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DEPARTMENT OF
DATA MANAGEMENT

CITY OF SACRAMENTO
CALIFORNIA

819 TENTH STREET
SACRAMENTO, CA
95814-2601

916-449-5763

BARBARA C. WEAVER
DIRECTOR

June 12, 1990

Budget and Finance Committee
Sacramento, California 95814

Honorable Members in Session:

Subject: Report Back on Department of Data
Management Citywide Automation Master
Plan Implementation

SUMMARY

During the Data Management operating budget hearing, Councilmembers Robie and Mueller requested additional information on funding that was included for the City-wide Automation Master Plan.

In summary, the Master Plan outlined \$2.5 million in expenditures for 1990-91. The current budget proposal includes \$223,000 for these programs and services. An additional \$2.0 million in programs will involve a variety of funding sources and will be the subject of a financing plan that will be submitted to Committee in July. The balance of the plan, or approximately \$230,000 (which includes 4.5 FTE) is an immediate unmet need that requires funding from the general fund. These immediate needs are outlined in this report and address critical remedial functions of the Department.

It is recommended that the items detailed in this report be included in the items considered for funding during the final budget deliberations. The remaining \$2.0 million in programs and services will be the subject of a report to Committee in July.

BACKGROUND INFORMATION

The Automation Master Plan has two components--tactical/remedial and strategic; the remedial component is to correct current departmental deficits impacting day-to-day services.

During the past several years, Data Management has been dealing reactively with growth issues regarding demands for automation. Redeployment of staff, short term fixes and cheap solutions have allowed the Department to prepare for an onslaught of new information requests from areas which heretofore had been un- or under- automated. The ability to proactively prepare for critical information needs is severely hampered due to lack of Data Management resources; consequently, proactive involvement is a rare commodity which is administered parsimoniously. This, in turn, impacts decision support abilities of City employees. Attachment B provides detailed information on the remedial needs of Data Management which will allow an acceptable level of service for the daily workload.

When the Master Plan was compiled, the following priorities for automation efforts were recommended:

- 1 Augmentation to staffing levels and equipment to meet current workload demands (Remedial)
- 2 Disaster Recovery
- 3 Geographic Information System
- 4 Human Resource Information System
- 5 Constituent Information Pilot
- 6 Office Automation
Text and Records Management
Electronic Mail
- 7 Constituent Information (24 Hour City Hall) System

A short discussion of each priority follows.

Remedial

In the midyear review, \$246,326 for 1989-90 remedial hardware, software, maintenance increases and staff, as defined in the Master Plan, was requested but unfunded:

Hardware

3 Disk Drive Upgrades for growth in existing systems and disaster recovery

2 Cartridge Tape Drives* for reduction of errors and hardware failures causing overtime, system outages and reruns.

1 Communication Controller Upgrade** to accommodate more network lines (the controller had no capacity remaining)

Operating System Upgrades to remain current on software releases

Personnel Additions

- .5 Computer Operator
- 1 Sr. Programmer Analyst*
- 1 Departmental Data Analyst
- 1 Systems Programmer
- 1 Administrative Assistant I

In the recent Utility Customer Information System (UCIS) budget amendment report made by the Finance Director, the above-listed cartridge tape drives and the Sr. Programmer Analyst were defined as required for ongoing support of UCIS and included in the amendment.

Data Management cannot short change its day-to-day obligations and duties, so prior to satisfying the strategic component of the Master Plan, the remedial corrections are the current primary focus.

Disaster Recovery

This project will result in redundancy in hardware to minimize the vulnerability from loss of a disk drive and related data. A plan must also be developed which specifies by computer application events which must occur in the event of a disaster.

Geographic Information System

This automated mapping and information system will benefit every Department in the City within the next five years. Because of the magnitude and importance of this system, a separate report specifying funding from sources such as Public Works and Planning and Development will be made in July.

* = Included in UCIS budget amendment

** = Funded through midyear budget restoration

Human Resource Information System

The foundation for the replacement for our old and inflexible payroll system will begin this year by acquiring the database software and hiring a Database Administrator who can prepare for the subsequent purchase of the system.

Constituent Information Pilot

A pilot kiosk which provides text and a video on the City services and information will be installed in City Hall. Information from the use of the kiosk will determine future enhancements to a subsequent expansion of the kiosks.

Office Automation

There is a pilot trial use of Text Management software planned for July 1990. The results of the trial will be reported in the first quarterly Master Plan status report. In the future, text management will provide information for the Constituent Information kiosks.

Electronic Mail installed on the mainframe is becoming unstable with age and is not under any support service. There is not funding identified for a replacement, but if the software continues to be unstable, the issue must be addressed. Ultimately, constituents would be able to send the Council messages on items of concern through Electronic Mail.

ANALYSIS/FINANCIAL DATA

Total funding available:

\$80,000	CIP - Disaster Recovery
\$40,000	- Budget Augmentation
<u>\$230,000</u>	- Additional Augmentation
\$350,000	

The following will satisfy the remedial needs:

		<u>Available</u>
		\$350,000.00
.5 Operator	\$14,615	
1.0 Administrative Assistant I	38,550	
1.0 Systems Programmer	44,952	
1.0 Departmental Data Analyst	41,017	
Disk Drive Upgrades	80,000	
Operating System Upgrades	<u>36,000</u>	
		\$255,134
	Strategic Funds	\$ 94,866

Remaining funds can be applied toward the Human Resource Information System and Constituent Information as follows:

Constituent Information Pilot	\$15,000
1-Data Base Administrator (HRIS)	55,637
6 months IBM DB2 Database (HRIS)	<u>23,100</u>
TOTAL	\$93,737

The Geographic Information System (GIS) currently has a CIP balance of \$100,000 which can fund a badly needed project leader to increase momentum of the project, define levels of funding enterprise participation and prepare a full project plan. The GIS report back will be extremely detailed and should be handled subsequent to this report. It is necessary, however, due to the lack of GIS project staff and the magnitude and complexity of GIS to hire a Project Manager from existing funds as soon as possible.

The above allocation of funding allows for very little work on Office Automation/Text Management solutions and slows each strategic project from the ultimate goals in the Master Plan. A fully developed constituent Information System is dependent on a Text Management System to be in place as a source of pertinent documents. (See Attachment C for an updated schedule).

The ultimate goal of the Master Plan is to provide quality automated ultimate solutions as quickly as possible to the City of Sacramento. To do that, at least \$2.2 million in expenditures (capital and operating budget) would be required annually during the next five years. We have defined 19 percent of the funding for 1990-91 work excluding the GIS project. The first year's expenditures for GIS will be met from enterprise and special funds. During 1990-91 the major adverse impact is on the Payroll system replacement (HRIS). This project will slip at least twelve months under the current scenario.

An analysis of how these expenditures impact the Budget list of unmet needs can be found on Attachment D. Please note that because some of the unmet needs were satisfied through midyear restorations and UCIS funding, the reduction to the total unmet needs is larger than the \$350,000 proposed in this report.

POLICY CONSIDERATIONS

There are no policy considerations

MBE/WBE EFFORTS

MBE/WBE bids and proposals will be encouraged.

RECOMMENDATION

This report is for information only. It is recommended that the unmet needs of \$230,000 for critical remedial items be considered for funding during the final budget deliberations.

Because quarterly Council reports will be provided on the status of the Citywide Automation Master Plan, it is also recommended that additional funding be considered for the strategic component during the 1990-91 midyear review.

Respectfully submitted,

Barbara C. Weaver

Barbara C. Weaver
Director, Data Management

Recommendation Approved:

Walter J. Slye
FOR Jack R. Crist
Deputy City Manager

Contact Person to
Answer Questions:
Barbara Weaver

June 19, 1990
All Districts

MP-YEAR1

1990-91 MASTER PLAN
IMPLEMENTATION

<u>Mainframe</u>	<u>Requested</u>	<u>Funding Available</u>	<u>Additional Staff</u>
Normal growth or Technology Replacement:			
Disk	94,000	60,000	
Terminals (20% growth)	21,000	-0-	
Tape Drives	46,000	*	
Communications Controller	20,000	**	
Mainframe lease	-0-	-0-	
Added Hardware Maintenance	32,640	-0-	
Software:			
Operating System	68,000	36,000	
Staffing:			
Remedial	209,737	139,134	3.5
Support of Growth	-0-	-0-	
<u>Office Automation</u>			
e-Mail	48,000	-0-	
Text and Records Management	200,000	-0-	
24 Hour City Hall (Pilot)	24,000	15,000	
<u>Microcomputer Standardization</u>			
R&D	15,000	-0-	
Computer Store			
Staff Addition for Growth	-0-	-0-	
<u>GIS (Not yet funded)</u>	427,500	***	1
<u>HRIS</u>	802,840	-0-	
Database	45,360	23,100	
<u>Disaster Recovery</u>	80,000	20,000	
<u>Project Management</u>	-0-	-0-	
<u>Cost Accounting</u>	-0-	-0-	
<u>Staffing Project Support</u>	<u>127,643</u>	<u>55,937</u>	<u>1 (HRIS)</u>
GRAND TOTALS	2,261,720	349,171	5.5

*Funding identified in UCIS budget amendment
 **Funded through mid year budget restorations
 ***Funding identified in July report back

(REMEDJUS)
06/07/90

TECHNICAL SERVICES

DEPARTMENTAL DATA ANALYST WORKLOAD BACKLOG

HOURS AVAILABLE

4 Departmental Data Analysts - Base hours		8,320
Less: Vacations	400	
Holidays	448	
Sick Time	100	
Training	<u>224</u>	
LESS TOTAL REDUCTIONS		<u>1,172</u>
TOTAL HOURS AVAILABLE		7,148

WORKLOAD (HOURS)

(From a project/task database used for tracking in the division)

Administrative (Development of technical specifications for all microcomputer purchases, cabling and software)	1,760	
Current Backlog	969	
Problem Resolution	1,500	
Installation/Relocation	780	
Automation Analyses	2,160	
Dept. of Planning & Development	1,440	
On-going Local Area Network support	<u>960</u>	
TOTAL WORKLOAD		9,569
LESS HOURS AVAILABLE		<u>7,148</u>
DEFICIT HOURS		2,421

(REMEDJUS)
06/07/90

Through the addition of 1 FTE Departmental Data Analyst, we will:

1. Reduce the 969 hours of backlog work by 66%.
3. Reduce the wait for service from 2.7 months to 1 month.
4. Reduce the 40 (on average) calls received in the division to 20 calls per day. These are generally follow up calls and calls to find out where a request is in the queue.

Provide quality service as opposed to quantity service. The time to provide more quality service will be found in the reduced time taken in answering telephone inquiries.

5. Provide opportunity for specialization of functions. For instance, we can allocate 1 or 2 DDAs that respond only to problems reported. We can allocate someone to handle only installations and relocations, etc. Presently, we do not have enough DDAs to be able to use this approach, so each DDA has become a "jack of all trades".

Computer Operator Analysis

Hours Available/year:
(Based on 5 Computer Operators)

Base Hours	10400
Vacations	-400
Holidays	-560
Administration	-260
Training	-100
Sick (avg)	-150

Total Hours	8930

Job Requirements:
(Based on 3 shifts, 5 operators and
5.5 days per week)

Scheduling	858
Tape Mounts	1430
Printing	429
Problem Resolution	2860
Help Desk Assistance	143
Monitor System Console	4290
Operator Preventive Maintenance	715

Total Workload Hours	10725

Deficit Hours	1795
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An additional .5 FTE staff member will:

1. Allow the Operations Supervisor to perform his duties more effectively. The operations supervisor currently is covering the day shift console operator duties for 1 to 3 hours each day, so job setup and scheduling can be accomplished.
2. This addition will be added to the .5 position currently authorized. This position has not been filled because qualified candidates can not be found

that will work on a limited term basis.

3. Improves service to computer users during the day through prompt response to problems. Reduces time required for support issues by one half.
4. This staff member will also be assign to weekend coverage. Currently on Fridays a staggered shift schedule is used to allow coverage on the 1/2 day weekend schedule. This causes problems when one computer operator is on duty alone.
5. Provides Help Desk coverage more effectively during absences and vacations.
6. Improves shift coverage as follows:

	Current Coverage	Proposed
First Shift	1 Help Desk 1 Operator	1 Help Desk 2 Operators
Second Shift	2 Operators	2 Operators
Third Shift	2 Operators	2 Operators

System Programmer Analysis

Hours Available/year:

(Based on two System Programmers)

Base Hours	4160
Vacations	-200
Holidays	-224
Administration (time reporting, status reporting, misc reasearch)	-104
Training	- 80
Sick (avg)	- 60

Total Hours	3492

Current Workload/year:

(Based on two Systems Programmers)

Software Maintenance and Testing	3750
General Support	520
Assist end users	
Programmer and Operator support	
Problem Determination	1040
Problem reports and resolution	
Emergency fixes	
Production problem resolution	

Total Workload Hours	5310

Deficit Hours

1818

Need For Permanent Staff:

1. The System Programmer required will allow Computer Service Division to stay up to date on our 39 system software packages.
2. Able to reduce software downtime by 35 percent.
3. Able to improve software maintenance schedule for 11 products.

4. Able to resolve network related problems in half the time it is currently taking.
5. Able to react to computer interface issues such as General Services DEC and microcomputers within hours versus days.
6. Able to proactively define potential outages in hardware and software.
7. Able to work on performance issues (response time and capacity planning) which is not being done due to lack of staff.

Information Systems Division

Hours Available

Information Systems Manager - Base Hours 2,080

VACATION	160-
HOLIDAY	112-
SICK	48-
TRAINING	80-

- TOTAL HOURS 1,680

Workload/1990/91 Budget Year

Administration

-	Policy & Procedure Formulation	208
-	Project Management	104
-	Budgetary Control	208
-	Project Liaison	1,040
-	Contract Administration	60
-	Vendor Arbitrator/Liaison	500
-	Department Meetings	208

Sub-Total 2,328

Master Plan Projections

-	Administration	208
-	Special Projects	
.	Disaster Recovery	416
.	Document Sharing	80
.	Text Management Pilot	120
.	Records Management	120

Sub-Total 944

Technical Support

-	Consultive/Planning Services	624
-	Hardware Evaluations	192
-	Software Evaluations	320
-	Strategic/Tactical Planning	1,040
-	Technology Presentations	144

Sub-Total 2,320

Total Workload 5,592

Less Hours available 1,680-

Deficit Hours 3,912

The addition of a position will help with the day-to-day administrative functions such as policy and procedure formulation, budgetary control, contract administration, project management, vendor liaison and assisting in the area of technical support, which will free up 62% of the manager's time (1,042 hours) that can be allocated to the support following functions that are not being done or are done ineffectively:

- . Feasibility studies and project assessment - Provide support which currently is not being done or is ineffectively performed at this time in the following areas:
 - . Special projects outside the domain of existing Division.
 - . Decision support information within a week of request as opposed to none currently provided.
 - . Special research on what other cities are doing in automation and how they are accomplished.
 - . Compilation and analysis of raw data for forecasting and planning.
 - . Provide liaison assistance and participate in the planning and administration of Department activities.
- . Decision Support Information within a week of request - Currently, there is a void in this function and the work is either not done or so superficial that information which could benefit the Department is lacking. Projects such as evaluating and recommending inventory software for common Citywide departmental needs have extended over years.
- . Budgetary Forecasts - Provide short and long range budget projections to Department Managers on a scheduled basis.
- . Research and Analysis - Due to the lack of staff, the reactive nature of research and analysis is a weak link in overall Departmental planning.

AUTOMATION MASTER PLAN IMPLEMENTATION
STRATEGIC PROJECTS

PROJECT	1990		1991			1992					
	JUL	OCT	JAN	APR	JUL	OCT	JAN	APR	JUL	OCT	JAN
Disaster Recovery Hardware Plan	X	----	X								
Geographic Information Develop Base Maps Layers of Information (Data analysis, collection, automation)	X	-----				X	-----				Jan '95
Human Resource Information System			X	-----							X
Constituent Information Pilot Integrated with Text Management Text Management Pilot Electronic Mail	X	-----	X					X	-----		X
Office Automation Text/Records Management Electronic Mail						X	-----				Jul '93

UNMET NEEDS ANALYSIS

	FTE	COST	FTE	REVISED COST
Strategic Planning Support Staff	1	\$ 38,550	1	\$ 38,550
Staff to Support Existing Workload	5	208,211	0	0
Special Projects Support	1	54,327	1	54,327
Support for LAN Systems	2	96,000	2	96,000
Database Administrator - HRIS	1	55,937	0	0
GIS Support Staff	2	102,090	1	51,045
Supplies and Services		410,255		291,155
		<u>\$965,370</u>		<u>531,077</u>