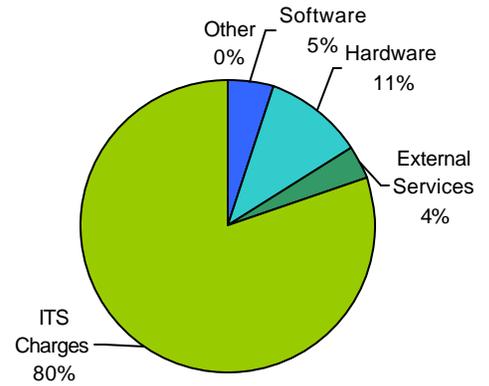
IT Labor: \$1.8 Million	TOTAL: \$3.3 Million	IT Goods & Services: \$1.5 Million
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IT Labor Costs by Category



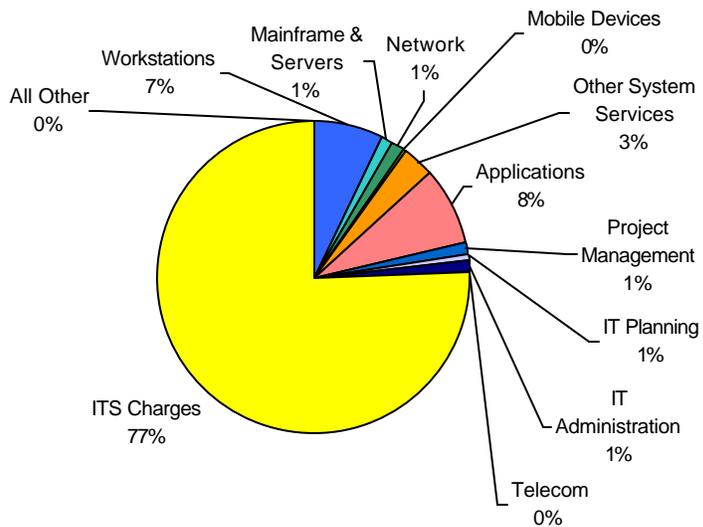
TOTAL: \$1,847,983

IT Goods & Services Costs by Category



TOTAL: \$1,491,154

Major IT Cost Drivers



TOTAL: \$3,339,137

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	2.20	0.00	0.10	2.30
System Services	1.13	0.00	0.00	1.13
Business Application Services	0.80	0.76	0.11	1.67
IT Planning	0.35	0.00	0.00	0.35
IT Administration	0.52	0.24	0.04	0.80
TOTALS	5.00	1.00	0.25	6.25

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
541	2.06	263	\$ 181,695	\$ 335.85

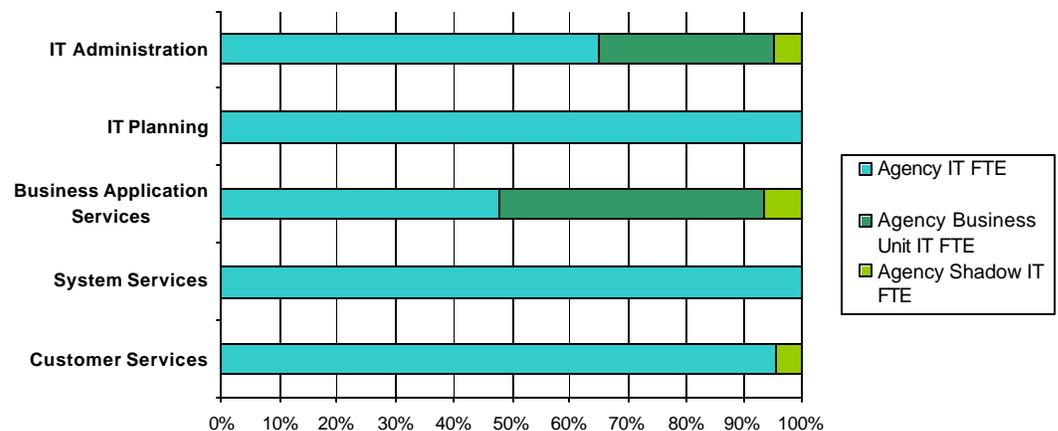
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.05	0	\$ 4,180	n/a
File & Print	2	0.01	200	\$ 836	\$ 418
Application	2	0.19	11	\$ 15,382	\$ 7,691
Other	0	0.18	0	\$ 14,590	n/a
TOTAL	4	0.43	9	\$ 34,989	\$ 8,747

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 103,011,019
Total Agency FY03 FTEs	917
Total Agency FY03 IT FTEs	6.3
Total Agency FY03 IT Operating Expenditures	\$ 3,339,137
IT Operating Expenditures Percent of Total Operating Expenditures	3.24%
IT FTEs Percent of Total FTEs	0.68%
IT Operating Expenditures Per FTE	\$ 3,641

IT Unit IT Labor Compared to Business Unit IT Labor



**Total Operating
 Cost of
 Technology
 Final Report**

**APPENDIX B:
 Agency Detail**

IT Staff Labor Distribution and Cost – Adult and Juvenile Detention

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	2.20	0.00	0.10	2.30	\$ 180,582	
Help Desk (Tier 1)	0.60	0.00	0.00	0.60	\$ 46,633	\$ 77,722
Tier 2 support:						
Desktop PC support	0.50	0.00	0.00	0.50	\$ 39,253	\$ 78,505
PDA support	0.00	0.00	0.00	0.00	-	n/a
Other portable/specialized device support	0.10	0.00	0.00	0.10	\$ 8,361	\$ 83,605
Personal productivity tool support	0.40	0.00	0.00	0.40	\$ 31,872	\$ 79,679
Business application support	0.60	0.00	0.10	0.70	\$ 54,464	\$ 77,805
Training	0.00	0.00	0.00	0.00	-	n/a
System Services	1.13	0.00	0.00	1.13	\$ 91,783	
Network connectivity (WAN/LAN/wireless)	0.35	0.00	0.00	0.35	\$ 28,671	\$ 81,917
Workstation administration	0.10	0.00	0.00	0.10	\$ 7,381	\$ 73,809
Server administration:						
Email administration	0.05	0.00	0.00	0.05	\$ 4,180	\$ 83,605
File/print administration	0.01	0.00	0.00	0.01	\$ 836	\$ 83,605
GIS server administration	0.05	0.00	0.00	0.05	\$ 3,960	\$ 79,196
Application server administration	0.19	0.00	0.00	0.19	\$ 15,382	\$ 80,960
Other server administration	0.13	0.00	0.00	0.13	\$ 10,631	\$ 81,775
Mainframe operations & administration	0.08	0.00	0.00	0.08	\$ 6,688	\$ 83,605
Data center operations	0.01	0.00	0.00	0.01	\$ 836	\$ 83,605
Database administration	0.09	0.00	0.00	0.09	\$ 7,405	\$ 82,281
Security administration	0.06	0.00	0.00	0.06	\$ 4,976	\$ 82,939
Telephone systems support	0.01	0.00	0.00	0.01	\$ 836	\$ 83,605
Business Application Services	0.80	0.76	0.11	1.67	\$ 149,617	
Application development:						
Website design/maintenance	0.15	0.00	0.00	0.15	\$ 12,815	\$ 85,435
Desktop application development/maintenance	0.23	0.10	0.00	0.33	\$ 28,788	\$ 87,236
GIS application development/maintenance	0.00	0.00	0.00	0.00	-	n/a
All other development	0.01	0.10	0.00	0.11	\$ 11,090	\$ 100,822
Requirements analysis	0.11	0.05	0.10	0.26	\$ 20,138	\$ 77,452
Data administration	0.03	0.05	0.00	0.08	\$ 7,688	\$ 96,097
Application administration	0.02	0.05	0.00	0.07	\$ 6,852	\$ 97,881
Custom application maintenance:						
ARMS	0.00	0.01	0.00	0.01	\$ 1,022	\$ 102,194
IBIS	0.00	0.00	0.00	0.00	-	n/a
EssBase	0.00	0.00	0.00	0.00	-	n/a
Other finance	0.00	0.00	0.00	0.00	-	n/a
Other HR	0.00	0.00	0.00	0.00	-	n/a
Other payroll	0.00	0.00	0.00	0.00	-	n/a
Other budget	0.00	0.00	0.00	0.00	-	n/a
Agency app 1	0.10	0.00	0.01	0.11	\$ 8,468	\$ 76,980
Agency app 2	0.10	0.00	0.00	0.10	\$ 7,920	\$ 79,196
All other	0.00	0.00	0.00	0.00	-	n/a
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	-	n/a
MSA	0.00	0.05	0.00	0.05	\$ 5,110	\$ 102,194
Fixed Asset	0.00	0.00	0.00	0.00	-	n/a
Other finance	0.00	0.00	0.00	0.00	-	n/a
Other HR	0.00	0.05	0.00	0.05	\$ 5,110	\$ 102,194
Other payroll	0.00	0.05	0.00	0.05	\$ 5,110	\$ 102,194
Other budget	0.00	0.05	0.00	0.05	\$ 5,110	\$ 102,194
Agency app 1	0.05	0.10	0.00	0.15	\$ 14,179	\$ 94,528
Agency app 2	0.00	0.10	0.00	0.10	\$ 10,219	\$ 102,194
All other	0.00	0.00	0.00	0.00	-	n/a
IT Planning	0.35	0.00	0.00	0.35	\$ 29,086	
Strategic planning & governance	0.10	0.00	0.00	0.10	\$ 8,710	\$ 87,099
Research and development	0.20	0.00	0.00	0.20	\$ 16,021	\$ 80,104
Disaster recovery/planning	0.05	0.00	0.00	0.05	\$ 4,355	\$ 87,099
IT Administration	0.52	0.24	0.04	0.80	\$ 70,647	
Asset management	0.11	0.00	0.00	0.11	\$ 8,217	\$ 74,699
IT procurement	0.05	0.00	0.00	0.05	\$ 4,355	\$ 87,099
Project management	0.12	0.24	0.02	0.38	\$ 36,075	\$ 94,934
Standards and policies development	0.04	0.00	0.00	0.04	\$ 3,484	\$ 87,099
Administrative support	0.00	0.00	0.02	0.02	\$ 1,096	\$ 54,819
Departmental management	0.20	0.00	0.00	0.20	\$ 17,420	\$ 87,099
TOTALS	5.00	1.00	0.25	6.25	\$ 521,715	
ITS Labor Charges					\$ 1,326,268	
TOTAL including ITS					\$ 1,847,983	



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**Total Operating
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Technology
Final Report**

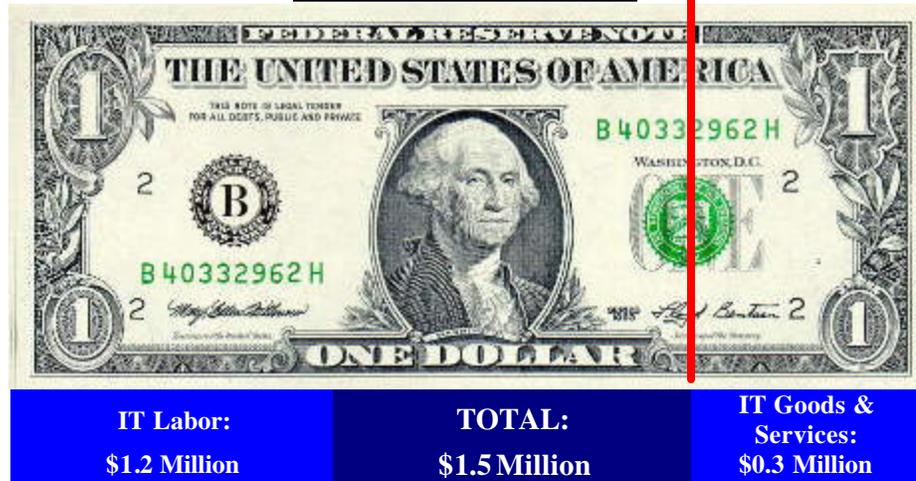
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Adult and Juvenile Detention

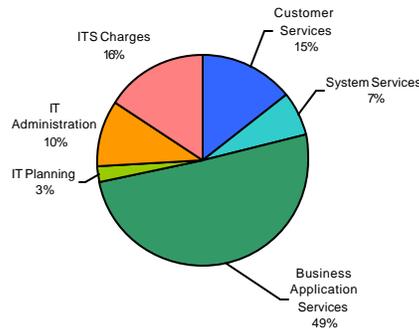
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ -
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 73,680
Other	\$ -
Software Totals	\$ 73,680
Hardware	
Workstations	\$ 40,000
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 8,000
Storage	\$ -
Network equipment/infrastructure	\$ 12,000
Telco back-end	\$ -
Printers	\$ 5,000
Other	\$ 101,230
Hardware Totals	\$ 166,230
External Services	
Application development	\$ -
Application maintenance	\$ 55,250
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ -
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 55,250
Other	
ITS Charges (Goods & Services)	\$ 1,195,994
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 1,195,994
TOTAL	\$ 1,491,154

ASSESSOR

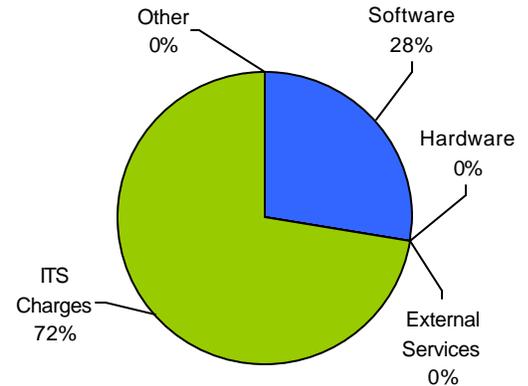
Total IT Operating Costs



IT Labor Costs by Category



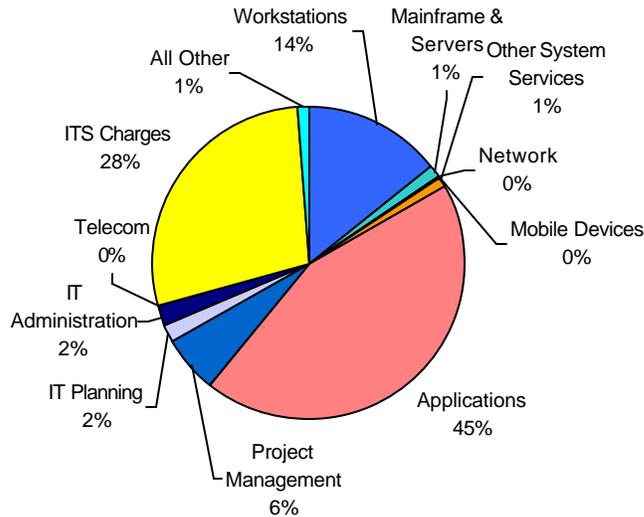
IT Goods & Services Costs by Category



TOTAL: \$1,210,272

TOTAL: \$335,622

Major IT Cost Drivers



TOTAL: \$1,545,894

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	2.45	0.00	0.00	2.45
System Services	1.13	0.00	0.00	1.13
Business Application Services	8.49	0.00	0.00	8.49
IT Planning	0.35	0.00	0.00	0.35
IT Administration	1.58	0.00	0.00	1.58
TOTALS	14.00	0.00	0.00	14.00

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
270	2.02	134	\$ 129,930	\$ 481.22

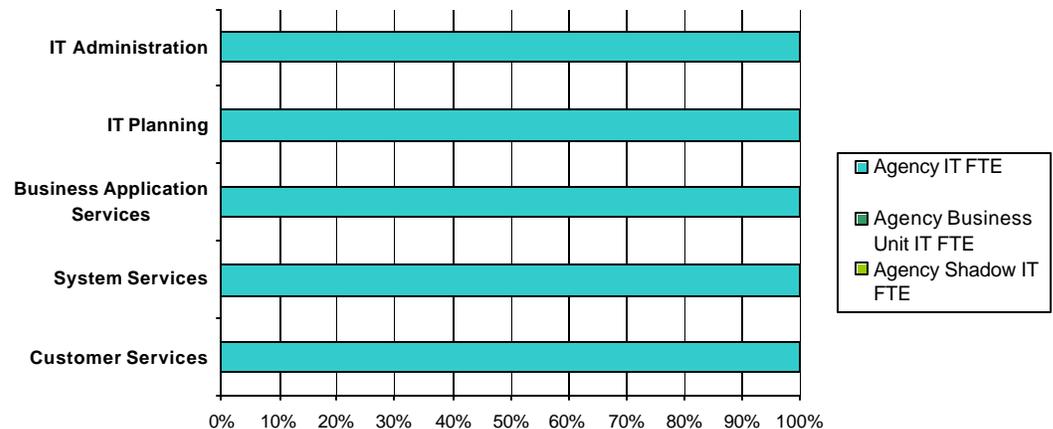
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	2	0.01	200	\$ 705	\$ 352
Application	0	0.01	0	\$ 705	n/a
Other	6	0.02	300	\$ 1,410	\$ 235
TOTAL	8	0.04	200	\$ 2,820	\$ 352

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 16,679,530
Total Agency FY03 FTEs	229
Total Agency FY03 IT FTEs	14.0
Total Agency FY03 IT Operating Expenditures	\$ 1,545,894
IT Operating Expenditures Percent of Total Operating Expenditures	9.27%
IT FTEs Percent of Total FTEs	6.11%
IT Operating Expenditures Per FTE	\$ 6,751

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost - Assessor

**Total Operating
 Cost of
 Technology
 Final Report**

**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	2.45	0.00	0.00	2.45	\$ 175,721	
Help Desk (Tier 1)	1.35	0.00	0.00	1.35	\$ 98,173	\$ 72,720
Tier 2 support:						
Desktop PC support	0.20	0.00	0.00	0.20	\$ 14,100	\$ 70,498
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.05	0.00	0.00	0.05	\$ 3,525	\$ 70,498
Personal productivity tool support	0.00	0.00	0.00	0.00	\$ -	n/a
Business application support	0.60	0.00	0.00	0.60	\$ 42,299	\$ 70,498
Training	0.25	0.00	0.00	0.25	\$ 17,625	\$ 70,498
System Services	1.13	0.00	0.00	1.13	\$ 79,663	
Network connectivity (WAN/LAN/wireless)	0.01	0.00	0.00	0.01	\$ 705	\$ 70,498
Workstation administration	0.24	0.00	0.00	0.24	\$ 16,920	\$ 70,498
Server administration:						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.01	0.00	0.00	0.01	\$ 705	\$ 70,498
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.01	0.00	0.00	0.01	\$ 705	\$ 70,498
Other server administration	0.02	0.00	0.00	0.02	\$ 1,410	\$ 70,498
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.20	0.00	0.00	0.20	\$ 14,100	\$ 70,498
Database administration	0.44	0.00	0.00	0.44	\$ 31,019	\$ 70,498
Security administration	0.20	0.00	0.00	0.20	\$ 14,100	\$ 70,498
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	8.49	0.00	0.00	8.49	\$ 610,530	
Application development:						
Website design/maintenance	0.35	0.00	0.00	0.35	\$ 24,674	\$ 70,498
Desktop application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
GIS application development/maintenance	0.50	0.00	0.00	0.50	\$ 38,249	\$ 76,498
All other development	3.10	0.00	0.00	3.10	\$ 221,545	\$ 71,466
Requirements analysis	2.44	0.00	0.00	2.44	\$ 175,016	\$ 71,728
Data administration	0.70	0.00	0.00	0.70	\$ 52,349	\$ 74,784
Application administration	0.10	0.00	0.00	0.10	\$ 7,050	\$ 70,498
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.60	0.00	0.00	0.60	\$ 42,299	\$ 70,498
Agency app 2	0.35	0.00	0.00	0.35	\$ 24,674	\$ 70,498
All other	0.00	0.00	0.00	0.00	\$ -	n/a
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.15	0.00	0.00	0.15	\$ 10,575	\$ 70,498
Agency app 2	0.20	0.00	0.00	0.20	\$ 14,100	\$ 70,498
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.35	0.00	0.00	0.35	\$ 30,674	
Strategic planning & governance	0.15	0.00	0.00	0.15	\$ 13,575	\$ 90,498
Research and development	0.10	0.00	0.00	0.10	\$ 8,550	\$ 85,498
Disaster recovery/planning	0.10	0.00	0.00	0.10	\$ 8,550	\$ 85,498
IT Administration	1.58	0.00	0.00	1.58	\$ 120,387	
Asset management	0.00	0.00	0.00	0.00	\$ -	n/a
IT procurement	0.00	0.00	0.00	0.00	\$ -	n/a
Project management	1.25	0.00	0.00	1.25	\$ 91,123	\$ 72,898
Standards and policies development	0.23	0.00	0.00	0.23	\$ 19,215	\$ 83,542
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.10	0.00	0.00	0.10	\$ 10,050	\$ 100,498
TOTALS	14.00	0.00	0.00	14.00	\$ 1,016,975	
ITS Labor Charges					\$ 193,297	
TOTAL including ITS					\$ 1,210,272	



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**Total Operating
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Technology
Final Report**

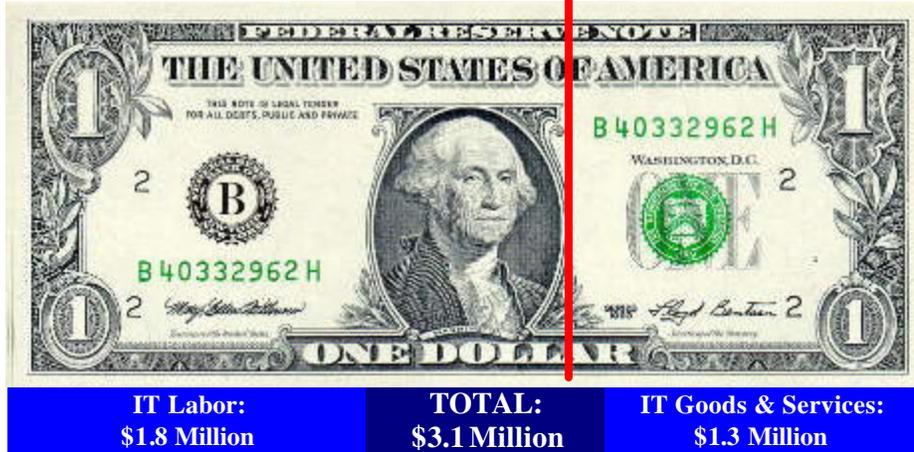
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures - Assessor

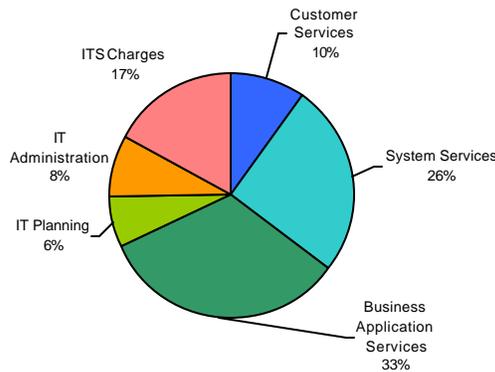
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 92,707
Other	\$ -
Software Totals	\$ 92,707
Hardware	
Workstations	\$ -
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ -
Storage	\$ -
Network equipment/infrastructure	\$ -
Telco back-end	\$ -
Printers	\$ -
Other	\$ -
Hardware Totals	\$ -
External Services	
Application development	\$ -
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ -
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ -
Other	
ITS Charges (Goods & Services)	\$ 242,915
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 242,915
TOTAL	\$ 335,622

COMMUNITY AND HUMAN SERVICES

Total IT Operating Costs

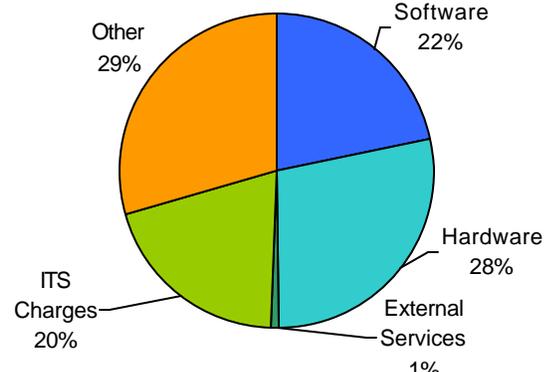


IT Labor Costs by Category



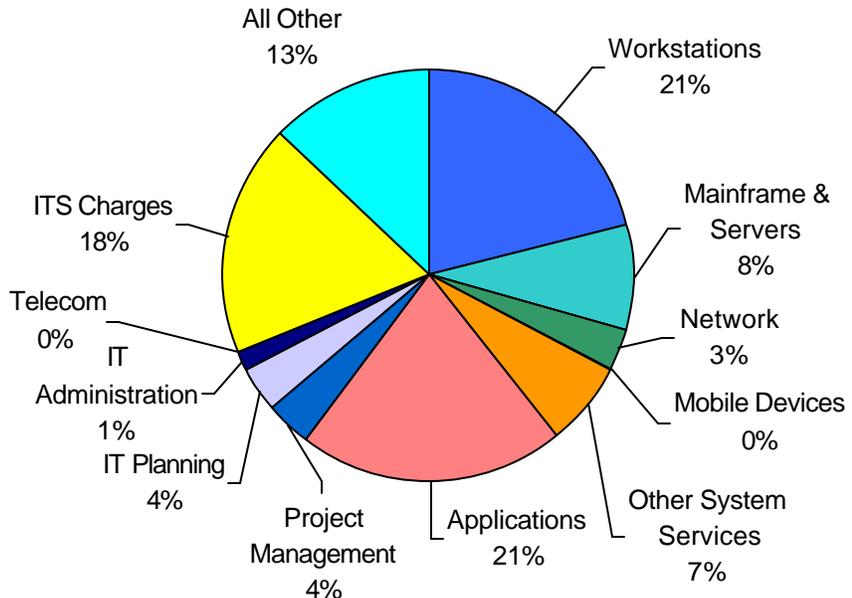
TOTAL: \$1,806,925

IT Goods & Services Costs by Category



TOTAL: \$1,317,810

Major IT Cost Drivers



TOTAL: \$3,124,735

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	2.40	0.00	0.00	2.40
System Services	6.00	0.00	0.00	6.00
Business Application Services	7.70	0.00	0.10	7.80
IT Planning	1.00	0.00	0.30	1.30
IT Administration	1.65	0.00	0.20	1.85
TOTALS	18.75	0.00	0.60	19.35

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
491	2.78	177	\$ 281,810	\$ 573.95

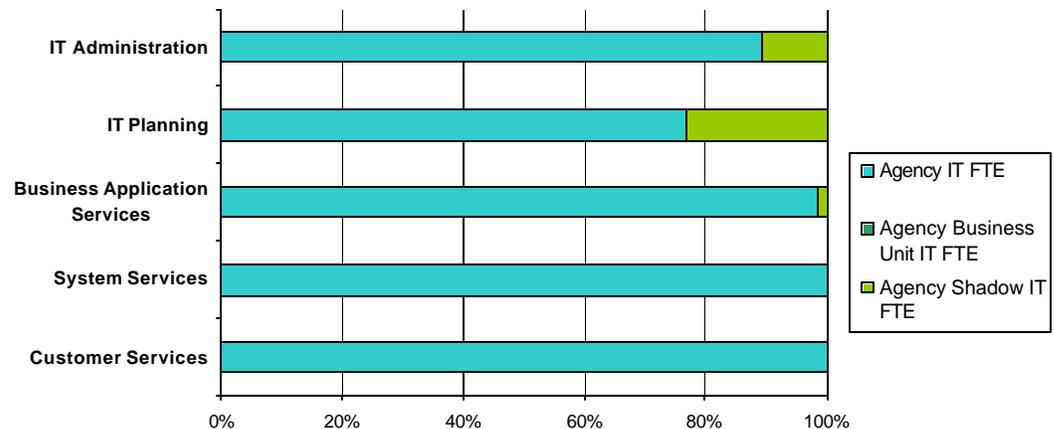
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.20	0	\$ 15,088	n/a
File & Print	19	1.95	10	\$ 145,606	\$ 7,663
Application	0	0.20	0	\$ 15,087	n/a
Other	25	1.00	25	\$ 80,835	\$ 3,233
TOTAL	44	3.35	13	\$ 256,615	\$ 5,832

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 178,948,000
Total Agency FY03 FTEs	308
Total Agency FY03 IT FTEs	19.4
Total Agency FY03 IT Operating Expenditures	\$ 3,124,735
IT Operating Expenditures Percent of Total Operating Expenditures	1.75%
IT FTEs Percent of Total FTEs	6.28%
IT Operating Expenditures Per FTE	\$ 10,140

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Community and Human Services

**Total Operating
 Cost of
 Technology
 Final Report**

**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	2.40	0.00	0.00	2.40	\$ 173,601	
Help Desk (Tier 1)	0.30	0.00	0.00	0.30	\$ 20,406	\$ 68,020
Tier 2 support:						
Desktop PC support	1.90	0.00	0.00	1.90	\$ 139,134	\$ 73,229
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.00	0.00	0.00	0.00	\$ -	n/a
Personal productivity tool support	0.00	0.00	0.00	0.00	\$ -	n/a
Business application support	0.15	0.00	0.00	0.15	\$ 10,797	\$ 71,983
Training	0.05	0.00	0.00	0.05	\$ 3,263	\$ 65,252
System Services	6.00	0.00	0.00	6.00	\$ 462,080	
Network connectivity (WAN/LAN/wireless)	1.30	0.00	0.00	1.30	\$ 97,850	\$ 75,270
Workstation administration	0.25	0.00	0.00	0.25	\$ 18,110	\$ 72,440
Server administration:						
Email administration	0.20	0.00	0.00	0.20	\$ 15,088	\$ 75,438
File/print administration	1.95	0.00	0.00	1.95	\$ 145,606	\$ 74,670
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.20	0.00	0.00	0.20	\$ 15,087	\$ 75,434
Other server administration	1.00	0.00	0.00	1.00	\$ 80,835	\$ 80,835
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.55	0.00	0.00	0.55	\$ 47,022	\$ 85,494
Security administration	0.55	0.00	0.00	0.55	\$ 42,483	\$ 77,242
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	7.70	0.00	0.10	7.80	\$ 598,821	
Application development:						
Website design/maintenance	0.75	0.00	0.00	0.75	\$ 48,340	\$ 64,453
Desktop application development/maintenance	1.00	0.00	0.00	1.00	\$ 81,611	\$ 81,611
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	4.00	0.00	0.00	4.00	\$ 306,240	\$ 76,560
Requirements analysis	0.75	0.00	0.00	0.75	\$ 61,294	\$ 81,725
Data administration	0.90	0.00	0.10	1.00	\$ 76,778	\$ 76,778
Application administration	0.30	0.00	0.00	0.30	\$ 24,558	\$ 81,861
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	1.00	0.00	0.30	1.30	\$ 114,511	
Strategic planning & governance	0.85	0.00	0.30	1.15	\$ 101,937	\$ 88,641
Research and development	0.10	0.00	0.00	0.10	\$ 8,898	\$ 88,975
Disaster recovery/planning	0.05	0.00	0.00	0.05	\$ 3,676	\$ 73,520
IT Administration	1.65	0.00	0.20	1.85	\$ 153,149	
Asset management	0.10	0.00	0.00	0.10	\$ 7,352	\$ 73,520
IT procurement	0.30	0.00	0.00	0.30	\$ 23,483	\$ 78,278
Project management	1.15	0.00	0.15	1.30	\$ 109,939	\$ 84,569
Standards and policies development	0.10	0.00	0.00	0.10	\$ 8,484	\$ 84,836
Administrative support	0.00	0.00	0.05	0.05	\$ 3,890	\$ 77,807
Departmental management	0.00	0.00	0.00	0.00	\$ -	n/a
TOTALS	18.75	0.00	0.60	19.35	\$ 1,502,161	
ITS Labor Charges					\$ 304,764	
TOTAL including ITS					\$ 1,806,925	



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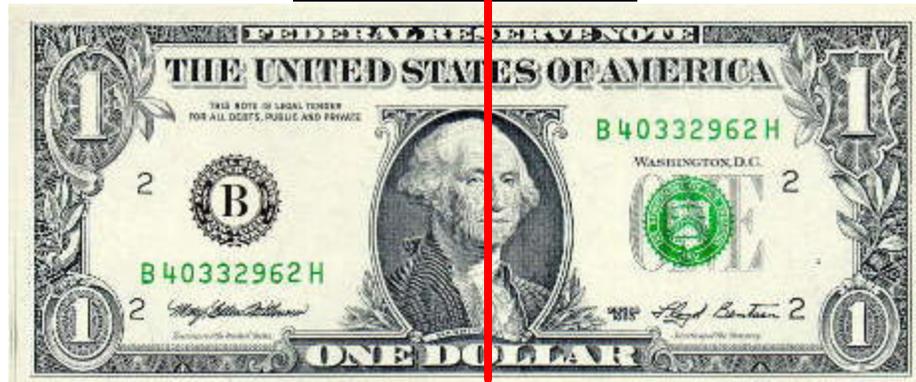
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Community and Human Services

Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ -
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	\$ 3,800
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 281,253
Other	\$ 1,914
Software Totals	\$ 286,967
Hardware	
Workstations	\$ 197,573
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 113
Storage	\$ -
Network equipment/infrastructure	\$ -
Telco back-end	\$ -
Printers	\$ 1,450
Other	\$ 168,158
Hardware Totals	\$ 367,294
External Services	
Application development	\$ -
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ 2,593
Cellular & pager related	\$ -
Networking	\$ 186
IT training	\$ 7,929
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 10,708
Other	
ITS Charges (Goods & Services)	\$ 263,305
IT-related debt service	\$ -
All other O & M IT spending	\$ 389,536
Other Totals	\$ 652,841
TOTAL	\$ 1,317,810

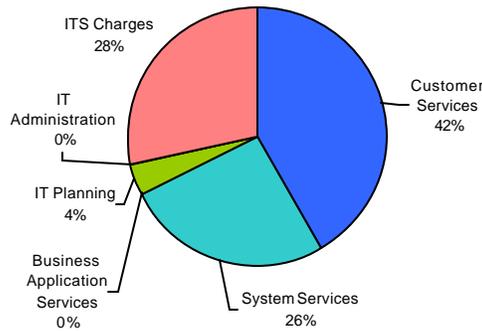
COUNCIL

Total IT Operating Costs



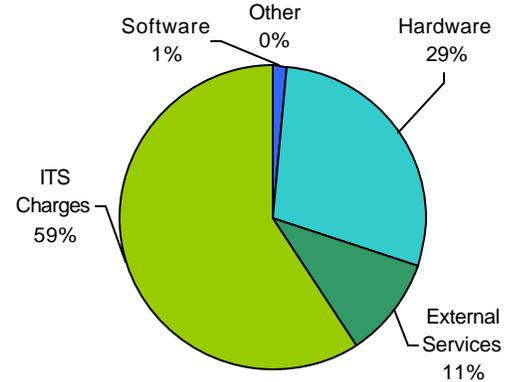
IT Labor: \$0.2 Million	TOTAL: \$0.4 Million	IT Goods & Services: \$0.2 Million
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IT Labor Costs by Category



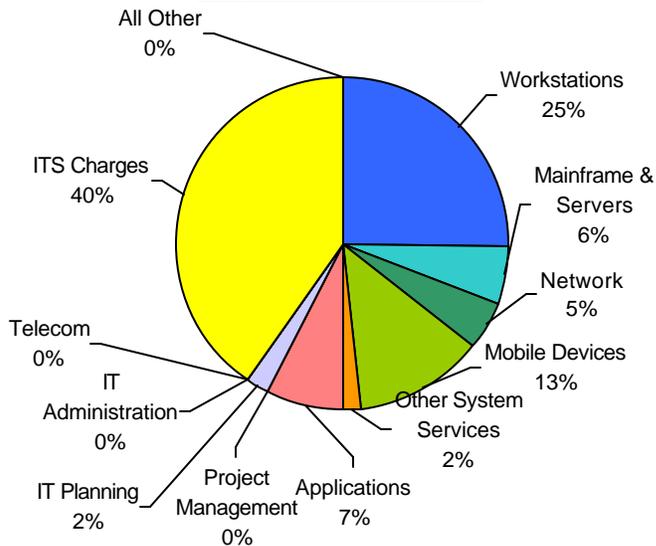
TOTAL: \$241,187

IT Goods & Services Costs by Category



TOTAL: \$153,320

Major IT Cost Drivers



TOTAL: \$394,507

Distribution of FTEs by Provider

IT Function	Agency			TOTALS
	Agency IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	1.20	0.00	0.00	1.20
System Services	0.70	0.00	0.00	0.70
Business Application Services	0.00	0.00	0.00	0.00
IT Planning	0.10	0.00	0.00	0.10
IT Administration	0.00	0.00	0.00	0.00
TOTALS	2.00	0.00	0.00	2.00

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
202	1.33	151	\$ 103,394	\$ 511.85

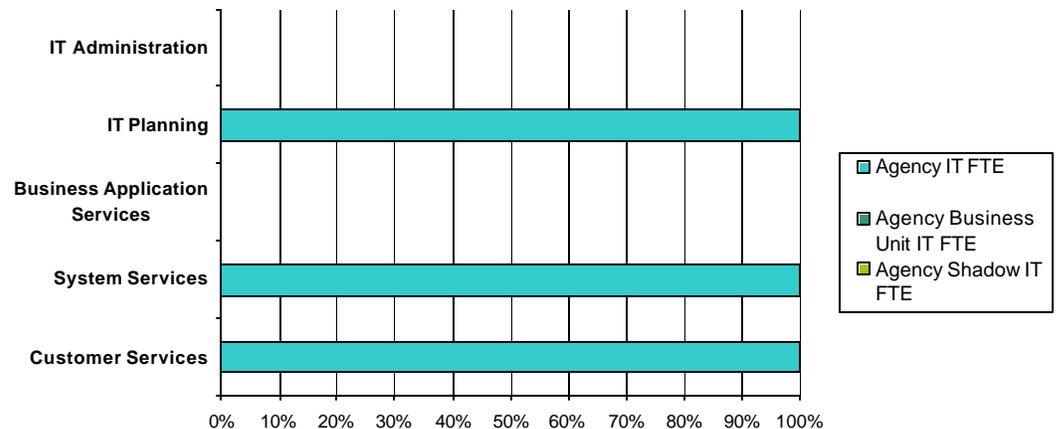
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	3	0.20	15	\$ 18,500	\$ 6,167
Application	0	0.00	n/a	\$ -	n/a
Other	1	0.00	n/a	\$ -	\$ -
TOTAL	4	0.20	20	\$ 18,500	\$ 4,625

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 14,118,451
Total Agency FY03 FTEs	157
Total Agency FY03 IT FTEs	2.0
Total Agency FY03 IT Operating Expenditures	\$ 394,507
IT Operating Expenditures Percent of Total Operating Expenditures	2.79%
IT FTEs Percent of Total FTEs	1.27%
IT Operating Expenditures Per FTE	\$ 2,513

IT Unit IT Labor Compared to Business Unit IT Labor



**Total Operating
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**APPENDIX B:
 Agency Detail**

IT Staff Labor Distribution and Cost - Council

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	1.20	0.00	0.00	1.20	\$ 100,198	
Help Desk (Tier 1)	0.20	0.00	0.00	0.20	\$ 16,100	\$ 80,498
Tier 2 support:						
Desktop PC support	0.50	0.00	0.00	0.50	\$ 41,449	\$ 82,898
PDA support	0.15	0.00	0.00	0.15	\$ 12,675	\$ 84,498
Other portable/specialized device support	0.20	0.00	0.00	0.20	\$ 17,300	\$ 86,498
Personal productivity tool support	0.00	0.00	0.00	0.00	\$ -	n/a
Business application support	0.15	0.00	0.00	0.15	\$ 12,675	\$ 84,498
Training	0.00	0.00	0.00	0.00	\$ -	n/a
System Services	0.70	0.00	0.00	0.70	\$ 63,549	
Network connectivity (WAN/LAN/wireless)	0.20	0.00	0.00	0.20	\$ 18,500	\$ 92,498
Workstation administration	0.30	0.00	0.00	0.30	\$ 26,549	\$ 88,498
Server administration:						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.20	0.00	0.00	0.20	\$ 18,500	\$ 92,498
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Other server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.00	0.00	0.00	0.00	\$ -	n/a
Security administration	0.00	0.00	0.00	0.00	\$ -	n/a
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	0.00	0.00	0.00	0.00	\$ -	
Application development:						
Website design/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
Desktop application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.00	0.00	0.00	0.00	\$ -	n/a
Requirements analysis	0.00	0.00	0.00	0.00	\$ -	n/a
Data administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application administration	0.00	0.00	0.00	0.00	\$ -	n/a
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.10	0.00	0.00	0.10	\$ 9,250	
Strategic planning & governance	0.00	0.00	0.00	0.00	\$ -	n/a
Research and development	0.10	0.00	0.00	0.10	\$ 9,250	\$ 92,498
Disaster recovery/planning	0.00	0.00	0.00	0.00	\$ -	n/a
IT Administration	0.00	0.00	0.00	0.00	\$ -	
Asset management	0.00	0.00	0.00	0.00	\$ -	n/a
IT procurement	0.00	0.00	0.00	0.00	\$ -	n/a
Project management	0.00	0.00	0.00	0.00	\$ -	n/a
Standards and policies development	0.00	0.00	0.00	0.00	\$ -	n/a
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.00	0.00	0.00	0.00	\$ -	n/a
TOTALS	2.00	0.00	0.00	2.00	\$ 172,996	
ITS Labor Charges					\$ 68,191	
TOTAL including ITS					\$ 241,187	



Practical Planning
Positive Change

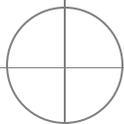
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**Total Operating
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APPENDIX B:
Agency Detail

IT Goods & Services Expenditures - Council

Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 2,000
Other	
Software Totals	\$ 2,000
Hardware	
Workstations	\$ 13,806
Servers	\$ 3,200
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 20,600
Storage	\$ -
Network equipment/infrastructure	\$ 500
Telco back-end	\$ -
Printers	\$ 6,000
Other	\$ -
Hardware Totals	\$ 44,106
External Services	
Application development	\$ -
Application maintenance	\$ 16,595
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ -
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 16,595
Other	
ITS Charges (Goods & Services)	\$ 90,619
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 90,619
TOTAL	\$ 153,320

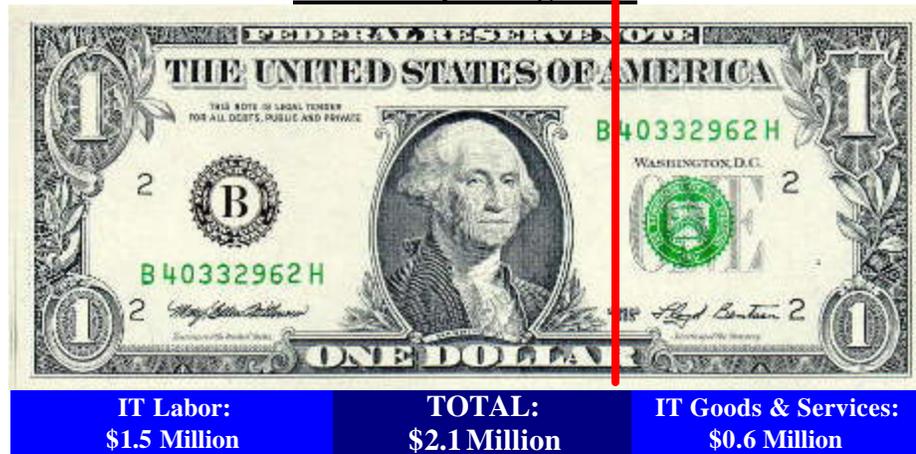


DEVELOPMENT AND ENVIRONMENTAL SERVICES

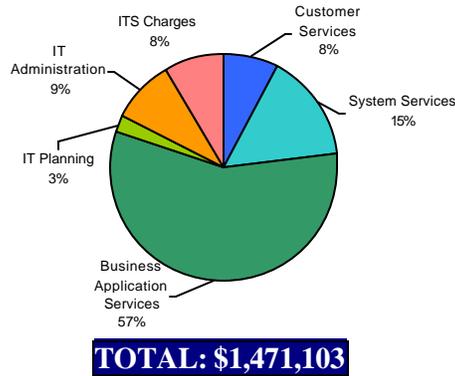
**Total Operating
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 Final Report**

**APPENDIX B:
 Agency Detail**

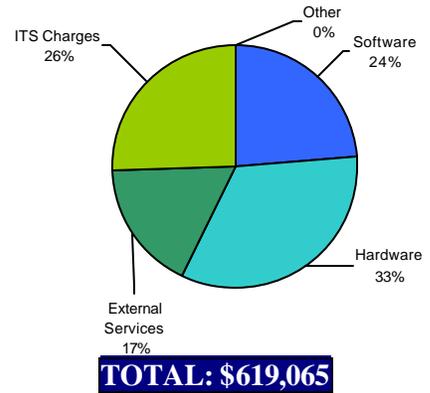
Total IT Operating Costs



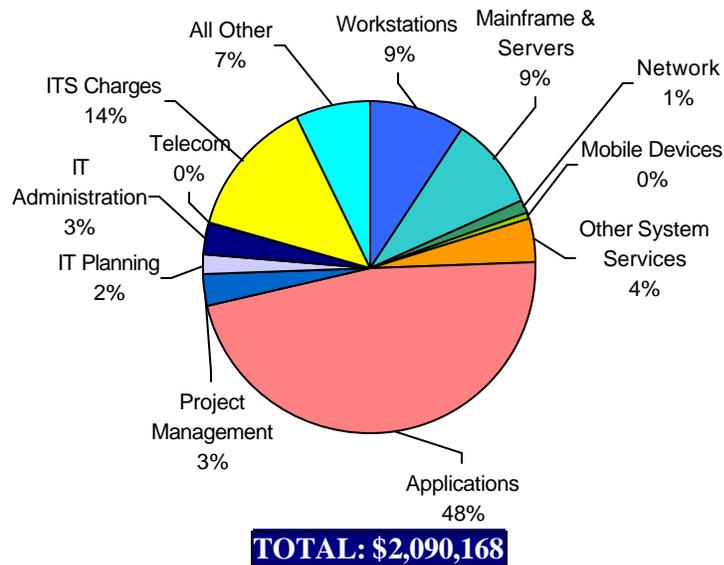
IT Labor Costs by Category



IT Goods & Services Costs by Category



Major IT Cost Drivers



Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	1.65	0.00	0.00	1.65
System Services	2.50	0.00	0.00	2.50
Business Application Services	9.95	0.00	0.00	9.95
IT Planning	0.40	0.00	0.00	0.40
IT Administration	1.50	0.00	0.00	1.50
TOTALS	16.00	0.00	0.00	16.00

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
382	2.05	186	\$ 162,140	\$ 424.45

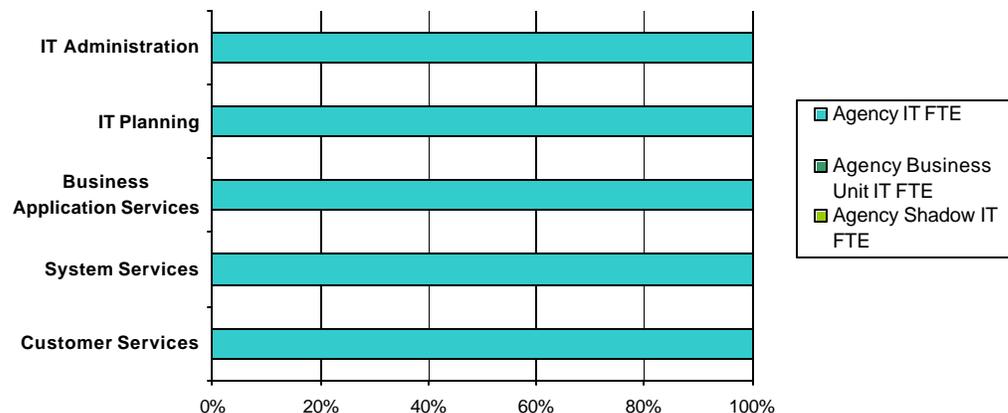
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	2	0.20	10	\$ 17,190	\$ 8,595
Application	2	0.35	6	\$ 30,465	\$ 15,232
Other	9	0.50	18	\$ 43,957	\$ 4,884
TOTAL	13	1.05	12	\$ 91,611	\$ 7,047

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 29,000,000
Total Agency FY03 FTEs	243
Total Agency FY03 IT FTEs	16.0
Total Agency FY03 IT Operating Expenditures	\$ 2,090,168
IT Operating Expenditures Percent of Total Operating Expenditures	7.21%
IT FTEs Percent of Total FTEs	6.58%
IT Operating Expenditures Per FTE	\$ 8,602

IT Unit IT Labor Compared to Business Unit IT Labor



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**APPENDIX B:
 Agency Detail**

IT Staff Labor Distribution and Cost – Development and Environmental Services

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	1.65	0.00	0.00	1.65	\$ 114,582	
Help Desk (Tier 1)	0.45	0.00	0.00	0.45	\$ 31,357	\$ 69,681
Tier 2 support:						
Desktop PC support	0.95	0.00	0.00	0.95	\$ 65,544	\$ 68,994
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.00	0.00	0.00	0.00	\$ -	n/a
Personal productivity tool support	0.25	0.00	0.00	0.25	\$ 17,682	\$ 70,726
Business application support	0.00	0.00	0.00	0.00	\$ -	n/a
Training	0.00	0.00	0.00	0.00	\$ -	n/a
System Services	2.50	0.00	0.00	2.50	\$ 225,100	
Network connectivity (WAN/LAN/wireless)	0.35	0.00	0.00	0.35	\$ 28,560	\$ 81,600
Workstation administration	0.15	0.00	0.00	0.15	\$ 10,609	\$ 70,726
Server administration:						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.20	0.00	0.00	0.20	\$ 17,190	\$ 85,949
GIS server administration	0.25	0.00	0.00	0.25	\$ 22,469	\$ 89,877
Application server administration	0.35	0.00	0.00	0.35	\$ 30,465	\$ 87,042
Other server administration	0.25	0.00	0.00	0.25	\$ 21,487	\$ 85,949
Mainframe operations & administration	0.20	0.00	0.00	0.20	\$ 19,857	\$ 99,284
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.75	0.00	0.00	0.75	\$ 74,463	\$ 99,284
Security administration	0.00	0.00	0.00	0.00	\$ -	n/a
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	9.95	0.00	0.00	9.95	\$ 836,355	
Application development:						
Website design/maintenance	1.05	0.00	0.00	1.05	\$ 71,001	\$ 67,620
Desktop application development/maintenance	1.90	0.00	0.00	1.90	\$ 153,401	\$ 80,737
GIS application development/maintenance	1.55	0.00	0.00	1.55	\$ 131,726	\$ 84,985
All other development	1.20	0.00	0.00	1.20	\$ 104,866	\$ 87,388
Requirements analysis	1.85	0.00	0.00	1.85	\$ 159,725	\$ 86,338
Data administration	1.40	0.00	0.00	1.40	\$ 121,423	\$ 86,731
Application administration	0.20	0.00	0.00	0.20	\$ 18,469	\$ 92,344
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.40	0.00	0.00	0.40	\$ 38,227	\$ 95,568
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.30	0.00	0.00	0.30	\$ 27,960	\$ 93,200
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.10	0.00	0.00	0.10	\$ 9,557	\$ 95,568
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.40	0.00	0.00	0.40	\$ 37,463	
Strategic planning & governance	0.31	0.00	0.00	0.31	\$ 28,943	\$ 93,365
Research and development	0.06	0.00	0.00	0.06	\$ 5,712	\$ 95,204
Disaster recovery/planning	0.03	0.00	0.00	0.03	\$ 2,807	\$ 93,576
IT Administration	1.50	0.00	0.00	1.50	\$ 135,041	
Asset management	0.08	0.00	0.00	0.08	\$ 6,188	\$ 77,351
IT procurement	0.12	0.00	0.00	0.12	\$ 9,604	\$ 80,029
Project management	0.80	0.00	0.00	0.80	\$ 71,503	\$ 89,378
Standards and policies development	0.10	0.00	0.00	0.10	\$ 9,549	\$ 95,493
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.40	0.00	0.00	0.40	\$ 38,197	\$ 95,493
TOTALS	16.00	0.00	0.00	16.00	\$ 1,348,541	
ITS Labor Charges					\$ 122,562	
TOTAL including ITS					\$ 1,471,103	



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APPENDIX B:
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IT Goods & Services Expenditures – Development and Environmental Services

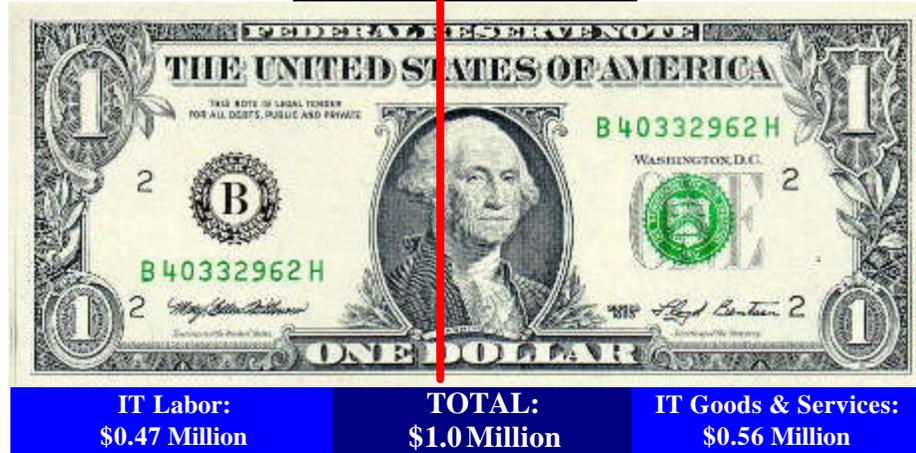
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ 23,988
DBMS maintenance/license	\$ 39,315
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ 39,969
Telco software	\$ -
Personal productivity licenses	\$ -
Other	\$ 43,753
Software Totals	\$ 147,025
Hardware	
Workstations	\$ 27,706
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ 54,540
Mobile devices	\$ 8,830
Storage	\$ 26,094
Network equipment/infrastructure	\$ -
Telco back-end	\$ -
Printers	\$ 18,752
Other	\$ 71,960
Hardware Totals	\$ 207,882
External Services	
Application development	\$ -
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ 23,375
Management consulting	\$ -
Other	\$ 82,071
External Services Totals	\$ 105,446
Other	
ITS Charges (Goods & Services)	\$ 158,712
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 158,712
TOTAL	\$ 619,065

DISTRICT COURT

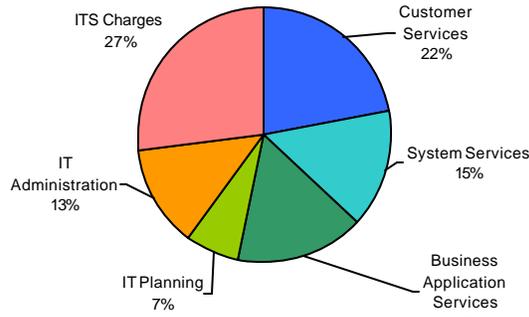
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**APPENDIX B:
 Agency Detail**

Total IT Operating Costs

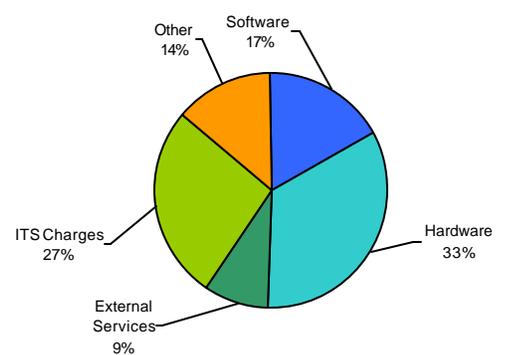


IT Labor Costs by Category



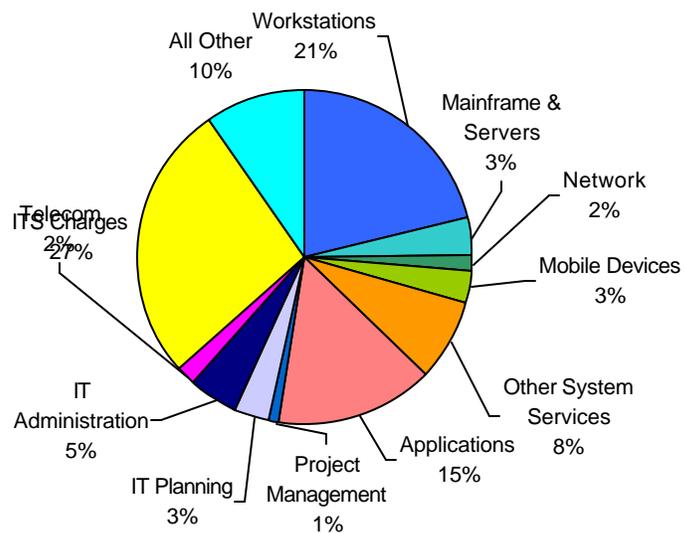
TOTAL: \$472,738

IT Goods & Services Costs by Category



TOTAL: \$560,803

Major IT Cost Drivers



TOTAL: \$1,033,541

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	1.37	0.00	0.00	1.37
System Services	0.85	0.00	0.00	0.85
Business Application Services	0.99	0.00	0.00	0.99
IT Planning	0.36	0.00	0.00	0.36
IT Administration	0.45	0.00	0.20	0.65
TOTALS	4.02	0.00	0.20	4.22

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
391	1.40	279	\$ 88,544	\$ 226.45

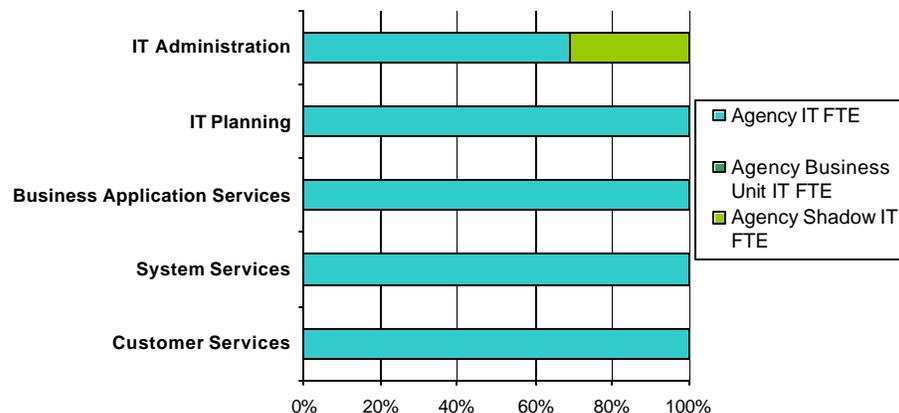
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	0	0.10	0	\$ 7,642	n/a
Application	1	0.05	20	\$ 3,320	\$ 3,320
Other	11	0.20	55	\$ 16,337	\$ 1,485
TOTAL	12	0.35	34	\$ 27,300	\$ 2,275

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 20,505,790
Total Agency FY03 FTEs	235
Total Agency FY03 IT FTEs	4.2
Total Agency FY03 IT Operating Expenditures	\$ 1,033,541
IT Operating Expenditures Percent of Total Operating Expenditures	5.04%
IT FTEs Percent of Total FTEs	1.79%
IT Operating Expenditures Per FTE	\$ 4,392

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – District Court

**Total Operating
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**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	1.37	0.00	0.00	1.37	\$ 104,044	
Help Desk (Tier 1)	0.28	0.00	0.00	0.28	\$ 22,880	\$ 81,715
Tier 2 support:						
Desktop PC support	0.55	0.00	0.00	0.55	\$ 41,062	\$ 74,659
PDA support	0.01	0.00	0.00	0.01	\$ 1,111	\$ 111,058
Other portable/specialized device support	0.05	0.00	0.00	0.05	\$ 3,371	\$ 67,417
Personal productivity tool support	0.01	0.00	0.00	0.01	\$ 674	\$ 67,417
Business application support	0.35	0.00	0.00	0.35	\$ 25,083	\$ 71,665
Training	0.12	0.00	0.00	0.12	\$ 9,863	\$ 82,195
System Services	0.85	0.00	0.00	0.85	\$ 70,357	
Network connectivity (WAN/LAN/wireless)	0.01	0.00	0.00	0.01	\$ 1,111	\$ 111,058
Workstation administration	0.25	0.00	0.00	0.25	\$ 18,706	\$ 74,824
Server administration:						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.10	0.00	0.00	0.10	\$ 7,642	\$ 76,422
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.05	0.00	0.00	0.05	\$ 3,320	\$ 66,402
Other server administration	0.20	0.00	0.00	0.20	\$ 16,337	\$ 81,686
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.05	0.00	0.00	0.05	\$ 3,371	\$ 67,417
Security administration	0.15	0.00	0.00	0.15	\$ 15,428	\$ 102,853
Telephone systems support	0.04	0.00	0.00	0.04	\$ 4,442	\$ 111,058
Business Application Services	0.99	0.00	0.00	0.99	\$ 77,756	
Application development:						
Website design/maintenance	0.15	0.00	0.00	0.15	\$ 16,659	\$ 111,058
Desktop application development/maintenance	0.29	0.00	0.00	0.29	\$ 19,460	\$ 67,102
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.00	0.00	0.00	0.00	\$ -	n/a
Requirements analysis	0.13	0.00	0.00	0.13	\$ 10,235	\$ 78,735
Data administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application administration	0.20	0.00	0.00	0.20	\$ 15,335	\$ 76,676
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.01	0.00	0.00	0.01	\$ 1,111	\$ 111,058
Agency app 2	0.05	0.00	0.00	0.05	\$ 4,322	\$ 86,442
All other	0.16	0.00	0.00	0.16	\$ 10,635	\$ 66,466
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.36	0.00	0.00	0.36	\$ 33,320	
Strategic planning & governance	0.13	0.00	0.00	0.13	\$ 13,499	\$ 103,836
Research and development	0.16	0.00	0.00	0.16	\$ 13,869	\$ 86,683
Disaster recovery/planning	0.07	0.00	0.00	0.07	\$ 5,952	\$ 85,032
IT Administration	0.45	0.00	0.20	0.65	\$ 59,528	
Asset management	0.02	0.00	0.00	0.02	\$ 1,448	\$ 96,511
IT procurement	0.07	0.00	0.00	0.07	\$ 7,081	\$ 101,162
Project management	0.11	0.00	0.00	0.11	\$ 10,539	\$ 95,810
Standards and policies development	0.05	0.00	0.10	0.15	\$ 11,901	\$ 79,338
Administrative support	0.05	0.00	0.10	0.15	\$ 11,901	\$ 79,338
Departmental management	0.15	0.00	0.00	0.15	\$ 16,659	\$ 111,058
TOTALS	4.02	0.00	0.20	4.22	\$ 345,006	
ITS Labor Charges					\$ 127,732	
TOTAL including ITS					\$ 472,738	



Practical Planning
Positive Change

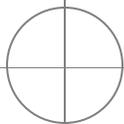
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Agency Detail

IT Goods & Services Expenditures – District Court

Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ 5,004
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ -
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ 25,348
DBMS maintenance/license	\$ -
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 64,593
Other	
Software Totals	\$ 94,945
Hardware	
Workstations	\$ 73,000
Servers	\$ 7,800
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 27,000
Storage	\$ -
Network equipment/infrastructure	\$ 15,850
Telco back-end	\$ -
Printers	\$ 64,000
Other	\$ -
Hardware Totals	\$ 187,650
External Services	
Application development	\$ 20,000
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ 17,500
Networking	\$ -
IT training	\$ 12,700
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 50,200
Other	
ITS Charges (Goods & Services)	\$ 149,669
IT-related debt service	\$ -
All other O & M IT spending	\$ 78,339
Other Totals	\$ 228,008
TOTAL	\$ 560,803



EXECUTIVE (BUDGET/EXECUTIVE/ECONOMIC DEVELOPMENT/OIRM)

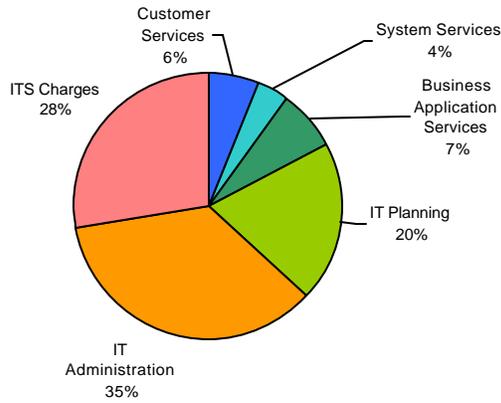
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**APPENDIX B:
 Agency Detail**

Total IT Operating Costs

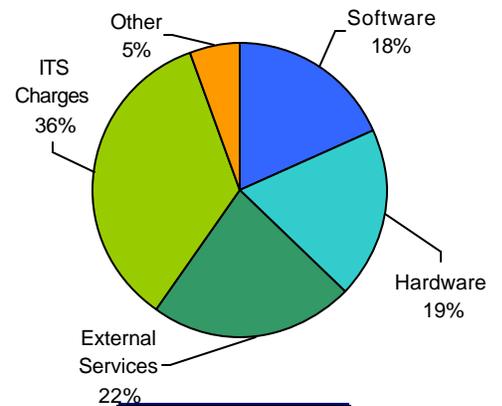


IT Labor Costs by Category



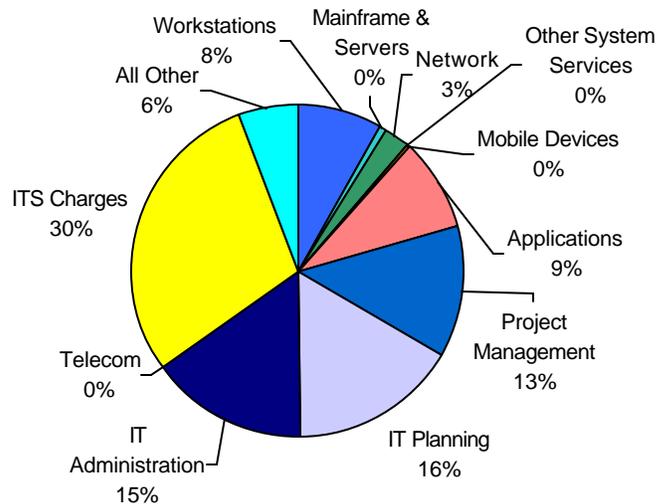
TOTAL: \$1,377,016

IT Goods & Services Costs by Category



TOTAL: \$322,306

Major IT Cost Drivers



TOTAL: \$1,699,322

Distribution of FTEs by Provider

IT Function	Agency		Agency Shadow IT FTE	TOTALS
	Agency IT FTE	Business Unit IT FTE		
Customer Services	0.50	0.00	0.56	1.06
System Services	0.50	0.00	0.07	0.57
Business Application Services	0.00	0.00	1.46	1.46
IT Planning	2.00	0.00	0.00	2.00
IT Administration	4.00	0.00	0.30	4.30
TOTALS	7.00	0.00	2.39	9.39

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
121	2.51	48	\$ 238,690	\$ 1,972.65

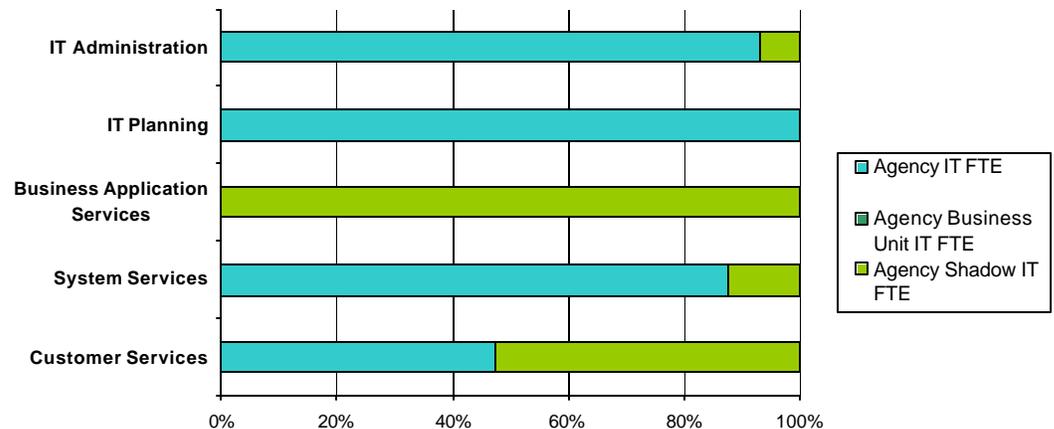
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ 15,088	n/a
File & Print	0	0.00	n/a	\$ 145,606	n/a
Application	0	0.00	n/a	\$ 15,087	n/a
Other	6	0.02	300	\$ 80,835	\$ 13,472
TOTAL	6	0.02	300	\$ 256,615	\$ 42,769

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 10,211,043
Total Agency FY03 FTEs	87
Total Agency FY03 IT FTEs	9.4
Total Agency FY03 IT Operating Expenditures	\$ 1,699,322
IT Operating Expenditures Percent of Total Operating Expenditures	16.64%
IT FTEs Percent of Total FTEs	10.86%
IT Operating Expenditures Per FTE	\$ 19,645

IT Unit IT Labor Compared to Business Unit IT Labor



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IT Staff Labor Distribution and Cost – Executive (B/E/E/O)

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	0.50	0.00	0.56	1.06	\$ 85,198	
Help Desk (Tier 1)	0.00	0.00	0.11	0.11	\$ 7,242	\$ 65,833
Tier 2 support:						
Desktop PC support	0.50	0.00	0.00	0.50	\$ 45,089	\$ 90,178
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.00	0.00	0.00	0.00	\$ -	n/a
Personal productivity tool support	0.00	0.00	0.15	0.15	\$ 9,876	\$ 65,841
Business application support	0.00	0.00	0.20	0.20	\$ 13,622	\$ 68,108
Training	0.00	0.00	0.10	0.10	\$ 9,369	\$ 93,695
System Services	0.50	0.00	0.07	0.57	\$ 50,834	
Network connectivity (WAN/LAN/wireless)	0.50	0.00	0.00	0.50	\$ 45,089	\$ 90,178
Workstation administration	0.00	0.00	0.00	0.00	\$ -	n/a
Server administration:						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.00	0.00	0.00	0.00	\$ -	n/a
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Other server administration	0.00	0.00	0.02	0.02	\$ 1,641	\$ 82,071
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.00	0.00	0.05	0.05	\$ 4,104	\$ 82,071
Security administration	0.00	0.00	0.00	0.00	\$ -	n/a
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	0.00	0.00	1.46	1.46	\$ 100,754	
Application development:						
Website design/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
Desktop application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
GIS application development/maintenance	0.00	0.00	0.30	0.30	\$ 17,823	\$ 59,411
All other development	0.00	0.00	0.05	0.05	\$ 4,104	\$ 82,071
Requirements analysis	0.00	0.00	0.02	0.02	\$ 1,641	\$ 82,071
Data administration	0.00	0.00	0.22	0.22	\$ 16,109	\$ 73,221
Application administration	0.00	0.00	0.05	0.05	\$ 2,979	\$ 59,579
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.37	0.37	\$ 24,577	\$ 66,425
Other finance	0.00	0.00	0.05	0.05	\$ 3,904	\$ 78,084
Other HR	0.00	0.00	0.05	0.05	\$ 3,904	\$ 78,084
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.20	0.20	\$ 16,414	\$ 82,071
Agency app 2	0.00	0.00	0.15	0.15	\$ 9,298	\$ 61,990
All other	0.00	0.00	0.00	0.00	\$ -	n/a
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	2.00	0.00	0.00	2.00	\$ 272,267	
Strategic planning & governance	1.50	0.00	0.00	1.50	\$ 214,955	\$ 143,303
Research and development	0.50	0.00	0.00	0.50	\$ 57,313	\$ 114,626
Disaster recovery/planning	0.00	0.00	0.00	0.00	\$ -	n/a
IT Administration	4.00	0.00	0.30	4.30	\$ 485,683	
Asset management	0.00	0.00	0.00	0.00	\$ -	n/a
IT procurement	0.25	0.00	0.05	0.30	\$ 33,557	\$ 111,857
Project management	1.80	0.00	0.00	1.80	\$ 223,133	\$ 123,963
Standards and policies development	0.45	0.00	0.00	0.45	\$ 51,111	\$ 113,580
Administrative support	1.20	0.00	0.10	1.30	\$ 122,227	\$ 94,021
Departmental management	0.30	0.00	0.15	0.45	\$ 55,655	\$ 123,678
TOTALS	7.00	0.00	2.39	9.39	\$ 994,737	
ITS Labor Charges					\$ 382,279	
TOTAL including ITS					\$ 1,377,016	



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IT Goods & Services Expenditures – Executive (B/E/E/O)

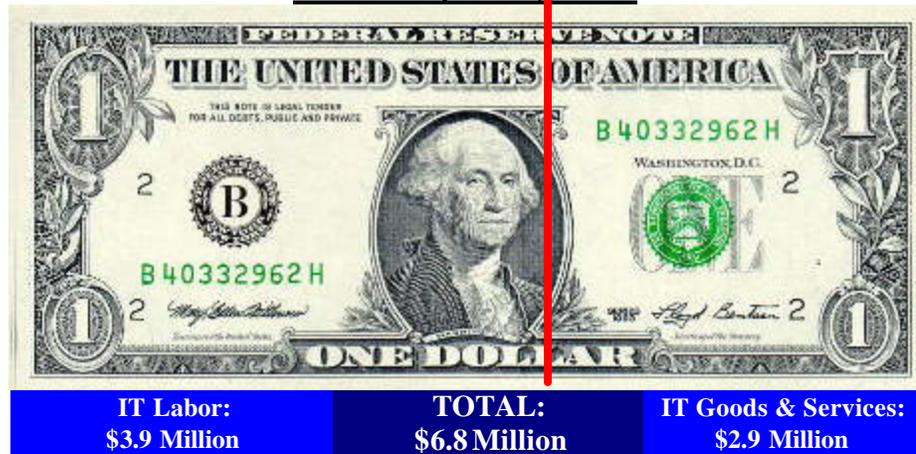
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ 31,000
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ 3,566
Telco software	\$ -
Personal productivity licenses	\$ 24,501
Other	
Software Totals	\$ 59,067
Hardware	
Workstations	\$ 51,930
Servers	\$ 6,588
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ -
Storage	\$ -
Network equipment/infrastructure	\$ -
Telco back-end	\$ -
Printers	\$ -
Other	\$ 2,613
Hardware Totals	\$ 61,130
External Services	
Application development	\$ -
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ -
Management consulting	\$ 72,354
Other	\$ -
External Services Totals	\$ 72,354
Other	
ITS Charges (Goods & Services)	\$ 112,067
IT-related debt service	\$ -
All other O & M IT spending	\$ 17,688
Other Totals	\$ 129,755
TOTAL	\$ 322,306

EXECUTIVE SERVICES: FINANCE

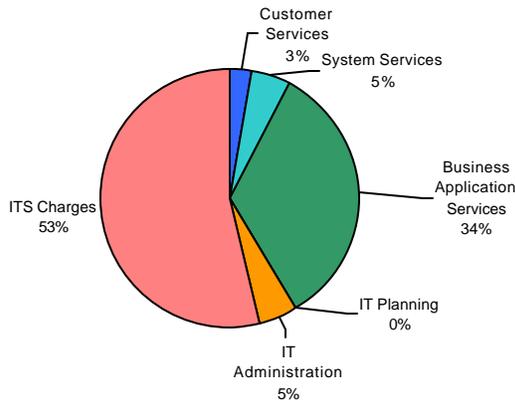
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Total IT Operating Costs

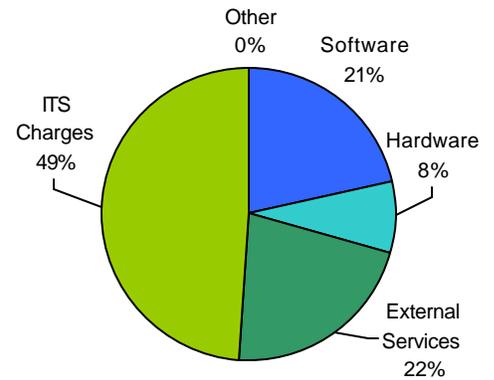


IT Labor Costs by Category



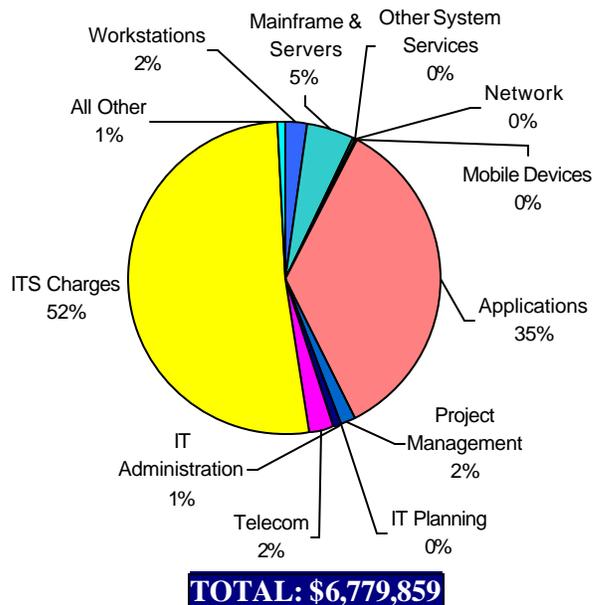
TOTAL: \$3,918,978

IT Goods & Services Costs by Category



TOTAL: \$2,860,881

Major IT Cost Drivers



TOTAL: \$6,779,859

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	0.00	1.16	0.20	1.36
System Services	0.00	2.21	0.00	2.21
Business Application Services	0.00	9.43	5.70	15.13
IT Planning	0.00	0.02	0.00	0.02
IT Administration	0.00	1.09	0.85	1.94
TOTALS	0.00	13.90	6.75	20.65

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
292	1.28	228	\$ 93,134	\$ 318.95

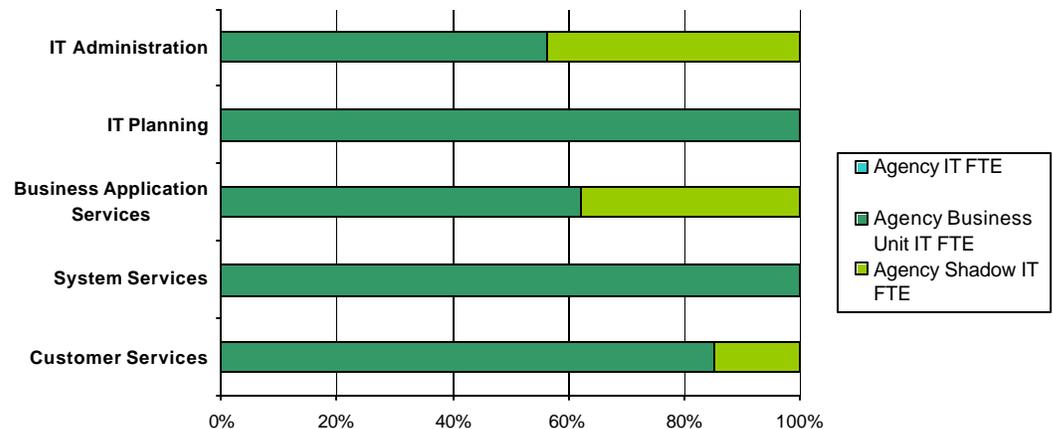
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.02	0	\$ 1,552	n/a
File & Print	6	0.07	86	\$ 5,415	\$ 902
Application	0	0.24	0	\$ 19,478	n/a
Other	11	0.30	37	\$ 23,231	\$ 2,112
TOTAL	17	0.63	27	\$ 49,676	\$ 2,922

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 23,700,382
Total Agency FY03 FTEs	206
Total Agency FY03 IT FTEs	20.7
Total Agency FY03 IT Operating Expenditures	\$ 6,779,859
IT Operating Expenditures Percent of Total Operating Expenditures	28.61%
IT FTEs Percent of Total FTEs	10.02%
IT Operating Expenditures Per FTE	\$ 32,912

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Executive Services: Finance

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	0.00	1.16	0.20	1.36	\$ 105,407	
Help Desk (Tier 1)	0.00	0.00	0.00	0.00	\$ -	n/a
Tier 2 support:						
Desktop PC support	0.00	0.85	0.00	0.85	\$ 65,848	\$ 77,468
PDA support	0.00	0.01	0.00	0.01	\$ 386	\$ 77,250
Other portable/specialized device support	0.00	0.05	0.00	0.05	\$ 3,863	\$ 77,250
Personal productivity tool support	0.00	0.02	0.00	0.02	\$ 1,159	\$ 77,250
Business application support	0.00	0.24	0.00	0.24	\$ 20,289	\$ 84,538
Training	0.00	0.00	0.20	0.20	\$ 13,862	\$ 69,311
System Services	0.00	2.21	0.00	2.21	\$ 202,368	
Network connectivity (WAN/LAN/wireless)	0.00	0.10	0.00	0.10	\$ 7,744	\$ 77,435
Workstation administration	0.00	0.17	0.00	0.17	\$ 13,147	\$ 77,337
Server administration:						
Email administration	0.00	0.02	0.00	0.02	\$ 1,552	\$ 77,620
File/print administration	0.00	0.07	0.00	0.07	\$ 5,415	\$ 77,356
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.00	0.24	0.00	0.24	\$ 19,478	\$ 81,159
Other server administration	0.00	0.30	0.00	0.30	\$ 23,231	\$ 77,435
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.00	1.10	0.00	1.10	\$ 116,701	\$ 106,092
Security administration	0.00	0.21	0.00	0.21	\$ 15,101	\$ 71,908
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	0.00	9.43	5.70	15.13	\$ 1,314,365	
Application development:						
Website design/maintenance	0.00	0.15	2.20	2.35	\$ 173,294	\$ 73,742
Desktop application development/maintenance	0.00	0.02	0.00	0.02	\$ 1,545	\$ 77,250
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.00	0.00	0.00	0.00	\$ -	n/a
Requirements analysis	0.00	0.10	0.30	0.40	\$ 35,383	\$ 88,459
Data administration	0.00	0.10	0.00	0.10	\$ 8,768	\$ 87,683
Application administration	0.00	0.00	0.00	0.00	\$ -	n/a
Custom application maintenance:						
ARMS	0.00	0.02	2.15	2.17	\$ 143,541	\$ 66,148
IBIS	0.00	0.02	1.00	1.02	\$ 109,380	\$ 107,235
EssBase	0.00	0.01	0.00	0.01	\$ 776	\$ 77,620
Other finance	0.00	2.13	0.00	2.13	\$ 212,010	\$ 99,535
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.05	0.00	0.05	\$ 3,881	\$ 77,620
Agency app 2	0.00	0.80	0.00	0.80	\$ 70,147	\$ 87,683
All other	0.00	0.00	0.00	0.00	\$ -	n/a
Package application maintenance:						
PeopleSoft	0.00	4.53	0.00	4.53	\$ 410,982	\$ 90,825
MSA	0.00	0.03	0.05	0.08	\$ 5,956	\$ 79,415
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.07	0.00	0.07	\$ 5,426	\$ 77,515
Other HR	0.00	0.40	0.00	0.40	\$ 38,337	\$ 95,843
Other payroll	0.00	0.80	0.00	0.80	\$ 76,557	\$ 95,697
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.01	0.00	0.01	\$ 773	\$ 77,250
Agency app 2	0.00	0.20	0.00	0.20	\$ 17,608	\$ 88,039
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.00	0.02	0.00	0.02	\$ 1,162	
Strategic planning & governance	0.00	0.00	0.00	0.00	\$ -	n/a
Research and development	0.00	0.00	0.00	0.00	\$ -	n/a
Disaster recovery/planning	0.00	0.02	0.00	0.02	\$ 1,162	\$ 77,497
IT Administration	0.00	1.09	0.85	1.94	\$ 179,380	
Asset management	0.00	0.03	0.00	0.03	\$ 2,321	\$ 77,374
IT procurement	0.00	0.04	0.85	0.89	\$ 65,875	\$ 74,017
Project management	0.00	1.00	0.00	1.00	\$ 110,021	\$ 110,021
Standards and policies development	0.00	0.02	0.00	0.02	\$ 1,162	\$ 77,497
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.00	0.00	0.00	0.00	\$ -	n/a
TOTALS	0.00	13.90	6.75	20.65	\$ 1,802,682	
ITS Labor Charges					\$ 2,116,296	
TOTAL including ITS					\$ 3,918,978	



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**Total Operating
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APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Executive Services: Finance

Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ 341,982
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ 43,071
DBMS maintenance/license	\$ 170,375
System software licenses	\$ 55,689
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ -
Other	
Software Totals	\$ 611,118
Hardware	
Workstations	\$ 71,221
Servers	\$ 129,317
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 1,548
Storage	\$ 20,868
Network equipment/infrastructure	\$ 1,029
Telco back-end	\$ -
Printers	\$ 2,687
Other	\$ -
Hardware Totals	\$ 226,671
External Services	
Application development	\$ 342,529
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ 86,628
Telecom:	\$ -
Land-line related	\$ 157,863
Cellular & pager related	\$ 2,629
Networking	\$ -
IT training	\$ 34,135
Management consulting	\$ -
Other	\$ 1,087
External Services Totals	\$ 624,871
Other	
ITS Charges (Goods & Services)	\$ 1,398,221
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 1,398,221
TOTAL	\$ 2,860,881

EXECUTIVE SERVICES: HUMAN RESOURCES

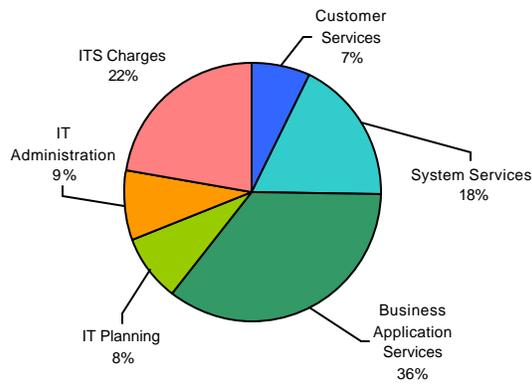
**Total Operating
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**APPENDIX B:
 Agency Detail**

Total IT Operating Costs

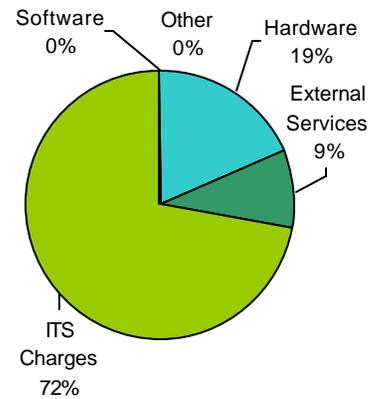


IT Labor Costs by Category



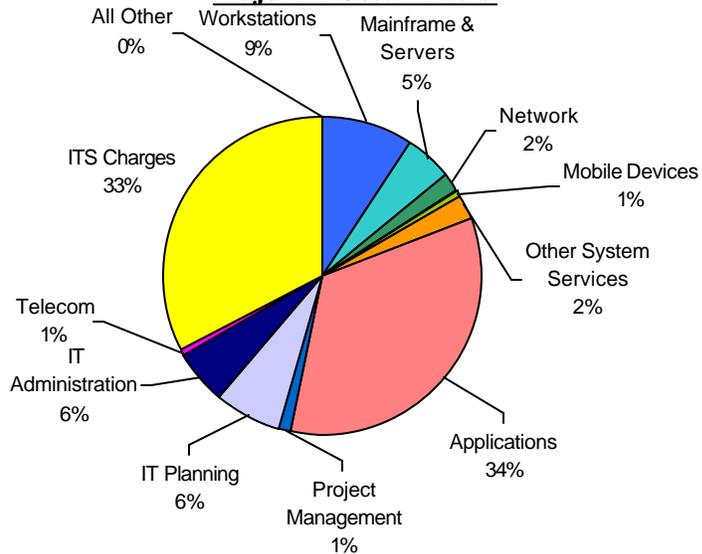
TOTAL: \$776,626

IT Goods & Services Costs by Category



TOTAL: \$208,232

Major IT Cost Drivers



TOTAL: \$984,858

Distribution of FTEs by Provider

IT Function	Agency			TOTALS
	Agency IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	0.80	0.00	0.00	0.80
System Services	1.60	0.10	0.00	1.70
Business Application Services	1.15	2.37	0.00	3.52
IT Planning	0.70	0.00	0.00	0.70
IT Administration	0.75	0.00	0.00	0.75
TOTALS	5.00	2.47	0.00	7.47

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
105	1.07	98	\$ 71,981	\$ 685.53

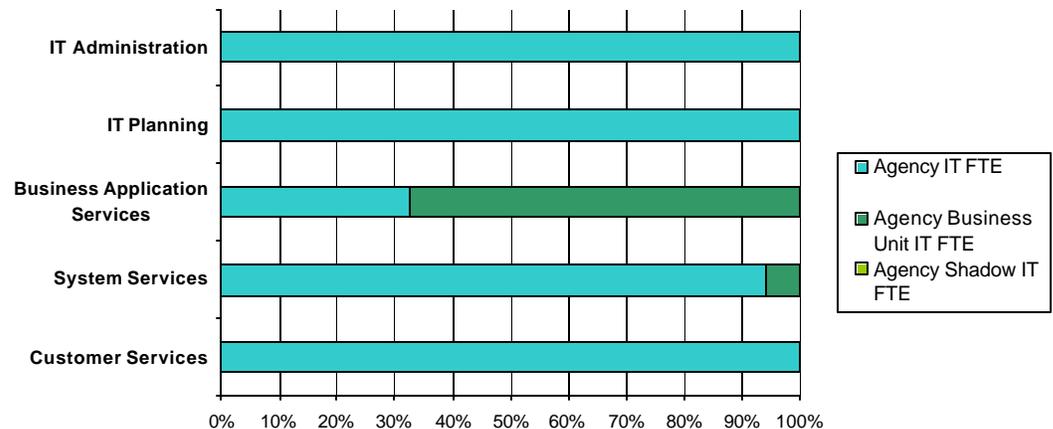
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	3	0.10	30	\$ 8,450	\$ 2,817
Application	1	0.25	4	\$ 21,124	\$ 21,124
Other	10	0.10	100	\$ 8,450	\$ 845
TOTAL	14	0.45	31	\$ 38,023	\$ 2,716

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 9,111,408
Total Agency FY03 FTEs	96
Total Agency FY03 IT FTEs	7.5
Total Agency FY03 IT Operating Expenditures	\$ 984,858
IT Operating Expenditures Percent of Total Operating Expenditures	10.81%
IT FTEs Percent of Total FTEs	7.82%
IT Operating Expenditures Per FTE	\$ 10,313

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Executive Services: Human Resources

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	0.80	0.00	0.00	0.80	\$ 56,831	
Help Desk (Tier 1)	0.45	0.00	0.00	0.45	\$ 31,398	\$ 69,773
Tier 2 support:						
Desktop PC support	0.15	0.00	0.00	0.15	\$ 11,018	\$ 73,454
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.05	0.00	0.00	0.05	\$ 3,397	\$ 67,933
Personal productivity tool support	0.05	0.00	0.00	0.05	\$ 3,397	\$ 67,933
Business application support	0.10	0.00	0.00	0.10	\$ 7,621	\$ 76,214
Training	0.00	0.00	0.00	0.00	\$ -	n/a
System Services	1.60	0.10	0.00	1.70	\$ 139,437	
Network connectivity (WAN/LAN/wireless)	0.20	0.00	0.00	0.20	\$ 17,549	\$ 87,746
Workstation administration	0.30	0.00	0.00	0.30	\$ 22,036	\$ 73,454
Server administration:						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.10	0.00	0.00	0.10	\$ 8,450	\$ 84,495
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.25	0.00	0.00	0.25	\$ 21,124	\$ 84,495
Other server administration	0.10	0.00	0.00	0.10	\$ 8,450	\$ 84,495
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.40	0.05	0.00	0.45	\$ 37,665	\$ 83,701
Security administration	0.25	0.05	0.00	0.30	\$ 24,163	\$ 80,544
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	1.15	2.37	0.00	3.52	\$ 274,075	
Application development:						
Website design/maintenance	0.10	1.00	0.00	1.10	\$ 82,855	\$ 75,323
Desktop application development/maintenance	0.15	0.10	0.00	0.25	\$ 19,515	\$ 78,060
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.00	0.00	0.00	0.00	\$ -	n/a
Requirements analysis	0.00	0.00	0.00	0.00	\$ -	n/a
Data administration	0.25	0.00	0.00	0.25	\$ 21,124	\$ 84,495
Application administration	0.30	0.00	0.00	0.30	\$ 25,349	\$ 84,495
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	1.25	0.00	1.25	\$ 94,216	\$ 75,372
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
Package application maintenance:						
PeopleSoft	0.00	0.02	0.00	0.02	\$ 1,444	\$ 72,185
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.35	0.00	0.00	0.35	\$ 29,573	\$ 84,495
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.70	0.00	0.00	0.70	\$ 63,698	
Strategic planning & governance	0.20	0.00	0.00	0.20	\$ 19,500	\$ 97,498
Research and development	0.25	0.00	0.00	0.25	\$ 22,424	\$ 89,696
Disaster recovery/planning	0.25	0.00	0.00	0.25	\$ 21,774	\$ 87,096
IT Administration	0.75	0.00	0.00	0.75	\$ 69,517	
Asset management	0.15	0.00	0.00	0.15	\$ 11,668	\$ 77,788
IT procurement	0.05	0.00	0.00	0.05	\$ 4,875	\$ 97,498
Project management	0.15	0.00	0.00	0.15	\$ 14,625	\$ 97,498
Standards and policies development	0.15	0.00	0.00	0.15	\$ 13,975	\$ 93,164
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.25	0.00	0.00	0.25	\$ 24,375	\$ 97,498
TOTALS	5.00	2.47	0.00	7.47	\$ 603,558	
ITS Labor Charges					\$ 173,068	
TOTAL including ITS					\$ 776,626	



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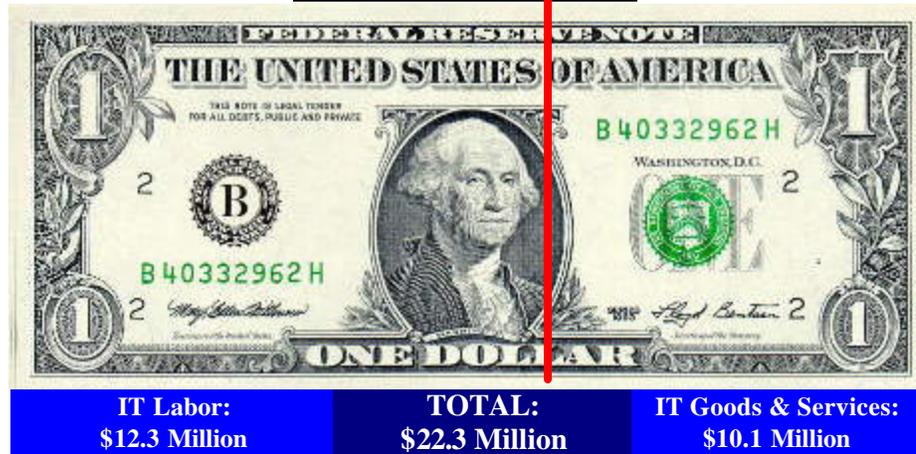
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Executive Services: Human Resources

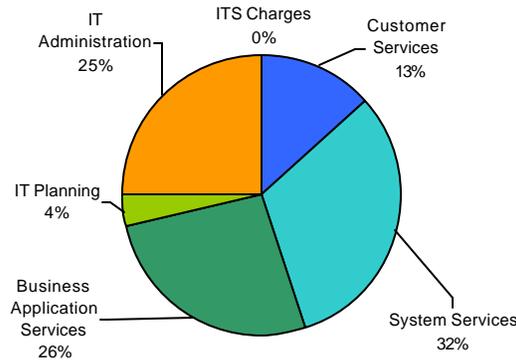
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ -
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	\$ -
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ -
Other	\$ -
Software Totals	\$ -
Hardware	
Workstations	\$ 23,500
Servers	\$ 10,700
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 4,400
Storage	\$ -
Network equipment/infrastructure	\$ -
Telco back-end	\$ -
Printers	\$ -
Other	\$ -
Hardware Totals	\$ 38,600
External Services	
Application development	\$ -
Application maintenance	\$ 13,338
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ 3,371
Cellular & pager related	\$ 3,041
Networking	\$ -
IT training	\$ -
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 19,750
Other	
ITS Charges (Goods & Services)	\$ 149,882
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 149,882
TOTAL	\$ 208,232

EXECUTIVE SERVICES: ITS

Total IT Operating Costs

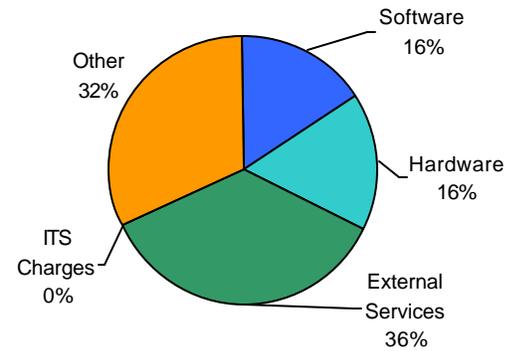


IT Labor Costs by Category



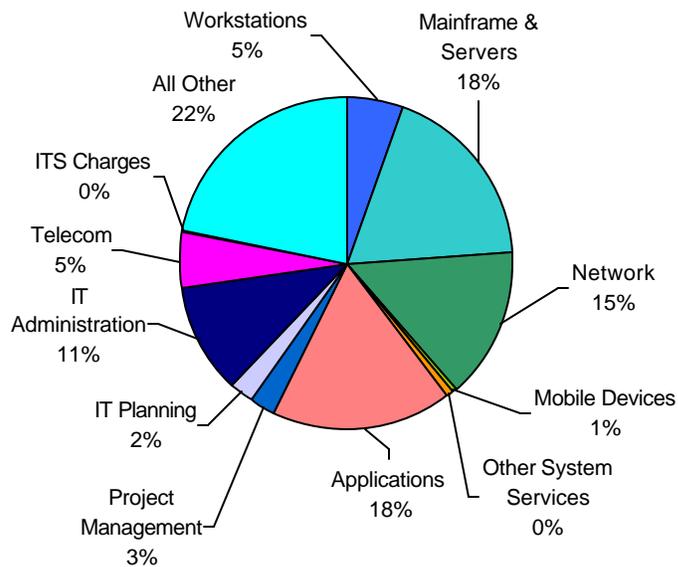
TOTAL: \$12,252,990

IT Goods & Services Costs by Category



TOTAL: \$10,082,923

Major IT Cost Drivers



TOTAL: \$22,335,913

Distribution of FTEs by Provider

IT Function	Agency IT		Agency Shadow IT		TOTALS
	FTE	Unit IT FTE	FTE	Unit IT FTE	
Customer Services	21.00	0.00	0.00	0.00	21.00
System Services	45.95	0.00	0.00	0.00	45.95
Business Application Services	36.16	0.00	0.00	0.00	36.16
IT Planning	4.40	0.00	0.00	0.00	4.40
IT Administration	34.52	0.00	0.00	0.00	34.52
TOTALS	142.03	0.00	0.00	0.00	142.03

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
193	3.00	64	\$ 225,248	\$ 1,167.09

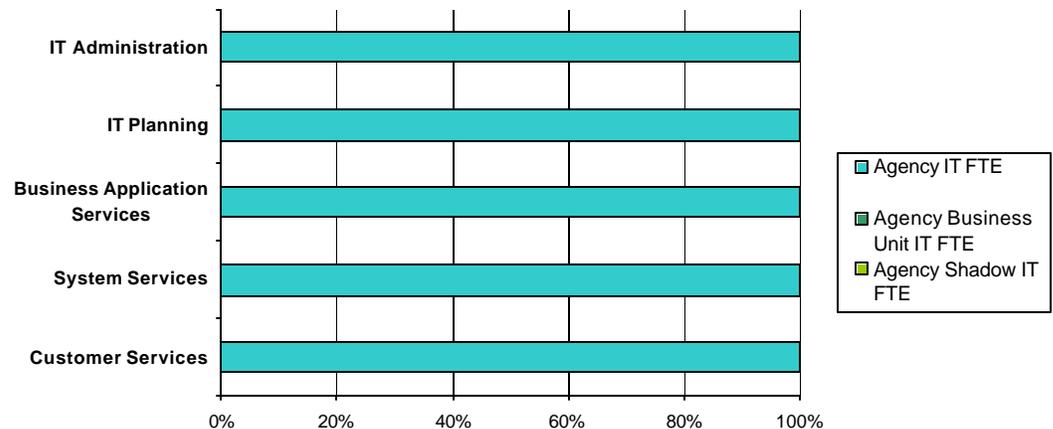
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	13	1.50	9	\$ 128,344	\$ 9,873
File & Print	12	1.15	10	\$ 94,650	\$ 7,888
Application	32	3.65	9	\$ 331,207	\$ 10,350
Other	78	3.50	22	\$ 292,579	\$ 3,751
TOTAL	135	9.80	14	\$ 846,780	\$ 6,272

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 25,227,389
Total Agency FY03 FTEs	185
Total Agency FY03 IT FTEs	142.0
Total Agency FY03 IT Operating Expenditures	\$ 22,335,913
IT Operating Expenditures Percent of Total Operating Expenditures	88.54%
IT FTEs Percent of Total FTEs	76.98%
IT Operating Expenditures Per FTE	\$ 121,062

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Executive Services: ITS

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**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost per	
	Agency IT FTE	Unit IT FTE	Shadow IT FTE		Cost Total	FTE
Customer Services	21.00	0.00	0.00	21.00	\$ 1,631,493	
Help Desk (Tier 1)	8.95	0.00	0.00	8.95	\$ 667,622	\$ 74,595
<i>Tier 2 support:</i>						
Desktop PC support	2.85	0.00	0.00	2.85	\$ 217,353	\$ 76,264
PDA support	0.30	0.00	0.00	0.30	\$ 25,007	\$ 83,356
Other portable/specialized device support	1.30	0.00	0.00	1.30	\$ 95,185	\$ 73,219
Personal productivity tool support	0.95	0.00	0.00	0.95	\$ 72,584	\$ 76,404
Business application support	4.60	0.00	0.00	4.60	\$ 370,580	\$ 80,561
Training	2.05	0.00	0.00	2.05	\$ 183,163	\$ 89,348
System Services	45.95	0.00	0.00	45.95	\$ 3,891,713	
Network connectivity (WAN/LAN/wireless)	11.00	0.00	0.00	11.00	\$ 974,232	\$ 88,567
Workstation administration	0.05	0.00	0.00	0.05	\$ 5,920	\$ 118,399
<i>Server administration:</i>						
Email administration	1.50	0.00	0.00	1.50	\$ 128,344	\$ 85,563
File/print administration	1.15	0.00	0.00	1.15	\$ 94,650	\$ 82,304
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	3.65	0.00	0.00	3.65	\$ 331,207	\$ 90,742
Other server administration	3.50	0.00	0.00	3.50	\$ 292,579	\$ 83,594
Mainframe operations & administration	7.70	0.00	0.00	7.70	\$ 635,305	\$ 82,507
Data center operations	8.35	0.00	0.00	8.35	\$ 611,360	\$ 73,217
Database administration	2.50	0.00	0.00	2.50	\$ 228,849	\$ 91,540
Security administration	0.80	0.00	0.00	0.80	\$ 77,349	\$ 96,686
Telephone systems support	5.75	0.00	0.00	5.75	\$ 511,919	\$ 89,029
Business Application Services	36.16	0.00	0.00	36.16	\$ 3,219,329	
<i>Application development:</i>						
Website design/maintenance	1.15	0.00	0.00	1.15	\$ 92,276	\$ 80,240
Desktop application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.00	0.00	0.00	0.00	\$ -	n/a
Requirements analysis	0.05	0.00	0.00	0.05	\$ 4,928	\$ 98,558
Data administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application administration	2.38	0.00	0.00	2.38	\$ 198,060	\$ 83,219
<i>Custom application maintenance:</i>						
ARMS	1.48	0.00	0.00	1.48	\$ 145,961	\$ 98,622
IBIS	3.00	0.00	0.00	3.00	\$ 283,693	\$ 94,564
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	2.54	0.00	0.00	2.54	\$ 233,915	\$ 92,093
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.84	0.00	0.00	0.84	\$ 76,864	\$ 91,505
Other budget	0.16	0.00	0.00	0.16	\$ 13,577	\$ 84,855
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	20.01	0.00	0.00	20.01	\$ 1,752,501	\$ 87,581
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	2.82	0.00	0.00	2.82	\$ 259,169	\$ 91,904
Fixed Asset	0.25	0.00	0.00	0.25	\$ 28,402	\$ 113,608
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	1.48	0.00	0.00	1.48	\$ 129,984	\$ 87,827
IT Planning	4.40	0.00	0.00	4.40	\$ 461,559	
Strategic planning & governance	2.95	0.00	0.00	2.95	\$ 320,320	\$ 108,583
Research and development	1.25	0.00	0.00	1.25	\$ 122,924	\$ 98,340
Disaster recovery/planning	0.20	0.00	0.00	0.20	\$ 18,315	\$ 91,575
IT Administration	34.52	0.00	0.00	34.52	\$ 3,048,895	
Asset management	1.90	0.00	0.00	1.90	\$ 159,183	\$ 83,780
IT procurement	3.53	0.00	0.00	3.53	\$ 310,419	\$ 87,937
Project management	5.88	0.00	0.00	5.88	\$ 584,615	\$ 99,424
Standards and policies development	1.51	0.00	0.00	1.51	\$ 153,029	\$ 101,344
Administrative support	10.22	0.00	0.00	10.22	\$ 715,954	\$ 70,054
Departmental management	11.48	0.00	0.00	11.48	\$ 1,125,695	\$ 98,057
TOTALS	142.03	0.00	0.00	142.03	\$ 12,252,990	
ITS Labor Charges					\$ -	
TOTAL including ITS					\$ 12,252,990	



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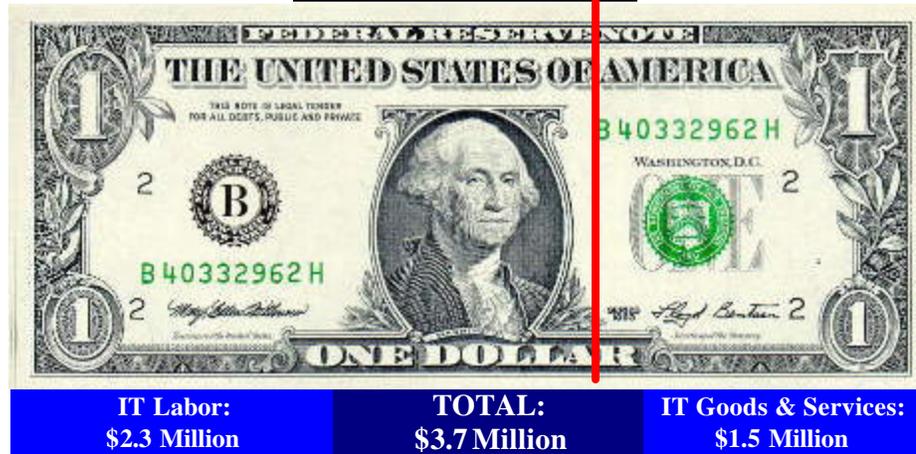
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Executive Services: ITS

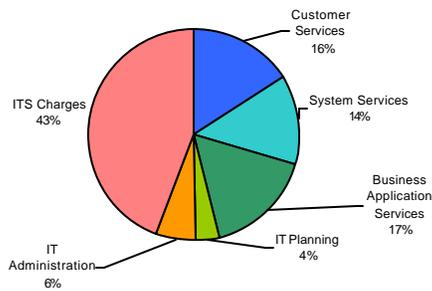
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ 95,405
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ 7,102
System software licenses	\$ 688,270
Mainframe OS & utilities	\$ 661,193
Desktop operating systems	\$ 132,663
Telco software	\$ -
Personal productivity licenses	\$ 18,065
Other	
Software Totals	\$ 1,602,698
Hardware	
Workstations	\$ 108,729
Servers	\$ 106,650
Mainframe computers	\$ 522,701
Mid-range computers	\$ 8,502
Mobile devices	\$ 52,508
Storage	\$ 1,433
Network equipment/infrastructure	\$ 484,610
Telco back-end	\$ 349,124
Printers	\$ 4,589
Other	\$ -
Hardware Totals	\$ 1,638,846
External Services	
Application development	\$ -
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ 250,102
Cellular & pager related	\$ 23,409
Networking	\$ 1,829,830
IT training	\$ 382,720
Management consulting	\$ 63,107
Other	\$ 1,082,750
External Services Totals	\$ 3,631,918
Other	
ITS Charges (Goods & Services)	\$ -
IT-related debt service	\$ -
All other O & M IT spending	\$ 3,209,461
Other Totals	\$ 3,209,461
TOTAL	\$ 10,082,923

EXECUTIVE SERVICES: OTHER

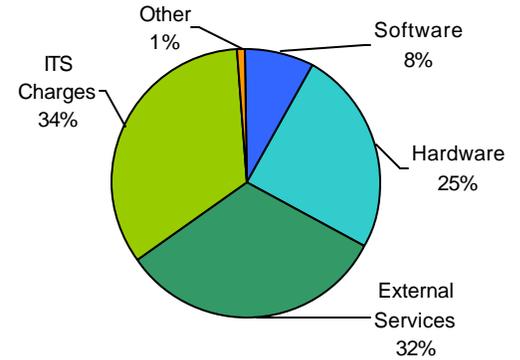
Total IT Operating Costs



IT Labor Costs by Category



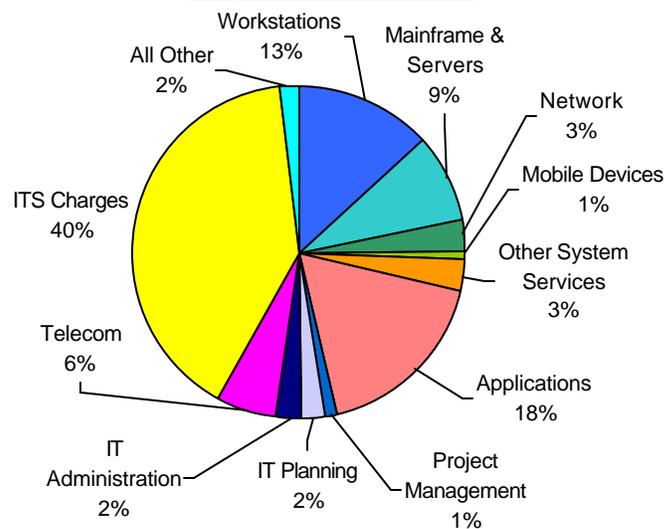
IT Goods & Services Costs by Category



TOTAL: \$2,253,585

TOTAL: \$1,469,781

Major IT Cost Drivers



TOTAL: \$3,723,366

Distribution of FTEs by Provider

IT Function	Agency IT		Agency Shadow IT		TOTALS
	FTE	Unit IT FTE	FTE	Unit IT FTE	
Customer Services	2.15	1.38	0.64		4.17
System Services	1.29	2.41	0.12		3.82
Business Application Services	0.54	3.63	0.56		4.73
IT Planning	0.03	0.59	0.44		1.06
IT Administration	0.09	0.99	0.68		1.76
TOTALS	4.10	9.00	2.44		15.54

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
623	5.55	112	\$ 514,473	\$ 825.80

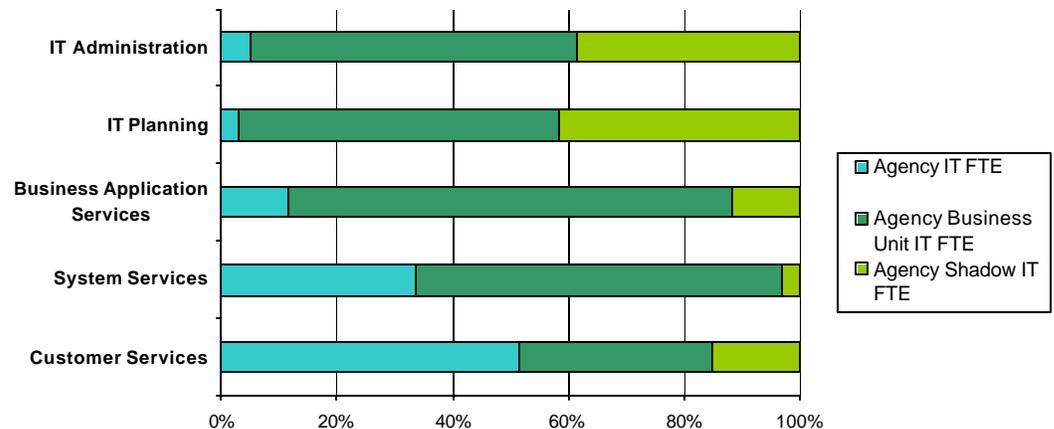
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	1	0.03	33	\$ 2,165	\$ 2,165
File & Print	8	0.17	47	\$ 14,812	\$ 1,852
Application	12	0.10	120	\$ 7,274	\$ 606
Other	60	1.01	59	\$ 86,947	\$ 1,449
TOTAL	81	1.31	62	\$ 111,198	\$ 1,373

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 56,263,733
Total Agency FY03 FTEs	504
Total Agency FY03 IT FTEs	15.5
Total Agency FY03 IT Operating Expenditures	\$ 3,723,366
IT Operating Expenditures Percent of Total Operating Expenditures	6.62%
IT FTEs Percent of Total FTEs	3.08%
IT Operating Expenditures Per FTE	\$ 7,388

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Executive Services: Other

**Total Operating
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**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost per	
	Agency IT FTE	Unit IT FTE	Shadow IT FTE		Cost Total	FTE
Customer Services	2.15	1.38	0.64	4.17	\$ 356,963	
Help Desk (Tier 1)	0.20	0.69	0.05	0.94	\$ 78,867	\$ 83,901
<i>Tier 2 support:</i>						
Desktop PC support	1.75	0.00	0.06	1.81	\$ 166,833	\$ 92,173
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.05	0.05	0.07	0.17	\$ 15,165	\$ 89,206
Personal productivity tool support	0.05	0.00	0.05	0.10	\$ 8,405	\$ 84,055
Business application support	0.10	0.42	0.22	0.74	\$ 57,907	\$ 78,253
Training	0.00	0.22	0.19	0.41	\$ 29,785	\$ 72,647
System Services	1.29	2.41	0.12	3.82	\$ 307,520	
Network connectivity (WAN/LAN/wireless)	0.57	0.40	0.00	0.97	\$ 76,266	\$ 78,625
Workstation administration	0.02	0.26	0.00	0.28	\$ 21,129	\$ 75,461
<i>Server administration:</i>						
Email administration	0.00	0.03	0.00	0.03	\$ 2,165	\$ 72,158
File/print administration	0.10	0.07	0.00	0.17	\$ 14,812	\$ 87,131
GIS server administration	0.00	0.25	0.00	0.25	\$ 19,229	\$ 76,914
Application server administration	0.00	0.10	0.00	0.10	\$ 7,274	\$ 72,743
Other server administration	0.51	0.25	0.00	0.76	\$ 67,718	\$ 89,103
Mainframe operations & administration	0.00	0.08	0.02	0.10	\$ 7,161	\$ 71,608
Data center operations	0.00	0.20	0.02	0.22	\$ 17,159	\$ 77,995
Database administration	0.06	0.55	0.02	0.63	\$ 50,524	\$ 80,197
Security administration	0.03	0.22	0.02	0.27	\$ 21,878	\$ 81,028
Telephone systems support	0.00	0.00	0.04	0.04	\$ 2,205	\$ 55,117
Business Application Services	0.54	3.63	0.56	4.73	\$ 374,976	
<i>Application development:</i>						
Website design/maintenance	0.05	0.05	0.16	0.26	\$ 20,238	\$ 77,838
Desktop application development/maintenance	0.05	0.00	0.01	0.06	\$ 5,631	\$ 93,852
GIS application development/maintenance	0.00	2.25	0.00	2.25	\$ 162,209	\$ 72,093
All other development	0.00	0.02	0.00	0.02	\$ 1,490	\$ 74,498
Requirements analysis	0.00	0.28	0.24	0.52	\$ 39,615	\$ 76,183
Data administration	0.01	0.42	0.00	0.43	\$ 33,223	\$ 77,263
Application administration	0.03	0.09	0.00	0.12	\$ 10,589	\$ 88,238
<i>Custom application maintenance:</i>						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.20	0.00	0.00	0.20	\$ 23,834	\$ 119,172
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.15	0.00	0.15	\$ 11,539	\$ 76,927
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.22	0.00	0.22	\$ 19,860	\$ 90,271
Agency app 2	0.20	0.15	0.15	0.50	\$ 46,749	\$ 93,497
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.03	0.59	0.44	1.06	\$ 83,636	
Strategic planning & governance	0.00	0.31	0.18	0.49	\$ 39,964	\$ 81,558
Research and development	0.02	0.15	0.24	0.41	\$ 30,478	\$ 74,337
Disaster recovery/planning	0.01	0.13	0.02	0.16	\$ 13,194	\$ 82,462
IT Administration	0.09	0.99	0.68	1.76	\$ 135,666	
Asset management	0.01	0.13	0.16	0.30	\$ 20,958	\$ 69,861
IT procurement	0.01	0.18	0.13	0.32	\$ 23,847	\$ 74,523
Project management	0.01	0.45	0.09	0.55	\$ 44,079	\$ 80,144
Standards and policies development	0.00	0.18	0.20	0.38	\$ 28,796	\$ 75,779
Administrative support	0.03	0.05	0.00	0.08	\$ 6,725	\$ 84,066
Departmental management	0.03	0.00	0.10	0.13	\$ 11,260	\$ 86,618
TOTALS	4.10	9.00	2.44	15.54	\$ 1,258,762	
ITS Labor Charges					\$ 994,824	
TOTAL including ITS					\$ 2,253,585	



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**Total Operating
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APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Executive Services: Other

Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ 39,000
DBMS maintenance/license	\$ 21,000
System software licenses	
Mainframe OS & utilities	\$ 6,500
Desktop operating systems	\$ 2,322
Telco software	\$ -
Personal productivity licenses	\$ 31,265
Other	\$ 22,620
Software Totals	\$ 122,707
Hardware	
Workstations	\$ 102,737
Servers	\$ 53,000
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 19,924
Storage	\$ 40,000
Network equipment/infrastructure	\$ 20,000
Telco back-end	\$ 29,000
Printers	\$ 48,940
Other	\$ 46,596
Hardware Totals	\$ 360,197
External Services	
Application development	\$ -
Application maintenance	\$ 112,432
Workstation support	\$ 82,432
Server support	\$ 82,432
Telecom:	\$ -
Land-line related	\$ 95,995
Cellular & pager related	\$ 83,383
Networking	\$ 11,250
IT training	\$ 5,000
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 472,925
Other	
ITS Charges (Goods & Services)	\$ 500,693
IT-related debt service	\$ -
All other O & M IT spending	\$ 13,260
Other Totals	\$ 513,953
TOTAL	\$ 1,469,781

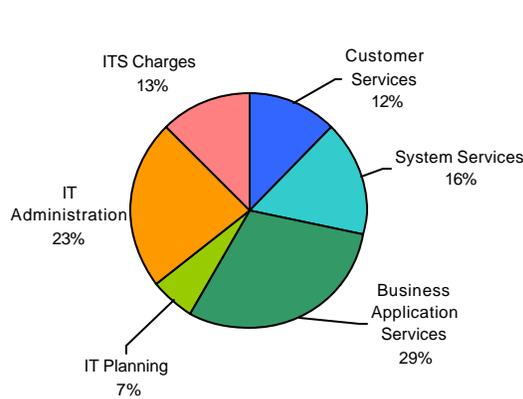
JUDICIAL ADMINISTRATION

Total IT Operating Costs



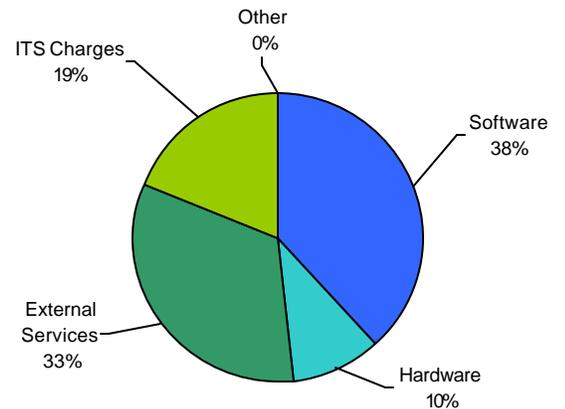
IT Labor: \$0.8 Million	TOTAL: \$1.5 Million	IT Goods & Services: \$0.7 Million
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IT Labor Costs by Category



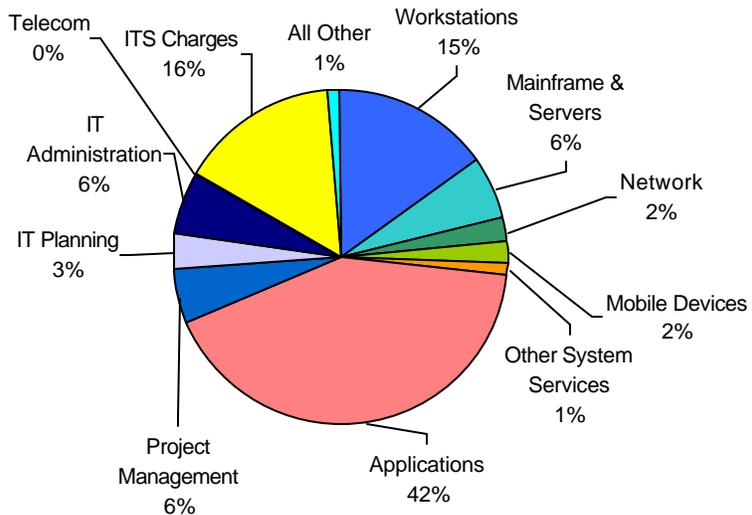
TOTAL: \$760,257

IT Goods & Services Costs by Category



TOTAL: \$724,505

Major IT Cost Drivers



TOTAL: \$1,484,763

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	1.15	0.00	0.06	1.21
System Services	1.59	0.00	0.00	1.59
Business Application Services	2.46	0.18	0.17	2.81
IT Planning	0.61	0.00	0.02	0.63
IT Administration	1.19	0.82	0.00	2.01
TOTALS	7.00	1.00	0.25	8.25

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
323	1.47	219	\$ 115,080	\$ 356.29

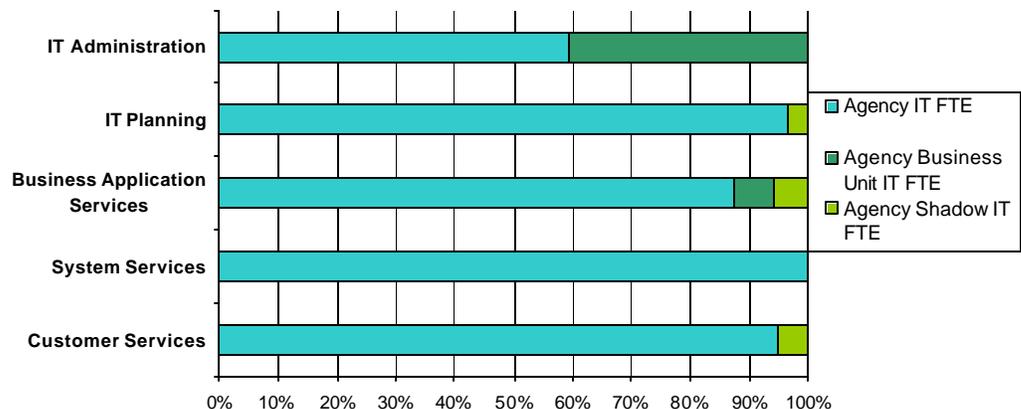
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.03	0	\$ 2,163	n/a
File & Print	5	0.05	100	\$ 4,149	\$ 830
Application	6	0.21	29	\$ 15,756	\$ 2,626
Other	29	0.06	483	\$ 4,326	\$ 149
TOTAL	40	0.35	114	\$ 26,394	\$ 660

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 14,045,911
Total Agency FY03 FTEs	202
Total Agency FY03 IT FTEs	8.3
Total Agency FY03 IT Operating Expenditures	\$ 1,484,763
IT Operating Expenditures Percent of Total Operating Expenditures	10.57%
IT FTEs Percent of Total FTEs	4.08%
IT Operating Expenditures Per FTE	\$ 7,350

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Judicial Administration

**Total Operating
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**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	1.15	0.00	0.06	1.21	\$ 92,214	
Help Desk (Tier 1)	0.00	0.00	0.00	0.00	\$ -	n/a
Tier 2 support:						
Desktop PC support	0.50	0.00	0.02	0.52	\$ 37,295	\$ 71,722
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.30	0.00	0.00	0.30	\$ 23,301	\$ 77,670
Personal productivity tool support	0.08	0.00	0.00	0.08	\$ 6,459	\$ 80,734
Business application support	0.20	0.00	0.02	0.22	\$ 17,547	\$ 78,971
Training	0.07	0.00	0.02	0.09	\$ 7,611	\$ 84,572
System Services	1.59	0.00	0.00	1.59	\$ 122,144	
Network connectivity (WAN/LAN/wireless)	0.42	0.00	0.00	0.42	\$ 31,962	\$ 76,099
Workstation administration	0.36	0.00	0.00	0.36	\$ 26,291	\$ 73,031
Server administration:						
Email administration	0.03	0.00	0.00	0.03	\$ 2,163	\$ 72,098
File/print administration	0.05	0.00	0.00	0.05	\$ 4,149	\$ 82,972
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.21	0.00	0.00	0.21	\$ 15,756	\$ 75,029
Other server administration	0.06	0.00	0.00	0.06	\$ 4,326	\$ 72,098
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.20	0.00	0.00	0.20	\$ 16,006	\$ 80,028
Database administration	0.15	0.00	0.00	0.15	\$ 12,224	\$ 81,494
Security administration	0.11	0.00	0.00	0.11	\$ 9,268	\$ 84,257
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	2.46	0.18	0.17	2.81	\$ 226,923	
Application development:						
Website design/maintenance	0.08	0.02	0.15	0.25	\$ 20,334	\$ 81,336
Desktop application development/maintenance	0.16	0.00	0.00	0.16	\$ 12,483	\$ 78,022
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.00	0.00	0.00	0.00	\$ -	n/a
Requirements analysis	0.29	0.16	0.00	0.45	\$ 38,710	\$ 86,022
Data administration	0.20	0.00	0.00	0.20	\$ 16,316	\$ 81,580
Application administration	0.18	0.00	0.02	0.20	\$ 15,586	\$ 79,117
Custom application maintenance:						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.73	0.00	0.00	0.73	\$ 59,523	\$ 81,539
Agency app 2	0.54	0.00	0.00	0.54	\$ 42,375	\$ 78,473
All other	0.20	0.00	0.00	0.20	\$ 15,839	\$ 79,194
Package application maintenance:						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.08	0.00	0.00	0.08	\$ 5,756	\$ 71,948
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.61	0.00	0.02	0.63	\$ 49,603	
Strategic planning & governance	0.08	0.00	0.02	0.10	\$ 8,905	\$ 87,136
Research and development	0.36	0.00	0.00	0.36	\$ 27,227	\$ 75,631
Disaster recovery/planning	0.17	0.00	0.00	0.17	\$ 13,470	\$ 79,237
IT Administration	1.19	0.82	0.00	2.01	\$ 174,084	
Asset management	0.26	0.00	0.00	0.26	\$ 19,448	\$ 74,801
IT procurement	0.14	0.00	0.00	0.14	\$ 10,637	\$ 75,982
Project management	0.19	0.72	0.00	0.91	\$ 83,997	\$ 92,304
Standards and policies development	0.20	0.04	0.00	0.24	\$ 18,944	\$ 78,933
Administrative support	0.16	0.00	0.00	0.16	\$ 11,708	\$ 73,175
Departmental management	0.24	0.06	0.00	0.30	\$ 29,349	\$ 97,831
TOTALS	7.00	1.00	0.25	8.25	\$ 664,967	
ITS Labor Charges					\$ 95,290	
TOTAL including ITS					\$ 760,257	



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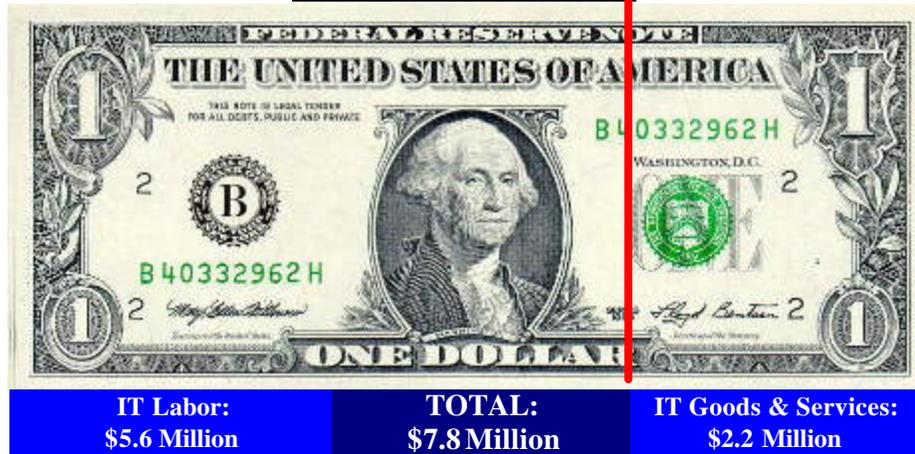
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Judicial Administration

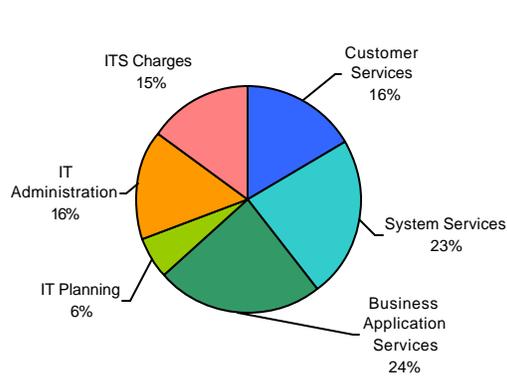
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ -
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ 152,736
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 124,448
Other	
Software Totals	\$ 277,184
Hardware	
Workstations	\$ 13,603
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 6,000
Storage	\$ 47,018
Network equipment/infrastructure	\$ -
Telco back-end	\$ -
Printers	\$ 6,355
Other	\$ -
Hardware Totals	\$ 72,976
External Services	
Application development	\$ 113,840
Application maintenance	\$ 96,280
Workstation support	\$ 20,000
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ 600
Networking	\$ -
IT training	\$ 7,500
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 238,220
Other	
ITS Charges (Goods & Services)	\$ 136,126
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 136,126
TOTAL	\$ 724,505

NATURAL RESOURCES AND PARKS

Total IT Operating Costs

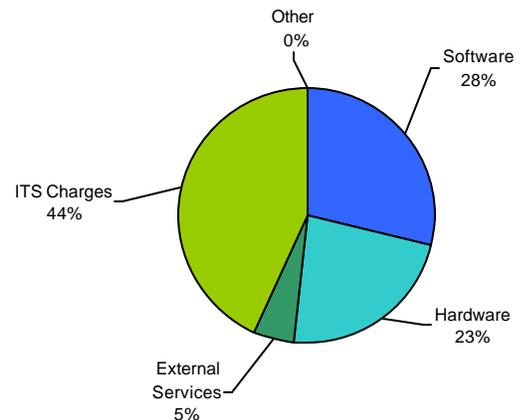


IT Labor Costs by Category



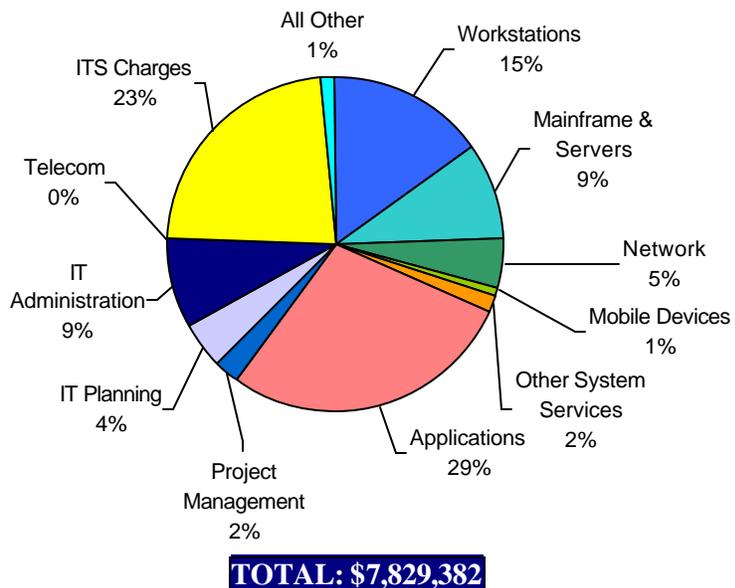
TOTAL: \$5,617,759

IT Goods & Services Costs by Category



TOTAL: \$2,211,623

Major IT Cost Drivers



TOTAL: \$7,829,382

Distribution of FTEs by Provider

IT Function	Agency		Agency Shadow IT FTE	TOTALS
	Agency IT FTE	Business Unit IT FTE		
Customer Services	10.74	0.00	0.40	11.14
System Services	14.35	0.00	0.80	15.15
Business Application Services	13.90	0.00	1.55	15.45
IT Planning	3.04	0.00	0.45	3.49
IT Administration	8.47	0.00	0.45	8.92
TOTALS	50.50	0.00	3.65	54.15

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
1,637	10.77	152	\$ 1,083,508	\$ 661.89

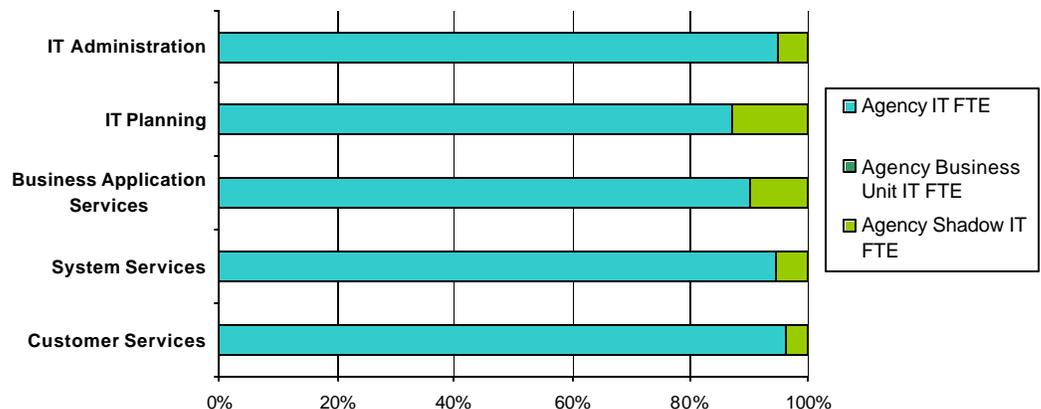
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.24	0	\$ 17,718	n/a
File & Print	55	2.80	20	\$ 240,693	\$ 4,376
Application	20	1.08	19	\$ 90,062	\$ 4,503
Other	52	2.41	22	\$ 218,998	\$ 4,211
TOTAL	127	6.53	19	\$ 567,471	\$ 4,468

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 236,821,019
Total Agency FY03 FTEs	1,686
Total Agency FY03 IT FTEs	54.1
Total Agency FY03 IT Operating Expenditures	\$ 7,829,382
IT Operating Expenditures Percent of Total Operating Expenditures	3.31%
IT FTEs Percent of Total FTEs	3.21%
IT Operating Expenditures Per FTE	\$ 4,643

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Natural Resources and Parks

**Total Operating
 Cost of
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**APPENDIX B:
 Agency Detail**

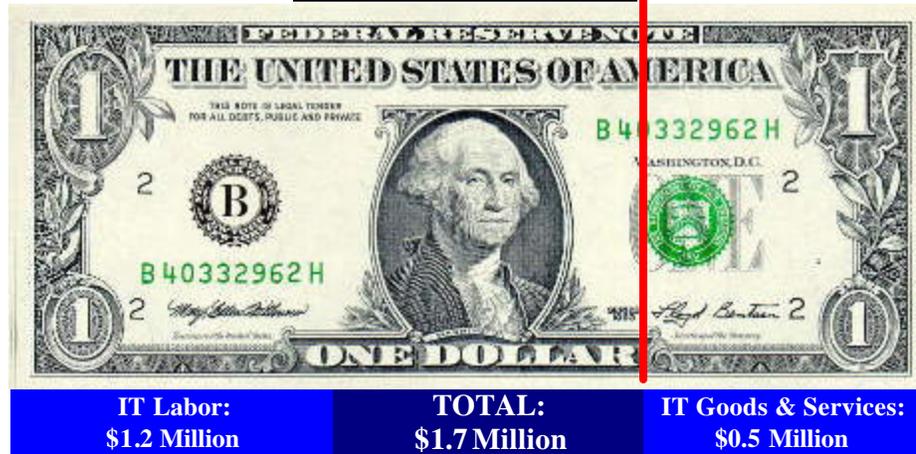
IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	10.74	0.00	0.40	11.14	\$ 919,219	
Help Desk (Tier 1)	0.77	0.00	0.00	0.77	\$ 69,190	\$ 89,857
<i>Tier 2 support:</i>						
Desktop PC support	7.47	0.00	0.40	7.87	\$ 631,623	\$ 80,257
PDA support	0.03	0.00	0.00	0.03	\$ 2,876	\$ 95,862
Other portable/specialized device support	0.35	0.00	0.00	0.35	\$ 31,713	\$ 90,608
Personal productivity tool support	0.05	0.00	0.00	0.05	\$ 4,875	\$ 97,507
Business application support	1.57	0.00	0.00	1.57	\$ 142,870	\$ 91,000
Training	0.50	0.00	0.00	0.50	\$ 36,073	\$ 72,146
System Services	14.35	0.00	0.80	15.15	\$ 1,291,424	
Network connectivity (WAN/LAN/wireless)	2.75	0.00	0.40	3.15	\$ 264,694	\$ 84,030
Workstation administration	0.65	0.00	0.00	0.65	\$ 58,152	\$ 89,465
<i>Server administration:</i>						
Email administration	0.24	0.00	0.00	0.24	\$ 17,718	\$ 73,824
File/print administration	2.40	0.00	0.40	2.80	\$ 240,693	\$ 85,962
GIS server administration	1.06	0.00	0.00	1.06	\$ 95,216	\$ 89,826
Application server administration	1.08	0.00	0.00	1.08	\$ 90,062	\$ 83,391
Other server administration	1.35	0.00	0.00	1.35	\$ 123,782	\$ 91,690
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.21	0.00	0.00	0.21	\$ 20,021	\$ 95,338
Database administration	3.97	0.00	0.00	3.97	\$ 316,633	\$ 79,756
Security administration	0.64	0.00	0.00	0.64	\$ 64,453	\$ 100,708
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	13.90	0.00	1.55	15.45	\$ 1,360,258	
<i>Application development:</i>						
Website design/maintenance	1.86	0.00	1.55	3.41	\$ 292,017	\$ 85,636
Desktop application development/maintenance	0.78	0.00	0.00	0.78	\$ 81,393	\$ 104,350
GIS application development/maintenance	2.45	0.00	0.00	2.45	\$ 185,446	\$ 75,692
All other development	1.44	0.00	0.00	1.44	\$ 141,221	\$ 98,070
Requirements analysis	0.61	0.00	0.00	0.61	\$ 53,349	\$ 87,457
Data administration	0.45	0.00	0.00	0.45	\$ 40,562	\$ 90,137
Application administration	0.10	0.00	0.00	0.10	\$ 8,823	\$ 88,232
<i>Custom application maintenance:</i>						
ARMS	0.01	0.00	0.00	0.01	\$ 353	\$ 70,537
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	4.11	0.00	0.00	4.11	\$ 345,899	\$ 84,263
Agency app 2	0.64	0.00	0.00	0.64	\$ 69,393	\$ 108,427
All other	0.76	0.00	0.00	0.76	\$ 76,565	\$ 100,743
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.10	0.00	0.00	0.10	\$ 8,752	\$ 87,519
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.40	0.00	0.00	0.40	\$ 36,710	\$ 91,774
Agency app 2	0.20	0.00	0.00	0.20	\$ 19,776	\$ 98,879
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	3.04	0.00	0.45	3.49	\$ 329,322	
Strategic planning & governance	1.22	0.00	0.00	1.22	\$ 116,557	\$ 95,932
Research and development	1.45	0.00	0.05	1.50	\$ 144,358	\$ 96,238
Disaster recovery/planning	0.38	0.00	0.40	0.78	\$ 68,407	\$ 88,268
IT Administration	8.47	0.00	0.45	8.92	\$ 879,688	
Asset management	0.79	0.00	0.00	0.79	\$ 67,537	\$ 86,034
IT procurement	0.41	0.00	0.00	0.41	\$ 38,426	\$ 93,723
Project management	1.55	0.00	0.30	1.85	\$ 179,794	\$ 97,186
Standards and policies development	0.59	0.00	0.00	0.59	\$ 58,642	\$ 99,394
Administrative support	1.71	0.00	0.05	1.76	\$ 160,128	\$ 90,982
Departmental management	3.42	0.00	0.10	3.52	\$ 375,161	\$ 106,580
TOTALS	50.50	0.00	3.65	54.15	\$ 4,779,911	
ITS Labor Charges					\$ 837,848	
TOTAL including ITS					\$ 5,617,759	

IT Goods & Services Expenditures – Natural Resources and Parks

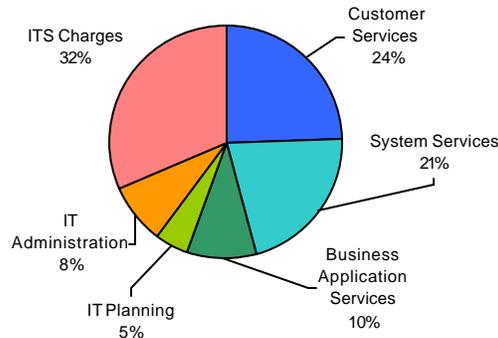
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ 38,447
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ 113,989
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ 126,240
DBMS maintenance/license	\$ 69,556
System software licenses	\$ 51,269
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ 170,176
Telco software	\$ -
Personal productivity licenses	\$ 22,718
Other	\$ 37,902
Software Totals	\$ 630,297
Hardware	
Workstations	\$ 229,002
Servers	\$ 77,058
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 24,490
Storage	\$ 11,574
Network equipment/infrastructure	\$ 105,863
Telco back-end	\$ -
Printers	\$ 60,019
Other	\$ 3,819
Hardware Totals	\$ 511,825
External Services	
Application development	\$ 25,000
Application maintenance	\$ 30,000
Workstation support	\$ -
Server support	\$ 7,294
Telecom:	\$ -
Land-line related	\$ 3,750
Cellular & pager related	\$ 6,841
Networking	\$ -
IT training	\$ 31,305
Management consulting	\$ -
Other	\$ 6,000
External Services Totals	\$ 110,190
Other	
ITS Charges (Goods & Services)	\$ 959,311
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 959,311
TOTAL	\$ 2,211,623

PROSECUTING ATTORNEY

Total IT Operating Costs

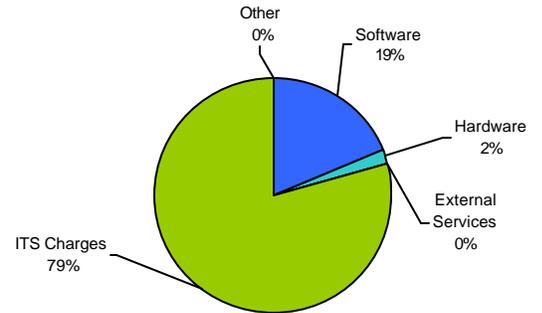


IT Labor Costs by Category



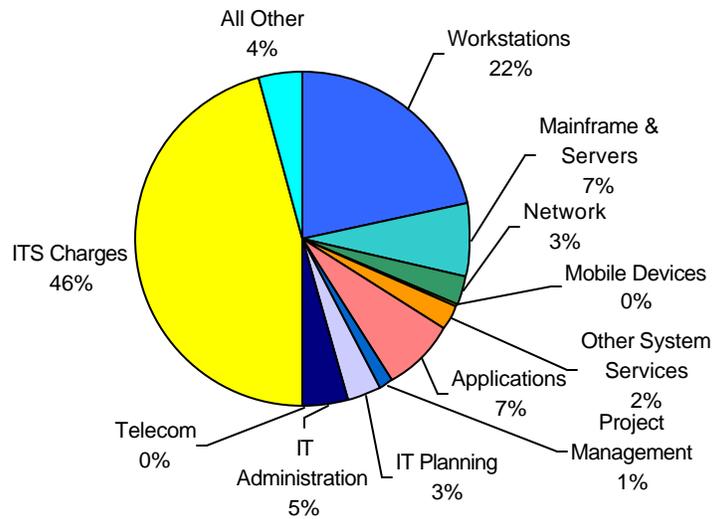
TOTAL: \$1,178,537

IT Goods & Services Costs by Category

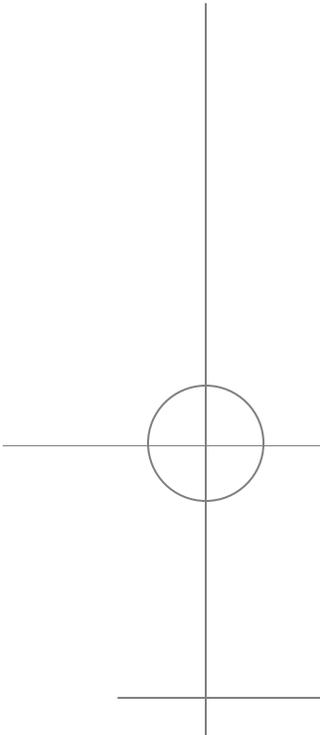


TOTAL: \$502,153

Major IT Cost Drivers



TOTAL: \$1,680,690



Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	2.76	0.60	0.30	3.66
System Services	2.09	0.65	0.20	2.94
Business Application Services	0.30	0.65	0.15	1.10
IT Planning	0.55	0.00	0.00	0.55
IT Administration	0.80	0.10	0.00	0.90
TOTALS	6.50	2.00	0.65	9.15

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
550	4.01	137	\$ 290,350	\$ 527.91

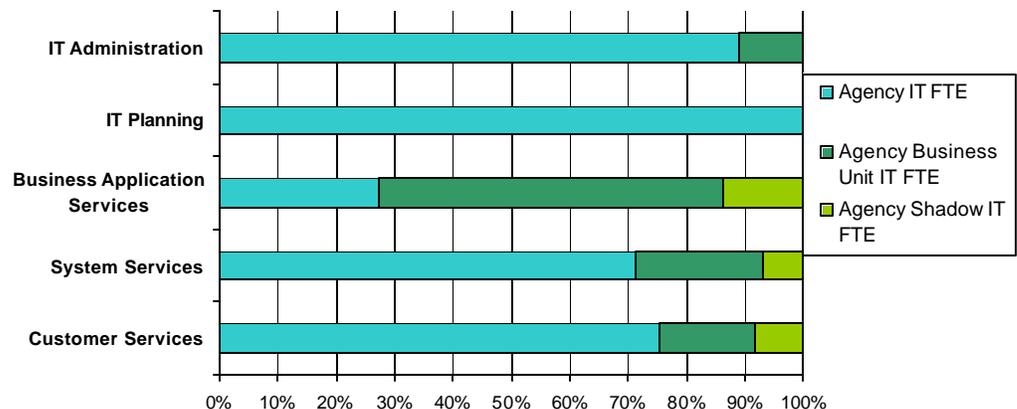
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	7	1.05	7	\$ 99,404	\$ 14,201
Application	1	0.00	n/a	\$ -	\$ -
Other	6	0.15	40	\$ 13,540	\$ 2,257
TOTAL	14	1.20	12	\$ 112,944	\$ 8,067

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 43,500,000
Total Agency FY03 FTEs	505
Total Agency FY03 IT FTEs	9.2
Total Agency FY03 IT Operating Expenditures	\$ 1,680,690
IT Operating Expenditures Percent of Total Operating Expenditures	3.86%
IT FTEs Percent of Total FTEs	1.81%
IT Operating Expenditures Per FTE	\$ 3,328

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Prosecuting Attorney

**Total Operating
 Cost of
 Technology
 Final Report**

**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	2.76	0.60	0.30	3.66	\$ 287,135	
Help Desk (Tier 1)	0.65	0.20	0.15	1.00	\$ 71,146	\$ 71,146
<i>Tier 2 support:</i>						
Desktop PC support	0.65	0.15	0.15	0.95	\$ 67,713	\$ 71,277
PDA support	0.06	0.00	0.00	0.06	\$ 4,231	\$ 70,520
Other portable/specialized device support	0.00	0.00	0.00	0.00	\$ -	n/a
Personal productivity tool support	0.75	0.15	0.00	0.90	\$ 77,077	\$ 85,641
Business application support	0.00	0.00	0.00	0.00	\$ -	n/a
Training	0.65	0.10	0.00	0.75	\$ 66,967	\$ 89,289
System Services	2.09	0.65	0.20	2.94	\$ 249,625	
Network connectivity (WAN/LAN/wireless)	0.45	0.10	0.00	0.55	\$ 47,061	\$ 85,565
Workstation administration	0.40	0.20	0.20	0.80	\$ 54,028	\$ 67,535
<i>Server administration:</i>						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.70	0.35	0.00	1.05	\$ 99,404	\$ 94,670
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Other server administration	0.15	0.00	0.00	0.15	\$ 13,540	\$ 90,264
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.00	0.00	0.00	0.00	\$ -	n/a
Security administration	0.39	0.00	0.00	0.39	\$ 35,593	\$ 91,263
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	0.30	0.65	0.15	1.10	\$ 118,309	
<i>Application development:</i>						
Website design/maintenance	0.15	0.00	0.15	0.30	\$ 27,340	\$ 91,135
Desktop application development/maintenance	0.10	0.00	0.00	0.10	\$ 9,575	\$ 95,754
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.05	0.00	0.00	0.05	\$ 4,788	\$ 95,754
Requirements analysis	0.00	0.00	0.00	0.00	\$ -	n/a
Data administration	0.00	0.20	0.00	0.20	\$ 23,571	\$ 117,854
Application administration	0.00	0.20	0.00	0.20	\$ 23,571	\$ 117,854
<i>Custom application maintenance:</i>						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.25	0.00	0.25	\$ 29,464	\$ 117,854
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.55	0.00	0.00	0.55	\$ 54,168	
Strategic planning & governance	0.10	0.00	0.00	0.10	\$ 10,997	\$ 109,973
Research and development	0.30	0.00	0.00	0.30	\$ 28,767	\$ 95,890
Disaster recovery/planning	0.15	0.00	0.00	0.15	\$ 14,404	\$ 96,026
IT Administration	0.80	0.10	0.00	0.90	\$ 97,697	
Asset management	0.10	0.05	0.00	0.15	\$ 16,373	\$ 109,155
IT procurement	0.10	0.05	0.00	0.15	\$ 16,373	\$ 109,155
Project management	0.20	0.00	0.00	0.20	\$ 21,995	\$ 109,973
Standards and policies development	0.15	0.00	0.00	0.15	\$ 16,238	\$ 108,250
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.25	0.00	0.00	0.25	\$ 26,718	\$ 106,872
TOTALS	6.50	2.00	0.65	9.15	\$ 806,934	
ITS Labor Charges					\$ 371,603	
TOTAL including ITS					\$ 1,178,537	



Practical Planning
Positive Change

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**Total Operating
Cost of
Technology
Final Report**

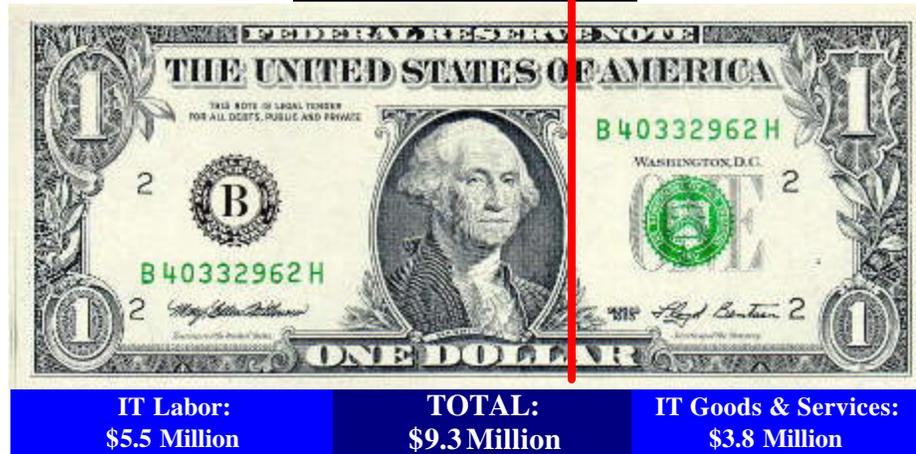
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Prosecuting Attorney

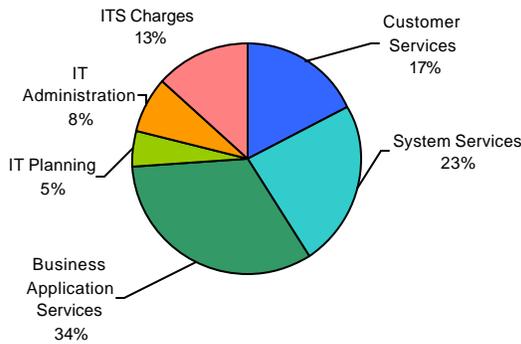
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ 500
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 90,861
Other	\$ 2,000
Software Totals	\$ 93,361
Hardware	
Workstations	\$ 5,000
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ -
Storage	\$ -
Network equipment/infrastructure	\$ 1,000
Telco back-end	\$ -
Printers	\$ 4,000
Other	\$ -
Hardware Totals	\$ 10,000
External Services	
Application development	\$ -
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ -
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ -
Other	
ITS Charges (Goods & Services)	\$ 398,792
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 398,792
TOTAL	\$ 502,153

PUBLIC HEALTH

Total IT Operating Costs

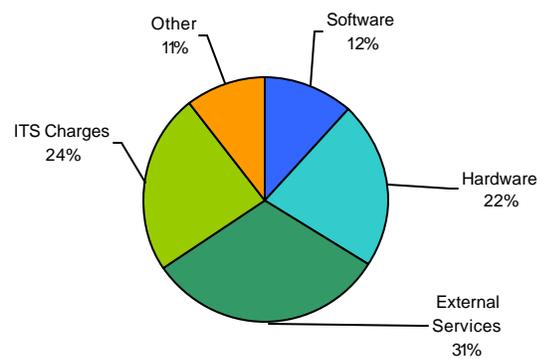


IT Labor Costs by Category



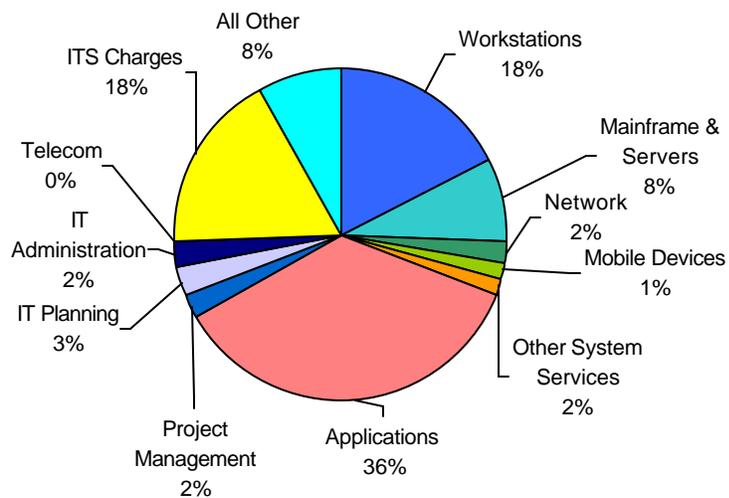
TOTAL: \$5,469,110

IT Goods & Services Costs by Category



TOTAL: \$3,802,597

Major IT Cost Drivers



TOTAL: \$9,271,707

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	10.60	1.30	1.06	12.96
System Services	15.23	0.30	0.10	15.63
Business Application Services	13.82	4.30	2.70	20.82
IT Planning	2.40	0.50	0.00	2.90
IT Administration	3.95	0.60	0.00	4.55
TOTALS	46.00	7.00	3.86	56.86

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
1,749	12.01	146	\$ 599,580	\$ 342.81

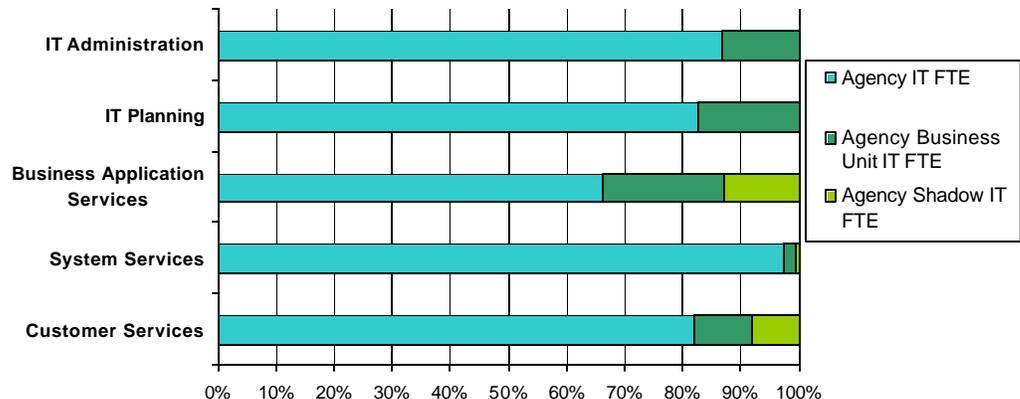
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	32	1.25	26	\$ 112,887	\$ 3,528
Application	8	1.65	5	\$ 145,988	\$ 18,249
Other	42	1.20	35	\$ 105,729	\$ 2,517
TOTAL	82	4.10	20	\$ 364,604	\$ 4,446

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 250,000,000
Total Agency FY03 FTEs	2,000
Total Agency FY03 IT FTEs	56.9
Total Agency FY03 IT Operating Expenditures	\$ 9,271,707
IT Operating Expenditures Percent of Total Operating Expenditures	3.71%
IT FTEs Percent of Total FTEs	2.84%
IT Operating Expenditures Per FTE	\$ 4,636

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Public Health

**Total Operating
 Cost of
 Technology
 Final Report**

**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	10.60	1.30	1.06	12.96	\$ 956,580	
Help Desk (Tier 1)	0.70	0.00	0.00	0.70	\$ 50,891	\$ 72,702
<i>Tier 2 support:</i>						
Desktop PC support	2.20	0.00	0.50	2.70	\$ 186,381	\$ 69,030
PDA support	0.80	0.00	0.00	0.80	\$ 59,191	\$ 73,989
Other portable/specialized device support	0.80	0.00	0.00	0.80	\$ 59,191	\$ 73,989
Personal productivity tool support	0.75	0.00	0.00	0.75	\$ 55,071	\$ 73,428
Business application support	2.60	0.80	0.28	3.68	\$ 284,601	\$ 77,337
Training	2.75	0.50	0.28	3.53	\$ 261,254	\$ 74,010
System Services	15.23	0.30	0.10	15.63	\$ 1,280,010	
Network connectivity (WAN/LAN/wireless)	1.95	0.00	0.00	1.95	\$ 161,063	\$ 82,596
Workstation administration	5.90	0.00	0.00	5.90	\$ 432,030	\$ 73,225
<i>Server administration:</i>						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	1.25	0.00	0.00	1.25	\$ 112,887	\$ 90,309
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	1.65	0.00	0.00	1.65	\$ 145,988	\$ 88,478
Other server administration	1.20	0.00	0.00	1.20	\$ 105,729	\$ 88,107
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.30	0.00	0.00	0.30	\$ 27,424	\$ 91,414
Database administration	1.53	0.00	0.10	1.63	\$ 140,084	\$ 85,941
Security administration	1.45	0.30	0.00	1.75	\$ 154,805	\$ 88,460
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	13.82	4.30	2.70	20.82	\$ 1,800,204	
<i>Application development:</i>						
Website design/maintenance	3.10	0.00	0.00	3.10	\$ 264,580	\$ 85,348
Desktop application development/maintenance	0.30	0.00	0.00	0.30	\$ 26,763	\$ 89,210
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	3.10	0.00	0.50	3.60	\$ 315,740	\$ 87,706
Requirements analysis	2.15	1.50	0.00	3.65	\$ 307,670	\$ 84,293
Data administration	3.07	1.10	0.10	4.27	\$ 370,623	\$ 86,797
Application administration	0.55	0.60	0.00	1.15	\$ 94,014	\$ 81,751
<i>Custom application maintenance:</i>						
ARMS	0.00	0.00	0.50	0.50	\$ 54,517	\$ 109,034
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.25	0.25	\$ 27,259	\$ 109,034
Other finance	0.00	0.00	0.35	0.35	\$ 33,864	\$ 96,755
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	1.40	0.90	0.00	2.30	\$ 192,220	\$ 83,574
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.15	0.20	1.00	1.35	\$ 112,955	\$ 83,670
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	2.40	0.50	0.00	2.90	\$ 279,137	
Strategic planning & governance	1.15	0.20	0.00	1.35	\$ 132,184	\$ 97,914
Research and development	0.75	0.10	0.00	0.85	\$ 80,230	\$ 94,389
Disaster recovery/planning	0.50	0.20	0.00	0.70	\$ 66,723	\$ 95,318
IT Administration	3.95	0.60	0.00	4.55	\$ 427,836	
Asset management	0.35	0.00	0.00	0.35	\$ 34,321	\$ 98,059
IT procurement	0.45	0.00	0.00	0.45	\$ 42,169	\$ 93,709
Project management	2.10	0.20	0.00	2.30	\$ 202,027	\$ 87,838
Standards and policies development	0.50	0.10	0.00	0.60	\$ 58,266	\$ 97,110
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.55	0.30	0.00	0.85	\$ 91,053	\$ 107,121
TOTALS	46.00	7.00	3.86	56.86	\$ 4,743,767	
ITS Labor Charges					\$ 725,343	
TOTAL including ITS					\$ 5,469,110	



Practical Planning
Positive Change

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**Total Operating
Cost of
Technology
Final Report**

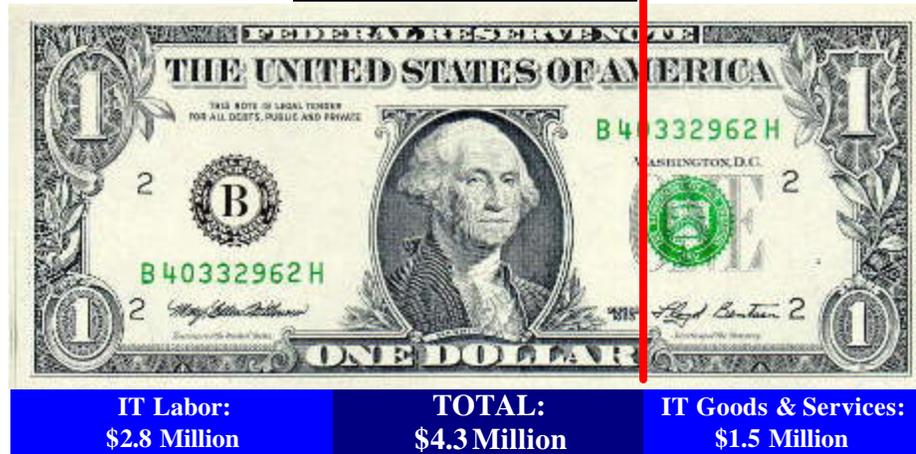
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Public Health

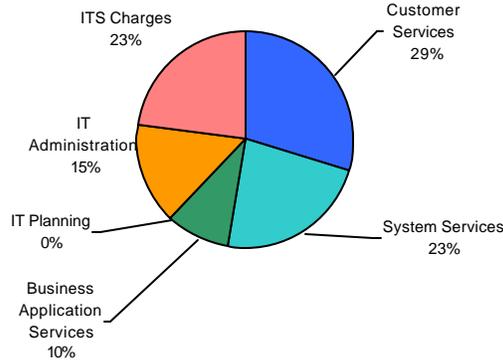
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	\$ 150,000
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 300,000
Other	
Software Totals	\$ 450,000
Hardware	
Workstations	\$ 600,000
Servers	\$ 200,000
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ -
Storage	\$ -
Network equipment/infrastructure	\$ 50,000
Telco back-end	\$ -
Printers	\$ -
Other	\$ -
Hardware Totals	\$ 850,000
External Services	
Application development	\$ 10,000
Application maintenance	\$ 1,100,000
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ 75,000
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 1,185,000
Other	
ITS Charges (Goods & Services)	\$ 917,597
IT-related debt service	\$ 400,000
All other O & M IT spending	\$ -
Other Totals	\$ 1,317,597
TOTAL	\$ 3,802,597

SHERIFF

Total IT Operating Costs

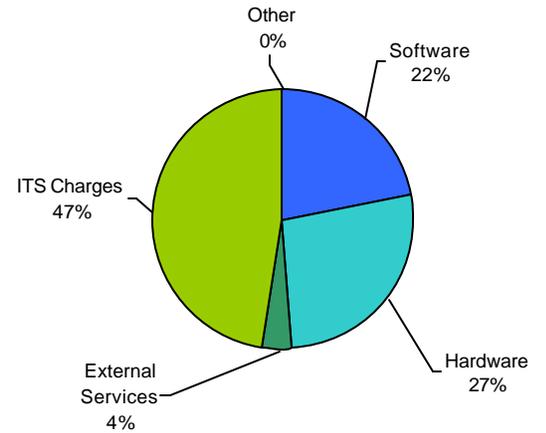


IT Labor Costs by Category



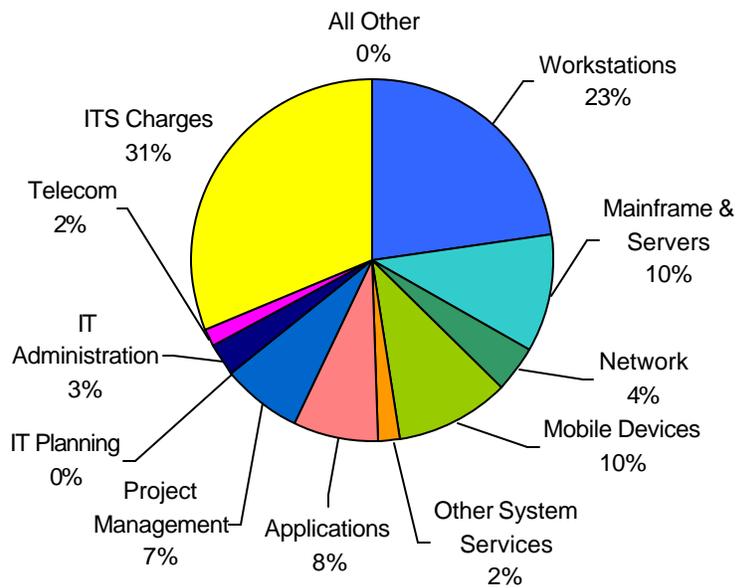
TOTAL: \$2,794,199

IT Goods & Services Costs by Category



TOTAL: \$1,530,203

Major IT Cost Drivers



TOTAL: \$4,324,402

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	5.70	6.00	0.00	11.70
System Services	5.90	2.00	0.00	7.90
Business Application Services	3.60	0.00	0.00	3.60
IT Planning	0.00	0.00	0.00	0.00
IT Administration	5.80	0.00	0.00	5.80
TOTALS	21.00	8.00	0.00	29.00

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
1,412	12.34	114	\$ 874,203	\$ 619.12

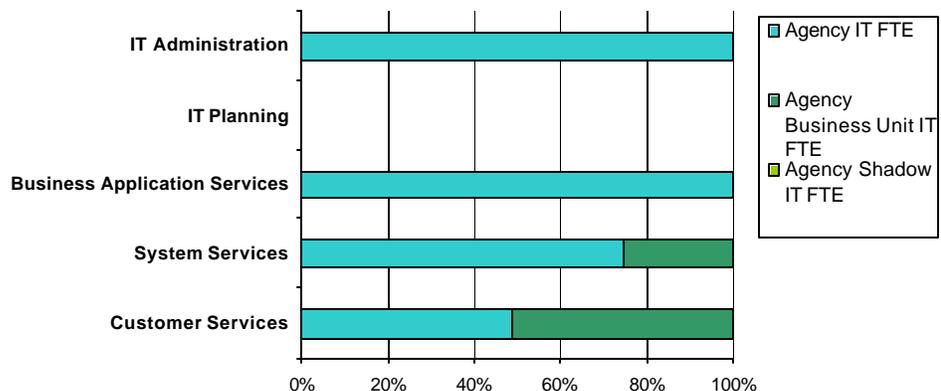
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	0	0.80	0	\$ 70,399	n/a
Application	0	1.00	0	\$ 83,298	n/a
Other	46	2.10	22	\$ 156,546	\$ 3,403
TOTAL	46	3.90	12	\$ 310,243	\$ 6,744

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 99,503,862
Total Agency FY03 FTEs	995
Total Agency FY03 IT FTEs	29.0
Total Agency FY03 IT Operating Expenditures	\$ 4,324,402
IT Operating Expenditures Percent of Total Operating Expenditures	4.35%
IT FTEs Percent of Total FTEs	2.91%
IT Operating Expenditures Per FTE	\$ 4,346

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost - Sheriff

**Total Operating
 Cost of
 Technology
 Final Report**

**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	5.70	6.00	0.00	11.70	\$ 827,729	
Help Desk (Tier 1)	1.80	0.00	0.00	1.80	\$ 144,797	\$ 80,443
<i>Tier 2 support:</i>						
Desktop PC support	1.20	6.00	0.00	7.20	\$ 458,787	\$ 63,720
PDA support	0.60	0.00	0.00	0.60	\$ 49,399	\$ 82,332
Other portable/specialized device support	0.60	0.00	0.00	0.60	\$ 49,199	\$ 81,998
Personal productivity tool support	0.80	0.00	0.00	0.80	\$ 66,199	\$ 82,748
Business application support	0.70	0.00	0.00	0.70	\$ 59,349	\$ 84,784
Training	0.00	0.00	0.00	0.00	\$ -	n/a
System Services	5.90	2.00	0.00	7.90	\$ 635,836	
Network connectivity (WAN/LAN/wireless)	1.00	0.00	0.00	1.00	\$ 84,998	\$ 84,998
Workstation administration	1.00	0.00	0.00	1.00	\$ 84,998	\$ 84,998
<i>Server administration:</i>						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.80	0.00	0.00	0.80	\$ 70,399	\$ 87,998
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	1.00	0.00	0.00	1.00	\$ 83,298	\$ 83,298
Other server administration	1.10	1.00	0.00	2.10	\$ 156,546	\$ 74,546
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.10	0.00	0.00	0.10	\$ 9,350	\$ 93,498
Database administration	0.00	0.00	0.00	0.00	\$ -	n/a
Security administration	0.90	0.00	0.00	0.90	\$ 75,748	\$ 84,165
Telephone systems support	0.00	1.00	0.00	1.00	\$ 70,498	\$ 70,498
Business Application Services	3.60	0.00	0.00	3.60	\$ 265,594	
<i>Application development:</i>						
Website design/maintenance	0.10	0.00	0.00	0.10	\$ 6,550	\$ 65,498
Desktop application development/maintenance	0.10	0.00	0.00	0.10	\$ 6,550	\$ 65,498
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.80	0.00	0.00	0.80	\$ 59,399	\$ 74,248
Requirements analysis	0.80	0.00	0.00	0.80	\$ 59,399	\$ 74,248
Data administration	0.20	0.00	0.00	0.20	\$ 12,600	\$ 62,998
Application administration	0.30	0.00	0.00	0.30	\$ 22,349	\$ 74,498
<i>Custom application maintenance:</i>						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.30	0.00	0.00	0.30	\$ 22,349	\$ 74,498
Agency app 2	0.30	0.00	0.00	0.30	\$ 22,349	\$ 74,498
All other	0.00	0.00	0.00	0.00	\$ -	n/a
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.40	0.00	0.00	0.40	\$ 31,699	\$ 79,248
Agency app 2	0.30	0.00	0.00	0.30	\$ 22,349	\$ 74,498
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.00	0.00	0.00	0.00	\$ -	
Strategic planning & governance	0.00	0.00	0.00	0.00	\$ -	n/a
Research and development	0.00	0.00	0.00	0.00	\$ -	n/a
Disaster recovery/planning	0.00	0.00	0.00	0.00	\$ -	n/a
IT Administration	5.80	0.00	0.00	5.80	\$ 432,290	
Asset management	0.10	0.00	0.00	0.10	\$ 8,250	\$ 82,498
IT procurement	0.10	0.00	0.00	0.10	\$ 8,250	\$ 82,498
Project management	4.20	0.00	0.00	4.20	\$ 315,693	\$ 75,165
Standards and policies development	0.00	0.00	0.00	0.00	\$ -	n/a
Administrative support	0.70	0.00	0.00	0.70	\$ 50,749	\$ 72,498
Departmental management	0.70	0.00	0.00	0.70	\$ 49,349	\$ 70,498
TOTALS	21.00	8.00	0.00	29.00	\$ 2,161,449	
ITS Labor Charges					\$ 632,750	
TOTAL including ITS					\$ 2,794,199	



Practical Planning
Positive Change

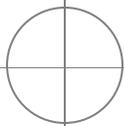
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**Total Operating
Cost of
Technology
Final Report**

APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Sheriff

Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ -
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ -
DBMS maintenance/license	\$ -
System software licenses	\$ 128,573
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ 33,614
Telco software	\$ -
Personal productivity licenses	\$ 175,431
Other	\$ -
Software Totals	\$ 337,618
Hardware	
Workstations	\$ 26,423
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 332,150
Storage	\$ -
Network equipment/infrastructure	\$ 36,271
Telco back-end	\$ -
Printers	\$ 11,331
Other	\$ -
Hardware Totals	\$ 406,175
External Services	
Application development	\$ -
Application maintenance	\$ -
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ 61,185
IT training	\$ -
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 61,185
Other	
ITS Charges (Goods & Services)	\$ 725,225
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 725,225
TOTAL	\$ 1,530,203



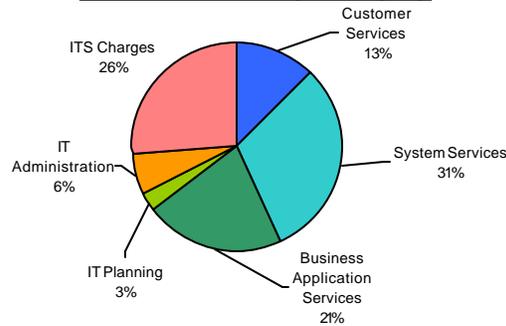
SUPERIOR COURT

Total IT Operating Costs



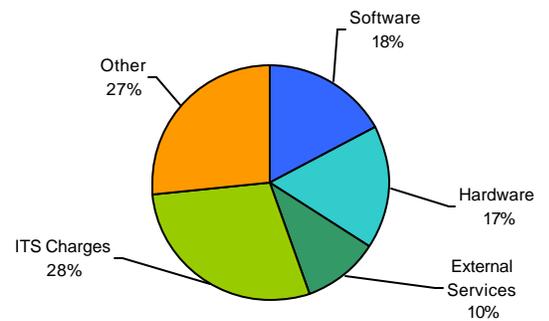
IT Labor: \$1.1 Million	TOTAL: \$2.0 Million	IT Goods & Services: \$0.9 Million
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IT Labor Costs by Category



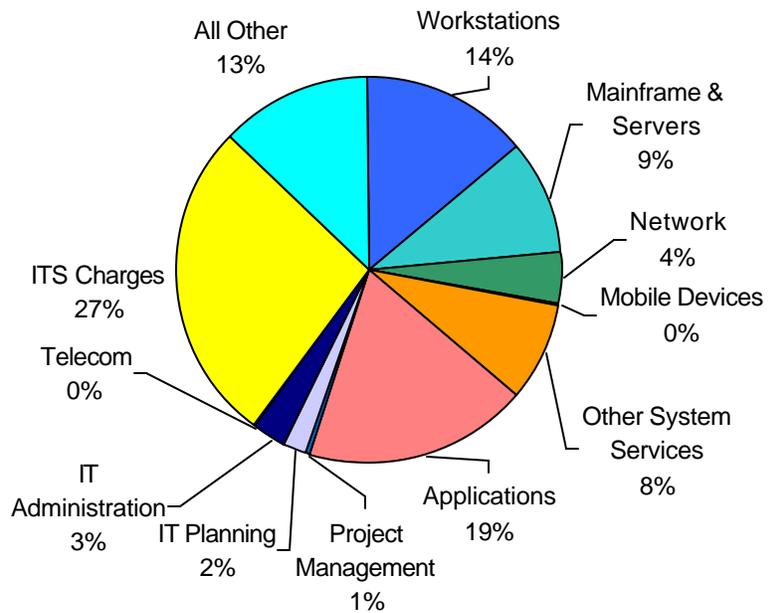
TOTAL: \$1,095,061

IT Goods & Services Costs by Category

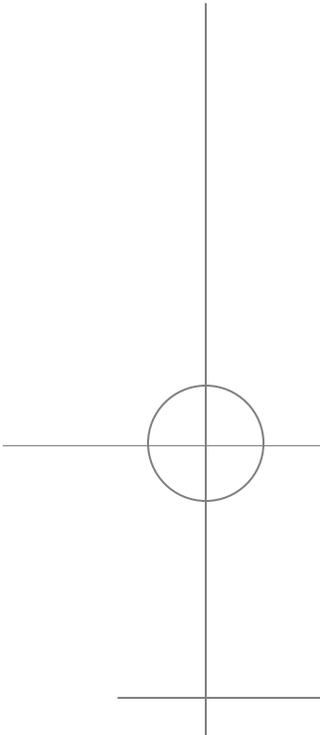


TOTAL: \$884,363

Major IT Cost Drivers



TOTAL: \$1,979,424



Distribution of FTEs by Provider

IT Function	Agency			TOTALS
	Agency IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	2.05	0.00	0.00	2.05
System Services	4.25	0.00	0.00	4.25
Business Application Services	2.75	0.00	0.00	2.75
IT Planning	0.30	0.00	0.00	0.30
IT Administration	0.65	0.00	0.00	0.65
TOTALS	10.00	0.00	0.00	10.00

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
631	2.42	261	\$ 237,762	\$ 376.80

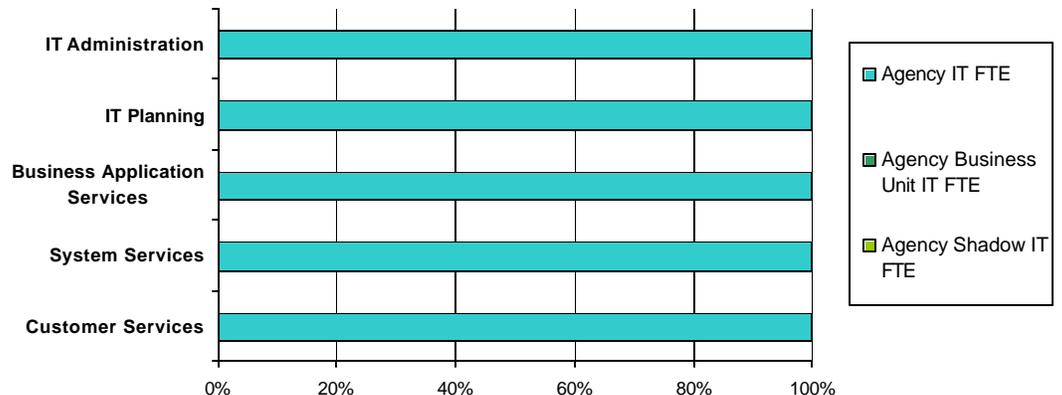
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	33	1.00	33	\$ 73,334	\$ 2,222
Application	5	1.00	5	\$ 73,334	\$ 14,667
Other	21	0.00	n/a	\$ -	\$ -
TOTAL	59	2.00	30	\$ 146,668	\$ 2,486

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 40,691,998
Total Agency FY03 FTEs	435
Total Agency FY03 IT FTEs	10.0
Total Agency FY03 IT Operating Expenditures	\$ 1,979,424
IT Operating Expenditures Percent of Total Operating Expenditures	4.86%
IT FTEs Percent of Total FTEs	2.30%
IT Operating Expenditures Per FTE	\$ 4,554

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Superior Court

**Total Operating
 Cost of
 Technology
 Final Report**

**APPENDIX B:
 Agency Detail**

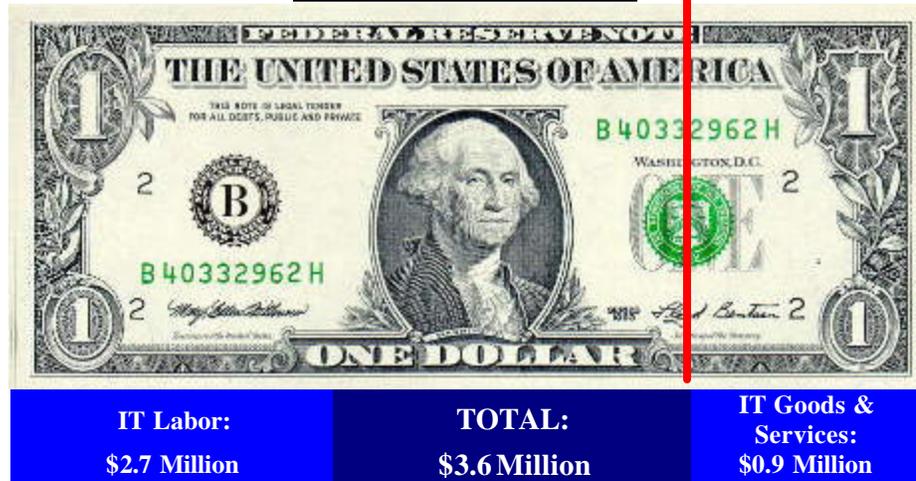
IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	2.05	0.00	0.00	2.05	\$ 138,396	
Help Desk (Tier 1)	0.00	0.00	0.00	0.00	\$ -	n/a
<i>Tier 2 support:</i>						
Desktop PC support	2.00	0.00	0.00	2.00	\$ 133,046	\$ 66,523
PDA support	0.00	0.00	0.00	0.00	\$ -	n/a
Other portable/specialized device support	0.00	0.00	0.00	0.00	\$ -	n/a
Personal productivity tool support	0.00	0.00	0.00	0.00	\$ -	n/a
Business application support	0.00	0.00	0.00	0.00	\$ -	n/a
Training	0.05	0.00	0.00	0.05	\$ 5,350	\$ 106,995
System Services	4.25	0.00	0.00	4.25	\$ 333,366	
Network connectivity (WAN/LAN/wireless)	1.00	0.00	0.00	1.00	\$ 73,334	\$ 73,334
Workstation administration	0.00	0.00	0.00	0.00	\$ -	n/a
<i>Server administration:</i>						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	1.00	0.00	0.00	1.00	\$ 73,334	\$ 73,334
GIS server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application server administration	1.00	0.00	0.00	1.00	\$ 73,334	\$ 73,334
Other server administration	0.00	0.00	0.00	0.00	\$ -	n/a
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.00	0.00	0.00	\$ -	n/a
Database administration	0.25	0.00	0.00	0.25	\$ 22,359	\$ 89,435
Security administration	1.00	0.00	0.00	1.00	\$ 91,004	\$ 91,004
Telephone systems support	0.00	0.00	0.00	0.00	\$ -	n/a
Business Application Services	2.75	0.00	0.00	2.75	\$ 233,816	
<i>Application development:</i>						
Website design/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
Desktop application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
GIS application development/maintenance	0.00	0.00	0.00	0.00	\$ -	n/a
All other development	0.00	0.00	0.00	0.00	\$ -	n/a
Requirements analysis	0.00	0.00	0.00	0.00	\$ -	n/a
Data administration	0.00	0.00	0.00	0.00	\$ -	n/a
Application administration	0.00	0.00	0.00	0.00	\$ -	n/a
<i>Custom application maintenance:</i>						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.00	0.00	0.00	\$ -	n/a
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	1.00	0.00	0.00	1.00	\$ 77,304	\$ 77,304
Agency app 2	1.00	0.00	0.00	1.00	\$ 89,435	\$ 89,435
All other	0.75	0.00	0.00	0.75	\$ 67,076	\$ 89,435
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	\$ -	n/a
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	0.00	0.00	0.00	0.00	\$ -	n/a
IT Planning	0.30	0.00	0.00	0.30	\$ 32,099	
Strategic planning & governance	0.10	0.00	0.00	0.10	\$ 10,700	\$ 106,995
Research and development	0.10	0.00	0.00	0.10	\$ 10,700	\$ 106,995
Disaster recovery/planning	0.10	0.00	0.00	0.10	\$ 10,700	\$ 106,995
IT Administration	0.65	0.00	0.00	0.65	\$ 69,547	
Asset management	0.10	0.00	0.00	0.10	\$ 10,700	\$ 106,995
IT procurement	0.10	0.00	0.00	0.10	\$ 10,700	\$ 106,995
Project management	0.10	0.00	0.00	0.10	\$ 10,700	\$ 106,995
Standards and policies development	0.10	0.00	0.00	0.10	\$ 10,700	\$ 106,995
Administrative support	0.00	0.00	0.00	0.00	\$ -	n/a
Departmental management	0.25	0.00	0.00	0.25	\$ 26,749	\$ 106,995
TOTALS	10.00	0.00	0.00	10.00	\$ 807,223	
ITS Labor Charges					\$ 287,838	
TOTAL including ITS					\$ 1,095,061	

IT Goods & Services Expenditures – Superior Court

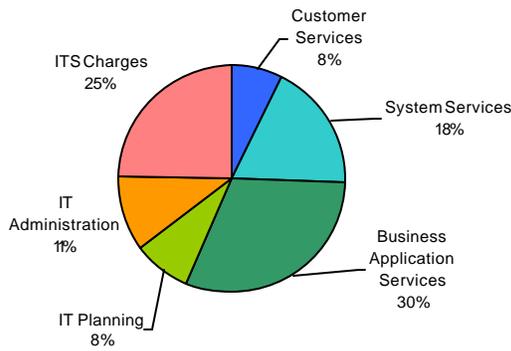
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ 4,570
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ 2,154
Agency Packaged Applications	\$ 1,053
DBMS maintenance/license	\$ 22,717
System software licenses	\$ 36,376
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ 80,628
Other	\$ 7,396
Software Totals	\$ 154,894
Hardware	
Workstations	\$ 59,841
Servers	\$ -
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 4,677
Storage	\$ 4,707
Network equipment/infrastructure	\$ 6,608
Telco back-end	\$ -
Printers	\$ 6,773
Other	\$ 65,774
Hardware Totals	\$ 148,380
External Services	
Application development	\$ 81,125
Application maintenance	\$ -
Workstation support	\$ 7,621
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ 1,600
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 90,346
Other	
ITS Charges (Goods & Services)	\$ 253,341
IT-related debt service	\$ -
All other O & M IT spending	\$ 237,402
Other Totals	\$ 490,743
TOTAL	\$ 884,363

TRANSPORTATION: AIRPORT, FLEET, ROADS

Total IT Operating Costs

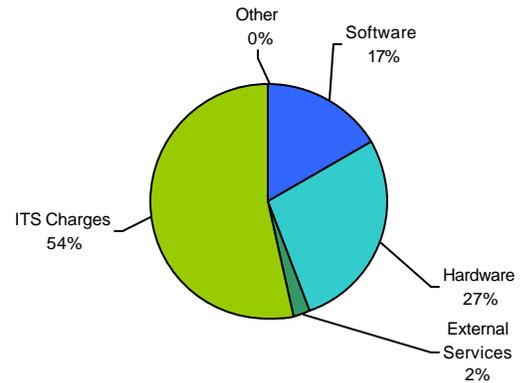


IT Labor Costs by Category



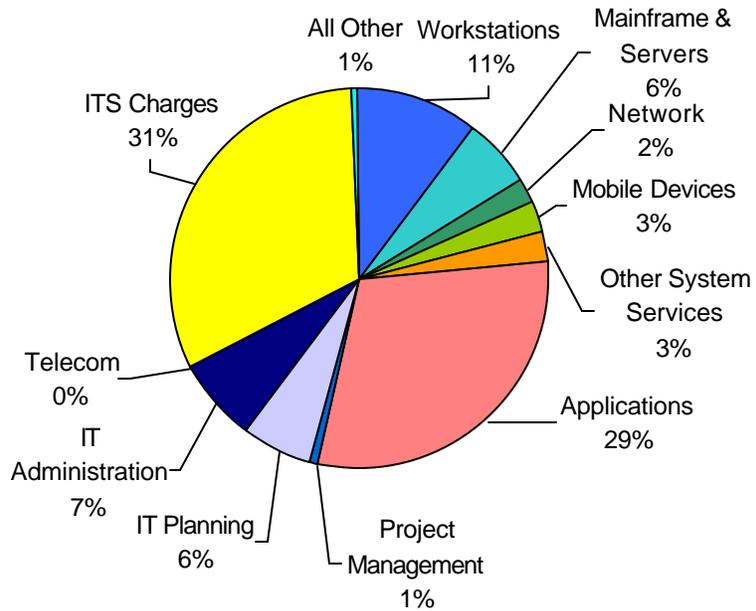
TOTAL: \$2,695,449

IT Goods & Services Costs by Category



TOTAL: \$932,384

Major IT Cost Drivers



TOTAL: \$3,627,833

Distribution of FTEs by Provider

IT Function	Agency		Agency	TOTALS
	IT FTE	Business Unit IT FTE	Shadow IT FTE	
Customer Services	1.47	1.05	0.16	2.68
System Services	2.84	2.84	0.08	5.76
Business Application Services	3.35	4.45	2.11	9.91
IT Planning	0.73	1.03	0.50	2.26
IT Administration	1.51	0.98	0.70	3.19
TOTALS	9.90	10.35	3.55	23.80

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
641	4.09	157	\$ 265,114	\$ 413.59

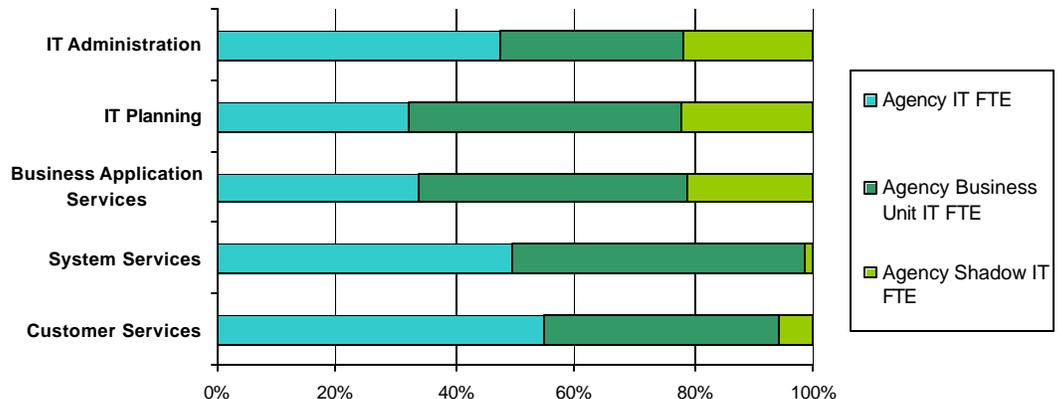
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.05	0	\$ 4,226	n/a
File & Print	18	0.71	25	\$ 59,628	\$ 3,313
Application	15	0.65	23	\$ 57,085	\$ 3,806
Other	18	0.49	37	\$ 42,224	\$ 2,346
TOTAL	51	1.90	27	\$ 163,162	\$ 3,199

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 104,565,477
Total Agency FY03 FTEs	769
Total Agency FY03 IT FTEs	23.8
Total Agency FY03 IT Operating Expenditures	\$ 3,627,833
IT Operating Expenditures Percent of Total Operating Expenditures	3.47%
IT FTEs Percent of Total FTEs	3.09%
IT Operating Expenditures Per FTE	\$ 4,716

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – DOT: Airport, Fleet, Roads

**Total Operating
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**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	1.47	1.05	0.16	2.68	\$ 205,237	
Help Desk (Tier 1)	0.17	0.00	0.00	0.17	\$ 14,898	\$ 87,637
<i>Tier 2 support:</i>						
Desktop PC support	0.37	0.53	0.04	0.94	\$ 65,683	\$ 69,875
PDA support	0.01	0.00	0.00	0.01	\$ 845	\$ 84,510
Other portable/specialized device support	0.55	0.25	0.02	0.82	\$ 66,585	\$ 81,201
Personal productivity tool support	0.21	0.00	0.00	0.21	\$ 17,490	\$ 83,286
Business application support	0.09	0.15	0.10	0.34	\$ 24,276	\$ 71,399
Training	0.07	0.12	0.00	0.19	\$ 15,460	\$ 81,370
System Services	2.84	2.84	0.08	5.76	\$ 480,803	
Network connectivity (WAN/LAN/wireless)	0.48	0.33	0.00	0.81	\$ 68,580	\$ 84,667
Workstation administration	0.87	0.64	0.02	1.53	\$ 119,412	\$ 78,047
<i>Server administration:</i>						
Email administration	0.05	0.00	0.00	0.05	\$ 4,226	\$ 84,510
File/print administration	0.43	0.28	0.00	0.71	\$ 59,628	\$ 83,983
GIS server administration	0.04	0.00	0.00	0.04	\$ 3,889	\$ 97,220
Application server administration	0.46	0.19	0.00	0.65	\$ 57,085	\$ 87,823
Other server administration	0.00	0.45	0.00	0.45	\$ 38,335	\$ 85,189
Mainframe operations & administration	0.00	0.00	0.00	0.00	-	n/a
Data center operations	0.00	0.00	0.04	0.04	\$ 2,351	\$ 58,783
Database administration	0.18	0.74	0.02	0.94	\$ 80,833	\$ 85,993
Security administration	0.33	0.21	0.00	0.54	\$ 46,464	\$ 86,045
Telephone systems support	0.00	0.00	0.00	0.00	-	n/a
Business Application Services	3.35	4.45	2.11	9.91	\$ 836,306	
<i>Application development:</i>						
Website design/maintenance	1.35	0.47	0.07	1.89	\$ 165,286	\$ 87,453
Desktop application development/maintenance	0.26	1.10	0.60	1.96	\$ 161,879	\$ 82,591
GIS application development/maintenance	0.46	0.55	0.11	1.12	\$ 100,352	\$ 89,600
All other development	0.15	0.00	0.00	0.15	\$ 13,810	\$ 92,067
Requirements analysis	0.41	0.41	0.42	1.24	\$ 109,451	\$ 88,267
Data administration	0.28	0.86	0.57	1.71	\$ 141,380	\$ 82,679
Application administration	0.16	0.29	0.12	0.57	\$ 45,538	\$ 79,891
<i>Custom application maintenance:</i>						
ARMS	0.11	0.00	0.00	0.11	\$ 10,078	\$ 91,618
IBIS	0.00	0.00	0.00	0.00	-	n/a
EssBase	0.01	0.00	0.00	0.01	\$ 845	\$ 84,510
Other finance	0.00	0.00	0.00	0.00	-	n/a
Other HR	0.00	0.00	0.00	0.00	-	n/a
Other payroll	0.00	0.00	0.00	0.00	-	n/a
Other budget	0.00	0.00	0.05	0.05	\$ 1,988	\$ 39,752
Agency app 1	0.00	0.35	0.00	0.35	\$ 28,475	\$ 81,356
Agency app 2	0.00	0.00	0.10	0.10	\$ 7,660	\$ 76,600
All other	0.00	0.00	0.00	0.00	-	n/a
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.00	0.00	0.00	-	n/a
MSA	0.00	0.00	0.00	0.00	-	n/a
Fixed Asset	0.00	0.00	0.00	0.00	-	n/a
Other finance	0.01	0.00	0.00	0.01	\$ 845	\$ 84,510
Other HR	0.00	0.00	0.00	0.00	-	n/a
Other payroll	0.00	0.00	0.00	0.00	-	n/a
Other budget	0.00	0.00	0.05	0.05	\$ 1,988	\$ 39,752
Agency app 1	0.10	0.18	0.02	0.30	\$ 23,357	\$ 77,857
Agency app 2	0.00	0.24	0.00	0.24	\$ 19,148	\$ 79,784
All other	0.05	0.00	0.00	0.05	\$ 4,226	\$ 84,510
IT Planning	0.73	1.03	0.50	2.26	\$ 211,129	
Strategic planning & governance	0.27	0.36	0.45	1.08	\$ 104,550	\$ 96,806
Research and development	0.35	0.45	0.05	0.85	\$ 76,509	\$ 90,010
Disaster recovery/planning	0.11	0.22	0.00	0.33	\$ 30,070	\$ 91,122
IT Administration	1.51	0.98	0.70	3.19	\$ 298,688	
Asset management	0.26	0.02	0.02	0.30	\$ 25,026	\$ 83,420
IT procurement	0.43	0.23	0.03	0.69	\$ 59,529	\$ 86,274
Project management	0.15	0.10	0.10	0.35	\$ 31,758	\$ 90,736
Standards and policies development	0.16	0.18	0.05	0.39	\$ 37,680	\$ 96,616
Administrative support	0.01	0.00	0.00	0.01	\$ 845	\$ 84,510
Departmental management	0.50	0.45	0.50	1.45	\$ 143,850	\$ 99,207
TOTALS	9.90	10.35	3.55	23.80	\$ 2,032,163	
ITS Labor Charges					\$ 663,287	
TOTAL including ITS					\$ 2,695,449	



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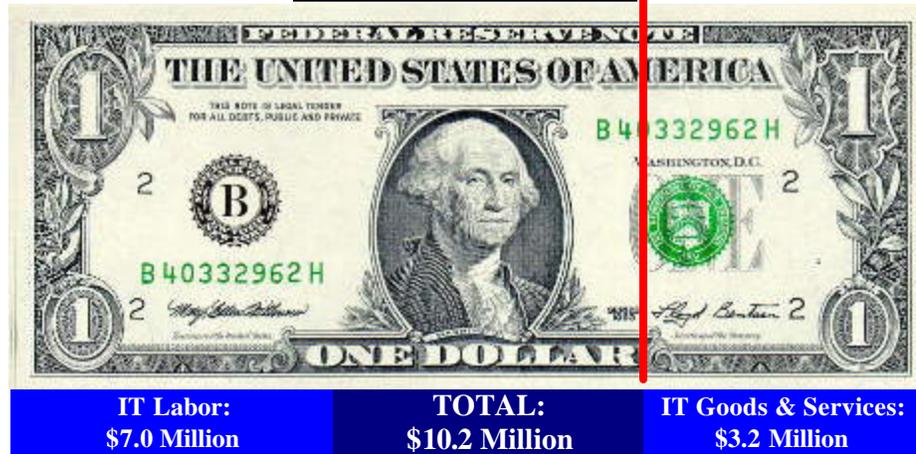
APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – DOT: Airport, Fleet, Roads

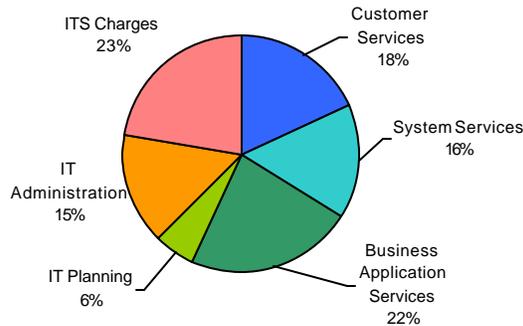
Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	\$ -
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ 100,839
DBMS maintenance/license	\$ 9,183
System software licenses	\$ 4,500
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ 13,428
Telco software	\$ -
Personal productivity licenses	\$ 23,000
Other	\$ 7,000
Software Totals	\$ 157,950
Hardware	
Workstations	\$ 133,521
Servers	\$ 13,500
Mainframe computers	\$ -
Mid-range computers	\$ -
Mobile devices	\$ 31,000
Storage	\$ 22,000
Network equipment/infrastructure	\$ 7,000
Telco back-end	\$ -
Printers	\$ 12,950
Other	\$ 34,000
Hardware Totals	\$ 253,971
External Services	
Application development	\$ -
Application maintenance	\$ 19,496
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ -
Cellular & pager related	\$ -
Networking	\$ -
IT training	\$ -
Management consulting	\$ -
Other	\$ -
External Services Totals	\$ 19,496
Other	
ITS Charges (Goods & Services)	\$ 500,967
IT-related debt service	\$ -
All other O & M IT spending	\$ -
Other Totals	\$ 500,967
TOTAL	\$ 932,384

TRANSPORTATION: TRANSIT

Total IT Operating Costs

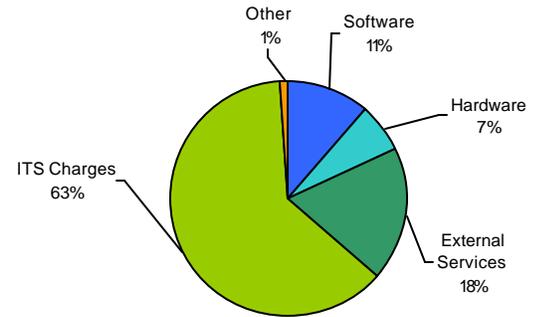


IT Labor Costs by Category



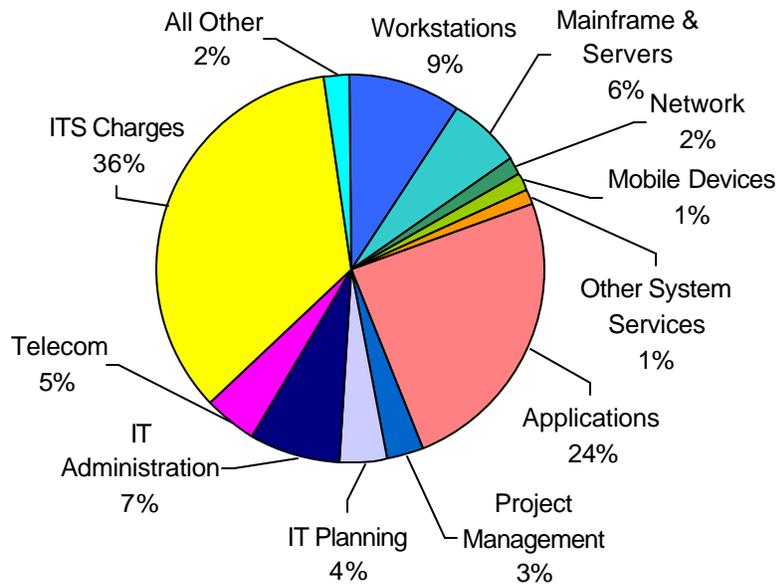
TOTAL: \$7,039,032

IT Goods & Services Costs by Category



TOTAL: \$3,185,145

Major IT Cost Drivers



TOTAL: \$10,224,177

Distribution of FTEs by Provider

IT Function	Agency IT		Agency Business	Agency Shadow IT	TOTALS
	FTE	Unit IT FTE	Unit IT FTE	FTE	
Customer Services	5.82	8.36	0.40	0.40	14.58
System Services	6.05	5.19	0.05	0.05	11.29
Business Application Services	9.35	8.43	0.00	0.00	17.78
IT Planning	2.81	1.32	0.00	0.00	4.13
IT Administration	8.76	2.40	0.10	0.10	11.26
TOTALS	32.79	25.70	0.55	0.55	59.04

Desktop Services Staffing and Cost

Total Agency Workstations	Total Desktop Services FTEs	Ratio of Workstations to FTEs	Total Desktop Services Labor Cost	Annual Labor Cost per Workstation
1,102	12.60	87	\$ 1,170,520	\$ 1,062.18

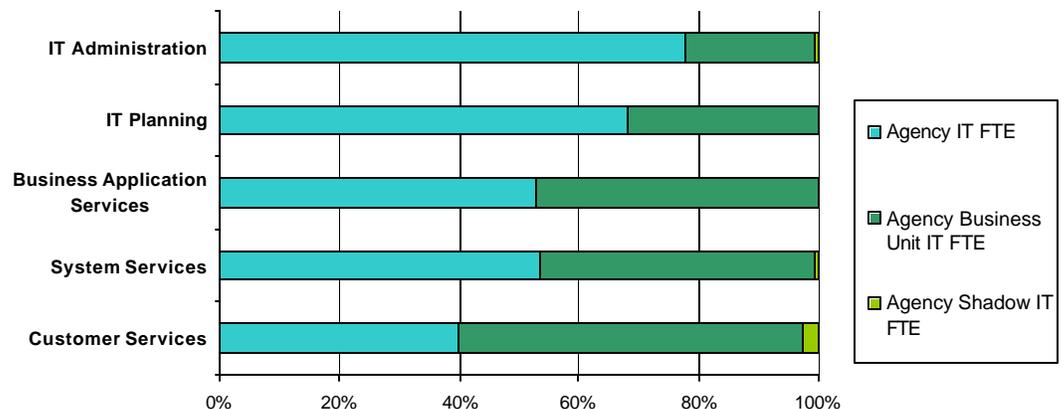
Server Administration Staffing and Cost

Server Type	Total Number of Servers	Total Server Admin FTEs	Ratio of Servers to FTEs	Total Server Admin Labor Cost	Annual Labor Cost per Server
Email/calendaring	0	0.00	n/a	\$ -	n/a
File & Print	17	0.81	21	\$ 77,411	\$ 4,554
Application	32	0.95	34	\$ 92,441	\$ 2,889
Other	26	2.26	12	\$ 226,892	\$ 8,727
TOTAL	75	4.01	19	\$ 396,744	\$ 5,290

IT Operating Expenditures and Staffing Metrics

Total Agency FY03 Operating Expenditures	\$ 389,261,400
Total Agency FY03 FTEs	3,567
Total Agency FY03 IT FTEs	59.0
Total Agency FY03 IT Operating Expenditures	\$ 10,224,177
IT Operating Expenditures Percent of Total Operating Expenditures	2.63%
IT FTEs Percent of Total FTEs	1.66%
IT Operating Expenditures Per FTE	\$ 2,866

IT Unit IT Labor Compared to Business Unit IT Labor



IT Staff Labor Distribution and Cost – Transportation: Transit

**Total Operating
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**APPENDIX B:
 Agency Detail**

IT Function	Business			TOTAL	Cost Total	Cost per FTE
	Agency IT FTE	Unit IT FTE	Shadow IT FTE			
Customer Services	5.82	8.36	0.40	14.58	\$ 1,286,634	
Help Desk (Tier 1)	0.00	1.62	0.25	1.87	\$ 162,406	\$ 87,003
<i>Tier 2 support:</i>						
Desktop PC support	4.39	2.85	0.05	7.29	\$ 651,996	\$ 89,437
PDA support	0.05	0.25	0.00	0.30	\$ 26,470	\$ 88,234
Other portable/specialized device support	0.55	0.52	0.00	1.07	\$ 94,177	\$ 88,016
Personal productivity tool support	0.00	0.44	0.05	0.49	\$ 41,969	\$ 85,651
Business application support	0.68	1.85	0.05	2.58	\$ 220,758	\$ 85,565
Training	0.15	0.83	0.00	0.98	\$ 88,858	\$ 90,672
System Services	6.05	5.19	0.05	11.29	\$ 1,091,452	
Network connectivity (WAN/LAN/wireless)	0.45	1.31	0.05	1.81	\$ 165,167	\$ 91,253
Workstation administration	0.25	0.90	0.00	1.15	\$ 96,814	\$ 84,186
<i>Server administration:</i>						
Email administration	0.00	0.00	0.00	0.00	\$ -	n/a
File/print administration	0.40	0.41	0.00	0.81	\$ 77,411	\$ 95,964
GIS server administration	0.02	0.00	0.00	0.02	\$ 2,239	\$ 111,962
Application server administration	0.75	0.20	0.00	0.95	\$ 92,441	\$ 97,649
Other server administration	1.59	0.65	0.00	2.24	\$ 224,653	\$ 100,441
Mainframe operations & administration	0.00	0.00	0.00	0.00	\$ -	n/a
Data center operations	0.00	0.02	0.00	0.02	\$ 1,994	\$ 99,709
Database administration	1.97	1.14	0.00	3.11	\$ 314,483	\$ 101,120
Security administration	0.57	0.41	0.00	0.98	\$ 98,366	\$ 100,374
Telephone systems support	0.05	0.16	0.00	0.21	\$ 17,883	\$ 85,158
Business Application Services	9.35	8.43	0.00	17.78	\$ 1,613,572	
<i>Application development:</i>						
Website design/maintenance	1.04	0.19	0.00	1.23	\$ 106,106	\$ 86,265
Desktop application development/maintenance	1.03	0.77	0.00	1.80	\$ 171,260	\$ 95,321
GIS application development/maintenance	1.12	0.00	0.00	1.12	\$ 105,400	\$ 94,107
All other development	0.49	0.90	0.00	1.39	\$ 133,283	\$ 95,887
Requirements analysis	2.03	0.54	0.00	2.57	\$ 222,206	\$ 86,574
Data administration	0.55	0.24	0.00	0.79	\$ 77,778	\$ 98,871
Application administration	0.05	0.69	0.00	0.74	\$ 69,373	\$ 94,172
<i>Custom application maintenance:</i>						
ARMS	0.00	0.00	0.00	0.00	\$ -	n/a
IBIS	0.00	0.08	0.00	0.08	\$ 6,813	\$ 85,166
EssBase	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.01	0.00	0.01	\$ 848	\$ 84,796
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	1.93	3.75	0.00	5.68	\$ 512,082	\$ 90,208
<i>Package application maintenance:</i>						
PeopleSoft	0.00	0.14	0.00	0.14	\$ 12,505	\$ 89,319
MSA	0.00	0.00	0.00	0.00	\$ -	n/a
Fixed Asset	0.00	0.00	0.00	0.00	\$ -	n/a
Other finance	0.00	0.00	0.00	0.00	\$ -	n/a
Other HR	0.00	0.00	0.00	0.00	\$ -	n/a
Other payroll	0.00	0.00	0.00	0.00	\$ -	n/a
Other budget	0.00	0.00	0.00	0.00	\$ -	n/a
Agency app 1	0.04	0.00	0.00	0.04	\$ 2,113	\$ 52,826
Agency app 2	0.00	0.00	0.00	0.00	\$ -	n/a
All other	1.07	1.14	0.00	2.21	\$ 193,804	\$ 87,694
IT Planning	2.81	1.32	0.00	4.13	\$ 402,870	
Strategic planning & governance	0.99	0.59	0.00	1.58	\$ 154,990	\$ 98,302
Research and development	1.18	0.36	0.00	1.54	\$ 149,466	\$ 97,266
Disaster recovery/planning	0.64	0.38	0.00	1.01	\$ 98,414	\$ 97,279
IT Administration	8.76	2.40	0.10	11.26	\$ 1,059,670	
Asset management	0.67	0.43	0.05	1.15	\$ 102,304	\$ 89,219
IT procurement	0.64	0.36	0.05	1.05	\$ 92,674	\$ 88,542
Project management	2.40	0.77	0.00	3.17	\$ 300,436	\$ 94,775
Standards and policies development	1.05	0.12	0.00	1.17	\$ 115,000	\$ 98,571
Administrative support	0.94	0.14	0.00	1.08	\$ 78,624	\$ 73,025
Departmental management	3.06	0.60	0.00	3.66	\$ 370,633	\$ 101,358
TOTALS	32.79	25.70	0.55	59.04	\$ 5,454,198	
ITS Labor Charges					\$ 1,584,834	
TOTAL including ITS					\$ 7,039,032	



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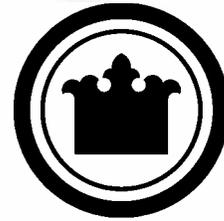
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**Total Operating
Cost of
Technology
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APPENDIX B:
Agency Detail

IT Goods & Services Expenditures – Transportation: Transit

Goods & Services Expenditures	Agency Total
Software	
MSA system maintenance	\$ -
PeopleSoft system maintenance	\$ -
Fixed Asset system maintenance	\$ -
Other FMS maintenance	
Other payroll system maintenance	\$ -
Other budget system maintenance	\$ -
Other HR system maintenance	\$ -
Agency Packaged Applications	\$ 230,400
DBMS maintenance/license	\$ 67,400
System software licenses	\$ 44,900
Mainframe OS & utilities	\$ -
Desktop operating systems	\$ -
Telco software	\$ -
Personal productivity licenses	\$ -
Other	\$ 17,300
Software Totals	\$ 360,000
Hardware	
Workstations	\$ -
Servers	\$ 71,089
Mainframe computers	\$ 108,100
Mid-range computers	\$ -
Mobile devices	\$ 11,500
Storage	\$ 1,300
Network equipment/infrastructure	\$ -
Telco back-end	\$ -
Printers	\$ -
Other	\$ 33,133
Hardware Totals	\$ 225,122
External Services	
Application development	\$ -
Application maintenance	\$ 43,700
Workstation support	\$ -
Server support	\$ -
Telecom:	\$ -
Land-line related	\$ 189,600
Cellular & pager related	\$ 254,500
Networking	\$ -
IT training	\$ 41,150
Management consulting	\$ 34,700
Other	\$ 13,150
External Services Totals	\$ 576,800
Other	
ITS Charges (Goods & Services)	\$ 1,985,223
IT-related debt service	\$ -
All other O & M IT spending	\$ 38,000
Other Totals	\$ 2,023,223
TOTAL	\$ 3,185,145



King County

**data collection
forms**

King County, Washington
May 26, 2004

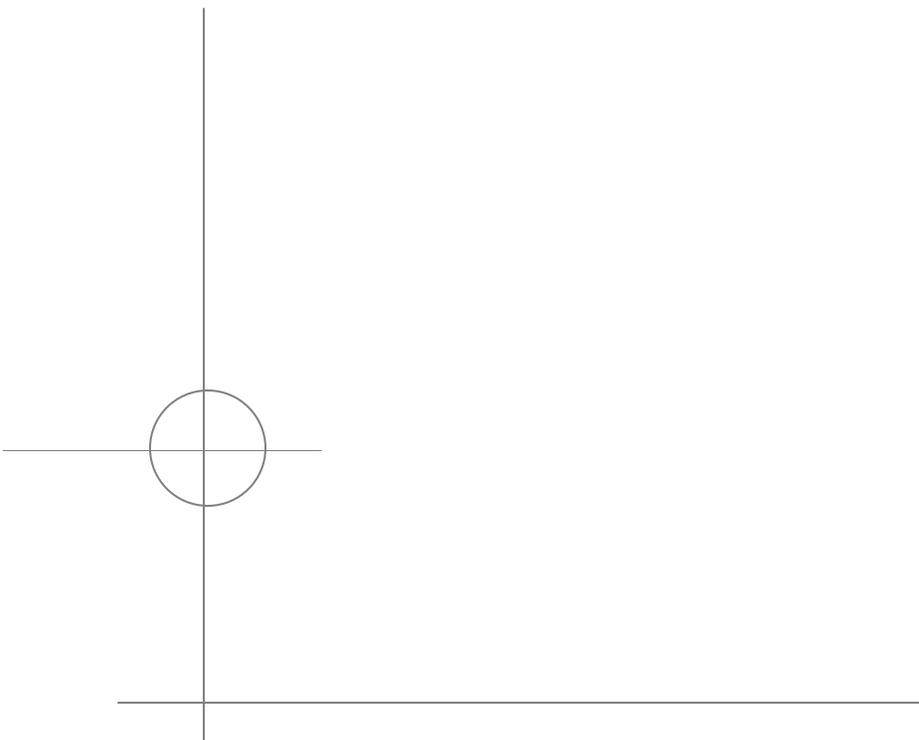
**Total Operating
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Appendix C:
Sample Data
Collection Forms

This appendix provides samples of the data collection workbooks used to gather the information presented in this report, organized as follows:

- ◆ A. IT Staffing Matrix
- ◆ B. IT Inventory and Spending
- ◆ C. Budget Information
- ◆ D. ITS Information Request (ITS Only)

Note that each workbook used functionality in Excel (roll over comments, macros, field validation, etc.) that cannot be easily represented in a hard-copy document such as this.



A. IT STAFFING MATRIX

Instructions for Completing the Operations & Maintenance IT Staffing Matrix

Dept./Agency Name:	
Completed by:	
Phone:	
Email:	

**Total Operating
 Cost of
 Technology
 Final Report**

**Appendix C:
 Sample Data
 Collection Forms**

This workbook will be used to provide an approximation of the County's 2003 IT labor costs across a specified set of IT functions. The information will be used to support the quantified business case project, and to assist in developing a total cost of technology for the County. It collects detailed information about all O & M (non-capital) IT labor in your department/agency. It provides worksheets representing your department/agency's IT division/unit, IT staff located in the business divisions/units within your agency, and "shadow" staff (staff that are not IT-titled, but spend at least 10% of their time performing IT support activities). For each worksheet, you will need to identify the appropriate staff (as of 2/1/04), allocate their time across the indicated IT activities, and provide their salary or hourly pay.

Data for your IT division and IT staff in the business units should be fairly easy to identify – they all have IT-related job titles. If your department/agency does not have an IT division/unit, or has no business unit IT staff, leave the corresponding worksheet empty. Do not include data entry staff. We define contractors as personnel utilized for staff augmentation, who are typically paid by the hour. Please include both unbudgeted and budgeted labor.

IT shadow staff may require a little more work to uncover. We define shadow staff as individuals who do not have IT-related job titles, but who spend at least 10% of their time performing one or more IT functions **in support of other staff**. For example, a finance analyst who spends 15% of her time developing spreadsheets for her own use is *not* shadow staff. On the other hand, a maintenance supervisor who spends 20% of her time administering a remote network *is* IT shadow staff, regardless of whether her job description includes this work.

Each staff member will occupy one column on the appropriate workbook tab. Fill in the approximate FTE level devoted by the staff member to whatever IT functions apply, using the definitions on tab #6 for guidance. Do not include O & M IT staff working on capital projects. This cost will be captured in the IT Inventory and Expenditure workbook. **Specifically label individuals that are not regular County employees as contractors, true temps, or term-limited temps.** In addition, please capture any administrative labor required to support IT in the "IT Administration" section of each worksheet, regardless of whether the individuals providing the support are IT-titled staff. Include budgeted vacant positions (substituting the word "vacant" for the employee name), estimating the FTE level to the best of your ability. **The FTE level is equivalent to the percentage of time, over the course of the last year, that this person spent on a particular function (e.g., if an individual spends 25% of his or her time on a given activity, enter .25, etc.). The total (i.e., the bottom row) FTE level may not add up to 1.00, but will equal:**

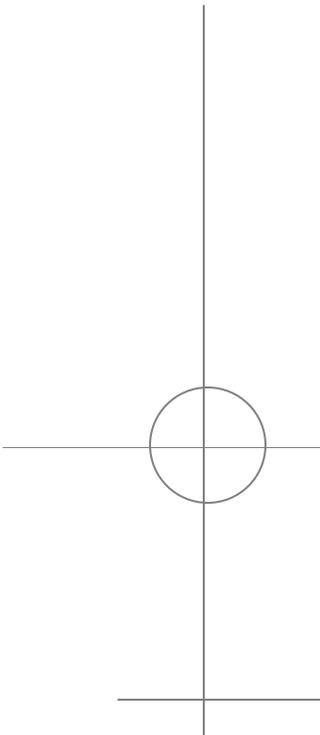
- ◆ 1.00 for full-time IT staff
- ◆ The actual FTE level for that position for part-time IT staff
- ◆ The total percentage of time devoted to IT functions for shadow staff
- ◆ Estimated annualized effort for contract staff (e.g., server administration performed by a contractor for 4 hours per week would be .1 FTE)

For each staff member, enter the annualized hourly wages or salary. To approximate the 2003 IT labor cost, use the 2004 PONS data, subtracting the 2004 COLA increase for employees who received it. If the 2004 compensation reflects a COLA increase over 2003, but you do not know the exact amount, use the County-wide average of 2.03% to calculate the reduction. Do not include benefits, overhead, etc. More specifically:

- ◆ **For full-time County staff** use the actual 2004 salary or annualized hourly pay (adjusted to remove the 2004 COLA) for that position, even if they do not devote 100% of their effort to IT functions (e.g., shadow staff, etc.)
- ◆ **For part-time County staff.** use this cost **adjusted as if they were full-time** – e.g., multiply a half-time employee by 2
- ◆ **For contract staff,** multiply their hourly rate by 1850

Some inaccuracy is acceptable. Our goal is to better quantify the County's cost of IT services, not to balance with accounting systems. Note: under the **Business Application Services** area we have provided two blank rows under "custom application maintenance" and "package application maintenance," respectively. Please enter the names of up to two of the primary applications specific to your department/agency for each category, and fill in the approximate FTE level as appropriate. These should represent the major applications supporting your business processes. If you have questions, contact Dave Robison at Pacific Technologies: (425) 881-3991 or DRobison@pticonsulting.com.

The following work sheet illustrates how to fill out the IT staffing matrix. Definitions for each IT activity appear on tab #6, and as pop-ups when the cursor is over the appropriate cell on the worksheets.



**Total Operating
 Cost of
 Technology
 Final Report**

Appendix C:
 Sample Data
 Collection Forms

IT Staff Functions	John Giggabyte, Programmer, IT Division	Julie Network, Network Tech II, Business Unit IT Staff	Sam Shadow, Financial Analyst, Administration	Rich Permatemp, contractor, ACME IT Services	Systems Analyst II, Vakant	FTE	COST
Customer Services							
Help Desk (Tier 1)		0.20	0.20			0.40	\$ 28,000
Tier 2 support:							
Desktop PC support	0.25					0.25	16,250
PDA support	0.05					0.05	3,250
Other portable/specialized device support			0.10			0.10	7,200
Personal productivity tool support		0.50				0.50	34,000
Business application support							
Training		0.10			0.10	0.10	6,800
System Services							
Network connectivity (WAN/LAN/wireless)	0.20					0.20	13,000
Workstation administration						0.00	\$ -
Server administration:							
Email administration	0.20					0.20	13,000
File/print administration						0.00	\$ -
GIS server administration						0.00	\$ -
Application server administration						0.00	\$ -
Other server administration						0.00	\$ -
Mainframe operations & administration						0.00	\$ -
Data center operations	0.20					0.20	13,000
Database administration						0.00	\$ -
Security administration						0.00	\$ -
Telephone systems support						0.00	\$ -
Business Application Services							
Application development:							
Website design/maintenance			0.25			0.25	33,750
Desktop application development/maintenance							
GIS application development/maintenance							
All other development							
Requirements analysis						0.00	\$ -
Data administration					0.60	0.60	\$ -
Application administration					1.60	1.60	\$ -
Custom application maintenance:							
ARMS	0.10					0.10	6,500
IBIS						0.00	\$ -
EssBase/Budget						0.00	\$ -
Other finance							
Other HR							
Other payroll							
Other budget							
Agency app 1						0.00	\$ -
Agency app 2						0.00	\$ -
All other							
Package application maintenance:							
PeopleSoft							
MSA						0.00	\$ -
Fixed Asset						0.00	\$ -
Other finance							
Other HR							
Other payroll							
Other budget						0.00	\$ -
Agency app 1						0.00	\$ -
Agency app 2						0.00	\$ -
All other						0.00	\$ -
IT Planning							
Strategic planning & governance						0.00	\$ -
Research and development					0.30	0.30	\$ -
Disaster recovery/planning						0.00	\$ -
IT Administration							
Asset management		0.20				0.20	13,600
IT procurement						0.00	\$ -
Project management						0.00	\$ -
Standards and policies development						0.00	\$ -
Administrative support						0.00	\$ -
Departmental management						0.00	\$ -
FTE Sum	1.00	1.00	0.30	0.25	2.60	2.55	
Annualized pay	\$ 65,000	\$ 68,000	\$ 72,000	\$ 135,000	\$ 75,000		\$ 188,350

Put the name, position, department here. If a contractor, include the company name.

The level of "FTE-ness" goes in these cells

No entry needed in this row

These last two columns "do the math." No input is required.

No entry needed in this row

No entry needed in this row

No entry needed in this row

Put the names of up to two additional agency-specific applications here...

...and here.

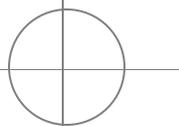
No entry needed in this row

Annualized costs of staff (i.e., salary or annualized hourly wage) go here

**Total Operating
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Appendix C:
 Sample Data
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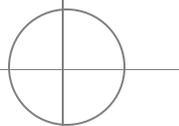
	Name, Position, Company Name (if contractor)	FTE TOTAL	Cost TOTAL									
IT Division Staff												
Customer Services												
Help Desk (Tier 1)											0.00	\$ -
<i>Tier 2 support:</i>												
Desktop PC support											0.00	\$ -
PDA support											0.00	\$ -
Other portable/specialized device support											0.00	\$ -
Personal productivity tool support											0.00	\$ -
Business application support											0.00	\$ -
Training											0.00	\$ -
System Services												
Network connectivity (WAN/LAN/wireless)											0.00	\$ -
Workstation administration											0.00	\$ -
<i>Server administration:</i>												
Email administration											0.00	\$ -
File/print administration											0.00	\$ -
GIS server administration											0.00	\$ -
Application server administration											0.00	\$ -
Other server administration											0.00	\$ -
Mainframe operations & administration											0.00	\$ -
Data center operations											0.00	\$ -
Database administration											0.00	\$ -
Security administration											0.00	\$ -
Telephone systems support											0.00	\$ -
Business Application Services												
<i>Application development:</i>												
Website design/maintenance											0.00	\$ -
Desktop application development/maintenance											0.00	\$ -
GIS application development/maintenance											0.00	\$ -
All other development											0.00	\$ -
Requirements analysis											0.00	\$ -
Data administration											0.00	\$ -
Application administration											0.00	\$ -
<i>Custom application maintenance:</i>												
ARMS											0.00	\$ -
IBIS											0.00	\$ -
EssBase											0.00	\$ -
Other finance											0.00	\$ -
Other HR											0.00	\$ -
Other payroll											0.00	\$ -
Other budget											0.00	\$ -
Agency app 1											0.00	\$ -
Agency app 2											0.00	\$ -
All other											0.00	\$ -
<i>Package application maintenance:</i>												
PeopleSoft											0.00	\$ -
MSA											0.00	\$ -
Fixed Asset											0.00	\$ -
Other finance											0.00	\$ -
Other HR											0.00	\$ -
Other payroll											0.00	\$ -
Other budget											0.00	\$ -
Agency app 1											0.00	\$ -
Agency app 2											0.00	\$ -
All other											0.00	\$ -
IT Planning												
Strategic planning & governance											0.00	\$ -
Research and development											0.00	\$ -
Disaster recovery/planning											0.00	\$ -
IT Administration												
Asset management											0.00	\$ -
IT procurement											0.00	\$ -
Project management											0.00	\$ -
Standards and policies development											0.00	\$ -
Administrative support											0.00	\$ -
Departmental management											0.00	\$ -
FTE Sum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Annualized pay	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



**Total Operating
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Appendix C:
 Sample Data
 Collection Forms

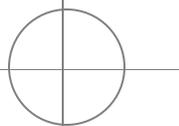
	Name, Position, Business Unit/ Company Name	FTE TOTAL	Cost TOTAL									
Business Unit IT Staff												
Customer Services												
Help Desk (Tier 1)											0.00	\$ -
<i>Tier 2 support:</i>												
Desktop PC support											0.00	\$ -
PDA support											0.00	\$ -
Other portable/specialized device support											0.00	\$ -
Personal productivity tool support											0.00	\$ -
Business application support											0.00	\$ -
Training											0.00	\$ -
System Services												
Network connectivity (WAN/LAN/wireless)											0.00	\$ -
Workstation administration											0.00	\$ -
<i>Server administration:</i>												
Email administration											0.00	\$ -
File/print administration											0.00	\$ -
GIS server administration											0.00	\$ -
Application server administration											0.00	\$ -
Other server administration											0.00	\$ -
Mainframe operations & administration											0.00	\$ -
Data center operations											0.00	\$ -
Database administration											0.00	\$ -
Security administration											0.00	\$ -
Telephone systems support											0.00	\$ -
Business Application Services												
<i>Application development:</i>												
Website design/maintenance											0.00	\$ -
Desktop application development/maintenance											0.00	\$ -
GIS application development/maintenance											0.00	\$ -
All other development											0.00	\$ -
Requirements analysis											0.00	\$ -
Data administration											0.00	\$ -
Application administration											0.00	\$ -
<i>Custom application maintenance:</i>												
ARMS											0.00	\$ -
IBIS											0.00	\$ -
EssBase											0.00	\$ -
Other finance											0.00	\$ -
Other HR											0.00	\$ -
Other payroll											0.00	\$ -
Other budget											0.00	\$ -
Agency app 1											0.00	\$ -
Agency app 2											0.00	\$ -
All other											0.00	\$ -
<i>Package application maintenance:</i>												
PeopleSoft											0.00	\$ -
MSA											0.00	\$ -
Fixed Asset											0.00	\$ -
Other finance											0.00	\$ -
Other HR											0.00	\$ -
Other payroll											0.00	\$ -
Other budget											0.00	\$ -
Agency app 1											0.00	\$ -
Agency app 2											0.00	\$ -
All other											0.00	\$ -
IT Planning												
Strategic planning & governance											0.00	\$ -
Research and development											0.00	\$ -
Disaster recovery/planning											0.00	\$ -
IT Administration												
Asset management											0.00	\$ -
IT procurement											0.00	\$ -
Project management											0.00	\$ -
Standards and policies development											0.00	\$ -
Administrative support											0.00	\$ -
Departmental management											0.00	\$ -
FTE Sum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	\$ -
Annualized pay	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



**Total Operating
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Appendix C:
 Sample Data
 Collection Forms

Shadow Staff: departmental staff with non-IT job titles who spend at least 10% of their time performing one or more IT functions	Name, Position, Division/Unit	FTE TOTAL	Cost TOTAL									
Customer Services												
Help Desk (Tier 1)											0.00	\$ -
<i>Tier 2 support:</i>												
Desktop PC support											0.00	\$ -
PDA support											0.00	\$ -
Other portable/specialized device support											0.00	\$ -
Personal productivity tool support											0.00	\$ -
Business application support											0.00	\$ -
Training											0.00	\$ -
System Services												
Network connectivity (WAN/LAN/wireless)											0.00	\$ -
Workstation administration											0.00	\$ -
<i>Server administration:</i>												
Email administration											0.00	\$ -
File/print administration											0.00	\$ -
GIS server administration											0.00	\$ -
Application server administration											0.00	\$ -
Other server administration											0.00	\$ -
Mainframe operations & administration											0.00	\$ -
Data center operations											0.00	\$ -
Database administration											0.00	\$ -
Security administration											0.00	\$ -
Telephone systems support											0.00	\$ -
Business Application Services												
<i>Application development:</i>												
Website design/maintenance											0.00	\$ -
Desktop application development/maintenance											0.00	\$ -
GIS application development/maintenance											0.00	\$ -
All other development											0.00	\$ -
Requirements analysis											0.00	\$ -
Data administration											0.00	\$ -
Application administration											0.00	\$ -
<i>Custom application maintenance:</i>												
ARMS											0.00	\$ -
IBIS											0.00	\$ -
EssBase											0.00	\$ -
Other finance											0.00	\$ -
Other HR											0.00	\$ -
Other payroll											0.00	\$ -
Other budget											0.00	\$ -
Agency app 1											0.00	\$ -
Agency app 2											0.00	\$ -
All other											0.00	\$ -
<i>Package application maintenance:</i>												
PeopleSoft											0.00	\$ -
MSA											0.00	\$ -
Fixed Asset											0.00	\$ -
Other finance											0.00	\$ -
Other HR											0.00	\$ -
Other payroll											0.00	\$ -
Other budget											0.00	\$ -
Agency app 1											0.00	\$ -
Agency app 2											0.00	\$ -
All other											0.00	\$ -
IT Planning												
Strategic planning & governance											0.00	\$ -
Research and development											0.00	\$ -
Disaster recovery/planning											0.00	\$ -
IT Administration												
Asset management											0.00	\$ -
IT procurement											0.00	\$ -
Project management											0.00	\$ -
Standards and policies development											0.00	\$ -
Administrative support											0.00	\$ -
Departmental management											0.00	\$ -
FTE Sum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Annualized pay	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



This page defines the functions used in the IT Staffing Matrix. These definitions are intended to make comparisons between IT organizations more consistent, and to simplify completion of the IT Staffing Matrix.

CUSTOMER SERVICES

Those functions related to directly supporting users of IT systems and services.

Help Desk (Tier 1)
 The activities related to providing a first point of contact for users to report problems and seek answers to questions related to their desktop PCs, network access, email, personal productivity software, and business application software. Includes initial problem resolution, triage, and problem escalation.

Tier 2 Support
 The activities related to providing on-site assistance with the software and hardware that support user work functions, including PCs, handhelds and other mobile devices, peripherals, and specialized computing environments such as public kiosks.

Desktop PC Support (Tier 2)
 The activities related to onsite support of the organization's network applications (e.g., calendar, email, etc.), desktop computers, mobile computing devices (e.g. laptops, PDAs, etc.), and attendant operating systems and peripherals.

PDA Support (Tier 2)
 The processes related to onsite support of personal digital assistants (PDAs), including troubleshooting syncing to desktop PCs, network connectivity, and their business-specific applications.

Other Portable/Specialized Device Support (Tier 2)
 The processes related to onsite support of the organization's computers which do not reside on a desktop (beyond PDAs), such as kiosks, laptops, and mobile data terminals (MDTs), along with attendant peripherals.

Personal Productivity Tool Support (Tier 2)
 The processes related to providing onsite end user support concerning the use of desktop applications such as word processing, spreadsheets, presentation tools, and other organizational office productivity tools.

Business Application Support (Tier 2)
 The processes related to providing end-user support (answering questions, etc.) regarding the use of business-specific software (e.g., financial management, permit management, etc.) beyond that which is provided by the first point of contact.

Training
 The processes related to providing technology-related instruction to staff aimed at enhancing their skills, knowledge, and performance. Includes training requirement analysis, course design and development, and training delivery.

SYSTEM SERVICES

Those functions related to implementing, maintaining, and supporting the organization's computers, systems software, and connectivity.

Network Connectivity (WAN/LAN/wireless)
 The activities related to implementing and maintaining the operational integrity of the organization's local and wide-area networks, both wired and wireless. These activities include responding to user requests for assistance, managing, maintaining, and performance monitoring related equipment, coordinating with external network service providers, and taking appropriate corrective actions as needed.

Workstation Administration
 The activities related to the setup, configuration, original installation, and scheduled maintenance of end users' desktop computers and peripherals. Includes installation and configuration of PC operating systems and software, such as personal productivity tools and anti-virus applications. Includes the creation and maintenance of disk images, application of patches and updates, and all scheduled maintenance.

Server Administration (email, file & print, GIS, application, other)
 The activities related to implementing and maintaining servers, including both Intel-based and mid-range devices (such as AS/400). These activities also include administration, account management, and operation of file, print, and application servers and other logical network devices; performance management; tuning; applying operating system patches and upgrades; and administering configuration data.

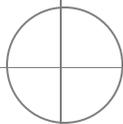
Mainframe Operations & Administration
 The processes related to administering the operation of the host/mainframe computing platforms, managing their operating systems to keep functionality at optimal performance levels, and managing associated peripheral devices.

Data Center Operations
 The processes related to the planning, administration, and operation of the facility that houses all centralized enterprise computing equipment, including production control, runbooks, backup/restore operations, and storage management. It also includes operation and maintenance of the attendant systems, including fire suppression, backup electrical power, air conditioning, etc.

Database Administration
 The processes related to planning, implementing, and administering the data structures required to support the organization's applications portfolio, and to maintaining the data contained within the organization's defined data structures. Includes performance management and recovery.

Security Administration
 The processes related to developing, maintaining, and administering the security plan for the organization's host processors, servers, personal computers, communication devices and networks.

Telephone Systems Support
 The processes related to implementing and maintaining the operational integrity of the organization's voice network. This includes responding to user requests for assistance, administering data associated with the voice network, performance monitoring, coordinating with telecommunications providers and taking appropriate corrective actions as needed.



BUSINESS APPLICATION SERVICES

Those functions related to developing, installing, configuring, and otherwise maintaining the software needed to meet the operational, management, and reporting requirements of the organization.

Application Development

The processes related to engineering new software that meets system-wide needs, integrates third party software, and accommodates special requests. Includes major enhancements to existing applications. Development phases include design, coding, testing, and implementation.

Website Design and Maintenance

The processes related to planning, implementing, and supporting Internet and intranet applications for the organization.

Desktop Application Development and Maintenance

The processes related to providing assistance in creating and using desktop applications based on productivity tools (e.g., spreadsheets, macro development). Also includes performing upgrades and maintaining these applications.

GIS application development/maintenance

The processes related to planning, implementing, and supporting map-based applications for the organization.

All Other Development

The processes related to developing software using specialized development environments and languages, other than website, desktop application, and GIS development.

Requirements Analysis

The processes related to describing business needs, evaluating alternatives, recommending an approach to address the requirements, and creating the summary and detailed specifications for software that would meet the requirements.

Data Administration

The processes related to the analysis, development, and maintenance of the organization's data models and related data dictionaries.

Application Administration

The processes related to administering and configuring production business application software, including maintaining workflow, setting access rights for users, and updating validation tables.

Custom Application Maintenance (ARMS, IBIS, EssBase, other finance, other HR, other payroll, other budget)

The processes related to updating and making minor enhancements to existing software applications to meet new requirements and comply with external mandates. Includes writing new code, extracting data for use by other applications, and customizing reports for users.

Package Application Maintenance (PeopleSoft, MSA, Fixed Asset, other finance, other HR, other payroll, other budget)

The processes related to installing, integrating, interfacing, and testing business-specific packaged applications and their associated data, including managing vendor relationships, and providing necessary business context for integration. Includes installing new releases, minor updates, and bug fixes.

IT PLANNING

Those functions related to planning for the technology function at the organization.

Strategic Planning and Governance

The processes related to identifying and evaluating the future directions for IT application, networks, and hardware for the organization. Includes strategic planning, evaluating and prioritizing IT investments, technology research, participating in committees and task forces, and feasibility studies.

Research and Development

The processes related to evaluation and testing of current and future IT products and services, and to the deployment of pilot projects to test the viability of these technologies for the organization. Includes dissemination of relevant information to appropriate parties.

Disaster Recovery/Planning

The processes related to developing, maintaining, updating, and testing the organization's IT disaster recovery/business resumption plan, and to activating and managing the plan in the event of a disaster.

IT ADMINISTRATION

Those functions related to the oversight and administration of the technology function at the organization.

Asset Management

The processes related to managing the IT properties of the organization, include tracking inventory, software license compliance, warranty information, and performance guarantees.

IT Procurement

The processes related to acquisition of goods and services in support of all IT functions; including the development of RFP's, evaluation and selection of vendors, management of purchasing activities, and receipt of goods.

Project Management

Those processes related to the oversight and coordination of major technology initiatives.

Standards and Policies Development

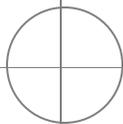
Those processes related to the creation and updating of enterprise-wide IT standards and policies related to hardware, software, procurement, security, and staffing.

Administrative Support

The processes related to the provision of clerical, administrative, and related services required for the ongoing operation of the IT department.

Departmental Management

The processes related to management and oversight of the organization's technology functions: including staff evaluation, quality assurance, and budgeting. Includes the effort made by non-IT managers to manage IT staff and contactors.



B. IT INVENTORY AND SPENDING

Thank you for completing this information technology (IT) inventory and expenditure workbook for your department/agency. You will find a total of two worksheets to complete in this workbook. Clicking on the links below will take you to the respective worksheets, which include detailed instructions. This information will be used to inform the quantified business case project and to analyze the County's total cost of information technology. Please begin by noting your name and your department/agency's name below:

Dept./Agency Name:	
Completed by:	
Phone:	
Email:	

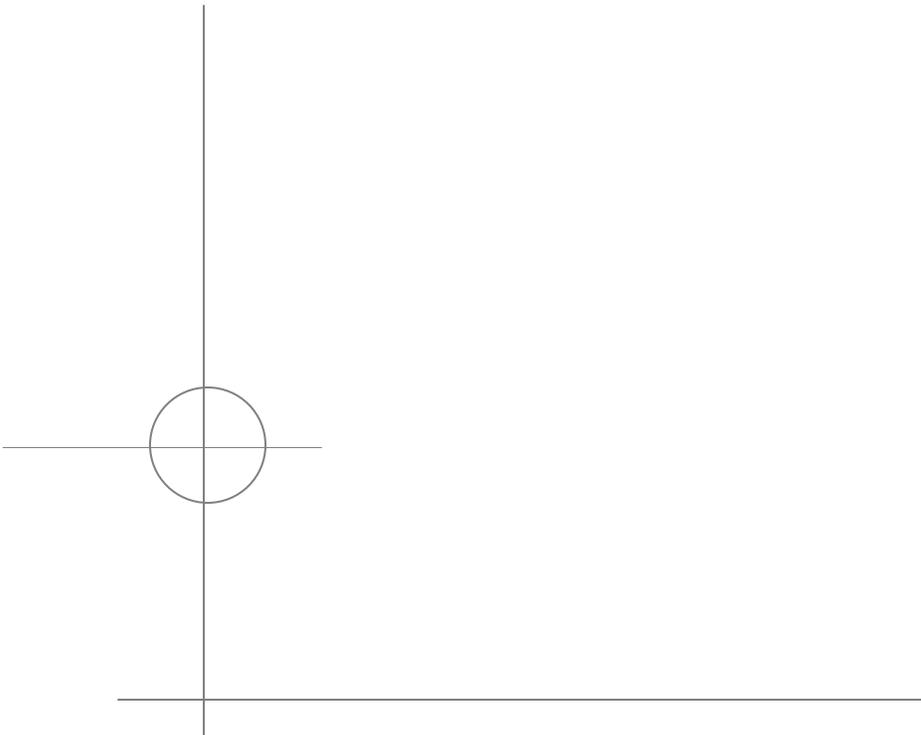
[IT Inventory](#)

Use this page to inventory the servers, workstations, and printers which are located in any of your agency's facilities, regardless of whether they are owned by your agency, as of 2/2/04

[IT Goods & Services](#)

Use this page to record your agency's budget and actual expenditures for O & M (operations and maintenance) IT-related goods and services for FY03 and capital IT-related goods and services for FY03 and FY04

If you have any questions regarding the completion of this workbook, please contact Dave Robison at PTI at (425) 881-3991, or drobison@pticonsulting.com.



On this page, please note how many of the listed items your agency has. Please include only those that are currently in use (for example, don't include PCs or printers that are in storage). **Note that this is not an audit — some inaccuracy is acceptable. We appreciate your completing this worksheet to the best of your ability.** Point your cursor over the cells for additional explanation.

Total Operating Cost of Technology Final Report

Appendix C:
 Sample Data
 Collection Forms

1. Provide an inventory of your agency's servers, excluding any used for SCADA or other control system (e.g., HVAC, security, etc.). **Subtotal your servers according to the operating system they use.**

Primary Server Use	Count by Operating System									Totals
	Windows	Linux	Unix	OS/400	MVS	VMS	MPE	Mac OS	Other	
File & Print										0
Email										0
Application										0
Database										0
Web										0
Application Development/Test										0
Combination of above uses										0
Other										0
Totals	0	0	0	0	0	0	0	0	0	0

2. Provide an inventory of your agency's printers.

Printer Type	Quantity
Dept./Agency	
Workgroup	
Personal	
Total	0

3. Provide an inventory of your agency's desktop workstations. If some positions routinely utilize multiple PCs (such as application developers), be sure to count them. **Subtotal by operating system.**

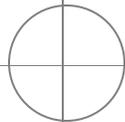
Processor Class	Count by Operating System									Totals
	Windows 95 - ME	Windows NT	Windows 2000	Windows XP/Pro	Macintosh OS 7 - 9	Macintosh OS X	Linux	Non-Programmable Terminal	Other	
Pentium 4										0
Pentium 3										0
Pentium 2										0
Pentium										0
486										0
386										0
RISC										0
Other										0
Totals	0	0	0	0	0	0	0	0	0	0

4. Provide an inventory of your agency's classroom, lab, system monitoring, and public access workstations. **Subtotal by operating system.**

Processor Class	Count by Operating System									Totals
	Windows 95 - ME	Windows NT	Windows 2000	Windows XP/Pro	Macintosh OS 7 - 9	Macintosh OS X	Linux	Non-Programmable Terminal	Other	
Pentium 4										0
Pentium 3										0
Pentium 2										0
Pentium										0
486										0
386										0
RISC										0
Other										0
Totals	0	0	0	0	0	0	0	0	0	0

5. Provide an inventory of your agency's County-provided and supported mobile computing devices.

Mobile Technologies	Quantity
Networked laptop	
Non-networked laptop	
Networked tablet PC	
Non-networked tablet PC	
Networked PDA	
Non-networked PDA	
Networked handheld	
Non-networked handheld	
Mobile terminal (e.g., MDT)	
Other	
Total	0



IT Goods and Services Expenditures

[Back to Overview](#)

Use this page to record your agency's **annual** IT expenditures in the following areas. Include only FY03 amounts for the first 6 tables -- table 7 also asks for FY04 budget amounts. If you do not have exact FY03 expenditure data available, please provide your best estimate. Include only those items for which you paid directly -- i.e., do not include ITS chargeback amounts. Point your cursor over the cells for further explanation. **Please record capitalized expenditures only in Table 7.**

**Total Operating
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**Appendix C:
Sample Data
Collection Forms**

1. Summarize your department/agency's FTE level and annual operating expenditures below.

FY03 total operating expenditures	
FY03 agency FTE levels	

2. Summarize your agency's FY03 O & M IT budget below, using the County's designated accounts, or appropriately categorizing your FY03 IT budget if your agency/department did not use the IT accounts.

FY03 O & M IT Budget Summary	FY03 Budget
Consulting IT Services (53127 budget dollars or equiv.)	
Subcontract IT Services (53179 budget dollars or equiv.)	
Repair/Maint -- IT Equipment (53634 budget dollars or equiv.)	
Training -- IT (53813 budget dollars or equiv.)	
Capital IT Lease Pmt -- Principal (57303 budget dollars or equiv.)	
Capital IT Lease Pmt -- Interest (57304 budget dollars or equiv.)	
Totals	\$ -

3. Record your agency's actual FY03 O & M software license spending as categorized below.

Software (O & M)	FY03 Actuals
MSA system maintenance	
PeopleSoft system maintenance	
Fixed Asset system maintenance	
Other financial management system maintenance	
Other payroll system maintenance	
Other budget system maintenance	
Other HR system maintenance	
Agency Packaged App 1	
Agency Packaged App 2	
Database system maintenance/license	
System software licenses	
Mainframe OS & utilities	
Desktop operating systems	
Telco software	
Personal productivity licenses	
Other	
Totals	\$ -

4. Record your agency's O & M IT hardware spending as categorized below.

Hardware (O & M)	FY03 Actuals
Workstations	
Servers	
Mainframe computers	
Mid-range computers	
Mobile devices (e.g., laptops, handhelds, tablets)	
Storage	
Network equipment/infrastructure	
Telco back-end	
Printers	
Other	
Totals	\$ -

5. Record your agency's O & M IT services spending to external (non-County) service providers as categorized below.

External Services (O & M)	FY03 Actuals
Application development	
Application maintenance	
Workstation support	
Server support	
Telecom:	
Land-line related	
Cellular & pager related	
Networking	
IT training	
Management consulting	
Other	
Totals	\$ -

6. Record your agency's other annual IT-related spending below from FY 2003.

Other O & M	FY03 Actuals
ITS charges	
IT-related debt service	
All other O & M IT spending (please list):	
Total	\$ -

7. Record your agency's annual IT-related capital spending below from your FY 2003 & 2004 budget.

Capital	FY03 Budget	FY04 Budget
Software		
Hardware		
Services		
Internal labor:		
Capital accounts		
O & M labor spent on capital projects		
Other		
Totals	\$ -	\$ -

C. BUDGET INFORMATION

IT Goods and Services Budgets

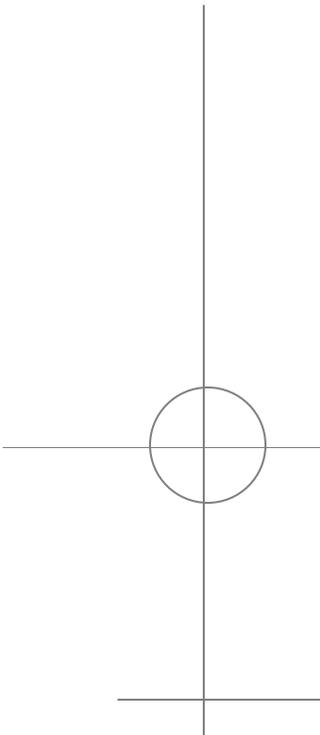
Use this page to record your agency's annual IT budget. Include only FY03 amounts for the first table -- table 2 also asks for FY04 budget amounts. Do not include ITS or OIRM internal service charge amounts since those budgets can be gathered centrally. Even if you contract with ITS for development or server maintenance services, we will capture those budgeted costs centrally from ITS; please do not include as labor or consulting costs in the tables below. Point your cursor over the cells for further explanation. Please record budgeted internal labor or contracted services amounts that will be capitalized in Table 2 - this is intended to capture budget amounts to support capital project budgets that may be in either your operating budgets or in capital fund/project budgets.

1. Summarize your agency's FY03 O & M IT budget below, using the County's designated accounts, or appropriately categorizing your FY03 IT budget if your agency/department did not use the IT accounts.

FY03 O & M IT Budget Summary		FY03 Budget
Software		
	Software Under \$1000/unit (account 52190 or equiv.)	
	Computer Software (account 56742 or equiv.)	
Hardware		
	Inventoriable Minor Equipment (account 52185 or equiv.)	
	Minor PC Upgrades/Repairs (account 52191 or equiv.)	
	EDP Supplies (account 52212 or equiv.)	
	Equipment O & M Accounts (account 52220 or equiv.)	
	Telcom Supplies (account 52291 or equiv.)	
	Computer Hardware (account 56741 or equiv.)	
Services:		
	EDP & Microfiche/Film Svc (account 53106 or equiv.)	
	Consulting IT Services (account 53127 or equiv.)	
	Subcontract IT Services (account 53179 or equiv.)	
	Repair/Maint -- IT Equipment (account 53634 or equiv.)	
	Rent -- EDO Equipment (account 53740 or equiv.)	
	Training -- IT (account 53813 or equiv.)	
	Communication Equipment (account 56780 or equiv.)	
	Capital IT Lease Pmt -- Principal (account 57303 or equiv.)	
	Capital IT Lease Pmt -- Interest (account 57304 or equiv.)	
Totals		\$ -

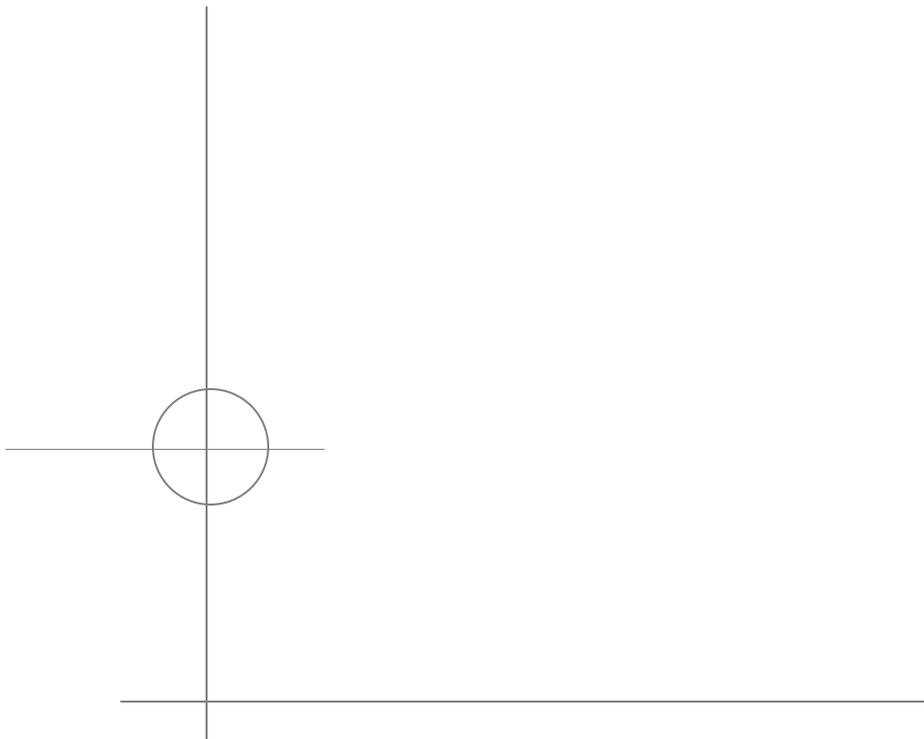
2. Record your agency's annual IT-related capital spending plan below from your FY 2003 & 2004 budget.

FY03 & FY04 Capital Budget Summary	FY03 Budget	FY04 Budget
Computer Software (account 56742 or equiv.)		
Computer Hardware (account 56741 or equiv.)		
Communication Equipment (account 56780 or equiv.)		
Consulting or other contracted IT services		
<i>Internal labor:</i>		
Labor budgeted in capital project funds		
O & M labor budgeted for work on capital projects		
Other		
Totals	\$ -	\$ -



D. ITS INFORMATION REQUEST (ITS ONLY)

		FY03 Actual ITS Charges to Agencies																		
		O & M Goods and Services																		
	Assessor	Council	Pros. Atty	Sup Court	Dist Court	Sheriff	Budget/Ext	Human Sv	AJD	Judicial	Devel & Inf	Pub Health	DNRP	Transit	Roads/Lev	DES Finan	DES HR	DES ITS	DES Other	
Workstations																				
Servers																				
Mainframe																				
Networking																				
Telecomm																				
Professional Services																				
License Fees:																				
ARMS																				
IBIS																				
EssBase																				
PeopleSoft																				
MSA																				
Fixed Asset																				
Other finance																				
Other HR																				
Other payroll																				
Other budget																				
Email/calendar																				
Personal productivity																				
All other agency apps																				
Debt Service																				
All Other Charges																				
TOTAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -





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**Total Operating
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**Appendix C:
Sample Data
Collection Forms**

ITS Labor Charges	Assessor	Council	Pros. Atty	Sup Court	Dist Court	Sheriff	Budget/Exec	Human Sv	AJD	Judicial	Devel & Er	Pub Health	DNRP	Transit	Roads/flee	DES Finan	DES HR	DES ITS	DES Other	Cost TOTAL	
Customer Services																					
Help Desk (Tier 1)																					\$ -
Tier 2 support:																					
Desktop PC support																					\$ -
PDA support																					\$ -
Other portable/specialized device support																					\$ -
Personal productivity tool support																					\$ -
Business application support																					\$ -
Training																					\$ -
System Services																					
Network connectivity (WAN/LAN/wireless)																					\$ -
Workstation administration																					\$ -
Server administration:																					
Email administration																					\$ -
File/print administration																					\$ -
GIS server administration																					\$ -
Application server administration																					\$ -
Other server administration																					\$ -
Mainframe operations & administration																					\$ -
Data center operations																					\$ -
Database administration																					\$ -
Security administration																					\$ -
Telephone systems support																					\$ -
Business Application Services																					
Application development:																					
Website design/maintenance																					\$ -
Desktop application development/maintenance																					\$ -
GIS application development/maintenance																					\$ -
All other development																					\$ -
Requirements analysis																					\$ -
Data administration																					\$ -
Application administration																					\$ -
Custom application maintenance:																					
ARMS																					\$ -
IBIS																					\$ -
EssBase																					\$ -
Other finance																					\$ -
Other HR																					\$ -
Other payroll																					\$ -
Other budget																					\$ -
Agency app 1																					\$ -
Agency app 2																					\$ -
All other																					\$ -
Package application maintenance:																					
PeopleSoft																					\$ -
MSA																					\$ -
Fixed Asset																					\$ -
Other finance																					\$ -
Other HR																					\$ -
Other payroll																					\$ -
Other budget																					\$ -
Agency app 1																					\$ -
Agency app 2																					\$ -
All other																					\$ -
IT Planning																					
Strategic planning & governance																					\$ -
Research and development																					\$ -
Disaster recovery/planning																					\$ -
IT Administration																					
Asset management																					\$ -
IT procurement																					\$ -
Project management																					\$ -
Standards and policies development																					\$ -
Administrative support																					\$ -
Departmental management																					\$ -
COST TOTAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

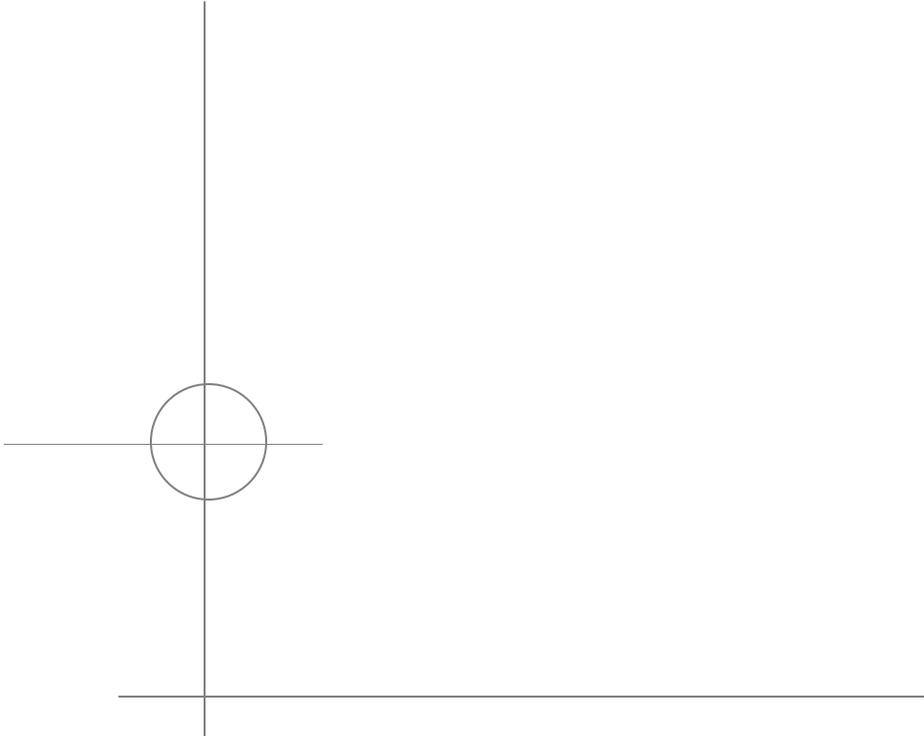


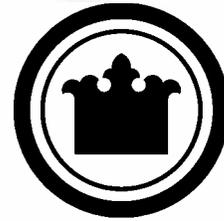
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**Total Operating
Cost of
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Final Report**

Appendix C:
Sample Data
Collection Forms

FY03 Actual Charges – Major Applications																											
	Assessor	Council	Pros. Atty	Sup Court	Dist Court	Sheriff	Budget/Exec	Human Svc	AJD	Judicial	Devel & Envir	Pub Health	DNRP	Transit	Roads/High	DES Finan	DES HR	DES ITS	DES Other								
ARMS																											
IBIS																											
EssBase																											
PeopleSoft																											
MSA																											
Fixed Asset																											
Other finance																											
Other HR																											
Other payroll																											
Other budget																											
Email/calendaring																											
Personal productivity																											
All other agency apps																											
TOTAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -							





King County

**unreported data
elements**

King County, Washington
May 26, 2004

**Total Operating
 Cost of
 Technology
 Final Report**

APPENDIX D:
 Unreported Data
 Elements

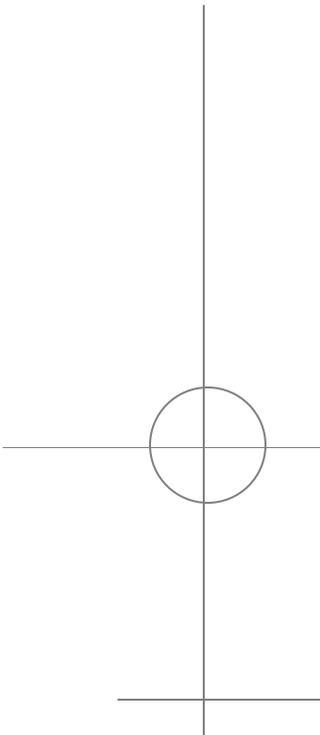
Between the delivery of the draft and final reports, PTI solicited changes, updates, and corrections from each of the agencies regarding their original data submission. We specifically asked agencies to confirm that any data elements that did not have values associated with them actually represented zeros – instead of missing data. Each agency was asked to respond, either with the appropriate changes or with a statement that the original submission was accurate.

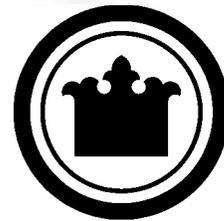
With the exception of the Prosecuting Attorney, all agencies responded to this request and either confirmed that their original submission was correct, or provided updates to their original data.

Exhibit D-1: Data Confirmation Status

Agency	Budget Data			Goods & Services Data				Labor Data			Response
	03 Op	03 Cap	04 Cap	HW	SW	Svcs	Other	IT	Biz Unit	Shadow	
Assessor											Confirmed
Council											Confirmed
Pros. Atty											Did not respond
Sup Court											Confirmed
Dist Court											Confirmed
Sheriff											Confirmed
Executive (B/E/E/O)											Confirmed
Human Svc											Confirmed
AJD											Confirmed
Judicial											Updated Data
Devel & Envir Svcs											Confirmed
Pub Health											Updated Data
DNRP											Updated Data
Transit											Confirmed
Roads/fleet/airport											Confirmed
DES Finance											Confirmed
DES HR											Updated Data
DES ITS											Confirmed
DES Other											Confirmed

	Budget, expenditure, and labor amounts provided
	Submitted no data or zeros, agency confirmed as zeros
	Submitted no data or zeros, agency did not confirm zeros





King County

**major cost driver
detail**

King County, Washington
May 26, 2004

The following itemizes the cost components that made up the 11 categories used in the Major Cost Drivers exhibit in Chapter 1 of the report.

1. WORKSTATIONS

- ◆ Labor Components :
 - Help Desk (Tier 1)
 - Tier 2 Support: Desktop PC Support
 - Tier 2 Support: Personal productivity tool support
 - Workstation Administration
- ◆ Goods & Services Components :
 - Desktop operating systems
 - Personal productivity licenses
 - Workstations
 - Workstation Support

2 MAINFRAME & SERVERS

- ◆ Labor Components :
 - Server administration: Email administration
 - Server administration: File/print administration
 - Server administration: GIS server administration
 - Server administration: Application server administration
 - Server administration: Other server administration
 - Mainframe operations & administration
 - Data center operations
- ◆ Goods & Services Components :
 - System software licenses
 - Mainframe OS & utilities
 - Servers
 - Mainframe computers
 - Mid-range computers
 - Storage
 - Server support

3. NETWORK

- ◆ Labor Components :
 - Network Connectivity (WAN/LAN/wireless)
- ◆ Goods & Services Components :
 - Network equipments/infrastructure
 - Networking

4. MOBILE DEVICES

- ◆ Labor Components :
 - Tier 2 Support: PDA support
 - Tier 2 Support: Other portable/specialized device support
- ◆ Goods & Services Components :
 - Mobile devices

5. OTHER SYSTEM SERVICES

- ◆ Labor Components :
 - Security Administration
- ◆ Goods & Services Components :
 - Printers
 - Other hardware

6. APPLICATIONS

- ◆ Labor Components :
 - Tier 2: Business application support
 - Database administration
 - Application development: Website design/maintenance
 - Application development: Desktop application development/maintenance
 - Application development: GIS application development/maintenance
 - Application development: All other development
 - Requirements analysis
 - Data administration
 - Application administration
 - Custom application maintenance: ARMS
 - Custom application maintenance: IBIS
 - Custom application maintenance: EssBase
 - Custom application maintenance: Other finance
 - Custom application maintenance: Other HR
 - Custom application maintenance: Other payroll
 - Custom application maintenance: Other budget
 - Custom application maintenance: Agency app 1 & 2
 - Custom application maintenance: All other
 - Package application maintenance: PeopleSoft
 - Package application maintenance: MSA
 - Package application maintenance: Fixed Asset
 - Package application maintenance: Other finance
 - Package application maintenance: Other HR
 - Package application maintenance: Other Payroll
 - Package application maintenance: Other budget
 - Package application maintenance: Agency App 1 & 2

**Total Operating
Cost of
Technology
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APPENDIX E:
Major Cost Driver
Backup

- Package application maintenance: All other
- ◆ Goods & Services Components :
 - MSA system maintenance
 - PeopleSoft system maintenance
 - Fixed Asset system maintenance
 - Other FMS system maintenance
 - Other payroll system maintenance
 - Other budget system maintenance
 - Other HR system maintenance
 - Agency Packaged App 1
 - Agency Packaged App 2
 - DBMS maintenance/licenses
 - Application development
 - Application maintenance

7. PROJECT MANAGEMENT

- ◆ Labor Components :
 - Project Management
- ◆ Goods & Services Components :
 - NONE

8. IT PLANNING

- ◆ Labor Components :
 - Strategic planning & governance
 - Research and development
 - Disaster recover/planning
- ◆ Goods & Services Components :
 - NONE

9. IT ADMINISTRATION

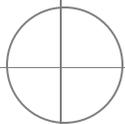
- ◆ Labor Components :
 - Asset management
 - IT procurement
 - Standards and policies development
 - Administrative support
 - Departmental management
- ◆ Goods & Services Components :
 - NONE

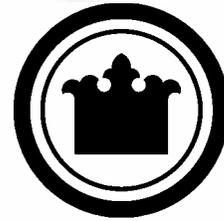
10. TELECOM

- ◆ Labor Components :
 - Telephone system support
- ◆ Goods & Services Components :
 - Telco back-end
 - Telecom: Land-line related
 - Telecom: Cellular & pager related

ALL OTHER

- ◆ Labor Components :
 - Training
- ◆ Goods & Services Components :
 - Other software
 - IT Training
 - Management consulting
 - Other services
 - ITS charges
 - IT-related debt service
 - All other O&M spending





King County

glossary

King County, Washington
May 26, 2004

This appendix provides a glossary offering explanations and definitions of key terms and acronyms used in this report.

GLOSSARY

ADMINISTRATIVE SUPPORT – the processes related to the provision of clerical, administrative, and related services required for the ongoing operation of the IT department

AGENCY – the organization level used for analysis in this report as defined in Appendix A

APPLICATION ADMINISTRATION – the processes related to administering and configuring production business application software, including maintaining workflow, setting access rights for users, and updating validation tables

APPLICATION DEVELOPMENT – the processes related to engineering new software that meets system-wide needs, integrates third party software, and accommodates special requests. Includes major enhancements to existing applications. Development phases include design, coding, testing, and implementation.

ASSET MANAGEMENT – the processes related to managing the IT properties of the organization, including tracking inventory, software license compliance, warranty information, and performance guarantees

BUSINESS APPLICATION SERVICES – those functions related to developing, installing, configuring, and otherwise maintaining the software needed to meet the operational, management, and reporting requirements of the organization

BUSINESS APPLICATION SUPPORT – the processes related to providing end-user support (answering questions, etc.) regarding the use of business-specific software (e.g., financial management, permit management, etc.) beyond that which is provided by the first point of contact

BUSINESS UNIT – the divisions/sections of an agency responsible for business operations other than IT. In this context of this report, this is in comparison to the IT units, the sub-division of an agency responsible for agency-specific IT activities.

CAPITAL BUDGET – funds allocated to one-time expenses, usually for depreciable assets

CATEGORY – the various components that make up the group, most often used in this report to define the goods & services cost components (e.g., software, hardware, external services, and other)

CENTRALIZED IT EFFORT – the IT support provided by a single, organization-wide service provider (i.e., the County's Information and Telecommunication Services Division)

CHARGEBACK – the method employed by a service-based agency to recover its expenses from the customers it serves. The charges are typically meted out based on an algorithm that allocates costs for a service by either a direct cost driver (actual cost of a service) or a proxy for workload drivers (e.g., number of PC's).

COOKS – this number counts the individuals required for a particular function, as opposed to the FTE effort level. For example, an agency might have 5.5 FTE of server administration performed by 8 staff. This amount of service could be provided by as few as 6 individuals, so the Cooks (as in “too many cooks spoil the broth”) number would be 2.

CUSTOM APPLICATION MAINTENANCE – the processes related to updating and making minor enhancements to existing software applications to meet new requirements and comply with external mandates. Includes writing new code, extracting data for use by other applications, and customizing reports for users.

CUSTOMER SERVICES – those functions related to directly supporting users of IT systems and services

DATA ADMINISTRATION – the processes related to the analysis, development, and maintenance of the organization's data models and related data dictionaries

DATA CENTER OPERATIONS – the processes related to the planning, administration, and operation of the facility that houses all centralized enterprise computing equipment, including production control, runbooks, backup/restore operations, and storage management. It also includes operation and maintenance of the attendant systems, including fire suppression, backup electrical power, air conditioning, etc.

DATABASE ADMINISTRATION – the processes related to planning, implementing, and administering the data structures required to support the organization's applications portfolio. Includes performance management and recovery.

DBMS – database management system. Computer software that is used to create, access, and control the database.

DEPARTMENTAL MANAGEMENT – the processes related to management and oversight of the organization's technology functions: including staff evaluation, quality assurance, and budgeting. Includes the effort made by non-IT managers to manage IT staff and contractors.

DESKTOP APPLICATION DEVELOPMENT AND MAINTENANCE – the processes related to providing assistance in creating and using desktop applications based on productivity tools (e.g., spreadsheets, macro development). Also includes performing upgrades and maintaining these applications.

DESKTOP PC SUPPORT – the activities related to onsite support of the organization's network applications (e.g., calendar, email, etc.), desktop computers, mobile computing devices (e.g. laptops, PDAs, etc.), and attendant operating systems and peripherals

DESKTOP SERVICES – the IT support services related to support and maintenance of end users and their computing equipment (e.g., PCs). This typically includes Tier 1 (telephone or email) support, Tier 2 (desk-side) workstation and personal productivity support, and workstation administration effort.

DISASTER RECOVERY MANAGEMENT – the processes related to developing, maintaining, updating, and testing the organization's IT disaster recovery/business resumption plan, and to activating and managing the plan in the event of a disaster

DISTRIBUTED IT EFFORT – the IT effort provided by service providers located within agencies (i.e., outside of a central service provider for the entire organization). Distributed effort can be provided by a formal IT unit within the agency, IT staff reporting within a business organization, or shadow staff.

END USER APPLICATION SUPPORT – the activities related to the desktop setup, installation, and maintenance, as well as supporting the day-to-day use of the organization's business applications. For instance, helping a user accomplish a specific business function, or updating value in a validation table would qualify as business application support.

ENTERPRISE – a business organization or entity in its entirety

ERP – enterprise resource planning. A term originally used to describe enterprise-wide systems that include financial, human resources, and materials management functions in a production environment, but is often used to describe an enterprise-wide implementation of a single, complex, and completely integrated system that can automate virtually every business process within the organization.

FEDERATED SERVICE DELIVERY MODEL – a model of IT service delivery which places the responsibility for shared resources (e.g., network infrastructure) with a centralized service provider, while users of non-shared services are responsible for maintaining the resources and applications that are particular to them.

FULL TIME EQUIVALENT (FTE) – The labor effort equal with the working time of a full-year, full time staff member. Often used to calculate the total labor effort associated with an activity. For instance, if 5 individuals spend 50% of their time on a particular activity, then that activity received 2.5 FTEs of effort. Note the FTEs do *not* necessarily equate directly to employees. One FTE of effort may be provided by a combination of one or more individuals, including employees, contractors, etc.

GIS – geographic information systems

GIS APPLICATION DEVELOPMENT/MAINTENANCE – the processes related to planning, implementing, and supporting map-based applications for the organization

FUNCTIONAL AREA – high-level categories that can be used to summarize IT labor effort, including customer services, system services, business application services, IT planning, and IT administration

GANTT CHART – a bar graph or other graph that helps plan and monitor project development or resource allocation on a horizontal time scale. Gantt charts are used to indicate and monitor diverse aspects of project management, including without limitation: the exact duration of specific tasks, the relationship between tasks, planned and actual completion dates, cost of each task, the person or persons responsible for each task, and the milestones in a project's development.

GOODS AND SERVICES – Hardware, software, support services, and consulting services purchased from a third party. Typically, the third party is not affiliated with the enterprise, although this is not always the case (e.g., services purchased from a central IT supplier).

HELP DESK – a source of technical support for hardware or software. Help desks are staffed by people that can either solve the problem directly or forward the problem to someone else.

INFORMATION TECHNOLOGY (IT) – the profession concerned with all aspects of managing and processing information via computers and computer systems

IT – information technology (see above)

IT ADMINISTRATION – those functions related to the oversight and administration of the technology function at the organization

IT PLANNING – those functions related to planning for the technology function at the organization

ITS – The Information and Telecommunications Services division within the Department of Executive Services.

IT PROCUREMENT – The processes related to acquisition of goods and services in support of all IT functions; including the development of RFP's, evaluation and selection of vendors, management of purchasing activities, and receipt of goods.

IT UNIT – the sub-division of an agency responsible for agency-specific IT activities

JOAT – “jack of all trades.” This counts the number of IT service functions performed by each individual – for instance, one person might perform e-mail administration, database administration, help desk, and project management; giving that individual a JOAT number of 4. The overall JOAT number for an agency is the average JOAT number for all of its staff. Simply, this number provides an indication of how many multiple IT service “hats” are worn by each individual within an organization.

LABOR – the human effort expended on a given function, often expressed in units of FTEs

LAN – local area network, a collection of computers and/or computing devices (e.g., printers, wireless PDAs) that are connected to allow the sharing of resources; generally within a building or a floor of a building.

MAINFRAME OPERATIONS & ADMINISTRATION – The processes related to administering the operation of the host/mainframe computing platforms, managing their operating systems to keep functionality at optimal performance levels, and managing associated peripheral devices.

NETWORK CONNECTIVITY (WAN/LAN/WIRELESS) – the activities related to implementing and maintaining the operational integrity of the organization's local and wide-area networks, both wired and wireless. Technologies include building wiring, fiber optic data circuits, and point-to-point technologies such as laser and microwave. These activities include responding to user requests for assistance, performance monitoring, coordinating with external network service providers, and taking appropriate corrective actions as needed.

O&M– Operations and Maintenance. Includes the ongoing expenditures and labor associated with performing the functions of a given agency or supporting a specific project or application.

OPERATING BUDGET – funds allocated for O&M expenses, generally used for such items as salary, maintenance contracts, etc.

OTHER PORTABLE/SPECIALIZED DEVICE SUPPORT – The processes related to onsite support of the organization’s computers which do not reside on a desktop (beyond PDAs), such as kiosks, laptops, and mobile data terminals (MDTs), along with attendant peripherals.

PACKAGE APPLICATION MAINTENANCE– the processes related to installing, integrating, interfacing, and testing business-specific packaged applications and their associated data, including managing vendor relationships, and providing necessary business context for integration. Includes installing new releases, minor updates, and bug fixes.

PC– personal computer. A single-user computing device that does not necessarily rely on another computer to perform data processing.

PDA SUPPORT – the processes related to onsite support of personal digital assistants (PDAs), including troubleshooting syncing to desktop PCs, network connectivity, and their business-specific applications

PERFORMANCE MEASURE– A quantitative indicator [measure] that can be used to track progress toward an objective

PERSONAL PRODUCTIVITY TOOLS SUPPORT – the processes related to providing onsite end user support concerning the use of desktop applications such as word processing, spreadsheets, presentation tools, and other organizational office productivity tools.

PROGRAM– the organizational division used by King County in presenting its budget

PROJECT MANAGEMENT – those activities related to the oversight and coordination of major technology initiatives

REQUIREMENTS ANALYSIS – The processes related to describing business needs, evaluating alternatives, recommending an approach to address the requirements, and creating the summary and detailed specifications for software that would meet the requirements.

RESEARCH AND DEVELOPMENT – the processes related to evaluation and testing of current and future IT products and services, and to the deployment of pilot projects to test the viability of these technologies for the organization. Includes dissemination of relevant information to appropriate parties.

RFP – Request for Proposals

SECURITY ADMINISTRATION – the activities related to developing, maintaining, and administering the security plan and overall security approach for the organization’s host processors, servers, personal computers, communication devices, and networks

SERVER – a computer which provides shared files, applications, connectivity, or print services to users of a network

SERVER ADMINISTRATION – the activities related to implementing and maintaining servers, including both Intel-based and mid-range devices (such as AS/400). These activities also include administration, account management, and operation of file, print, and application servers and other logical network devices; performance management; tuning; applying operating system patches and upgrades; and administering configuration data.

SHADOW STAFF– non-IT-titled staff who spend 10% or more of their time performing IT support tasks on behalf of other staff

STANDARDS AND POLICIES DEVELOPMENT – those processes related to the creation and updating of enterprise-wide IT standards and policies related to hardware, software, procurement, security, and staffing

STORAGE MANAGEMENT – the activities related to deploying, upgrading, managing, and maintaining centralized enterprise storage devices and networks. Includes aggregating and consolidating data, applying retention and destruction policies, performance tuning, monitoring and reporting on utilization.

STRATEGIC PLANNING AND GOVERNANCE – the processes related to identifying and evaluating the future directions for IT application, networks, and hardware for the organization. Includes strategic planning, evaluating and prioritizing IT investments, technology research, participating in committees and task forces, and feasibility studies.

SYSTEM – any computer, computer system, computer network, computer program or combination of other data processing or communication device along with the business processes they are intended to support

SYSTEM SERVICES – those functions related to implementing, maintaining, and supporting the organization’s computers, systems software, and connectivity

TELEPHONE SYSTEMS SUPPORT – the activities related to implementing and maintaining the operational integrity of the organization’s voice network. This includes responding to user requests for assistance, administering data associated with the voice network, performance monitoring, coordinating with telecommunications providers, and taking appropriate corrective actions as needed.

TIER 1 – the activities related to providing a first point of contact for users to report problems and seek answers to questions related to their desktop PCs, network access, email, personal productivity software, and business application software. Includes initial problem resolution, triage, and problem escalation.

TIER 2 – the activities related to providing on-site assistance with the software and hardware that support user work functions, including PCs, handhelds and other mobile devices, peripherals, and specialized computing environments such as public kiosks.

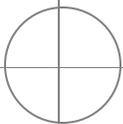
TRAINING – the processes related to providing technology-related instruction to staff aimed at enhancing their skills, knowledge, and performance. Includes training requirement analysis, course design and development, and training delivery.

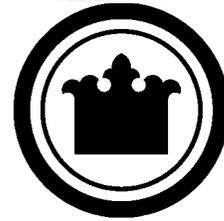
WAN – wide area network. A collection of computers and/or computing devices that are connected to permit sharing of resources either with cables or a variety of other non-cabled methods; generally over a large geographic area, such as a city, state, or region.

WEBSITE DESIGN AND MAINTENANCE – the processes related to planning, implementing, and supporting Internet and intranet applications for the organization

WORKSTATION ADMINISTRATION – the activities related to the setup, configuration, original installation, and scheduled maintenance of end users’ desktop computers and peripherals. Includes installation and configuration of PC operating systems and software, such as personal productivity tools and anti-virus applications. Includes the creation and maintenance of disk images, application of patches and updates, and all scheduled maintenance.

WORKSTATION – single user computing device, such as a desktop personal computer or laptop





King County

ITS data

King County, Washington
May 26, 2004

This appendix presents the server allocation chargeback data collected from ITS, as follows:

- ◆ A. Server Allocations
- ◆ B. Labor Charges
- ◆ C. Goods & Services Charges
- ◆ D. Application Charges

The server allocation information allowed us to calculate server administration costs by individual agency. We used the labor, goods & services, and application charge allocation information to calculate total agency IT operating costs including ITS charges.

A. SERVER ALLOCATIONS

As part of the data collection effort, PTI gathered server inventory information from each of the 19 agencies for use in our analysis. The primary purpose for collecting this data was to help inform workload drivers for server-support activities. We assumed that ownership (i.e., who paid for the server) and physical location are less important workload factors than responsibility for management. Accordingly, we worked with ITS and followed up with affected agencies to identify which servers that reside at ITS are supported by ITS and which are supported by the agencies – ensuring that the servers were allocated to the inventory of the supporting agency.

The table below lists the number of agency-owned servers located at ITS by agency and by supporting organization

Exhibit G-1 ITS-Hosted Server Maintenance Responsibility by Agency

Agency	Servers Supported by ITS	Servers Supported by Agency	Total Agency Servers at ITS
Adult and Juvenile Detention		3	3
Assessor			
Budget/Executive/Economic Development/OIRM	3		3
Community and Human Services			
Council			
Development and Environmental Services			
District Court			
Executive Services: Finance	18		18
Executive Services: Human Resources			
Executive Services: Information and Telecommunications Services			
Executive Services: Other	2		2
Judicial Administration	1	5	6
Natural Resources and Parks		2	2
Prosecuting Attorney			
Public Health	1		1
Sheriff		1	1
Superior Court			
Transportation: Airport, Fleet Administration, and Road Services			
Transportation: Transit	12	2	14
TOTALS	37	13	50

B. LABOR CHARGES

The following table presents ITS' allocation of the labor component of its charges to each of the agencies.

Exhibit G-2: ITS Labor Charges by Agency

**Total Operating
Cost of
Technology
Final Report**

APPENDIX G:
ITS Data

ITS Labor Charges	Assessor	Council	Pros. Atty	Sup Court	Dist Court	Sheriff	Budget/Ex	Human Sv	AJD	Judicial	Devel & En	Pub Health	DNRP	Transit	Roads/flee	DES Finance	DES HR	DES ITS	DES Other	Cost TOTAL	
Customer Services																					
Help Desk (Tier 1)	\$ 2,958	\$ 2,027	\$ 6,256	\$ 5,142	\$ 2,909	\$ 13,523	\$ 1,199	\$ 4,542	\$ 12,706	\$ 2,768	\$ 2,948	\$ 19,280	\$ 24,735	\$ 46,439	\$ 9,521	\$ 2,654	\$ 1,075	\$ 2,448	\$ 6,906	\$ 170,048	
<i>Tier 2 support:</i>																					
Desktop PC support																					\$ -
PDA support																					\$ -
Other portable/specialized device support																					\$ -
Personal productivity tool support																					\$ -
Business application support																					\$ -
Training																					\$ -
System Services																					
Network connectivity (WAN/LAN/wireless)	\$ 29,110	\$ 19,950	\$ 61,566	\$ 50,600	\$ 28,629	\$133,082	\$ 13,245	\$ 41,774	\$ 123,591	\$ 27,240	\$ 29,013	\$192,659	\$228,547	\$ 458,659	\$ 92,037	\$ 26,215	\$ 9,762	\$ 24,088	\$ 68,781	\$ 1,658,548	
Workstation administration							\$155,405													\$199,808	\$ 355,213
<i>Server administration:</i>																					
Email administration	\$ 8,803	\$ 6,769	\$ 22,731	\$ 19,236	\$ 9,113	\$ 41,931	\$ 4,929	\$ 35,187	\$ 42,515	\$ 8,780	\$ 9,626	\$ 62,642	\$ 74,464	\$ 48,795	\$ 22,095	\$ 10,521	\$ 4,040	\$ 9,562	\$ 13,813	\$ 455,552	
File/print administration																					\$ -
GIS server administration																					\$ -
Application server administration (DSS)			\$ 13,609	\$ 24,249	\$ 820		\$ 18,546	\$ 410	\$ 10,818			\$ 36,394	\$ 410	\$ 213,368		\$ 270,149	\$ 410	\$ 410	\$ 11,348	\$ 600,941	
Other server administration			\$ 2,199			\$ 1,832	\$ 2,382		\$ 3,664	\$ 15,756			\$ 75,116		\$ 11,909				\$ 733	\$ 164,707	
Mainframe operations & administration	\$ 31,732	\$ 574	\$ 48,833	\$ 673	\$ 1,258	\$ 57,283	\$ 10,315	\$ 917	\$ 298,582	\$ 53	\$ 2,018	\$ 17,011	\$ 28,861		\$ 10,463	\$ 422,799	\$ 38,265	\$ 3,328	\$ 81,547	\$ 1,054,512	
Data center operations																					\$ -
Database administration																					\$ -
Security administration																					\$ -
Telephone systems support	\$ 7,127	\$ 5,095	\$ 12,187	\$ 11,321	\$ 18,299	\$ 30,032	\$ 2,744	\$ 18,598	\$ 35,619	\$ 2,282	\$ 25,688	\$ 67,811	\$104,041	\$ 99,365	\$ 37,004	\$ 22,707	\$ 3,642	\$ 20,857	\$ 12,921	\$ 537,340	
Business Application Services																					
<i>Application development:</i>																					
Website design/maintenance	\$ 8,395	\$ 1,778	\$ 5,486	\$ 4,509	\$ 2,551	\$ 11,859	\$ 12,654	\$ 10,299	\$ 10,627	\$ 2,428	\$ 2,585	\$ 22,709	\$ 27,492	\$ 47,117	\$ 13,560	\$ 8,137	\$ 943	\$ 7,948	\$ 6,056	\$ 207,135	
Desktop application development/maintenance																					\$ -
GIS application development/maintenance																					\$ -
All other development																					\$ -
Requirements analysis	\$ 113	\$ 77	\$ 239	\$ 196	\$ 111	\$ 516	\$ 46	\$ 196	\$ 462	\$ 106	\$ 112	\$ 735	\$ 943	\$ 1,796	\$ 337	\$ 102	\$ 41	\$ 93	\$ 263	\$ 6,484	
Data administration																					\$ -
Application administration	\$ 6,550	\$ 3,800	\$ 13,520	\$ 11,498	\$ 5,775	\$ 27,741	\$ 4,478	\$ 11,414	\$ 30,587	\$ 5,069	\$ 5,466	\$ 35,844	\$ 46,057	\$ 85,696	\$ 23,438	\$ 27,841	\$ 3,795	\$ 5,467	\$ 19,320	\$ 373,355	
<i>Custom application maintenance:</i>																					
ARMS																					\$ 123,678
IBIS																					\$ 264,854
Essbase							\$ 88,285														\$ 88,285
Other finance																					\$ 333,562
Other HR																					\$ -
Other payroll				\$ 2,386	\$ 13,074				\$ 10,153		\$ 4,524		\$ 12,477								\$ 42,614
Other budget							\$ 2,386														\$ 2,386
Agency app 1								\$ 16,300													\$ 118,446
Agency app 2																					\$ -
All other (Incl. CIP)	\$ 46,528	\$ 4,772		\$ 85,302	\$ 17,100	\$112,842		\$108,070	\$ 432,927			\$ 33,555	\$ 33,405	\$ -	\$ 298,160			\$ 40,364	\$ 296,238	\$ 1,509,263	
<i>Package application maintenance:</i>																					
PeopleSoft																					\$ -
MSA																					\$ 235,660
Fixed Asset																					\$ 20,838
Other finance																					\$ -
Other HR																					\$ -
Other payroll																					\$ -
Other budget																					\$ -
Agency app 1																					\$ -
Agency app 2																					\$ -
All other			\$ 85,302							\$ 1,789											\$ 87,091
IT Planning																					
Strategic planning & governance	\$ 2,379	\$ 1,069	\$ 4,662	\$ 3,337	\$ 1,775	\$ 8,651	\$ 3,005	\$ 2,611	\$ 14,372	\$ 1,328	\$ 1,857	\$ 10,833	\$ 11,190	\$ 23,272	\$ 7,170	\$ 16,843	\$ 1,763	\$ 1,833	\$ 8,007	\$ 125,958	
Research and development	\$ 714	\$ 321	\$ 1,399	\$ 1,001	\$ 532	\$ 2,595	\$ 902	\$ 783	\$ 4,311	\$ 398	\$ 557	\$ 3,250	\$ 3,357	\$ 6,981	\$ 2,151	\$ 5,053	\$ 529	\$ 550	\$ 2,402	\$ 37,787	
Disaster recovery/planning	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
IT Administration																					
Asset management	\$ 3,093	\$ 1,389	\$ 6,061	\$ 4,338	\$ 2,307	\$ 11,247	\$ 3,907	\$ 3,395	\$ 18,683	\$ 1,727	\$ 2,414	\$ 14,083	\$ 14,547	\$ 30,253	\$ 9,321	\$ 21,897	\$ 2,292	\$ 2,383	\$ 10,409	\$ 163,746	
IT procurement	\$ 4,639	\$ 2,084	\$ 9,092	\$ 6,507	\$ 3,461	\$ 16,870	\$ 5,860	\$ 5,092	\$ 28,024	\$ 2,590	\$ 3,622	\$ 21,125	\$ 21,821	\$ 45,379	\$ 13,982	\$ 32,845	\$ 3,438	\$ 3,575	\$ 15,613	\$ 245,618	
Project management	\$ 4,282	\$ 1,923	\$ 8,392	\$ 6,007	\$ 3,195	\$ 15,573	\$ 5,409	\$ 4,700	\$ 25,869	\$ 2,391	\$ 3,343	\$ 19,500	\$ 20,142	\$ 41,889	\$ 12,907	\$ 30,318	\$ 3,173	\$ 3,300	\$ 14,412	\$ 226,725	
Standards and policies development	\$ 1,071	\$ 481	\$ 2,098	\$ 1,502	\$ 799	\$ 3,893	\$ 1,352	\$ 1,175	\$ 6,467	\$ 598	\$ 836	\$ 4,875	\$ 5,036	\$ 10,472	\$ 3,227	\$ 7,580	\$ 793	\$ 825	\$ 3,603	\$ 56,681	
Administrative support	\$ 19,508	\$ 8,763	\$ 38,232	\$ 27,363	\$ 14,554	\$ 70,942	\$ 24,643	\$ 21,413	\$ 117,847	\$ 10,891	\$ 15,229	\$ 88,831	\$ 91,760	\$ 190,827	\$ 58,797	\$ 138,117	\$ 14,455	\$ 15,033	\$ 65,654	\$ 1,032,857	
Departmental management	\$ 16,296	\$ 7,320	\$ 31,937	\$ 22,858	\$ 12,158	\$ 59,252	\$ 20,586	\$ 17,887	\$ 93,445	\$ 9,098	\$ 12,722	\$ 74,207	\$ 76,653	\$ 159,410	\$ 49,117	\$ 115,378	\$ 12,075	\$ 12,558	\$ 54,845	\$ 862,813	
COST TOTAL	\$193,297	\$ 88,191	\$371,605	\$287,838	\$127,732	\$632,750	\$382,279	\$304,764	\$1,326,268	\$ 95,290	\$122,562	\$725,343	\$837,848	\$1,584,834	\$663,287	\$2,116,296	\$173,068	\$154,823	\$94,824	\$1,182,897	

C. GOODS & SERVICES CHARGES

The following table presents ITS' allocation of the goods & services component of its charges to each of the agencies.

Exhibit G-3: ITS Goods & Services Charges by Agency

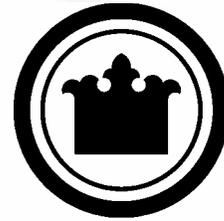
FY03 Actual ITS Charges to Agencies																			
O & M Goods and Services																			
	Assessor	Council	Pros. Atty	Sup Court	Dist Court	Sheriff	Budget/Exec	Human Sv	AJD	Judicial	Devel & Envir	Pub Health	DNRP	Transit	Roads/fleet	DES Finance	DES HR	DES ITS	DES Other
Workstations/Email	\$ 14,668	\$ 11,076	\$ 37,877	\$ 32,032	\$ 15,184	\$ 69,879	\$ 8,212	\$ 58,843	\$ 70,887	\$ 14,628	\$ 16,026	\$ 104,099	\$ 90,077	\$ 81,162	\$ 36,941	\$ 17,528	\$ 6,772	\$ 15,936	\$ 22,969
Servers (DSS)			\$ 7,027	\$ 6,446	\$ 1,180		\$ 6,352	\$ 590	\$ 3,010			\$ 9,310	\$ 590	\$ 80,731		\$ 138,490	\$ 590	\$ 590	\$ 5,329
Mainframe	\$ 56,197	\$ 1,018	\$ 86,484	\$ 1,192	\$ 1,665	\$ 102,029	\$ 18,267	\$ 1,643	\$ 528,789	\$ 98	\$ 2,284	\$ 31,524	\$ 51,013		\$ 18,530	\$ 748,775	\$ 67,769	\$ 5,894	\$ 144,484
Networking	\$ 85,013	\$ 58,382	\$ 179,796	\$ 147,767	\$ 83,610	\$ 388,651	\$ 34,461	\$ 128,951	\$ 370,586	\$ 79,553	\$ 84,729	\$ 550,231	\$ 531,600	\$ 1,332,431	\$ 275,803	\$ 76,557	\$ 30,908	\$ 70,342	\$ 198,469
Telecomm	\$ 10,470	\$ 7,484	\$ 17,903	\$ 16,631	\$ 26,882	\$ 44,119	\$ 4,032	\$ 27,323	\$ 52,327	\$ 3,352	\$ 37,738	\$ 99,618	\$ 152,843	\$ 145,975	\$ 54,361	\$ 33,359	\$ 5,350	\$ 30,691	\$ 18,632
Professional Services (ADSS)	\$ 9,152	\$ 939	\$ 16,779	\$ 16,779	\$ 4,328	\$ 24,767	\$ 17,835	\$ 16,300	\$ 66,567	\$ 352	\$ 890	\$ 6,600	\$ 9,025		\$ 58,838	\$ 178,209	\$ 14,275	\$ 7,940	\$ 52,565
License Fees:																			
ARMS																			
IBIS																			
EssBase																\$ 60,000			
PeopleSoft																			
MSA																			
Fixed Asset																			
Other finance																			
Other HR																			
Other payroll																			
Other budget																			
Email/calendaring																			
Personal productivity																			
All other agency apps																			
LAN							\$ 7,207												\$ 9,265
Debt Service	\$ 60,215	\$ 11,720	\$ 52,926	\$ 30,469	\$ 16,820	\$ 94,084	\$ 13,499	\$ 29,655	\$ 99,008	\$ 16,003	\$ 17,045	\$ 112,615	\$ 113,164	\$ 272,380	\$ 55,774	\$ 40,287	\$ 6,218	\$ 22,780	\$ 48,980
All Other Charges (Hosting, etc.)	\$ 7,200		\$ 2,025	\$ 2,025		\$ 1,696	\$ 2,202		\$ 4,820	\$ 22,140		\$ 3,600	\$ 10,999	\$ 72,544	\$ 720	\$ 105,016		\$ 18,000	
TOTAL	\$242,915	\$ 90,619	\$ 398,792	\$ 253,341	\$ 149,669	\$ 725,225	\$ 112,067	\$ 263,305	\$ 1,195,994	\$ 136,126	\$ 158,712	\$ 917,597	\$ 959,311	\$ 1,985,223	\$ 500,967	\$ 1,398,221	\$ 149,882	\$ 154,173	\$ 500,693

D. APPLICATION CHARGES

In support of the QBC project, PTI also asked ITS to provide application-specific charges for the County financial and payroll applications. The table below presents the per-agency charges for each application. Note: The charges include both labor and goods & services and are a subset of the tables presented in the two previous sections.

Exhibit G-4: ITS Application Charges by Agency

FY03 Actual Charges -- Major Applications																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	Assessor	Council	Pros. Atty	Sup Court	Dist Court	Sheriff	Budget/Exec	Human Sv	AJD	Judicial	Devel & Envir	Pub Health	DNRP	Transit	Roads/fleet/air	DES Finance	DES HR	DES ITS	DES Other
ARMS																\$ 760,804			\$ 760,804
IBIS																\$ 498,841			\$ 498,841
EssBase							\$ 125,814									\$ 63,442			\$ 125,814
PeopleSoft																\$ 449,420	\$ 253,248		\$ 702,668
MSA											\$ 8,330		\$ 74,983			\$ 91,981			\$ 176,964
Fixed Asset																\$ 493,763			\$ 493,763
Other finance																			
Other HR																			
Other payroll					\$ 5,011	\$ 42,552			\$ 14,130										\$ 61,693
Other budget							\$ 8,875												\$ 8,875
Email/calendaring																			\$ -
Personal productivity																			\$ -
All other agency apps																			\$ -
All Other Charges	\$ 172,518	\$ 7,492	\$ 271,869	\$ 123,491	\$ 25,733	\$ 315,425	\$ 27,084	\$ 116,695	\$ 1,405,164	\$ 40,522	\$ 1,968	\$ 228,917	\$ 100,729	\$ 147,660	\$ 443,589	\$ 455,827	\$ 43,513	\$ 71,481	\$ 634,571
TOTAL	\$ 172,518	\$ 7,492	\$ 271,869	\$ 123,491	\$ 30,744	\$ 357,977	\$ 161,773	\$ 116,695	\$ 1,419,294	\$ 40,522	\$ 10,298	\$ 228,917	\$ 175,712	\$ 147,660	\$ 443,589	\$ 2,814,078	\$ 296,761	\$ 71,481	\$ 634,571



King County

**benchmarking
information**

King County, Washington
May 26, 2004

This chapter summarizes the background data used in creating some of the comparative numbers and ratios presented in Chapters 1 and 8 of this report.

Exhibit H-1: Comparative Benchmark Data

**Total Operating
 Cost of
 Technology
 Final Report**

APPENDIX H:
 Benchmarking
 Information

Organization Name	Type of Organization	Number of Employees	IT as % of Total Budget	IT Staff/Ttl Staff
City of Vancouver, WA	Municipality	1000	1.65%	1.8%
City of Oxnard, CA	Municipality	1016	1.20%	1.3%
City of Bellevue, WA	Municipality	1042	2.06%	4.9%
Yakima County, WA	County	1050	2.17%	3.3%
Washington County, OR	County	1100	3.07%	3.9%
City of Las Cruces, NM	Municipality	1164	0.97%	1.7%
City of Lakewood, CO	Municipality	1200	6.29%	2.3%
City of Bellevue, WA	Municipality	1266	1.78%	5.5%
City of Bakersfield, CA	Municipality	1397	1.69%	1.9%
Clark County, WA	County	1446	1.79%	3.4%
Lane County, OR	County	1501	2.50%	3.9%
Clackamas County, OR	County	1791	2.36%	4.2%
City of Irving, TX	Municipality	2047	1.57%	1.8%
City of Scottsdale, AZ	Municipality	2089	3.18%	5.8%
Snohomish County, WA	County	2100	1.68%	3.0%
City of Colorado Springs, CO	Municipality	2300	4.92%	3.2%
City of Fresno, CA	Municipality	3744	1.80%	2.0%
State of North Dakota	State	7097	3.29%	6.3%
State of South Dakota	State	13294	1.70%	2.1%
State of Alaska	State	18507	1.38%	3.6%
State of Kansas	State	37154	1.52%	4.4%
State of Kentucky	State	39000	1.90%	4.2%
State of Missouri	State	57006	0.99%	2.8%
State of North Carolina	State	79895	4.69%	3.3%

