

INFORMATION SYSTEMS
PROGRAM

ANNUAL REPORT

INPUT

NOVEMBER 1987

INPUT

NOTES:

UP87: I-1

INPUT



OVERVIEW

- Objectives
- Annual Planning Procedures
- Major Issues
 - Driving Forces
 - Issues and Objectives
 - New Technology
- New Applications
- Budget Analysis

INPUT

NOTES:

UP87: I-2

INPUT



OBJECTIVES

- Identify and Analyze
 - Business Forces Impacting Information Systems
 - New Technologies of High Impact
 - Trends in Information Systems Pending

- Provide INPUT's Views on
 - Resulting Objectives for IS
 - Key Opportunities & Applications Trends

INPUT

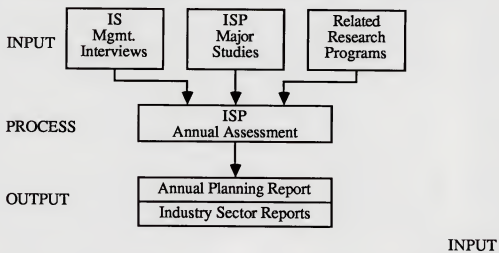
NOTES:

UP87: I-3

INPUT



INFORMATION SYSTEMS PROGRAM ANNUAL PLANNING REPORT PROCESS



NOTES:

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INPUT



**INFORMATION SYSTEMS
PROGRAM**

ANNUAL REPORT

MAJOR ISSUES

INPUT

NOTES:

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ISSUE HIERACRCHY

MAJOR ISSUE SECTION	FOCUS	TIMEFRAME
Driving Forces	Strategic	Over 3 Years
Issues	Tactical	Objectives
Objectives	Operational	0 to 2 Years

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NOTES:

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TECHNOLOGICAL DEVELOPMENTS OPTIONS AND ISSUES

- Data Base-Relational and Distributed
- Workstations
- Networking
- Electronic Data Interchange
- Managing Technology

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NOTES:

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DRIVING FORCES

- Rising Expectations of Senior Management
- Expanding Wealth of New Technologies
- Cost-Sensitive Business Environment

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NOTES:

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DRIVING FORCES (Continued)

- Ability to Conceptualize More Complex Applications
- Growing Interaction Between Large Corporations
- Unstable Organizational Environments

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MAJOR ISSUES-1988 AND BEYOND

- Data Management
- Connectivity
- Integration
- User Involvement
- Development Productivity
- Business Contribution

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NOTES:

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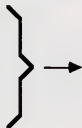
INPUT



MAJOR ISSUES

ELEMENTS

Current
Status/
Activities



INPUT

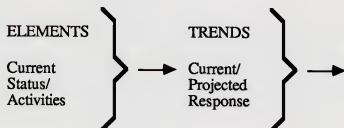
NOTES:

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INPUT



MAJOR ISSUES



INPUT

NOTES:

UP87: II-7

INPUT



MAJOR ISSUES



INPUT

NOTES:

UP87: II-8

INPUT



MAJOR ISSUE-DATA MANAGEMENT

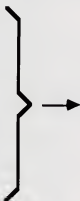
ELEMENTS

Physically
Distributed
Data

Access Growing User
Process

Multiple DBMS
Technologies

Inadequate
Data Control



INPUT

NOTES:

UP87: II-9

INPUT



MAJOR ISSUE-DATA MANAGEMENT

TRENDS

Move to RDBMS

Adopting DBMS
on Distributed
Systems

Renewed Move
to Data
Dictionaries



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NOTES:

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INPUT



MAJOR ISSUE-DATA MANAGEMENT

OBJECTIVES

Learn RDBMS

→ Train the User
on RDBMS

Select a
Standard for
Each Level

Strengthen Data
Processes

INPUT

NOTES:

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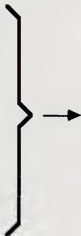
MAJOR ISSUE-INTEGRATION

ELEMENTS
Multivendor
Environments

Computer to
Computer
Data Transfer

Larger, More
Complex
Applications

Data Transfer
to Outsiders



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NOTES:

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MAJOR ISSUE-INTEGRATION

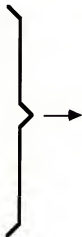
TRENDS

Dist'd. Processing
Strategies

Vendor
Support for
Standards

Purchase
Decisions Tied
to Integration

Outside Expertise



INPUT

NOTES:

UP87: II-13

INPUT



MAJOR ISSUE-INTEGRATION

OBJECTIVES

Standards,
Standards,
Standards



Pressure
the Vendor

Educate
the User

INPUT

NOTES:

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INPUT



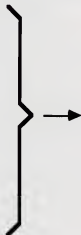
MAJOR ISSUE-CONNECTIVITY

ELEMENTS
More PCs than
Terminals

PC is the
Manager's
Terminal

Bi-Directional
Data Transfer

Power of the
Workstation
Growing Quickly



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NOTES:

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MAJOR ISSUE-CONNECTIVITY

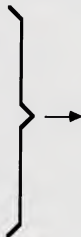
TRENDS

PCs Commonly
Connected

PC Interface
as Standard

PC as Dept'l.
System
Workstations

LANs Evolving
Slowly



INPUT

NOTES:

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MAJOR ISSUE-CONNECTIVITY

OBJECTIVES

Standards for
Connectivity

→ Info Center
in Charge

Programmable
Workstation
Preference

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NOTES:

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MAJOR ISSUE-USER INVOLVEMENT

ELEMENTS

Mgmt. is the User

Appetite for Data

Dept'l. Computers
vs. PCs

Applications
without Rules

Power User's
Growing Influence



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NOTES:

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MAJOR ISSUE-USER INVOLVEMENT

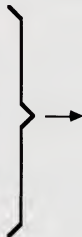
TRENDS

More Power at
the Workstation

Access to Data

Defining Own
Environment

Developing Own
Applications



INPUT

NOTES:

UP87: II-19

INPUT



MAJOR ISSUE-USER INVOLVEMENT

OBJECTIVES

Strengthen
End-User Computing
Function



Flexible Standards

Education about
Application
Development

Education about
IS Strategy

INPUT

NOTES:

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MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

ELEMENTS

Focus on Devel't.
and Architecture

Infra-structure
Changing Rapidly

Control over
Development
Changing

Impact on Installed
Processes and
Applications



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NOTES:

UP87: II-21

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MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

TRENDS

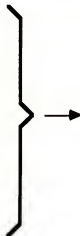
Addressing
Entire Process

Many CASE Tools-
No Proven Leader

4GLs Not the
Long-Term Answer

Go Slow Attitude

Professional Services
Co's. Leading the Way



INPUT

NOTES:

UP87: II-22

INPUT



MAJOR ISSUE- DEVELOPMENT PRODUCTIVITY

OBJECTIVES

Study CASE-Don't
Jump Too Fast

→ User Involvement in
Large Applications

Set Rules for User
Applications

User Education on
Planning for
Computing

INPUT

NOTES:

UP87: II-23

INPUT



MAJOR ISSUE- BUSINESS CONTRIBUTION

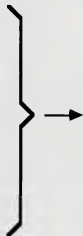
ELEMENTS

Senior User
Influence

Greater Return
on Investment

Business
Knowledge
of Developers

Senior Mgmt.
Expectations
Growing



INPUT

NOTES:

UP87: II-24

INPUT



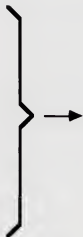
MAJOR ISSUE- BUSINESS CONTRIBUTION

TRENDS

IS Executive
Stature Grows

Increased Business
Justification

Use of Outside
Development
Firms



INPUT

NOTES:

UP87: II-25

INPUT



MAJOR ISSUE- BUSINESS CONTRIBUTION

OBJECTIVES

Assume Strategic Role

→ Expose Senior Mgmt.
to Technology

Monitor Competition's
IS Program

Proactively Consider
Outside Experts

INPUT

NOTES:

UP87: II-26

INPUT



INFORMATION SYSTEMS RECOMMENDED CHANGES OF EMPHASIS

1987-1992

Data Processing —————> Information Flow

Information Quantity —————> Information Quality

Automation of Process —————> Improvement of Process

INPUT

NOTES:

UP87: II-27

INPUT



**INFORMATION SYSTEMS
PROGRAM**

ANNUAL REPORT

IMPACTS OF NEW TECHNOLOGY

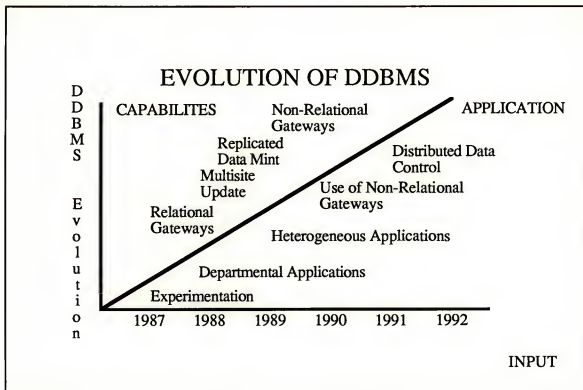
INPUT

NOTES:

UP87: III-1

INPUT





NOTES:

UP87: III-3

INPUT



DDBMS-CRITICAL SUCCESS FACTORS

1. Know Relational DBMS Technology
2. Audit the Data Administration Function
3. Do a Controlled Experiment
4. Use a Homogeneous DBMS Environment
5. Involve a Mature End User
6. Use a Geographically Dispersed Application
7. Select a Non-Strategic Application

INPUT

NOTES:

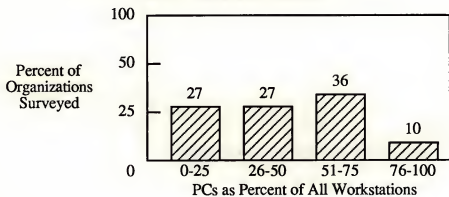
UP87: III-4

INPUT



WORKSTATION TRENDS

PERSONAL COMPUTERS AS A PERCENTAGE
OF ALL WORKSTATIONS



INPUT

NOTES:

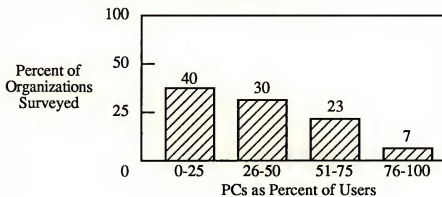
UP87: III-5

INPUT



WORKSTATION TRENDS

PERSONAL COMPUTERS AS A PERCENTAGE
OF USERS



INPUT

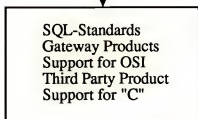
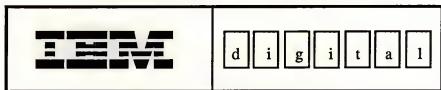
NOTES:

UP87: III-6

INPUT



NETWORKING THE COMMON GROUND



INPUT

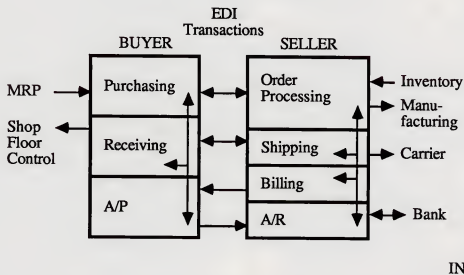
NOTES:

UP87: III-7

INPUT



EDI APPLICATIONS



NOTES:

UP87: III-8

INPUT



EDI
"THE WAVE OF THE FUTURE"

- Applications
- Enhanced Services: E-mail, E-forms, Data Bases
- Internetworking
- Media (Data, Graphics, Voice, Video)

INPUT

NOTES:

UP87: III-9

INPUT



IS MANAGEMENT FOCUS

AREA	NEED
TECHNOLOGY INTEGRATION	Infrastructure Data Management User Interfaces
MANAGEMENT OF IS	Productivity of IS Simplification of Support User-Managed Development
STRATEGIC AND ADVANCED SYSTEMS	

INPUT

NOTES:

UP87: III-10

INPUT



INFORMATION SYSTEMS PROGRAM

ANNUAL REPORT

NEW APPLICATION TRENDS
AND
DEVELOPMENT RESOURCE ALLOCATION

INPUT

NOTES:

UP87: IV-1

INPUT



NEW APPLICATION TRENDS CROSS INDUSTRY SUMMARY

- Electronic Data Interchange
- Business Analysis and Management Tools
- Purchasing Package Software
- Strategic Applications
- RDBMS on the Minicomputer (MID) Level

INPUT

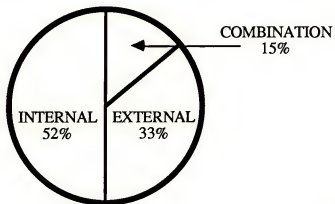
NOTES:

UP87: IV-2

INPUT



SOURCE OF
DEVELOPMENT RESOURCES
GROUP ONE



INPUT

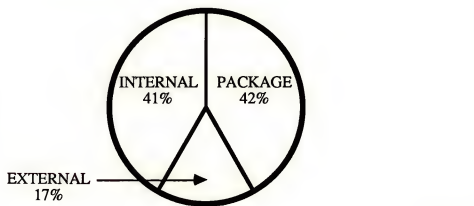
NOTES:

UP87: IV-3

INPUT



SOURCE OF
DEVELOPMENT RESOURCES
GROUP TWO



INPUT

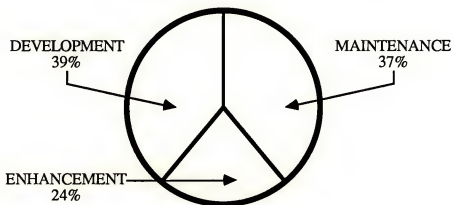
NOTES:

UP87: IV-4

INPUT



ASSIGNMENT OF APPLICATIONS
DEVELOPMENT STAFF



INPUT

NOTES:

UP87: IV-5

INPUT



**INFORMATION SYSTEMS
PROGRAM**

ANNUAL REPORT

**BUDGET ANALYSIS
1987-1988**

INPUT

NOTES:

UP87: V-1

INPUT



BUDGET CHANGE FOR ALL
INDUSTRIES



INPUT





NOTES:

UP87: V-2

INPUT



INDUSTRY COMPARISON

INDUSTRY SECTOR HIGH	PERCENT CHANGE		
	4	8	12
Telecommunications			12.0
Services			10.8
Transportation			10.3
Other			10.0

INPUT

NOTES:

UP87: V-3

INPUT



INDUSTRY COMPARISON

INDUSTRY SECTOR LOW	PERCENT CHANGE		
	0	1	2
Distribution-Wholesale			2.7
Banking & Finance			2.6
Federal Government			2.5
Distribution-Retail		0.0	
Utilities	-0.2		

INPUT

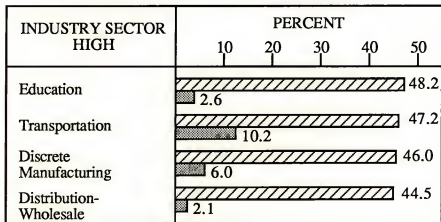
NOTES:

UP87: V-4

INPUT



PERSONNEL EXPENDITURES



Allocation

Change

INPUT

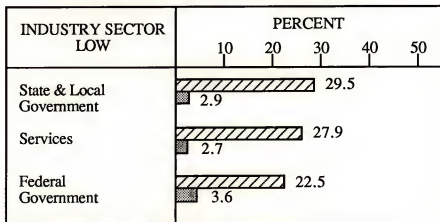
NOTES:

UP87: V-5

INPUT



PERSONNEL EXPENDITURES



Allocation

Change

INPUT

NOTES:

UP87: V-6

INPUT



PERSONNEL EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Insurance	34.1	15.3
Smallest Change Distribution-Retail	41.8	1.1

INPUT

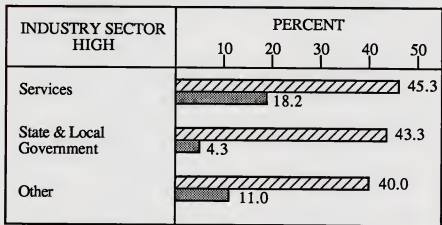
NOTES:

UP87: V-7

INPUT



HARDWARE EXPENDITURES



Allocation

Change

INPUT

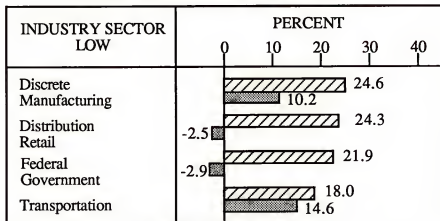
NOTES:

UP87: V-8

INPUT



HARDWARE EXPENDITURES



Allocation

Change

INPUT

NOTES:

UP87: V-9

INPUT



HARDWARE EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Services	45.3	18.2
Smallest Change Federal Government	21.9	-2.9

INPUT

NOTES:

UP87: V-10

INPUT



HARDWARE EXPENDITURES

PERCENT CHANGE
MAINFRAME-MINI-MICRO

INDUSTRY SECTOR	MAIN	MINI	MICRO	MASS	OTHER	TOTAL
Services	18.8	0.0	18.8	0.0	17.8	18.2
Transport.	16.4	8.5	7.1	0.0	0.0	14.6
Discr. Mfg.	10.9	6.2	15.1	8.0	3.5	10.2

INPUT

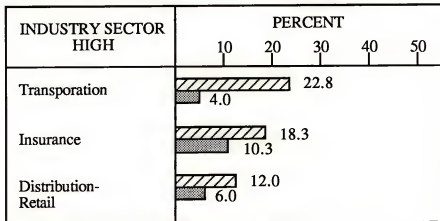
NOTES:

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INPUT



DATA COMMUNICATIONS EXPENDITURES



Allocation
 Change

INPUT

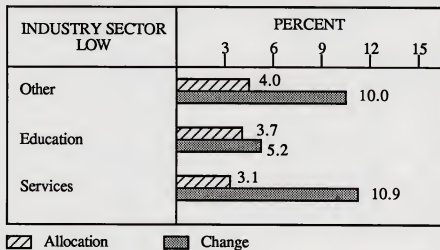
NOTES:

UP87: V-12

INPUT



DATA COMMUNICATIONS EXPENDITURES



INPUT

NOTES:

UP87: V-13

INPUT



DATA COMMUNICATIONS EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Insurance	18.3	10.3
Smallest Change Telecommunications	5.3	-12.0

INPUT

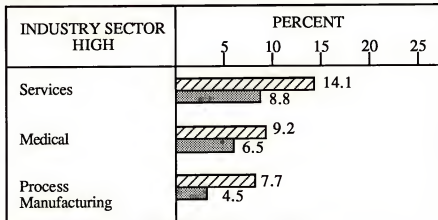
NOTES:

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INPUT



EXTERNAL SOFTWARE EXPENDITURES



Allocation

Change

INPUT

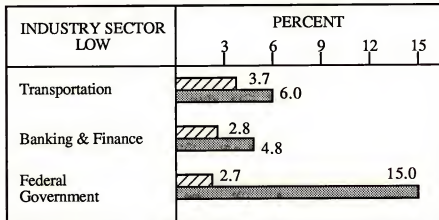
NOTES:

UP87: V-15

INPUT



EXTERNAL SOFTWARE EXPENDITURES



Allocation

Change

INPUT

NOTES:

UP87: V-16

INPUT



EXTERNAL SOFTWARE EXPENDITURES

INDUSTRY SECTOR	ALLOCATION (Percent)	CHANGE (Percent)
Largest Change Telecommunications	7.2	19.0
Smallest Change Distribution-Retail	6.1	-1.4

INPUT

NOTES:

UP87: V-17

INPUT

