

Oakland County

Department of
Information Technology

Strategic Plan

June 2001

IT Strategic Plan Table of Contents

1.0 INTRODUCTION	1
1.1 Scope of Strategic Plan.....	1
1.2 Oakland County Overview.....	1
1.3 Information Technology Department Overview	3
2.0 INFORMATION TECHNOLOGY VISION	8
2.1 Information Technology Mission Statement.....	8
2.2 Information Technology Goals and Guiding Principles	8
2.3 Critical Success Factors.....	9
3.0 INFORMATION TECHNOLOGY MASTER PLANNING PROCESS	10
3.1 History of Master Planning Process.....	10
3.2 Leadership Groups: Managing Customer Needs	11
3.3 Annual Master Planning	12
3.4 Plan Monitoring, Management and Budgeting.....	13
3.5 Analysis: IT Labor Distribution	15
4.0 MAJOR INFORMATION TECHNOLOGY PROGRAMS AND PROJECTS	21
4.1 Courts / Law Enforcement Leadership Group	21
4.2 Finance / Administration Leadership Group	23
4.3 Governmental Services Leadership Group.....	25
4.4 Land Leadership Group	26
4.5 Common Services Leadership Group.....	28
4.6 Technical Systems and Networking Leadership Group	31
4.7 CLEMIS Leadership Group.....	37
5.0 SUMMARY	41

Oakland County Michigan Information Technology (IT) Strategic Plan

1.0 INTRODUCTION

The Oakland County Information Technology (IT) Strategic Plan, similar to all strategic planning, is a process - not an end result. The Plan is a working tool to link the County's goals with information technology to provide improved government functions and enhanced customer service. The Plan is intended to allow for change over a period of time and serves as a broad guideline for action that can be revised as technologies emerge and the County's business requirements change. As a working reference document, the Plan will be distributed internally to County Commissioners, County Executive staff, County Elected Officials, and all management employees.

Both internal and external environments of the County are continually changing, and technology plays a critical support role in the development, implementation and enhancement of government services. As a result, the County recognizes the need to outline an overall approach for the selection, use, and support of technology that aligns with County resources, business needs, and processes. Therefore, a countywide approach based on standards, consistency, and compatibility will make more cost-effective use of technology.

The Oakland County Information Technology Strategic Plan builds on the original Strategic Plan drafted in 1991 and later approved by the County Commissioners. In addition, it is a compilation of other planning documents drafted by Information Technology's Project Management Office (PMO) and other technology teams responsible for the implementation of these information systems. These planning documents have been supplied to the Finance Committee and other committees of the Board of Commissioners over the past decade.

1.1 Scope of Strategic Plan

This is a strategic plan with a two to three year planning horizon. Since it is difficult to predict the state of the information technology field beyond three (3) years, the County has developed a flexible long-term strategy, not a detailed long-term plan.

This plan addresses all facets of the County's information technology services and related infrastructures. It strives to maximize the benefits of high-level organizational cooperation while allowing individual and group creativity and flexibility. Therefore, the foundation for the plan includes trends in the information technology industry; an outline of customers and services; and an Information Technology vision accompanied by a mission statement, goals and guiding principles, critical success factors and the Information Technology Master Planning Process. A desired target environment along with strategies for organizational effectiveness, partnerships, and processes will be developed in subsequent revisions to this plan.

1.2 Oakland County Overview

Oakland County Michigan covers 910 square miles, has 61 cities, villages and townships (CVTs) and is located in southeast Michigan, immediately north of the City of Detroit. Located astride the Interstate 75 corridor and at the heart of "Automation Alley", Oakland County is a world technology center. In 2000, Oakland County's population was 1,194,156, a 10.2% increase from 1990. With approximately 440,000 parcels of property and an increase of approximately 7,000 parcels per year, Oakland County has added over 10 billion dollars in total property value over each of the last five

years. Oakland County features among the lowest operating tax rates in the state, has perennially been the highest job-producing county in Michigan, and is home to six Fortune 500 companies. Oakland County is one of two dozen counties in the nation with the coveted AAA bond rating and in 1998, a bond rating agency ranked Oakland County the best run county in America.

Over the next several years, many city, village and township units (CVTs) may find themselves struggling with securing qualified information technology resources at a price they can afford. Changing technologies, integration of suite products, and software complexities will continue to cripple the local municipalities in their efforts to cope. The situation is expected to get much worse over the next several years.

The expense of highly qualified technology personnel and the limitations on property tax revenue will inhibit technology initiatives absent some County involvement. The constitutional cap placed on taxable value growth combined with the annual millage rollbacks has restricted discretionary spending for many local CVTs. This trend will continue into the foreseeable future. Yet, there is hope as the County has recognized these issues faced by the CVTs and is taking active steps to assist in its resolution.

Over the last several years, Oakland County has been aggressively replacing existing mainframe programs with improved vendor-supported systems. As the IT Department has addressed these systems for County departments, the CVTs have been kept in mind as well. The benefits derived from the investments can be obtained from other sets of governmental units, namely the local municipalities.

Unlike many counties in Michigan, or in the nation, Oakland County and its local municipalities cooperate in the performance of services to residents. Traditionally, counties and CVTs work independent of one another - **not in Oakland County**. The County on behalf of the local municipalities performs many services (much of which is in the technology arena) normally rendered by BOTH entities in other counties. The County often financially burdens itself with incremental costs that provide direct technology programs and economic benefits to CVTs. In many instances, the funding of computer programs by the County would enable operating programs that could not otherwise be performed by smaller CVTs. This "centralized computing" practice is unique compared to many counties, where each of the local municipalities, and even County departments, have their own computer systems that do not integrate with each other.

The benefits of providing these services centrally, rather than separately (CVT and the County as well), results in an overall cost reduction for services to the taxpayers in Oakland County. Essentially fixed costs of computer services are spread over a larger economic base - thus, reducing the cost per unit served. A detailed report on this subject entitled ***Interdependence of Governmental Services: Achieving Vertical Integration*** can be found in Appendix A. Such report details the cost-saving concepts underway in Oakland County.

1.3 Information Technology Department Overview

The Department of Information Technology is a service bureau that provides IT services to 82 County Divisions, more than 60 local governmental units (assessors, treasurers, law enforcement, etc.), over 50 private sector customers, and over 900 @ccess Oakland customers). IT is responsible for over 150 major applications consisting of more than 8,000 programs and provides systems support, maintenance, enhancements and new development for all major systems applications.

The Department of Information Technology is under the administration of the County Executive and is comprised of the following six organizational divisions:

- Administration
- Data Center Operations
- Systems Development and Support
- CLEMIS and Public Safety
- Digital Information Service Center
- Technical Systems and Networking

1.3.1 Administration Division

The Administration Division is comprised of the following Operational Units; Project Management Office (PMO) Training & Support, and Administrative Services.

This Division supports Information Technology and the County in functions related to Project Management, Training and Customer Support. This includes the following:

- IT Annual Master Planning and Leadership Group Processes.
- Project Management support and assistance to IT Project Managers.
- Hands-on instruction and training, customized to the needs of County employees to empower them with skills in standard software products, providing the skills necessary to complete their tasks effectively and efficiently.
- Help Desk Customer Support Services.
- IT Employee Training and Education.
- IT Department Communication Processes.
- IT Purchasing, Accounts Payable, Billing and Clerical staff functions.
- IT Department Policies and Procedures and Personnel Administration.

1.3.2 CLEMIS and Public Safety Division

The CLEMIS And Public Safety Division is comprised of the following Operational Units; CLEMIS, Emergency Management, and Radio Communications.

CLEMIS provides state of the art computer technology and related services to criminal justice and public safety agencies (police, fire, and emergency medical services). CLEMIS provides solutions through a cooperative effort that are affordable and efficient for agencies of all sizes. By serving as a technical link among multiple agencies, CLEMIS promotes communication and sharing of criminal justice information. CLEMIS facilitates the maintenance of fire and emergency medical records as well. CLEMIS standards and policies, as established and monitored by the Advisory Committee, ensure the integrity of information entered into the CLEMIS system. CLEMIS empowers criminal justice and public safety agencies to maximize the use of collected data, for their daily operations and comprehensive planning.

The Emergency Management unit develops and coordinates programs involving:

- Emergency Preparedness (developing response plans, siren plans, training responders and identifying crucial resources).
- Emergency Response (providing emergency aid and assistance).
- Recovery (coordinate the operations and response to a disaster).
- Mitigation (alleviate or prevent emergency situations in the future).

The Radio Communications unit is responsible for the replacement of the County's 806 MHz analog radio system. The new radio system enables the county, public safety answering points (that is, dispatchers) and public safety officials in the field the following benefits:

- Interoperability – the ability to seamlessly communicate on disparate frequencies (or eliminate the reliance on the present local systems).
- Improve coverage over the present 806 MHz system.
- Permit the transmission of data in addition to voice communication.
- Position the County to enable a larger regional radio system using the County's system as a base, thus, reducing the overall costs to each County by sharing fixed costs.

1.3.3 Data Center Operations Division

The Data Center Operations Division is comprised of the following Operational Units; Computer Operations, Production Services, Telephone Communications, and Customer Services Technical Staff.

The Oakland County Data Center Operations Division supports the following:

- 24 hour, 365 day on-line / batch services.
- Schedules and processes all production jobs.
- Quality assurance of production systems.
- Troubleshoots all hardware, software and production systems.
- Hardware, software, supplies, equipment, and forms inventory.
- 24 hour, 365 day computer room operations and help desk services.
- Telephone and wireless communications systems.
- Desktop and laptop operating systems and applications.
- Centralized software deployment and administration, including software distribution packages for remote deployment.

1.3.4 Digital Information Service Center Division (DISC)

The DISC Division is comprised of the following Operational Units; Data Warehouse / Enhanced Access and Geographic Information Systems (GIS).

The Digital Information Service Center (DISC) Division is a service organization designed to coordinate, manage, maintain, and distribute the County's digital information and specialized software. The DISC Division places a high emphasis on vertical and horizontal integration of systems and data stores in an effort to maximize return on investments in technology and infrastructure. The formation of this Division in May of 1998 was part of a larger County strategy to empower government workers and citizens with easy access to public information. The primary programs being administered here are GIS, Data Warehouse, Digital Pictures, Access Oakland, and

Address Management. Each of these programs touches a multitude of customers from every segment imaginable, to include County departments and agencies, local government units, and the private sector.

1.3.5 Systems Development and Support

The Systems Development and Support Division is comprised of the following Operational Units; Courts I, Courts II, Finance Systems, Governmental Services, and Land Systems.

The Systems Development and Support (SDS) Division provides IT development services to all Oakland County Departments and many of the CVTs within Oakland County. The staff is educated and has working experience in all areas of application development and systems implementation. The SDS Division is responsible for development of new applications, enhancements to existing applications, and support and maintenance of both Oakland County developed software and purchased software. The current portfolio of applications is based on several technology platforms including mainframe, client/server, and personal computers. Many of the applications are fully integrated with other applications running on the same or disparate platforms. Integration is real time updating and/or batch updating which is determined by business need. Support and maintenance is provided 24 hours a day, seven days a week.

1.3.6 Technical Systems and Networking

The Technical Systems and Networking Division is comprised of the following Operational Units; Data Base Administration, Distributed Computing, and Technical Services.

This Division performs the following major functions:

- County-wide network management, including monitoring, security, configuration, and troubleshooting activities. Deploying the OAKNet – a fiber optic network connecting the County with the CVTs to better coordinate data and video communications.
- File, print, application, and mail server management, including security administration, operating system upgrade and maintenance, capacity planning, anti-virus scanning, and monitoring.
- Legacy application management.
- New technology and system research and development.
- Establish standard development platforms and methodologies including such areas as mainframe and PC application development, database creation, design, and naming, application product selection, and standard software suites and applications.
- Administration of application databases and the associated database access software including the security administration, performance tuning, database design, database review, and monitoring.
- Disaster recovery, data protection, and data recovery.

Overall, Information Technology's customer base spans several different disciplines, including:

- Health and Human Services
- Court Services
- Public Safety (Police, Fire, EMS)
- Clerk/Register of Deeds
- Community & Economic Development
- Sheriff
- County Executive
- Oakland County International Airport
- CVTs
- Equalization and Treasurer
- Finance and Human Resources
- Drain Commissioner's Office
- MSU Extension/Oakland County
- Parks Department
- Prosecutor
- Board of Commissioners
- Facilities Management
- External Customers

Information Technology provides a number of services to its customers, in general, IT services provided include:

Information (Data) Services	
RDBMS and Mainframe Database Administration and Standards	RDBMS and Mainframe Database Design, Access and Security
RDBMS and Mainframe Database Recovery and Storage	Data Warehouse Design, ACCESS and Security
GIS Database Design, Access and Security	Digital Picture Database Administration
24/7 Data Center Management	
Application Development Services	
New Product Research and Testing	Custom Application Development and Code Management
"Commercial Off the Shelf" Software Selection and Implementation	Business Process Improvement
Office Automation Software	"Commercial Off the Shelf" Software Maintenance and Support
Technology Services	
Asset Management	Automated Software Delivery
Anti-Virus Maintenance and Control	Technology Standards Management
Internet Services (Web Hosting, FTP, and Web Browsing)	LAN Network Administration and Management
Network Directory Services and File Storage	WAN Network Administration and Management
Disaster Recovery Planning	Printing, Plotting and Fax Management
Telephone and Paging Management	Remote Access Management
Network Security and Authentication	PC Support and Maintenance
Video Conferencing Services	Server Hardware Support and Maintenance
Internet Security and Firewall Management	Technology Testing and Prototyping
Wireless Network Administration and Mgmt.	Web Site Design
Training and Support Services	
24/7 Help Desk Support	Technology Newsletters and Publications
Software and Application Training	Technology Project Management and Mentoring

1.3.7 IT Department Accomplishments

Information Technology has been recognized for its implementation of information systems by several national organizations. Many of the awards have been from organizations like the National Association of Counties (NACO). Those systems and programs that have been recognized are as follows:

Year	Awarding Organization	IT Project/Program
2001	IMAGIN	GIS
2000	NACO	Enhanced Access
1999	ESRI	GIS
1999	URISA	GIS
1998	SEMCOG	GIS
1997	NACO	Regional Mugshot System
1997	NACO	Election Reporting System
1997	NACO	Integrated Justice Data System
1997	NACO	CDROM Technologies
1996	NACO	Video Conferencing
1996	NACO	ACORN Network
1995	NACO	Office Automation
1994	NACO	Computer Software Training
1994	NACO	State Homestead Tax
1994	NACO	Property Tax Sale
1993	NACO	Electronic Document Imaging
1993	NACO	Regional CAD System
1991	NACO	County MDT Network
1991	NACO	Courts-Bindover System
1991	NACO	Municipal IT Tax Accounts Receivable

Information Technology has also received recognition in numerous publications; some of these are provided in the IT Strategic Plan Supporting Documents, Exhibit 1.

2.0 INFORMATION TECHNOLOGY VISION

A technology enabled community in which all residents, businesses and governmental units have easy access to high-quality, relevant information and information services.

2.1 Information Technology Mission Statement

The following Information Technology mission statements have been developed, and are intended to provide a high-level direction for the entire organization.

1. To provide the highest quality customer service in partnership with County agencies, citizens, communities and customers.
2. To provide information technology leadership.
3. To deploy creative and appropriate information technology for cost-effective solutions to business issues.
4. To empower IT customers to become more self-sufficient and technologically confident.
5. To encourage county departments and local governments to use information technology to improve services.
6. To support a technically competent workforce through access to continuing education.
7. To develop, maintain and distribute high-quality data in support of decision-making and the provision of government services.

2.2 Information Technology Goals and Guiding Principles

The following Information Technology goals represent broad statements of desired accomplishments:

Goal: Reduce the time and expense for acquisition, implementation and support of technology.

Guiding Principle: Commercial off the shelf software will be used when appropriate and cost-effective.

Goal: Efficient and cost effective data exchange between the county and local units of government.

Guiding Principle: A single, continuously managed communication network will be maintained.

Goal: Information systems that integrate horizontally and vertically within government organizations.

Guiding Principle: Data and technology standards will be used.

Goal: User involvement will minimize project failure and increase sustainability.

Guiding Principle: Information systems projects will be undertaken only when departments that own the processes have sufficient understanding, involvement and commitment to the

project.

Goal: Predictable and accountable use of resources and budget.

Guiding Principle: Information technology projects and resource allocation will be managed using standard project management tools.

Goal: Government employees will achieve their full potential.

Guiding Principle: Organizational and program structures will optimize productivity.

Goal: To be responsive to IT customers.

Guiding Principle: Internal organizational structures will be optimized for customer service.

Goal: Functional information systems that meet the needs and requirements of county departments, local governments and the business community.

Guiding Principle: Form strategic alliances and partnerships that involve all users in all levels of system specification.

Goal: Flexible and appropriate IT Strategic Plan.

Guiding Principle: An active working group will be responsible for the continuous maintenance and improvement of the IT Strategic Plan.

2.3 Critical Success Factors

Critical success factors are those attributes, assets and/or skills that will be needed for the successful implementation of information technology. The critical success factors are:

1. County Executive, Board of Commissioners, and other elected official support and commitment.
2. Commitment of, and support from, information technology “champions”.
3. Inculcation of technology into county business workflows.
4. Coordinated intra-agency technology involvement.
5. An openness to new technology and improved workflow.
6. Effective and applicable research and development.
7. Continuous information technology education and training.
8. The continued promotion of centralized and coordinated web presence.
9. All data will be shared across County agencies, except where security and confidentiality warrants otherwise.

10. All County agencies will be treated as equal and important partners of the IT Department.
11. Continuous development and support of information technology infrastructure, including networking, relational database, and distributed computing.

3.0 INFORMATION TECHNOLOGY MASTER PLANNING PROCESS

Oakland County Information Technology (IT) has always played an integral role in County operations. The effective use of technology remains the only feasible method of controlling and maintaining vast amounts of information required to efficiently and effectively operate the County. The staff at IT take significant pride in the Department's accomplishments and continues to strive towards more effective solutions to the County's business missions, goals, and objectives.

In 1979, a committee entitled Computer Users Advisory Committee (CUAC) was formed to ensure county-wide participation in the development of Computer Services plans and priorities. This committee was comprised of nine members who met monthly to review activities and approve plans. In October 1991, the Oakland County Computer Services Department Master Plan was developed. This document included the departments Mission, Goals, Strategies, Current Environment and Technology, Accomplishments and the Master Plan Activity for the 1991-1992 Master Plan Period. A complete copy of this document is available for review by contacting Information Technology.

With the election of L. Brooks Patterson as Oakland County Executive in 1993, a new process was instituted to ensure there was appropriate representation of all County departments and divisions. In addition this process also ensured that IT was working on the projects that had the most benefit to the County as a whole.

3.1 History of Master Planning Process

In 1996, the Department of Information Technology was facing a crisis with OVER 900 backlogged work orders for projects and resources. There was no quick way to determine the status of current projects, available manpower or estimated completion dates. The existing project tracking methods were varied; spreadsheets, databases, lists, etc. The existing work order system only tracked total hours expended and did not allow for inter-project dependencies or prioritization of work orders. Information Technology needed to end the over-commitment of manpower and reduce losses, but first IT needed to determine how to control the flow of work orders and manage projects and personnel.

In addition, IT needed a system to help deliver projects on time and within budget, and identify projects that were in trouble. Furthermore, improved service to IT customers was clearly needed, as well as improved efficiencies for IT staff and management. Therefore, in May of 1996, IT obtained funding from the Board of Commissioners for the implementation of a Project Management System.

County Executive L. Brooks Patterson delivered his opening comments at the implementation's kick-off meeting. "Efficient and progressive County operations, both now and in the future, will rely heavily on the successful delivery of IT projects. For this reason, this will be one of the most strategic initiatives for this department," Mr. Patterson said.

A Project Management Advisory Group was formed which provided the decision making needed in setting the standards, guidelines, and procedures that are necessary for a successful Project Management System. The Project Management System went into production February 8, 1997, at

which time IT staff began tracking actual hours in plans created using the new system. A major deliverable of this initiative was also to establish a Project Management Office, which provides:

- Expertise to provide on-going Project Management support and assistance to IT Project Managers.
- Mentoring of new or promoted employees to ensure those responsible for managing IT projects are fully trained in IT's standard techniques and practices.
- Providing analysis of Management reporting to provide accurate interpretation of the systems information in order to make intelligent decisions.
- Assurance and Compliance reporting and analysis to ensure ITs Project Management standards are adhered to so the benefits continue to be received.
- Facilitating Continuous Process Improvement through the dissemination of Project Management best practices.

In July of 1997, as a result of the Project Management System implementation, it was determined that IT was facing a severe resource crisis. Specifically, IT staff was over committed by 18,000 hours or 28%. This did not take into account another 36,000 hours of Outstanding Open Requests from IT customers. With this information, IT was able to identify a number of "next steps" necessary to resolve the situation. Upon the launch of the newly created Project Management System, over 30,000 hours of requested project work orders by County departments were eliminated. Few departments complained. Clearly, these projects were of nominal benefits to the departments. A Project Management System Update Report was presented to the Board of Commissioners on July 24, 1997. A complete copy of this report can be found in the IT Strategic Plan Supporting Documents, Exhibit 2.

One of the steps identified to help mitigate this crisis was the formation of Information Technology Leadership Groups to direct IT's resources to the projects that best benefit the County. These groups are made up of representatives from the various County Departments and Divisions. A budgeted amount of available hours is allocated to each group based on the IT development needs of each County Division. Additional hours are granted if there is specific funding from the Board of Commissioners for specific projects.

3.2 Leadership Groups: Managing Customer Needs

Information Technology Leadership Groups provide the vehicle for IT customers to help direct and allocate valuable IT resources to initiatives and projects that are most beneficial to the County organization as a whole.

The objectives of the Information Technology Leadership Groups are to:

- Identify Leadership Group Members and introduce projects from their constituents.
- Provide uniform project definition.
- Evaluate project value to the County organization and County constituents.
- Determine resource allocation through project prioritization with departmental input.
- Assist IT Project Managers in the planning of inter-dependent projects.
- Identify ways to better leverage existing resources, both IT and Business Unit.

These objectives provide the basis for the various Leadership Groups to operate and partner with the Department of Information Technology as an integral part of an on-going Annual Master Planning Process.

3.3 Annual Master Planning

The overall goal of the Master Planning Process is to develop a clearer picture of the way Information Technology's development resources can support the County's short and long term information needs. The Master Plan:

- Assists County Business Units in communicating to IT the direction and priorities of projects.
- Aids IT in allocating appropriate scarce resources to support project requests.
- Provides a framework for IT Leadership Groups and IT management to continually measure and re-evaluate information systems efforts.
- Supports IT in its determination of the types of technologies that will be of use to future organizational applications.
- Assists IT in charting strategies and individual project plans to support the business units present and future information needs.

The prior Master Plan of 1991 had become out-dated; therefore an updated Master Plan (1998/1999), resulting from the new processes was developed in 1997 and was tied to the overall budget based on equivalent hours. The hours available were determined based on the number of positions assigned to the department and the Professional Services budget. Based on this information, IT was able to determine the total annual labor hours available for project work. This Master Plan was limited to the utilization of the budgeted positions and professional services allocation of all IT Divisions with the exception of Data Center Operations.

Information Technology now has a revolving two-year master plan in place, which clearly defines the strategic projects that will be undertaken, and is revised on an annual basis to include the next year's projects. This plan represents the commitment of IT to partner with the County's various departments and divisions in an effort to effectively utilize Oakland County's scarce and costly IT development resources.

The implementation of the Project Management System and the development of the IT Master Plan has allowed IT to better manage customer expectations with firm data about available resources and current projects. Departments outside of IT now have a confidence level that IT projects are under control and that their projects will be completed on schedule.

In October of 2000, each of the Leadership Groups met and prioritized all of their outstanding projects/requests. The result is a prioritized list of all Planned Projects for the 2001/2002 Master Planning period (9/30/00 through 9/27/02). A complete copy of the current Master Plan as well as the two previous plans can be found in the IT Strategic Plan Supporting Documents, Exhibits 3, 4, and 5.

As part of the Master Planning Process, the Leadership Groups formulate and prioritize their IT project requests according to the Master Planning Process (see Leadership Group Process and Procedures, located in the IT Strategic Plan Supporting Documents, Exhibit 6), this includes a number of steps:

- **Project Definition and Prioritization** includes the creation of a Project Scope and Approach document. This standard document provides the basis for all projects to be evaluated and controlled consistently across the County organization. It includes a project goal, business objectives, major deliverables, approach, and benefits such as cost savings, and intangibles. Once preliminary project Scope and Approach documents have been

developed all requested projects involving that Leadership Group's functional areas will be reviewed, assessed, and prioritized by the Leadership Group.

- **Project Assessment Criteria** is provided so that the Leadership Groups have the ability to assess the expected value of a project and provide a common basis for comparing projects and as a result prioritize projects. During this Project Assessment and Evaluation Process, the Leadership Groups consider a number of factors, including:
 - **Mandated/Funded Projects.** A mandated project or one funded through a Board of Commissioners resolution or a Grant will be prioritized higher than a project without associated funding. Also, a project that will generate additional revenue for the County will attain a higher priority.
 - **Financial/Cost Benefit Analysis** is also reviewed as part of the Financial Project Assessment phase. At this phase, it is determined if the project costs will be recovered within a specific time frame. In January 2000, the Common Services Leadership Group took this process a step further, and established criteria for a payback period beyond the definition in the Leadership Group Process and Procedures. Specifically, the Common Services group approved the establishment of a payback period of 6 years for project prioritization, stating this is consistent with the criteria used by the Board of Commissioners in the appropriation of funds from the Designated Reserve for Operational Improvements.
 - **Impact, Risk, and Operational** factors are also considered in determining the priority of a project. Complete definitions are included in the Leadership Group Process and Procedures located in the IT Strategic Plan Supporting Documents, Exhibit 6.
- **Project Sizing and Resource Allocation** is the next step in the process. Once the project has been approved and prioritized by the Leadership Group, IT will provide the final project size, including labor and cost estimates for the project.
- **Master Planning** requires IT to prepare the overall Master Plan for the approved projects with the resources allocated. This involves development of a detailed project plan, which includes tasks, resource assignment, budget and timeline for the project. Each project is submitted to Project Management Office (PMO) for an Assurance & Compliance review, which ensures the plan meets all IT's standards. These projects become part of an internal Project Management Budget Control Process. Specifically, all projects are monitored on a weekly basis for any variances that may impact the project completion date or budget. These variances are presented to the IT Steering Committee, which meets weekly and is comprised of the IT Director, Deputy Director and Division Managers. In addition to variance monitoring, the Steering Committee approves all project plans submitted and addresses any issues (via the Issues Management Process) that may be impacting a project.
- **Project Review** involves the individual Leadership Group meetings for final approval of Master Plan projects and their priorities. Project Reviews continue as the Leadership Groups meet on a quarterly basis and the individual Project Managers meet with the respective Project Sponsors.

3.4 Plan Monitoring, Management and Budgeting

On a quarterly basis, the Master Plan Quarterly Status Report is distributed to all Leadership Group representatives and the Board of Commissioners. This report includes resource utilization, project status, project estimated and actual hours variance, and estimated and actual start and end date variance.

Leadership Groups continue to meet on a quarterly basis to review project progress and address any project variance which would require re-allocation of resources, re-prioritization of approved projects, as well as any new projects being submitted to the Leadership Group for review. If a new project is submitted and approved by the Leadership Group it is added to the prioritized list and the status will be reflected in the next Quarterly Status Report.

Historically, the Master Plan has been tied to the overall budget based on equivalent hours and IT has managed project hours and financials separately. However, effective April 1, 2001 IT began tracking financial information against each project in the same system.

In addition, a study regarding IT rates is being conducted by DMG Maximus. The objective of the rate study is to analyze the IT Services and billing rate structure (both internally and externally). The results of this study will impact the IT budget for years 2002–2003. In an effort to further link the Master Plan with the IT Budget, this rate study will assist IT Management in the adjustments to both the revenue and expenditures of the department.

The reduction in budgeted hours for the IT department is the first step toward the coordination of the Master Planning Process with the Financial Process. At the Leadership Group Meetings held April 24-27, 2001, the groups made a collective cut of 20,000 hours, or approximately 1.5 million dollars to reduce IT's budget (specifically in the Professional Services area). The Leadership Group Representatives were able to review the prioritized projects and determine where to make the cuts in order to reduce the number of hours available for IT projects in this Master Plan period. The hours and projects that have been cut can be seen in the updated Master Plan Quarterly Status Open Requests.

Also, through the implementation of information technology initiatives, County Departments and the County's General Fund realize financial benefit. A specific example of this would be a reduction in the Equalization Division staff of 4 positions, directly resulting from the implementation of laborsaving technology provided by IT. A Resolution will be presented to the Board of Commissioners for approval of a Cost Reduction Incentive Management Program (CRIMP) in regard to the above referenced cost reduction.

3.5 Analysis: IT Labor Distribution

IT's Project Management System now contains historical actual hours for IT staff from January 1, 1997. As a result of monitoring over the past four years, IT has been able to make a number of improvements to the planning processes, including project estimating. Analysis reveals that the Support and Maintenance estimates (as compared to the original baseline estimates) have improved significantly over the past years.

The planning and tracking of development resources are categorized to describe the various nature of work within the Department of Information Technology. These common definitions are a critical success factor to providing reliable data for planning and management reporting and analysis. The following are the 6 major labor categories:

<u>Non-Project</u>	All leaves of absence with or without pay, on or off-site time for formal training, attending vendor demonstrations or trade shows, team and department meetings, employee evaluations, attending County-wide meetings related to Personnel, Retirement etc., status reports, Team Workbench time entry, Payroll attendance, e-mail and U.S. mail, employee evaluation preparation, meeting with supervision regarding resource needs, budgeting, management meetings, and interviewing.
<u>Team Management</u>	Resource tracking, rescheduling, staff reallocation, and resource leveling across all projects.
<u>Customer Support</u>	New request review, preliminary or detail scope and approach, office automation requests, installation work order preparation, customer instruction and training, phone calls and e-mail response. Cross-training and system orientation.
<u>System Maintenance</u>	Consists of changes made to software to fix errors and all hours associated with the resolution of Problem Reports. It also includes time investigating the problem prior to determining it is a bug. Maintenance can also be initiated by the need to include new variables, such as new departments, cost codes, account numbers, or revised validation criteria, and development of one-time programs to fix data problems caused by bugs or users. Maintenance is usually performed "on demand". Includes standard new software releases and PTF's (Program Temporary Fix). System monitoring for Technical Systems and Networking.
<u>System Enhancements</u>	Includes any modifications to an operational system, either to expand its current capabilities or to satisfy changed business, technical, or management requirements, or mandated changes, or to make operational changes in areas such as user procedures, production schedules, file retention procedures, or job instructions. Custom or canned feature of an existing package.

New Development

New Project Development is comprised of new systems work which includes construction of a new system, replacement of a manual system by an automated system, a major extension of the capability of an existing system, or the identification, selection, installation, and implementation of software packages.

Analysis reveals the types and ratio of labor necessary to operate IT as shown by the following graphs in Figures 1 and 2. Specifically, in the year 2000, 74% of the labor was fixed in nature (Customer Support, Maintenance, Team Management, and Non-Project Time) and only 26% was discretionary for enhancing existing systems or developing new systems. The fixed labor is required simply to maintain the status quo and support existing systems and customers.

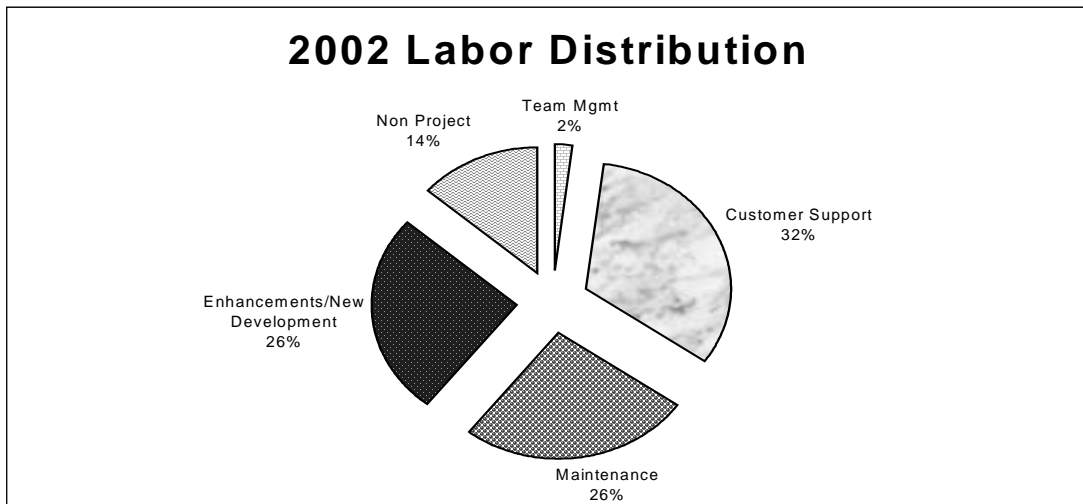


Figure 1: 2000 Labor Distribution

The trend for the first six months of the 2001 Master Plan reveal 78% fixed labor and 22% discretionary to work on developing or delivering new systems. This shows a continued trend over the past four years of increasing Support and Maintenance hours for existing systems or purchased “off the shelf systems”. Therefore, in order to implement new systems beyond the 22% available capacity, additional funding and/or resources are required.

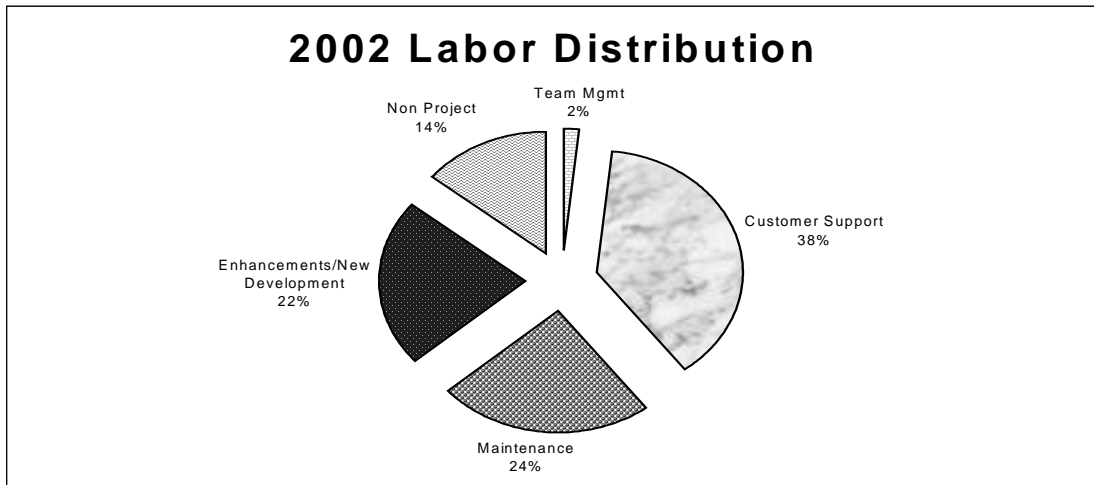


Figure 2: 2001 Labor Distribution

As demonstrated by the pie charts, IT is spending the majority of time supporting its customers. The following Support and Maintenance Activities (listed by Leadership Group) make up 62% of available IT staff time:

Courts/LE 00/01 Support & Maintenance	
Courts/Law Enforcement Leadership Group Support	Comm Corr/Probation/Pretrial Support
Clerk Administration Customer Support	Clerk Vital Statistics Customer Support
Clerk Legal Records Customer Support	Elections Customer Support
Circuit Court Customer Support - AD, J, LR	Circuit Court Jury Clerk Customer Support
Circuit Court Assignment Clerk Customer Support	Circuit Court Mediation Customer Support
FOC Customer Support	Friend of the Court/CSU Customer Support
District Court Customer Support	Probate Court--Juvenile Customer Support (PCJ)
Probate Ct.--Judicial Admin. Customer Support	Probate Court--Court Services Customer Support
Probate Court--Estates Customer Support	OCSD Customer Support
Prosecuting Attorney Executive Staff Customer Support	Justice Maint. Budget - County Clerk
Clerk Vital Statistics Maintenance	Justice Maint. Budget - Circuit Ct Admin
Elections Maintenance	Justice Maint Budget - Circuit Ct Assign Clerk
Justice Maint Budget – Circ. Ct Jury Clerk	Friend of the Court Maintenance Budget
Justice Maint Budget - Circuit Ct Mediation	Comm Corr/Probation/Pretrial S Maint Budget
District Court Maintenance Budget	Probate Court Contract Mgt. System Maint.
Probate Court Appointed Attorney System Maint.	Probate Ct. Adoption System Maint.
Probate Court Juvenile System Maint.	Probate Court Wills System Maint.
Probate Court Estates System Maint.	Probate Court Clinic System Maint.
Probate Court Case Work System Maint.	Probate Court Youth Comm. Service Sys. Maint.
Probate Court Youth Assistance Sys. Maint.	OCSD Systems Maintenance
Prosecuting Attorney Maintenance Budget	

Finance/Admin 00/01 Support & Maintenance	
Finance/Admin Leadership Group Support	County Executive - Customer Support
Auditing Customer Support	CE Corp. Counsel Customer Support
Performance Series Customer Support	Time & Labor Customer Support
Fiscal Services Customer Support Budget	FS Reimbursement Customer Support Budget
Parks & Recreation Customer Support Budget	CS Parks & Recreation Customer Support Budget
Materials Management Customer Support Budget	CS Support Services Customer Support Budget
FMO Comm Cost Customer Support Budget	Personnel Customer Support Budget
PeopleSoft Customer Support	IT Customer Support
IT Administrative System Customer Support	Treasurer Customer Support Budget
Drain Water & Sewer Cust Support Budget	Public Services Employment & Training Customer Support Budget
CE Auditing system maintenance	Performance Series Maintenance Budget
Time & Labor System Maintenance Budget	Fiscal Services System Maintenance
Reimbursement System Maintenance Budget	Parks Inventory System Maintenance
CS Support Services System Maintenance Budget	FMO Comm Cost Interface Maintenance Budget
PeopleSoft System Maintenance Budget	Personnel System Maintenance Budget
IT Administrative System Maintenance Budget	Treasurer's Cash Accounting System Maint. Budget
Drain - Water & Sewer System Maintenance Budget	

Governmental Services 00/01 Support & Maintenance	
Governmental Services Leadership Group Support	CS Aviation Customer Support
Human Services Health Customer Support	Human Services Medical Care Facility Customer Support
Children's Village Customer Support	Human Services Medical Examiner Customer Support
Public Services Veterans Customer Support	Public Services MSU Coop. Extension Cust. Support
Public Services Animal Control Customer Support	Oakland County Label System Support
CED Development and Planning Customer Support	Community Development Customer Support Budget
CED Community Development Customer Support	BOC Admin Customer Support
BOC Library Board Customer Support	CS Parks & Recreation System Maint. Budget
Central Services Parks & Recreation System Maintenance Budget	Human Services Health Div. CHAMPS Sys Maint.
IMM Health Division Immunization Maintenance	HDC Environment Health Download Maint.
CC3 Substance Abuse System Maint.	PWS Pool Water Sample System Maint.
MCF Pharmacy System Maintenance	CV JAMS Syst Maintenance
Medical Examiner Case Mgt. Sys. Maint.	Public Services MSU Coop. Extension Sys Maint.
DOP Public Services Animal Cont. Sys. Maint.	Community Development System Maint. Budget

Land 00/01 Support & Maintenance	
Land Leadership Group Support	DISC Team Support
Equalization Customer Support	Register of Deeds Customer Support
Treasurer Customer Support	CVT Customer Support
Equalization Division System Maintenance Budget	EAM Master Appraisal System Maintenance Budget
Register of Deeds Systems Maintenance Budget	DTX Delinquent Tax Maintenance Budget

CVT Systems Maintenance Budget	WAS/TAW Access 2000 Convert
--------------------------------	-----------------------------

Common Services - DW/EA 00/01 Support & Maintenance	
IT DW/EA General Customer Support	DW/EA General Maintenance Budget
Equalization Customer Support	Clerk/Register of Deeds DW/DS System Maint.
Planning and Economic Development	Health Division DW/DS System Maintenance
Sheriff Customer Support	Fiscal Services DW/DS System Maintenance
Treasurer Customer Support	Courts DW/DS System Maintenance
Clerk/Register of Deeds Customer Support	Drain DW/DS System Maintenance
Health Division Customer Support	Auditing DW/DS System Maintenance
Fiscal Services Customer Support	CVT DW/DS System Maintenance
Courts Customer Support	Enhanced Access Framework System Maintenance
Drain Customer Support	Enhanced Access Product System Maintenance
Auditing Customer Support	Digital Pictures System Maintenance
CVT Customer Support	Business Objects System Maintenance
Equalization DW/DS System Maintenance	Prism System Maintenance
Planning and Economic Development	Trillium System Maintenance
DW/DS System Maintenance	HP System Maintenance
Sheriff DW/DS System Maintenance	Oracle System Maintenance
Treasurer DW/DS System Maintenance	SQL/Server System Maintenance

Common Services - GIS 00/01 Support & Maintenance	
Parks Dept. GIS Implementation Support	Aviation GIS Implementation
Health Division GIS Implementation Support	MSU Extension GIS Implementation Support
GIS Project Support	ESRI Software Implementation & Support
GIS Hardware Support	Training & Outreach
GIS Regional Coordination & Presentations	Enterprise Data Support
GIS Web Page Support	GIS Grant Administration
GIS Program Management	EMS GIS Implementation Support
CLEMIS GIS Implementation Support	CED GIS Implementation Support
Equalization GIS Implementation Support	ROD GIS Implementation Support
Treasurer GIS Implementation Support	Drain Commission GIS Implementation Support
CVT Development Issues - GIS	Road Commission GIS Implementation Support
ArcGIS Software Upgrades	

Common Services - Courts2 00/01 Support & Maintenance	
IMAGING SYSTEMS SUPPORT	Imaging Systems Maintenance Budgets
FileNET 3.X Upgrade	

PMO 00/01 Support & Maintenance	
IT - PMO Project Management Office Activities	IT - Customer Support - OA
Quetzal Training/Support/Refinements	PMO Quarterly Follow Up Sessions - NIKU
Outlook Upgrade	Office Automation Training Support
Training Schedule Database/Course Evaluation	Project Management System Maintenance
Lecture Hall Upgrade	Quetzal Help Desk System Maintenance
	Enterprise Server Compiler

Tech Systems 00/01 Support & Maintenance	
IT SysDev Customer Support	Fax Servers - Support/Maint
IT Customer Management	Other Minor Project Development Support
IDMS Maintenance Budget	Oracle Maintenance Budget
IDMS Enhancements	Oracle Enhancements
Mainframe Admin/Maint/Help	Network Server Admin/Maint/Helpdesk
HP Systems Admin/Maint/Helpdesk	Network Infrastructure Admin/Maint/Helpdesk
Clemis Admin/Maint/Helpdesk	Citrix Admin/Maintenance
NT Server Admin/Maintenance	Web Servers Admin/Maintenance
Misc Servers Admin/Maintenance	OAKNet
Security Admin/Maintenance	ISP Support and Maintenance
Automation Alley	Presentations/New Media

CLEMIS 00/01 Support & Maintenance	
Purchasing & Accounting	Computer Support
Severe Weather Response	Disaster Response
Emergency Planning Assistance Outside Org	ARPSC
General Public Information Activities	OC Crisis Response Org
Facility Emergency Plans	SARA Title III
Emergency Training and Development	Severe Weather Awareness Week Campaign
Volunteer Work	Organizing
New Sirens	Siren Relocations
9-1-1	FRMS
Orientation	CLEMIS Training
CLEMIS Customer Support	OAKNet MAN/WAN Project
Develop/Maintaining EMA Compliance	Facility Emergency Plans
Weapons of mass Destruction	Domestic Preparedness Assessment
Project Impact	MDT System Maintenance
Sirens	Communication & Warning systems
CLEMIS Syst Maintenance	

A current status of these activities and hours can be found in the Master Plan Quarterly Status Report in the IT Strategic Plan Supporting Documents, Exhibit 7.

4.0 MAJOR INFORMATION TECHNOLOGY PROGRAMS AND PROJECTS

The major computer and related programs discussed herein are not meant to be an all-inclusive list of activities underway in the Information Technology Department. These programs have been undertaken to improve County services and, to the extent practical, services performed at the city, village and township (CVT) level as well.

As referenced previously in the discussion of Support and Maintenance activities, it is important to note that each of these initiatives listed below require Support and Maintenance once the system is implemented. As part of the annual planning process, for each new system implemented by IT, hours are set aside for the on-going support of that system.

Listed below is a high level overview of a number of projects currently underway at IT, presented by Leadership Group. As outlined in the Master Planning process, each project undertaken by IT has a detailed Project Scope and Approach document and Project Plan prepared. This document includes the Project Goal, Business Objectives, Major Deliverables and Benefits. This information has been summarized in a Project Goals and Objectives Summary, located in Appendix B. In addition, the project status is provided in the Master Plan Activity Report found in Appendix C.

4.1 Courts / Law Enforcement Leadership Group

The Courts/Law Enforcement Leadership Group represents the following functional area departments:

- Circuit Court
- County Clerk
- District Court
- Probate Court
- Prosecutor
- Public Services
- Sheriff

The following Programs and Projects have been approved by the Courts/Law Enforcement Leadership Group:

4.1.1 Friend of the Court / CSES / Centralized Collections and Reimbursements

Over the past dozen years, the federal government has issued many mandates to implement the Child Support Enforcement System (CSES). In 1988, the federal government mandated that a state- wide child support enforcement system must be in place no later than September 30, 1995 (later extended to September 30, 1997). In 1996, federal legislation required that all collections and disbursements be performed centrally by October 1, 1999. The State has repeatedly failed to meet the deadlines imposed by the federal government. Further, because the State was not successful in complying with federal mandates by installing a CSES system that complies with federal requirements and because it did not allow for high volume counties to participate, the State announced it would abandon this system in roughly 70 counties.

By the end of calendar 2000, the alternative approach (called high volume assessment or HVA for short) was determined to be too costly to implement. The State has now begun deploying the CSES to other counties not presently on the system, including Oakland County. The County has recently completed the efforts necessary for the State Disbursements Unit effective January 15, 2001. The County has also signed a Memorandum of Understanding effective March 2, 2001 and is actively working towards the implementation of CSES in Oakland County by September 30, 2001. Although

this project has been imposed on the County by the State of Michigan, the County is looking for ways to ensure that the constituents of Oakland County will benefit from the new system.

4.1.2 Judicial Information Management System (JIMS)

Over the past several years, the County sought and received a detailed functional analysis of the Courts management information system needs. Presently, each Court system (mainframe based) is generally separate, although certain functions are similar in any court operation. During 1998, the County released a request for proposal to consolidate and improve the three separate systems. Unfortunately, only one vendor submitted a proposal to serve and it was considered to be insufficient to address the County's needs.

During fiscal 2000, the County awarded a contract on this Program. The Delinquent Tax Revolving Fund covered \$5.0 million in fiscal 2000 as partial Program funding. The Program will be funded through future appropriations from the County's Delinquent Tax Revolving Fund over the next several years of implementation.

A later phase of this Program, which is still to be funded, will involve the electronic submission and access of Court records over the Internet. When the County completes this phase of the JIMS Program, substantial counter traffic in the Clerk's office should be reduced.

In late March 1999, the State Court Administrative Office released a report calling for a Statewide court computer system. Funding is proposed from increased local court fees. The State will collect and then distribute funds for these technology improvements. The impact on the County's court system improvements by this new Statewide initiative is unknown.

e-Traffic will be incorporated in the new system where constituents who have received a traffic ticket can logon to the Internet and pay their ticket with a credit card without ever going to the court, which will increase collections and reduce staff workload. e-Filing will allow attorneys to file and serve documents via the Internet along with accessing documents already filed, documents served and those filed in other cases. Courts in turn can review, accept and confirm these filings and issue and serve court orders.

4.1.3 Jail Management System

While the funding for the jail management system was initially included in the COPS MORE grant request, the federal government did not provide funding for this Program as part of the grant award. The need to replace this system continues. In the fourth quarter of 2001, the County will launch a need assessment leading up to the creation and issuance of a request for proposal from qualified vendors for the replacement. Funding will arise from bond proceeds in connection with the construction of the work release facility or District Courthouse.

4.2 Finance / Administration Leadership Group

The Finance/Administration Leadership Group represents the following functional area departments:

- Personnel
- Management and Budget-Fiscal Services
- Management and Budget-Purchasing
- Management and Budget-Reimbursement
- Treasurer
- County Executive
- Facilities Management
- Corporation Counsel
- Central Services
- Information Technology

The following Programs and Projects have been approved by the Finance/Administration Leadership Group:

4.2.1 Human Resource / Financial Information System

The County's Human Resource / Financial Information System (HRFIS) which is installed and operational, involved just over \$7 million in costs funded through General Fund operations. In 1997 and 1998, the County replaced its general ledger, disbursements / accounts payable system, cash receipting, investment management, payroll preparation, and fringe benefit management. The County's HRFIS is comprised of two separate software packages linked together, financial and personnel / payroll. The vendor for the financial component (KPMG, LLP) sold its consulting practice to another company. With the sale went the software business. At present, it is difficult to determine the level of support and enhancements anticipated from the new company.

The anticipated equipment upgrades in the near term involve the movement to an improved version of the current financial information system (Version 2.0) as the vendor updates the system's functionality. The principal function upgrades involve accounts receivable, billing, time and labor distribution of costs, and other functions. All amounts necessary for funding the upgrades have been designated in General Fund equity and / or are appropriated at September 30, 2000.

Oakland County implemented PeopleSoft, the application used for all human resource processing, has had minor releases, upgrades, and enhancements since its installation in 1998. The latest upgrade not only includes product upgrades, but also is deployed in a web-based environment. Additional enhancements to the HR system will include the implementation of 3 major PeopleSoft modules in the areas of Recruitment, Employee Self-service, and Workflow.

The Recruitment module will be scheduled for implementation within the next two years. The goal of this module is to enhance the recruitment process and reporting capabilities so that the County achieves greater hiring/promoting diversity in its workforce. The business objectives are to streamline the hiring/promotion process, administer effectively employee and non-employee applicants for job postings, maintain expense information related to recruitment, and to perform applicant to job matches while ensuring efficient hiring of qualified applicants. Additionally, to integrate Human Resource information so that recruiting data is leveraged should the candidate become an employee and to ensure that the County has an effective audit trail in the event of litigation.

The major deliverables for the Recruitment module will include: an application for entering and tracking of current and historical recruitment related information, an integration of recruitment information with Human Resource information, and an improved process for scheduling interviews. This module will improve service by increasing the efficiency for applicants and County departments, and develop “smoother” hiring and promotion processes.

The goal of the Employee Self-Service Module is to promote interactive management of employee data so that enhanced reliability and availability enables increased leveraging of this information asset. This implementation will enhance written communication between the County administration and employees in a manner promoting efficiency and effectiveness. Additionally, it will ensure information received from employees has the benefit of employee concurrence and immediate availability to County departments, and it will maintain an audit trail of formal human resource related communication.

Once implemented this Employee Self-Service Module will deliver a well-engineered web-based interface for the recording of benefit and personnel related information. In addition, it will provide the ability for employees to update their benefit and personal information while providing an application fully integrated with back office systems. This module will reduce cycle times associated with employee requests, reduce costs of printing and copying, encourage informed decision-making, and facilitate efficient communication. Furthermore, it will enable employees to maintain their own data thereby significantly enhancing the accuracy of their records.

The goal of the Workflow Module Implementation is to establish a workflow infrastructure supporting streamlined (reengineered) event-driven business processes so that the County can respond with increasing agility to mandates and customer expectations. This module will formalize communication channels and process flow while increasing the velocity of information dissemination, provide functional access to key data for decision-making, and enhance document and retrieval effectiveness through the selective use of imaging technology.

Once implemented, a coherent set of workflow tools and processes will be delivered. After two years, the County, will begin reaping the benefits which are often systematic as “process thinking” becomes endemic and incremental productivity gains compound over time.

4.2.2 Web Vendor Processing

The Purchasing Division will be expanding its existing web-based vendor registration system. The County’s web activities have focused on information that is generally static or involves publishing information that is not integrated with core management systems. The next step for Oakland County is to dramatically increase the value of its previous efforts through the implementation of a web-based procurement system that is fully integrated with its existing purchasing and financial systems.

This program has been requested to meet the business objective of giving vendors enhanced capabilities resulting in reduced staff time entering information manually and looking up vendor information, along with potential revenue from listing community bids. The major deliverables for this system will provide the capability for a vendor to change their personal information, retrieve a bid history on items, and track the status of payment owed. Additionally the County will have the capability to post open bids, accept bids on open items, post the bid summaries, post bids for the local communities, and send open and winning bid information to vendors via email.

Financial benefits of this re-write will consist of reducing staff time in the areas of vendor information

changes, requested bid history, vendor payment information and advertising open bids. Allowing vendors to bid through the application will reduce postage, and potential revenue could be collected for listing local communities' bids.

Additional benefits of this electronic procurement system will give vendors 24x7 access along with enhanced functionality, decrease the number of data entry errors as vendors are entering their own information, and decrease the amount of time staff is spent on vendors requests.

4.2.3 Water & Sewer Billing System Replacement

The Water and Sewer Division of Oakland County has requested the purchase of a Web based system to replace their existing billing system. The goal of this program is to improve service to County municipal customers so that the customer-base remains intact. The department expects improved service as customers experience confidence in the County as a committed supplier. This increased confidence will result from the Water and Sewer division taking advantage of contemporary computing tools that provide options and choices for their customers. Other benefits include increasing the velocity of information flow which will result in the timely identification of errors and opportunities for process improvement. County administrative effort will be reduced as well, as customers take advantage of effective self-service capabilities. This new billing system will impact over 35,000 customers.

4.2.4 Internal IT Initiatives

Information Technology is part of the Finance / Administration Leadership Group. Therefore any project requiring IT Development resources must be presented to this group for approval. There are a number of internal IT initiatives that will need to be presented to the Leadership Group for approval. There are also a number underway that do not require development resources or are considered Support and Maintenance of existing systems, some of these are listed below.

- Further automation of the IT inventory, workorder and billing system is required and is currently being reviewed. There are a number of manual processes that can be eliminated with further automation of the system.
- IT has automated the IT time tracking system for Professional Service employees. Previously this was a manual system.
- Personnel Project to review all Job Descriptions and Qualifications within the IT Department. This may result in a reorganization of the IT Structure.

4.3 Governmental Services Leadership Group

The Governmental Services Leadership Group represents the following functional area departments:

- Board of Commissioners
- Central Services
- Public Services
- Community and Economic Development
- Human Services

The following Programs and Projects have been approved by the Governmental Services Leadership Group:

4.3.1 e-Health

The Environmental Health Unit of the Oakland County Health Division is currently operating in a manually intensive environment. They are responsible for over 13,000 active files and process over 143,000 pieces of paper annually. Virtually all of the required forms are completed manually and pass through several hands prior to being filed.

The “eHealth” program was proposed to reduce the labor associated with the restaurant, well, on-site sewage and swimming pool field inspection activities, resulting in the elimination of staff through attrition. eHealth will integrate and electronically streamline the business functions by taking advantage of GIS, GPS, imaging, Data Warehousing and Web based technology.

The “e” solution will be the catalyst to an improved process that will maximize staff efficiency while serving customers/clients and simultaneously allow Environmental Health to efficiently meet the State Minimum Requirements (MPR’s). In the area of restaurant inspections, it will provide a uniform and consistent restaurant inspection report to the establishment owner on-site before the inspector leaves the facility. Additionally, by imaging client records, the 3 Lektrivers currently in use will be retired freeing valuable office space and eliminating maintenance costs. These images will also reduce the need for multiple copies of documents for various staff and allow search, retrieval, and distribution of information more efficiently. The e-Health Program will utilize the County’s standard Web and LAN based imaging infrastructure and environment.

The implementation of eHealth has an estimated completion date of two years from the project start date. This aggressive plan will be met by employing an iterative project management technique, which will provide incremental business value by releasing a usable version of eHealth approximately every ninety days. Co-location of the project team will be the strategy used for rapid decision making and agile team interaction. This interaction will be critical to collaboratively defining deliverables every two weeks. An 18-month payback period will be used to determine if a particular lower-level business process should be automated. eHealth will impact over 80 users. Customer service will be transformed by enabling customers with direct access to pertinent information. Additionally, incremental gains are anticipated through the increased likelihood that process steps are consistently executed. e-Health will be the first major system implementation utilizing the County’s new web development standard.

4.4 Land Leadership Group

The Land Leadership Group represents the following functional area departments:

- Register of Deeds
- Treasurer
- Drain Commissioner
- Management and Budget-Equalization

The following Programs and Projects have been approved by the Land Leadership Group:

4.4.1 Assessing / Equalization / Property Tax: Land Records

In 1994, State residents passed Proposal A (property tax limitation amendment). The County’s mainframe system for assessing, equalization and property tax billing and collections systems (referenced herein as land records system) used by the County departments and many CVTs had been criticized. It did not contain new requirements under Proposal A. Then again, most computer systems have just recently become compliant.

In the fall of 1997, the County undertook a strategic planning initiative (costing roughly \$375,000 and

funded by the County's General Fund) in cooperation with the County's Equalization Division, Register of Deeds, and Treasurer's Office. Local Assessors and Treasurers also participated in this planning effort. This strategic plan identified the needed improvements to the County's land records systems. Projects identified as JAD (Joint Application Development) Phase I were presented to the Board of Commissioners and \$552,500 was appropriated towards the most serious issues that will benefit not only County departments, but also CVTs.

Presently, approximately 40 of the County's 61 CVTs use the County's land records system for assessment, economic development, and other purposes. In 24 communities, the Equalization Division functions as the CVTs' assessor under a contractual fee arrangement. The sharing of land record information enables the Equalization Division and local CVT assessors to perform their functions more effectively and cost efficiently.

In late 1998, the County and its CVTs identified high priority improvement Programs needed in the land records system (identified as Phase I). Improvements to the existing system were determined to be more cost effective than the replacement of the entire land system (potential cost of \$8 million or more). A report was prepared which prioritized Phase I Programs in terms of hours to correct the deficiency, costs and funding. The Board of Commissioners appropriated \$552,500 towards the most serious issues that will benefit not only County departments, but also CVTs. The Programs were initiated in the fall of 1998.

The Phase II and Phase III efforts were funded by the Board of Commissioners in fiscal 2001, and included \$556,665 and \$360,000 respectively toward the programs that are currently underway, see the Master Plan Quarterly Status Report located in the IT Strategic Plan Supporting Documents, Exhibit 7.

An in-depth study of the JAD session use case documents, completed in the second quarter of 2001, identifies the current status of the JAD initiated projects. The status report, located in the IT Strategic Plan Supporting Documents, Exhibit 8, contains a project overview, and informational bullets on completed tasks, tasks in progress and future projects.

In the spring of 1999, the County's Equalization Division began taking digital pictures of commercial and residential property within the County. By the end of 2000, the pictures (roughly 300,000) were processed and available on the County's server. The remaining share will be completed in the summer of 2001 with processing occurring in the fall. The pictures have been taken for statutory assessing purposes and to facilitate E9-1-1 dispatching of public safety vehicles (police, fire, EMS) at night.

4.5 Common Services Leadership Group

The Common Services Leadership Group represents the following functional area departments and is responsible for prioritizing projects that benefit the entire County, specifically; GIS, Data Warehousing, Enhanced Access and Document Imaging:

- All (Chairperson from each of the Leadership Groups)
- GIS Steering Committee

The following Programs and Projects have been approved by the Common Services Leadership Group:

4.5.1 Geographic Information System (GIS)

The County has developed a robust GIS containing substantial land-related data and features. The base map, which is comprised of parcels of property, cost approximately \$7.5 million to construct. These costs were being borne by the County's General Fund (roughly \$4.7 million) and remonumentation program (to be funded by the State over a 10-year time frame; roughly \$2.8 million). The remonumentation and parcel fabric was completed in the first quarter of fiscal 2001. Funding from the State to repay the above should begin in 2002.

The base map covers 910 square miles and approximately 440,000 parcels of property. The cost to create this base map information is singly the most significant barrier preventing most County departments (individually) and CVTs from entering into a GIS Program. Oakland County has absorbed the cost of creating the base map centrally and is maintaining it. The County departments enjoy immediate access to parcel changes upon commitment to the publishing server. Quarterly, the base maps and related centralized files are transmitted to the CVTs. In the future, OAKNet will serve this information up to the CVTs upon request.

This enterprise wide approach to GIS management enables County officials to better perform their functions and by sharing this information with the CVTs, benefiting them as well. With this enterprise wide approach undertaken in creating this base map information, the County has enabled many of its CVTs to enter the GIS world. In addition, the County has effectively standardized the GIS data and software, which enables the transmission of County data to the CVTs and visa versa.

The County's GIS has become a significant component to the CLEMIS records management, E9-1-1 computer-aided dispatch, and criminal analyses (that is, law enforcement) to effectively improve resource allocations targeted at criminal activities. The fire departments are beginning to consider its potential in building pre-fire planning information and fire hydrant maintenance.

Several other GIS uses, include but are not limited to:

- Infrastructure management - DPW, drains, sewers, wetlands, roads, etc.
- Public health initiatives – septic tanks, wells, environmental health, epidemiology, etc. Several Programs are underway.
- Community and economic development - census, location of businesses, economic planning, etc. Several projects are underway.
- Assessing / equalizations - boards of review, valuation, etc.
- Gypsy moth suppression - the County created a module that would enable the tracking of resident's complaints, creation of spray blocks, notification of spray programs, and

- finally control via helicopter of the actual spraying program.
- Airport - noise complaint tracking and management.
- Vehicle routing (road centerline file). Nearing completion.

The Drain Commissioner has initiated the largest program to date in the use of the GIS for infrastructure creation, planning, operations, and maintenance. The federal court has been very active in the GIS arena for various local watersheds and is encouraging the use of GIS as well.

The County's orthophotography is generally flown every three years; such orthophotography is at a low level and very accurate. Previously, the flight did not contemplate the output to be used in a digital manner. In April 2000, the County's digital orthophotography was flown (i.e. low-flight). This Program will be used to capture land features, among other purposes. In addition, a high-flight was conducted in infrared photography. This later Program will be used to assist in locating and mapping wetlands, impervious surfaces, and other environmental purposes. This information will be critical to economic and infrastructure (namely, Drain Commissioner) planning throughout this decade. The single flight by the County served to mitigate many CVT flight initiatives otherwise completed at varying standards. The costs that would be incurred by CVTs individually have been estimated to significantly exceed the County's single flight cost.

The GIS Utility and the Planning and Economic Development Services Division have recently begun implementation of the One Stop Shop – Decision Support Center. Focus has been placed on the development of a new web enabled GIS-based kiosk, the integration of other public access programs (@ccess Oakland and the Website Redesign Project), and the development of customer service and technology-oriented staff. Funding for the development of the kiosk is already in place through the County GIS Program. Future phases will include additional e-government services, County data and the enhancement of local data and services. The GIS Strategic Plan is located in the IT Strategic Plan Supporting Documents, Exhibit 9.

4.5.2 Infrastructure Management System

In 2000, the GIS Utility prepared a GIS Implementation Plan and related request for proposal for the conversion of the Drain Commissioner's manual records to a digital format. The records involve drains, sewers, pressurized water, and all apportionment districts. They are detailed, complex and difficult to convert. The County anticipates that the records will be converted so that the County's GIS software package can be used to facilitate the planning of new infrastructure and the maintenance of that infrastructure in the ground.

By late 2000, the Drain Commissioner's Office reviewed the draft GIS Implementation Plan and related request for proposal. The request for proposal was released and proposals received. The contract was awarded, funded for fiscal 2001 by the Board of Commissioners, and began on January 1, 2001. The technology plan for the Drain Commissioner's office is now in draft form and should be finalized in the late second quarter of 2001.

The County is considering assisting the local CVTs in converting their public works records to a single format whose system would be maintained by the County's Drain Commissioner (likely through Information Technology). Should this Program be undertaken, which would rely heavily on the County's OAKNet, the conversion costs of locally maintained drain, sewer and pressurized water would be substantial. In addition, the County's well and septic records maintained by the County's Health Division (portions of which have already been converted) will be also part of this Program as well.

4.5.3 Data Warehouse Program

The County's enterprise Data Warehouse Program centers on the re-formatting of data from any and all sources, to include cleansing, integrating, and positioning that data for access by anyone with an authorized need to know. Once positioned, the data is accessed by decision support knowledge workers, GIS analysts, and Internet customers. Decision support software tools and training are provided to end users to empower them with easy access to the data.

The Data Warehouse pilot project targeted a majority of the Land records data and allows the County to share this information with local government units to better serve the assessing community, public safety (law enforcement, fire, EMS), and many other land-related management efforts. Since the pilot, decision support access has also been provided in the areas of economic development and planning, Sheriff Jail Management, Fiscal Services controllable expenses and budgeting, and Health substance abuse. Digital pictures of real properties were added to the data warehouse for access by government units of all types and real estate professionals. Tax receivables history data is currently under construction.

Future warehouse implementations have been identified for Planning and Economic Development Services, the Health Division, and the Courts. In addition, requirements definition and project planning are under way for a total Fiscal Services data warehouse that will provide integrated end user access to all facets of the KPMG Performance Series system data. The Data Warehouse Program Strategic Plan is located in the IT Strategic Plan Supporting Documents, Exhibit 10.

4.5.4 Address Management Program

The Address Management Program was initiated to tackle all the issues surrounding the way government assigns, maintains, and utilizes address data of all types (site, structure, occupancy). The address itself is the primary access key for many of the county records stored in the databases. The cost of non-conformance to consistent address formats and content standards can be measured in terms of lost dollars, lost time, and lost opportunity for everyone.

The County recently received Board of Commissioner approval and funding (\$90,000) for an initial phase of work to inform, educate, build consensus, and arrive at a strategic direction and plan for implementing address standards, data bases and software tools. Upon completion of the first phase, a plan will be completed to resolve the business issues observed. Funding will be sought to resolve these business issues. The Address Management Program Strategy Paper is located in the IT Strategic Plan Supporting Documents, Exhibit 11.

4.5.5 Access Oakland Program

Michigan Enhanced Access Act (P.A. 462 of 1996) has provided Oakland County with the impetus to move rapidly into an Internet-based program designed to get County information into the hands of people when they need it, and where they need it, while recovering the costs of providing the enhanced delivery. The initial thrust of the @ccess Oakland Program was to provide a host of fee-based Land/Tax, Delinquent Tax, and Register of Deeds related informational products to title companies, lending institutions, real estate professionals, and the general public. These same products are provided free-of-charge to County and local governments as well. A portion (15%) of the revenue generated from these products is distributed back to the local units.

As the @ccess Oakland Program matures, it will provide a common gateway or portal to any and all fee-based informational products or electronic services that the County will offer. The @ccess Oakland Program demonstrates the continuing commitment of Oakland County to develop innovative services and create new opportunities to enhance both the business climate and the quality of life, further positioning the County as a leader in the global economy.

4.5.6 Document Imaging

The Imaging System is an open technology, fully upwards scalable, and capable of supporting the entire enterprise. It replaced a ten-year-old priority system that was not easily scalable to support the County's needs. The current system is used by the Friend of the Court and the County Clerk of the Court. All legal documents filed with the Court are scanned and indexed and are available for viewing on any authorized workstation. The FOC staff scans and indexes all non-legal documents and has access to all the legal documents scanned by the Clerk.

The Imaging Program was funded through advances from the Delinquent Tax Revolving Fund (since repaid). The FOC system was 7 years old, subject to needed repairs, and uses proprietary software (limiting its use for purposes outside of FOC). The new imaging system was acquired in anticipation of its use by many different County departments over the local area network. Several departments will be using this equipment in the near term, Probate Court, Health through the e-health initiative, and the Drain Commissioner is strongly determining how this equipment can be used in daily operations.

4.5.7 Vital Statistics and Elections Division Imaging

Two areas of the County Clerk's office will be utilizing the existing Imaging System. The Elections Division receives many different types of campaign or election related documents on an ongoing basis as required by law. These campaign documents must be readily filed for public record and are retrieved whenever requests are made. Anyone can request to view any active campaign files. The Vital Statistics Division is responsible to process and maintain legal documents that pertain to identity, licensing, and official registration. Examples are birth certificates, death certificates, and marriage applications. The public makes requests on a continuing basis for the vital statistics documents. Use of imaging in these divisions will enhance the ability to retrieve these records and to ensure better protection of the records in case of disaster. The business objectives are:

- To improve customer service by allowing quick, simultaneous multi-use access to records including access via the Web for certain records or information.
- To improve staff productivity while maintaining and retrieving records for the public.
- To preserve the integrity of all records.
- To reduce the amount of office space dedicated to the storage of case records.
- To ensure access to historic documents.

The imaging solution allows for imaging, indexing, digital storage, and retrieval of all of the documents. This is proven technology currently in use in the County Clerk's office for all court documents and at Friend of the Court.

4.6 Technical Systems and Networking Leadership Group

The Technical Systems and Networking Leadership Group represents all functional area departments in the County as determined by the projects approved by all the Leadership Groups.

The following Programs and Projects have been approved by the Technical Systems and Networking Leadership Group:

4.6.1 Hardware / Software Replacements / Thin-Client Computing

The County replaced over 2,100 personal computers in March 1999 with Intergraph NT hardware. The Program was largely completed in time for the Y2K date conversion matter.

The County has standardized on the Microsoft NT operating system and the Microsoft Office Suite of Software Products. All funding for the hardware and software conversion will come from existing resources within the Information Technology Operating Fund. In 2001, the County will continue to move towards the Microsoft Suite of office automation products for all word processing, spreadsheet, and other administrative needs. GroupWise was abandoned in favor of Microsoft Outlook in May 2001.

Over the next 18 months, the County will need to consider its options involving 860 Gateway computers used for HR/FIS and other higher end functions. Replacement will be necessary in some fashion. The age and present capacity of the Gateways are driving this matter. The County is considering several options:

- Replacing the computers with similar machines – most costly at roughly \$3,000 or more per machine.
- Moving to a ‘thin’ client with a new machine and servers maintained centrally – roughly \$1,000 per machine. Servers will be needed centrally. Future maintenance efforts of this equipment and software, however, should be greatly simplified.
- Retrofitting the Gateways into a ‘thin client’.

As access to government information and services continues to evolve towards open platforms via the web and other thin-client technologies, the case for client/server computing is being fundamentally altered. The trend towards server-side computing offers the county the opportunity to move strategically to a network centric model via thin-client technologies. Thin-client technologies are being widely adopted by the private sector as a method to significantly reduce the Total Cost of Ownership (TCO) for PCs and improve network performance. The use of Citrix’s thin-client technology for standard business applications (i.e., Word, Excel, Access, E-Mail) in conjunction with Web or Java for business specific deployments is revolutionizing the way the role of the personal computer is viewed. The end result is a more functional and lower cost network appliance that continues to provide access to county information and county services at a reduced cost.

Total Cost of PC Ownership (TCO) has many elements. Some include, but are not limited to:

- The actual cost of the hardware and software
- User training
- Hardware/software maintenance for the PC and all of its application
- Virus Control
- Help desk and customer service support staff
- Network application support of the client machine
- Connectivity to the network
- Contracted technical support
- Personnel involved in purchasing, accounting, and inventory of PCs

Research has shown that the average annual cost of installing, running and maintaining a thin-client computer system can be up to a third of the cost of operating standard PC's due to the advantages this new "thin" era offers over traditional networks. Estimates of cost savings range from the private sector range from 22 to 57 percent per year.

The benefits of thin-client computing are many and compelling. Oakland County can benefit from thin-client computing in many ways such as:

- Reduces Time to Market
- Reduces the Need to Upgrade PCs
- Improves License Control
- Easy Deployment
- Cost Reduction
- Complete Access to Information
- Reduced power consumption
- Longer Life Expectancy
- Increased Equipment Reliability
- Less Downtime
- Reduced Contractor Support Staffing
- Better Virus Control
- Improved Document and Applications Security
- Higher Level of Service
- Familiar "End User" Environment
- Standardized Documentation
- Local Device Access
- Easier Management and Support
- Reduced Licensing/Maintenance Costs

With the acceleration of information technology use in Oakland County, IT is faced with the constant challenge of balancing customer requests for services and reducing costs. Thin-client computing addresses those cost reductions and provides the opportunity for the County to realize many of its benefits as mentioned above.

The management and cost benefits offered by these technologies are compelling, as is the case made by the fact that "Private Sector" is rapidly moving towards platform independent, thin-client, network centric models. Together, thin-client hardware and software translates to simpler, more cost effective access to information and government services.

4.6.2 OAKNet (Wide Area Network)

Because of the increased communications needs between the County and CVTs relating to CLEMIS, E9-1-1, GIS, data warehouse, land records system, and other initiatives, the County launched a study entitled Metro-Area Network / Wide-Area Network (now named "OAKNet"). The OAKNet study, which was conducted by Plante & Moran, LLP, involves the size of the communication network (or bandwidth) necessary to accommodate the transmissions in an appropriate time period.

This connectivity to the CVTs will enable the County to address not only the law enforcement needs,

but land records data sharing, video arraignments of offenders (thus, reducing offender transport costs), improved warrant teleconferencing and mugshot transmissions, voice communications, Internet service to CVTs, and much, much more. OAKNet became active to the roughly 180 sites starting in November 2000, with completion in third quarter of calendar 2001. By the winter of 2002, the County should have completed the final Program - providing Internet services to the CVTs. Because the County and Oakland Schools have acquired the fiber in a 'condo' arrangement with a telephone company, the County's residents will benefit by having a second fully functional telephone company providing local exchange service in the County's borders. While Lansing and other counties are attempting to determine how to effectively encourage competition in the telecommunications arena, Oakland County has already initiated it. More detailed information regarding OAKNet can be found in the IT Strategic Plan Supporting Documents, Exhibit 12.

4.6.3 Local Area Network / Email Communication Upgrades

On the heels of the OAKNet Project, Information Technology will be proposing an upgrade to the network located within the main County campus and some remote facilities as well. In keeping with Information Technology strategic goals, this project will migrate the network from a largely 10Mb shared environment to a 100mb switched environment by leveraging the infrastructure of 10/100Mb network cards in the existing PC base while moving Oakland County toward an industry standard. The project will also involve the reconfiguration of the network to achieve greater efficiencies as well as upgrading the connection type of the primary network devices to achieve higher speeds in delivering data to the user. The project will integrate with other Information Technology strategic objectives in support of the thin client rollout, delivering data to the user/customer over a more robust network. The project also includes features for disaster recovery and the project is aimed to benefit the Oakland County departments and increase their capabilities to service the constituents and customers of Oakland County. Also, Microsoft NT software will be abandoned in 2001, therefore, the County is taking steps to move its personal computer software to Microsoft 2000/Office XP. In addition, the move from GroupWise to Microsoft Outlook as the Email Communication Standard has been completed.

4.6.4 PBX Telephone System

The County has acquired its own telephone switch and has recently moved off the current Ameritech Centrex system. The County will maintain its own private branch exchange (PBX) system allowing for reduced costs for operations, including toll charges. The capital cost is approximately \$2.8 million. The County should also increase its share of the charges earned at the jail. The County is expecting to save substantial operating costs and improving the commissions on jail phone billings that should allow for a complete payment of the system in a 4-year payback period. The Program was initiated in the third quarter of fiscal 2000 period and should be completed in the second quarter of calendar 2001.

In addition to the implementation of the SL100 PBX on campus, Oakland County remote sites will be converted to McLeod PRI telephone line Service. The sites to be converted are Novi District Court, Troy District Court, Southfield Health Division, West Oakland Office Building, Community Corrections, Rochester District Court and Clarkston District Court. At Novi District Court and West Oakland Office Building, the current Ameritech Centrex Service will be replaced by an Nortel Meridian Option 11 PBX.

Also planned is connecting the remote sites to the campus through the use of an OAKNet connection. This will allow five-digit dialing between the campus and the remote sites saving on

telephone call charges.

4.6.5 Oakland County Website Redesign Project

In the fall of 2000, the Department of Information Technology issued a request for proposal (RFP) to obtain proposals for the design, development, repackaging, installation, training and support of its World Wide Website and Internet presence. Its purpose was to apply the use of Internet technologies to allow Oakland County to transform its relationships with citizens and businesses providing ubiquitous, continuous, real-time access to county information and services.

Specifically, Oakland County was looking to create a web site that:

- Is uniform throughout and represents the technological leadership of Oakland County.
- Elicits a positive, comfortable and enthusiastic response to the end user.
- Encourages participation with the site and within the county.
- Offers users tangible benefits.
- Speaks to the unique needs of Oakland County residents and businesses.

After reviewing and analyzing all bids submitted, Eviciti Corporation of Royal Oak was selected to be the business partner to help define, design, support and market the county's Internet site moving forward.

Upon completion of a contract, Oakland County and Eviciti began a discovery process, Phase I, to determine the functional requirements of the website to leverage new technologies throughout the daily business processes of Oakland County that impacts its constituents. To determine the functional requirements, Eviciti conducted 115 interviews with representatives of IT Leadership Groups, County Departments and Divisions, CVTs, Commissioners and Access Oakland customers. The interviews consisted of individual interviews, focus groups, presentations, etc.

Upon completion of Phase I of the Website Redesign Project, IT presented its findings and recommendations for moving forward to the Oakland County Board of Commissioners. With the unanimous approval of the Board (see Resolution #01109, \$980,512), IT launched Phase II of the Website Redesign project.

Phase II of the Website Redesign Project was the continuation of an initial discovery project which determined the need for developing a common brand and logo across the entire website and also address several usability issues with the Website. Based upon the findings of initial discovery, the new Website will be organized by user questions and needs in order to better serve the businesses and residents utilizing the Website.

It is important to note that the Website Redesign Project for Oakland County provides the County with much more than just a new Website. The fundamental premise of the redesign strategy is to provide the County with a Web foundation that transcends the typical deployment of static informational content by allowing the County to provide departmental services directly to the public using the Internet as a transactional medium. Typical services currently conducted in person, via phone or through mail correspondence will be performed 24 hours per day in ubiquitous fashion, at a reduced cost. Using the proposed Web foundation, these service offerings can be extended to CVTs or other government entities allowing those agencies to provide services to the communities they represent. Through a "user centric" design specifically tailored to residents, businesses, CVTs and governmental units located within Oakland County, the county can provide

access to government information and services anytime, anywhere.

Phase II of the Website Redesign Project is expected to be completed by October 2001. Formal steering committee review and approval as part of the project plan has been instituted to better align project deliverables with final results.

To accommodate the need for increased access to web, java, and other thin-client technologies, the Department of Information Technology is upgrading its Internet infrastructure. The updated infrastructure is intended to provide increased availability, improved security, more scalability and better user performance for all clients utilizing the Internet. Phase III of the project, if approved by the Board of Commissioners, will include a Marketing and Communications Office, e-Office applications, and additional e-Commerce initiatives.

4.6.6 Internet Security and Redundancy

Oakland County has secured two new ISP's for providing redundant access to and from the Internet. This project entails securing the Internet connection. In addition to providing firewall technology on the Internet side of the network, IT will also be implementing an intrusion detection system (IDS). The firewall controls the type of Internet traffic allowed through to the Web servers and Database Servers and it controls which servers the Internet Traffic are allowed to communicate with. The IDS device monitors the network traffic, scanning for inappropriate behavior patterns. If hostile strings of text are recognized, different options can be taken. For example, IT has the ability to disconnect the appropriate system and page an administrator or the defaced site could be replaced with a good copy. This project also includes on a quarterly basis penetration testing. This incorporates having the network security tested at various points by security experts with a report of the results provided along with recommendations for security issue resolution.

4.6.7 ICSA Security Lockdown

Information Technology has employed TruSecure Corporation to perform a risk assessment of the County's data and data network. TruSecure will provide certification to Oakland County when we meet all of their requirements for achieving and maintaining a sound information security posture. Oakland County will undergo a series of evaluations and recommendations on overall network architecture, connectivity, physical security, redundancy, disaster recovery, environmental controls, system configuration, and operational policy compliance. After certification, TruSecure will continue to monitor the adherence of Oakland County to evolving essential security practices. This project is scheduled to be completed in September 2001.

4.6.8 Information Technology Disaster Recovery Program

In 1997, the Board of Commissioners approved funding for Information Technology to develop a disaster recovery plan. The services of Strategia Corporation were retained to assist in the development of the plan.

The purpose of the Disaster Recovery Program is to ensure the continued operation of Oakland County during an interruption of critical business functions or a loss of information processing services at Information Technology. The first step of the Disaster Recovery Program was to assess Information Technology's (IT) exposure to threats and vulnerabilities. With these identified, policies, procedures and corrective actions were implemented to mitigate the risks associated with the exposures. The second step was to perform a thorough analysis of IT's operations to identify critical

business functions and to measure the impact that the loss of those functions would have on Oakland County. Utilizing the results of the analysis, an alternate processing strategy was designed to ensure Oakland County's recovery requirements were fulfilled. Finally, the tasks and procedures necessary to sustain the County's recovery were formally documented and tested.

As part of the program, Strategia Corporation performed a business impact analysis to assess and quantify, to the extent possible, the effects that a technology based disruption would have on the business functions of Oakland County. With this information, informed decisions were made to determine the level of resources necessary for disaster preparedness, to assign priorities to the recovery of the various business functions and to determine recovery alternatives.

The business impact analysis was conducted through questionnaires and interviews with IT and customer management. Department heads and managers were asked to list and describe their department's critical functions, name any internal or external dependencies, estimate a financial impact to the loss of their function and decide on a time frame of recovery. Of these topic areas, recovery time frame and estimated financial impacts were the most indicative of the scope and intensity of the required planning effort.

Due to the short recovery time frame identified for many critical computer applications, a hot site was required to be able to restore them in 24 hours. A hot site is an environmentally controlled location that contains equivalent computer equipment to Oakland County having data communication connectivity back to the County. The hot site contract is with Sungard with the primary hot site location in Philadelphia. The contract provides for two tests of the disaster recovery plan each contract year at the hot site. The teams responsible for recovery of Information Technology meet each year to review and update the disaster recovery plan.

4.7 CLEMIS Leadership Group

The CLEMIS Leadership Group represents the following functional area departments:

- CLEMIS Steering Committee

The following Programs and Projects have been approved by the CLEMIS Leadership Group:

4.7.1 CLEMIS

The Court and Law Enforcement Management Information System (CLEMIS) is a central records management information system targeting law enforcement needs, and more. The strength of CLEMIS is the sharing of data in a County-operated and maintained regional database. Few police departments in the nation are capable of sharing data with their neighbors (despite the mistaken belief by the public at large that this is routinely occurring). All 43 police departments located in the County provide information to CLEMIS and extract data from CLEMIS. Over thirty police departments outside of the County's borders are CLEMIS members as well - and this number is expanding as interest is growing.

CLEMIS is used for required reporting of information to the State and federal governments, analyzing criminal activity, incident reporting, and other purposes. The police chiefs, Sheriff, Prosecutor, and County Executive work cooperatively towards a single purpose through the CLEMIS Advisory Board: **reducing criminal activity in Oakland County and the region.**

While CLEMIS is a system superior to ANY law enforcement computer program in Michigan (if not

the nation), the County is replacing it with a system that further expands its functionality. In January 1998, the County prepared and submitted a grant for \$21 million (to be supplemented with a County General Fund match, including other costs) for funding of this Program. On December 1, 1998, the County received \$17.1 million from Community Oriented Policing Services (COPS) office under a COPS MORE grant. The County's share of the grant award was \$6.4 million (in lieu of the CVTs providing funding). Since that initial grant, the County's General Fund has provided other funding as well. Mugshots, livescan fingerprints and jail management systems were not initially funded (although a grant modification request was subsequently received for a regional mugshot system). The following systems and functions are included in CLEMIS:

- Replacement of the records management system (except for four CVTs in Oakland who have acquired their own law enforcement systems).
- Mobile data computers in police vehicles for transmission of data from dispatch to the vehicle and requisite infrastructure. These computers should enable reports to be produced in the field in lieu of the office, resulting in officers spending more time in the field.
- Computer-aided dispatch using spatial references (geographic information systems).
- Automated vehicle location - to control the assignment of public safety units in police districts and to facilitate mutual aid communications.
- Requisite computer equipment for CVTs and County use.
- Regional mugshot system and related query tools.
- Video arraignment during booking process (to be funded from the bond proceeds obtained in connection with the work release facility or District Courthouse later in 2001).
- Partial capital funding of the OAKNet Program.
- Criminal query tools based on GIS and the records management system.
- Digital Pictures.
- Warrant Technology.
- Livescan fingerprints and related query tools.
- Data improvements.

In the late 1980s, the County and CLEMIS law enforcement agencies entered into an arrangement to acquire mobile data terminals (MDTs). MDTs represent a dumb terminal (that is, largely car to car messaging with limited functionality) in the Sheriff's Department or CVT Police Department vehicle involving data (as opposed to voice) transmissions. The MDTs were acquired and funded through a fee arrangement with the local police departments and County Sheriff. The MDTs have been replaced with mobile data computers starting in late 2000 funded through the COPS MORE grant. Over 600 mobile data computers have been deployed. A more detailed discussion of these initiatives can be found in the IT Strategic Plan Supporting Documents, Exhibit 13.

Several other law enforcement initiatives are underway, including:

- Business process re-engineering Program in a local police department (the results of which will be replicated throughout the COPS MORE deployment in order to ensure the maximum use of the equipment's functionality).
- Assessment of the potential for determining whether there are more effective manners of providing dispatch services than in a decentralized manner.
- The redeployment tracking efforts required under the COPS MORE grant.

4.7.2 E9-1-1 Equipment

The County completed a yearlong study in 1998 involving the status of the E9-1-1 call-taking and radio communications voice, coverage and interoperability issues raised by the law enforcement community. The following is the status of the two Programs:

Call-taking Equipment - the call-taking equipment in most public safety answering points (PSAPs) had long since been determined to be obsolete. The equipment did not conform to federal mandates involving wireless / cellular telephone communications (Phase I is presently in effect; Phase II is required in 2001, but is being postponed pending the telephone companies' development of tracking standards). In 1998, repair parts for many PSAP call-taking equipment could not be obtained as the equipment in place had been out of production for quite some time. Maintenance was a significant problem for CVTs.

The County Executive recommended and the Board of Commissioners approved the funding (roughly \$3.0 million) of this Program from the County's General Fund (despite having no legal requirement to assume these costs on behalf of the CVTs). Combined with the County's CLEMIS initiatives, the new call-taking equipment has enabled Oakland County and its law enforcement and fire agencies to be in compliance with federal mandates associated with wireless / cellular telephone communications.

Other issues exist between the Michigan State Police – Emergency Telephone Services Commission and the telephone companies that are inhibiting the completion of this Program. There is a dispute as to who is required to fund the trunk lines from the telephone company routers to the PSAPs. Local governmental units are expecting the telephone companies to cover this cost; the telephone companies are asserting it the local government's costs. The debate has been outstanding for approximately 12 to 18 months. Recent Federal Communications Commission correspondence involving the State of Washington suggests that the cost of the additional trunk lines should be borne by the public safety answering points.

Radio Communications (Voice) - in 1998, the law enforcement community requested that the present radio communications (voice) system be upgraded. Communications between dispatchers at the public service answering points (PSAPs) and emergency vehicles (police, fire, EMS) on 150 MHz, 420 MHz, and 806 MHz systems could not communicate with one another with ease. Accordingly, the inability to communicate between dispatchers, public safety agencies and public safety vehicles in the field in emergency situations could pose safety risks for public safety officials and residents receiving service.

While the matter is far too complicated to discuss herein, the improved system was considered to be limited by the number of available frequencies / channels. Many PSAPs using the 150 MHz and 420 MHz systems will incur increased communications problems and costs as their frequencies are re-farmed as mandated by the federal government - unless, of course, they move from their existing systems to the proposed 806 / 821 MHz system or replace existing equipment.

The Board of Commissioners approved a December 1998 resolution authorizing the submission of an application to the Michigan APCO for no less than 14 channels under the 821 MHz frequency. The application was considered by Michigan APCO and approved for 18 channels at the 821 MHz frequency. The National APCO approved the application and forwarded it onto the FCC. The County received FCC approval in late October 1999.

The Board of Commissioners approved the application with the understanding that the 821 MHz system would be funded out of County operations or through an operational surcharge (as defined in the statutes) on monthly telephone bills. After much discussion, a \$.57 per month telephone surcharge (4.0% of specified line charges) was applied to County residents and commercial entities bills starting in June 2000.

In the spring of 1999, the County launched a Program involving the re-write of the Emergency Management Plan, last passed in 1986. The new technology, other procedural changes (not to mention the recent explosion of cellular telephone use for E9-1-1 calls) and recently passed legislation requires that the old Plan be revised. The Plan was written, taken through the statutory process (and passed by the Board of Commissioners as required in a tentative form) and approved by the Board of Commissioners in November 1999. Longer-term, this equipment is expected to be used for data transmissions for public safety vehicles in the future. The radio communications Program was launched in the second quarter of 2000. The request for proposal should be issued in June 2001.

The equipment cost would be roughly \$33.0 million, including towers, consoles, hand held radios, mobile radios and other enabling equipment. The Program involves complex issues involving governance, programmatic and financial matters. By the third quarter of fiscal 2001, the contract should be awarded.

Annually, the funding of the equipment and increased operating costs would approximate \$6.5 million or so - roughly equivalent to the expected amounts to be received under the telephone-operating and wireless surcharges.

4.7.3 Fire Records Management Systems (FRMS)

The County's Board of Commissioners appropriated approximately \$900,000 towards the completion of a centralized fire records management system (FRMS) to 29 fire departments located in Oakland County. The FRMS is being acquired through Printrak (i.e. law enforcement network / computer aided dispatch). This uniform system should allow relatively seamless data transmissions between these separate applications (that is, dispatch stations and records management system).

The fire departments are facing a significant reporting change mandated (but unfunded) by the federal government effective January 1, 2000. Few fire departments, if any, are compliant. The County intends on encouraging the use of this FRMS and has proposed that it cover 75% of the capital and operating costs of this system - thus, mitigating costs otherwise borne by CVTs. The Program launched in August 2000 and should be completed in late 2001 or early 2002.

4.7.4 Emergency Management – Sirens

The County has initiated a six-year program of siren replacement for those units roughly 20+ years old. These sirens are no longer in production and repair parts for the mechanical components would be expected to become scarcer to acquire. The radio components of these sirens are largely obsolete today. See complete Siren Plan located in the IT Strategic Plan Supporting Documents, Exhibit 14.

4.7.5 Video Arraignment

Oakland County will be implementing a state-of-the-art video arraignment system connecting the Circuit and District Courts in the County, Prosecutor's office, Community Corrections Division and

the local law enforcement agencies. This project is being performed as an adjunct to the CLEMIS COPS MORE grant in order to reduce prisoner transport requirements of officers, improve security and redeploy local judicial assistance into more effective endeavors. Combined with the mugshot and fingerprint units at the local law enforcement offices (and County jail), the movement of offenders should be substantially reduced.

The County is seeking funding from the issuance of bonds (likely to be bundled with the funds sought for a work release or District Court facility). In addition, portions of the COPS MORE grant funds have been set-aside for this project as well. The County is beginning to assemble the necessary technical specifications. The protocols affect on judicial procedures and other efforts have still not been initiated.

5.0 SUMMARY

With the internal and external business climates of the County in a state of continuous evolution, technology and information systems will continue to play a critical role in the delivery of efficient government services. The Oakland County Information Technology (IT) Strategic Plan is a living document and supporting process that provides a flexible, compatible, and integrated technology and information system strategy.

The IT Strategic Plan builds on an original IT Strategic Plan drafted in 1991 and later approved by the County Commissioners. In addition, it is a compilation of other planning documents prepared by Information Technology's Project Management Office (PMO) and other technology teams responsible for the implementation of these information systems. The foundation for the plan includes trends in the information technology industry; an outline of customers and services; and an Information Technology vision, accompanied by a mission statement, goals and guiding principles, critical success factors and the Information Technology Master Planning Process. In the future, this foundational plan will be used to develop subsequent revisions that include a desired target environment along with strategies for organizational effectiveness, partnerships, and processes.