

O = w/ Deamy Wayson

CBIS

For Next Week

MS - 1      WM - 1      SI - 18  
6              -6              SI - 35  
7              -12              SI - 34.

So - 24

MS - 13              -15              -51  
F - 1                  -16              52

I - 2                  NF - 4              PF - 1

4                      5                      2

8                      SP - 1                3

11                     -11                  5

22                    -15                  10

20                    -19                  12

OU - 6                -26                  13

OU - 1                TS - 1                PC - 1

2                      -4                      -4

3                      -13                    -5a, 6

4                      -9                      -9a

5                      -10                    SO - 1

7                      SI - 1                  -2

10                     -3                      -10

11                      4                      -11

13                      5                      -12

IS - 1                  6                      -13

-2                      7                      -14

-5                      9                      -17

-6                      17                     -23

CR12

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100	1	1	1

SO-53

-54

-55

-61

~~-73~~

-76

-77

-71

NS -1

-4

-5

-6.

-7

-8

-11

-13

-14.

-21

-23<sub>g</sub>

-236.

-39.

-51

-54<sub>a, G</sub>

-55<sub>G</sub>

VM-16

-17

-19

-20

-23

-24

-25

-26

-27.

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-31

-32

-33.

CT-1

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27<sub>a, G</sub>

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SC-1a

2

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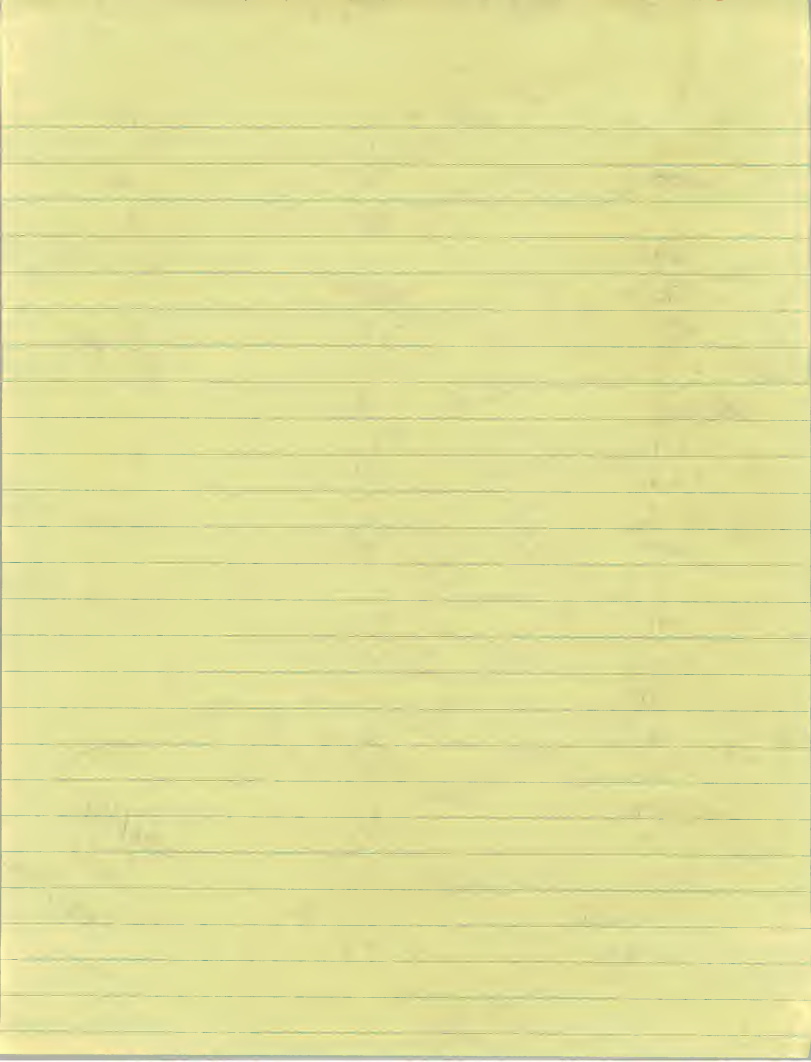
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7.

8<sub>a, G</sub>.

11

MAMAP  
Tues  
fast Mon.



FOR NEXT WEEK

So-24

MS-1	WM-1	SI-18
6	-6	SI-35
7.	-12	SI-34.
MS-13	-15	-51
I-1	-16	52
I-2	NF-4	PF-1
4	5	2
8	SP-1	3
11	-11	5
22	-15	10
20	-19	12
OU-6	-26	13
OU-1	TS-1	PC-1
2	-4	-4
3	-13	-5a,6
4	-9	-9a
5	-10	SO-1
7	SI-1	-2
10	-3	-10
11	4	-11
13	5	-12
IS-1	6	-13
-2	7	-16
-5	9	-17
-6	17	-23



SO-53	VM-16	SC-1a.
-54	-17	2
-55	-19	3
-61	-20	4
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-76.	-24	7.
-77	-25	8a, 6.
-71	-26	11
NS -1	-27.	
-4	-29.	
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-7	-33.	
-8	CT-1	
-11	2	
-13	3.	
-14.	4.	
-21	8	
-23a	12	
-236.	15.	
-39.	22.	
-51	24.	
-54a, 6	27a, 6	
-556	29.	

MAMAP  
Two  
fast Mox





# **Information Services Industry Directions**

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## **Executive Presentation**

MS-1

INPUT

Notes



# INPUT

Market Research and Consultancy

Information Services Industry

15 Years in Business

100 Employees

MS-6

INPUT

Notes



# INPUT

California, New York, Washington D.C.,  
London, Paris, Tokyo

Primary Research Emphasis

Senior Executives Experienced in  
Information Services

Forecast from Comprehensive Data Base

MS-7

INPUT

Notes



- Introduction
- Information Systems Trends
- "Outsourcing"
- Information Services Markets
- Competition
- Conclusion

MS-13

INPUT

Notes





# Information Systems

I-1

INPUT

Notes



# Fundamental Driving Forces

## *Key Business Trends:*

- Shorter product life cycles
- More customization/specialization
- Narrower market segments
- Higher impact of technology
- More competition from overseas vendors

I- 2

INPUT

Notes



## Blocking Factors

- Infrastructure gridlock
- Lack of qualified in-house personnel
- Existing applications portfolio
- Organizational response time

*Create opportunities for the information services industry*

I- 4

INPUT

Notes



# Where's the Productivity?

I- 8

INPUT

Notes





# Make vs. Buy

I-11

INPUT

Notes



## Limits to Growth

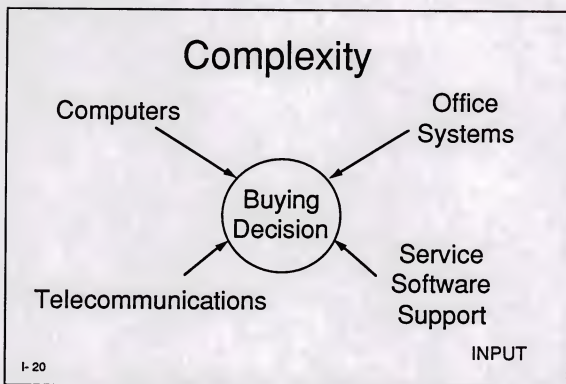
- Absorption rate
  - Implementation
  - Education and training
  - Organization changes
  - Resistance to change
  - Logistics

I-22

INPUT

Notes





Notes



Outsourcing is the contracting of information systems (IS) functions to external vendors.

OU-6

INPUT

Notes





What is it?

Why is it becoming  
a major factor?

OU-1

INPUT

Notes



# Beyond Products: Service-Based Strategy

HBR March/April 1990

OU-2

INPUT

Notes



# Key Findings

- Value added from services
- Technology enhances services
- Services enable competitive differentiation

Source: HBR Article

INPUT

OU-3

Notes



# Recommendations

- Focus on core services
- Outsource other activities

Source: HBR Article

INPUT

OU-4

Notes





# Outsourcing

- Outsource non-competitive activities
- Outsourcing builds flexibility
- Outsourcing allows focus

Source: HBR Article

INPUT

OU-5

Notes



# IS Outsourcing Areas

1. Development
2. Operation and maintenance

OU-7

INPUT

Notes



## "Outsourcing" vs. Buying Services

1980s: Services achieved  
recognition

1990s: Overcome prejudice  
against buying management  
services

OU-10

INPUT

Notes



## "Outsourcing" vs. Buying Services

- Greater commitment on part of buyer
- "Partnership"
- Responsibility/risk for vendors

OU-11

INPUT

Notes





# Outsourcing Vendors

- Approaches differ greatly
- Variety of capabilities needed
- Partnerships/alliances result

OU-13

INPUT

Notes



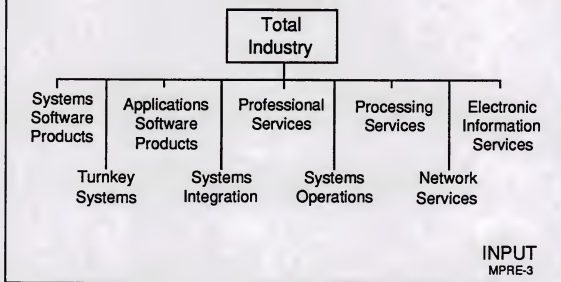
# Information Services Industry Trends

INPUT  
MPRE-34

Notes



# Information Services Industry Structure



Notes



# Information Services Market

- Major Trends

- Globalization of information services creates market opportunities
- Vendor consolidation continues
- Profit opportunities shift from equipment to services, software

INPUT

Notes





## Key Trends for the 1990s

- Products & services markets blurring
- Changing market structure
- Internationalization
- Standards
- Vendor consolidation

INPUT  
MPRE-35

Notes



# Worldwide Markets

INPUT  
MPRE-184

Notes



# Globalized Information Systems Facilitators

- Telecommunications networks
- Support services
- Standards

INPUT  
MPRE-40

Notes



## Counter-Trends to Globalization

- Cultural "non-fits"
- Preference for local products and services
- Focus on narrow, niche markets
- National restrictions

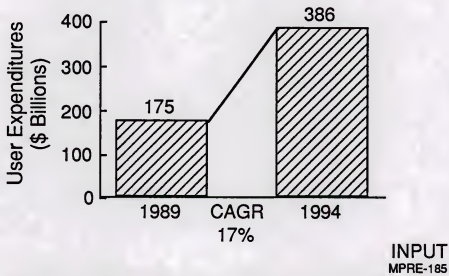
INPUT  
MPRE-41b

Notes





## Worldwide Information Services Market, 1989-1994



Notes



## Information Services Market Penetration Worldwide

	Expenditures (\$ Billions)	
	1989	1994
Information Systems	840	1,420
Information Services*	170	380
Penetration	20%	27%

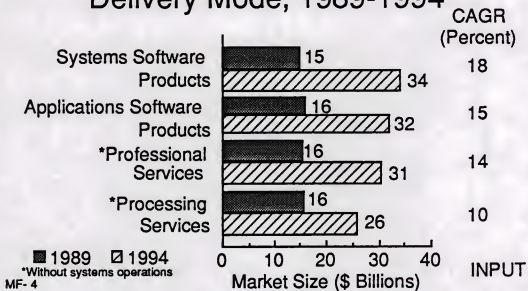
\* Less electronic information services

INPUT  
MPRE-186

### Notes



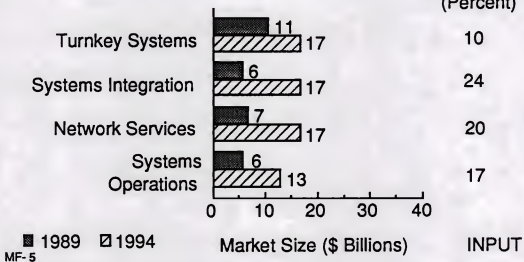
## U.S. Information Services Market by Delivery Mode, 1989-1994



Notes



## U.S. Information Services Market by Delivery Mode, 1989-1994 CAGR (Percent)



Notes





# Software Products

INPUT  
MPRE-407

Notes



# Software Products Market Issues

- Software complexity increasing
- Development resources decreasing
- Product life cycles
- Capital supply constraints
- Redundant software products

INPUT  
MPRE-409

Notes



## Leading Software Market Trends

- Mergers/acquisitions
- Alliances
- Open systems architectures
- Products and services markets blurring
- Cooperative processing models

INPUT

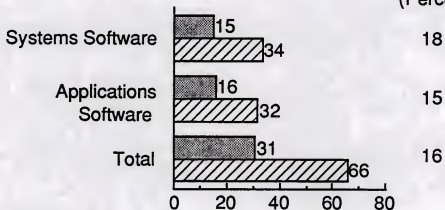
Notes



# U.S. Software Products Market

1989-1994

CAGR  
(Percent)



■ 1989    ▨ 1994

Market Size (\$ Billions)

INPUT  
MPRE-64b

Notes





## New/Hot Software Areas

- CASE/development tools
- AI—rejuvenated
- Data center management
- UNIX
- Image processing
- DSS/EIS

INPUT

Notes



# Turnkey Systems/VARs

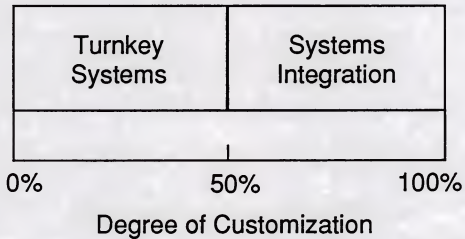
INPUT  
MPRE-71

Notes

TS-1



# The Customization Spectrum



INPUT  
MPRE-72

Notes



# Turnkey Systems Market Driving Forces

- Distributed solutions
- Customization
- Growth of support services
- Software applications required
- Account control at low end of spectrum

INPUT  
MPRE-79

Notes





# Turnkey Systems

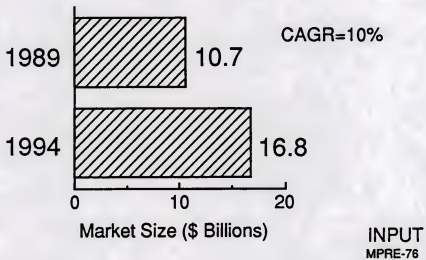
- Major Trends
  - Declining price discounts from manufacturers
  - Movement into software-only mode by turnkey firms
  - Impact of systems integration at high end of market

INPUT

Notes



## U.S. Turnkey Systems Market 1989-1994



Notes



# Systems Integration

SI- 1

INPUT

Notes



## Systems Integration: Globalized Activity

- Gaining overseas acceptance
- Prime contractors need local subcontractor relationships
- Big players with deep pockets and high visibility required
- Leads to systems operations (facilities management) contracts

SI- 3

INPUT

Notes





## Major SI Buyer Issues

- Core business focus
- Competitive demands
- Increasingly complex solutions

SI- 4

INPUT

Notes



## Major SI Buyer Issues

- Users becoming buyers
- New technology application
- Unavailable skills

SI- 5

INPUT

Notes



## Major SI Vendor Issues

- Consolidations and alliances
- Focus on repeatable solutions
  - Risk reduction
  - Productivity

SI- 6

INPUT

Notes



## Major Vendor SI Issues

- Full service suppliers
  - "Business change" consulting
  - Systems operation
- Increasing competition
  - Skills
  - Clients

SI- 7

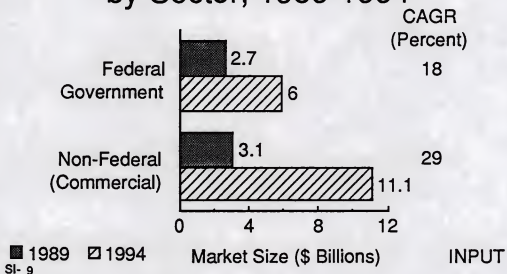
INPUT

Notes





## U.S. Systems Integration Market by Sector, 1989-1994



Notes



## SI Competition Ranked by Vendors

- Commercial
  - Andersen Consulting
  - EDS
  - IBM
  - DEC

By Number of Mentions

SI-17

INPUT

Notes



## SI Competition Ranked by Vendors

- Federal
  - CSC
  - EDS
  - IBM
  - BCS, PRC (tied)
  - TRW, MMDS (tied)

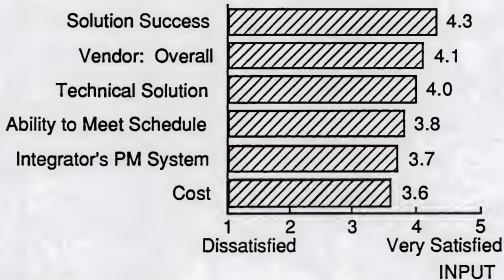
SI-18 By Number of Mentions

INPUT

Notes



## Buyer/User Satisfaction



SI-35

Notes





## SI Market Factors

- Demand for connectivity
- Major infrastructure rebuilding
- User management trend
- Application complexity

SI-34

INPUT

Notes



## Vendor Challenges

- System integration bidding
  - Costs
  - Skill set
- Product management
  - Managing the user

SI-51

INPUT

Notes



## Vendor Challenges

- Risk containment
  - Cost premium
  - Companywide responsibility
  - User benefit

SI-52

INPUT

Notes



# Professional Services

PF-1

INPUT

Notes





## Professional Services Market Driving Forces

- Changing U.S. workforce
- New hardware, software, and communications products
- Growing application backlog

PF-2

INPUT

Notes



## Professional Services Market—Driving Forces

- Lack of IS in-house expertise
- Rising labor costs
- Low-cost market entry
- Systems complexity

PF-3

INPUT

Notes



## Professional Services Market Growth Inhibitors

- More capital-intensive business means higher added-value services
- Competition from:
  - Packaged software products
  - In-house departments or subsidiaries

PF-5

INPUT

Notes



## Professional Services Market Inhibitors

- Lack of 'professional' status
- Lack of qualified personnel
- Investment required for internal education/training
- Unsuccessful projects
- Improved applications software products

PF-10

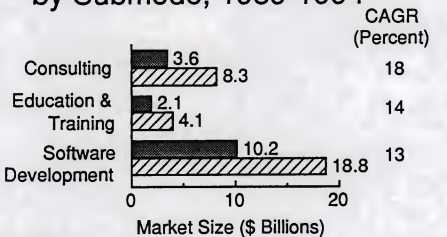
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Notes





## U.S. Professional Services Market by Submode, 1989-1994



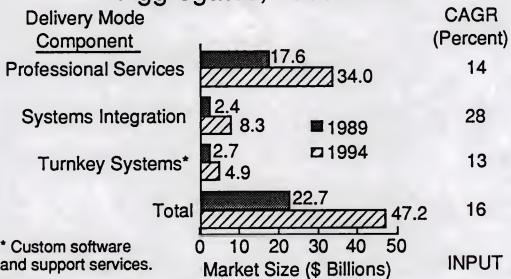
1989   
  1994  
 PF-12

INPUT

Notes



## U.S. Professional Services Market Aggregates, 1989-1994



PF-13

Notes



# Processing Services

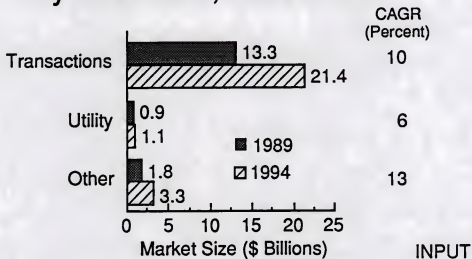
PC-1

INPUT

Notes



## U.S. Processing Services Market by Submode, 1989-1994



PC-4

Notes





# Transaction Processing

- Major Trends
  - Continuing trend for users “outsourcing”
  - Customer inertia
  - Vendor ability to deliver proven results quickly

PC-5a

INPUT

Notes



# Transaction Processing

- Major Trends
  - Strong vendor positions in specific niches
  - Continual improvement in workstation/PC price performance

PC-5b

INPUT

Notes



## Vendor Activity

- ADP
  - Continuing profit/revenue improvements
  - Buying and selling businesses
  - Focusing on basic markets

PC-9a

INPUT

Notes



# Systems Operations

SO- 1

INPUT

Notes





**“Old”  
Facilities Management**

- Focus on computer operations

**“New”**

**Systems Operations**

- Development, planning, control,  
operations

SO- 2

INPUT

Notes



## Systems Operations Driving Forces

- Increasing complexity of operations
- Scarcity and expense of required talents
- Costs and problems of systems upgrades
- Service level requirements
- Backup requirements

SO-10

INPUT

Notes



## Systems Operations Driving Forces

- Systems integration creates opportunities
- Reduction of costs through sharing
  - People
  - Software
  - Computer systems
  - Networks

SO-11

INPUT

Notes



## Systems Operations and Competitive Advantage

- Operations advantages hard to achieve
- Avoidance of operations disadvantages imperative
- Advantage/disadvantage comes from applications

SO-12

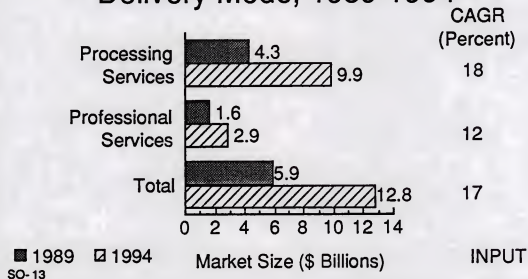
INPUT

Notes





## U.S. Systems Operations Market by Delivery Mode, 1989-1994



Notes



## Trends in Systems Operations

- Network management contracts
- Development and operations in agreements
- Shared resources approach
- Mixed hardware offerings
- Vertical market focus

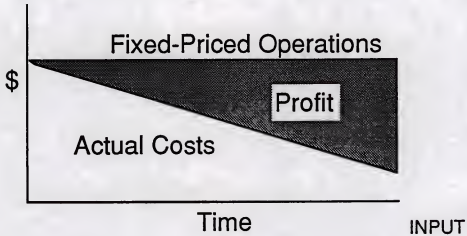
SO-16

INPUT

Notes



## Systems Operations Efficiency Yields Profits



SO-17

Notes



## U.S. Systems Operations Growth Perspectives

	Growth Rates (Percent)	
<u>Vendors' View:</u>		
Commercial	21	
Federal	12	
<u>INPUT Forecast:</u>		
Commercial	17	
Federal	15	INPUT

SO-23

Notes





## Industry Margins Vendors' View

	Profit Margins (Percent)
Commercial	15
Federal	9

SO-24

INPUT

Notes



(50) - 53	* VM - 16	SC - 1a
- 54	- 17	2
- 55	- 19	3
- 61	- 20	4
<del>- 63</del>	- 23	5.
- 76.	- 24	7.
- 77	- 25	8a, b.
- 71	- 26	11
* NS - 1	- 27.	
- 4	- 29.	
- 5	- 31	
- 6.	- 32	
- 7	- 33.	
- 8	CT - 1	
- 11	2	
- 13	3.	
- 14.	4.	
- 21	8	
- 23s	12	
- 23b.	15.	
- 39.	22.	
- 51	24.	
- 54a, b	27a, b	
- 55G	29.	

MAMAP  
Two  
for Me



## Who is the SO Buyer?

- Varies greatly—dependent on prospect
- Individual more than team
- Customized marketing required

SO-53

INPUT

Notes



## What is the SO Buyer Looking For?

- Depends on the prospect
- Requires customized marketing

SO-54

INPUT

Notes





## What are the SO Buyer's Key Motivators?

- Most often, solving a problem
- Reducing risk and time often important
- Scarcity of people

SO-55

INPUT

Notes



## Platform Systems Operations

### Prospect View of System Utility Relationship

- "Technology" rather than "application" solution
- View could be:
  - Short-term, solve a problem
  - Long-term, provide basic architecture

INPUT

SO-61

Notes



## Perceived SO Inhibitors

- Cost
- Employee loyalty
- Vendor employee turnover
- Loss of control
- Acceptance by user community

SO-76

INPUT

Notes



# SO Vendor Issues

- Account control
- Potential conflicts of interest
- Profit maximization vs. performance

SO-77

INPUT

Notes





## Conclusions

- Economic factors will continue to create user demand for systems operations
- Commercial sector is most attractive
- Profits through productivity and technology leverage

SO-71

INPUT

Notes



# Network Services

INPUT  
MPRE-127

Notes

NS-1

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**INPUT**



## Network/Electronic Information Services Market—Driving Forces

- Business need for rapidly available electronic information
- RBOC entry
- Network management services
- Voice information services
- Transaction "electronification"

INPUT  
MPRE-131

Notes



## Network/Electronic Information Services Market—Driving Forces

- PC population
- Consumer information services
- ISDN
- EDI popularity
- Wide-area networking

INPUT  
MPRE-404

Notes





## Network/Electronic Information Services Market—Inhibiting Forces

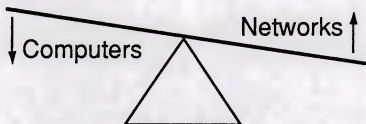
- Data overload
- CD-ROM as alternative
- Profitability questions

INPUT  
MPRE-405

Notes



## 1990s Trend



INPUT  
MPRE-232

Notes



## 1990 Trend

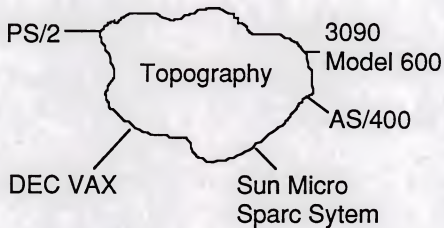
- Network = Power  
Consummable  
Embedded storage,  
processing, software
- Computer = Device  
Discrete replacement  
Embedded communications  
link

INPUT  
MPRE-233

Notes



# Network 1990



INPUT  
MPRE-235

Notes





## The Network Will Become the System

- Implications for users
  - Nodes are almost equal in power
  - Telecommunications skills are vital
  - IS management at many nodes
  - More complex systems design

INPUT  
MPRE-377

Notes



# Network Environment

Intelligent  
Workstation =



Window to  
Information Services

Local  
Distributed  
Central  
External

INPUT  
MPRE-12

Notes



## Network Services Issues

- ISDN service availability
- Rapid technology change
- Lack of standards
- Domestic regulations
- International regulations
- Investment costs

INPUT  
MPRE-216

Notes



# Electronic Mail Services

- Major Trends
  - Aerospace, petroleum industry use of X.400
  - Facsimile as competitor
  - Growth of in-house E-mail networks

INPUT

Notes





# Electronic Mail Services

- Major Trends
  - Voicemail as alternative
  - Corporate controls on communications expense
  - Current lack of inter-company directory; X.500 will remedy

INPUT

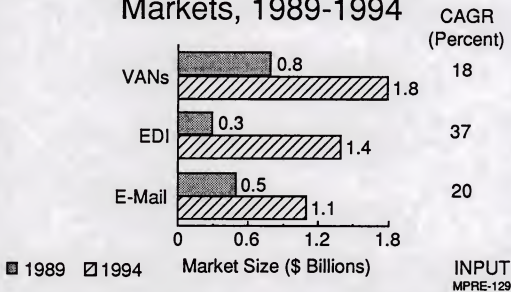
Notes

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, accounts payable, and accounts receivable. It also outlines the procedures for recording these transactions, including the use of double-entry bookkeeping to ensure that the books balance.

The second part of the document focuses on the analysis of the financial data. It explains how to calculate key financial ratios and metrics, such as the gross profit margin, operating profit margin, and return on investment. These metrics are used to evaluate the company's performance and identify areas for improvement. The document also discusses the importance of comparing the company's performance to industry benchmarks and competitors. This helps to provide context and identify trends in the market.

The final part of the document discusses the preparation of financial statements. It explains how to prepare the income statement, balance sheet, and cash flow statement. It provides a step-by-step guide to the process, including the calculation of net income, total assets, and total liabilities. The document also discusses the importance of auditing the financial statements to ensure their accuracy and reliability. It provides information on how to hire an auditor and what to expect from the audit process.

## U.S. Network Applications Services Markets, 1989-1994



Notes



## Trends In Electronic Mail

- Implementation of X.400 standard
- Conformance tests
- Intercorporate E-mail
- Entry of RBOCs
- PC/WS E-mail growth

INPUT

Notes



## Electronic Information Services (Data Bases) Markets

- Major Trends
  - Proliferation of PCs, modems
  - Consumer information services
  - Immediacy of business information needs

INPUT

Notes





## Electronic Information Services (Data Bases) Markets

- Major Trends
  - Improved access to large numbers of data bases
  - AT&T's recent authorization to compete

INPUT

Notes



## Electronic Information Services (Data Bases) Markets

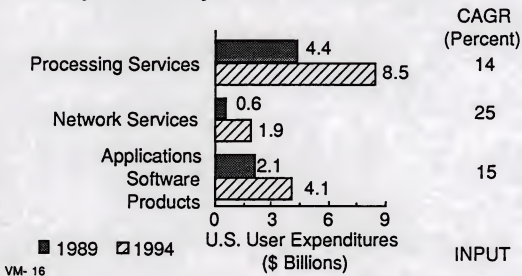
- Major Trends
  - Possible data saturation
  - CD-ROM, FM broadcast, X.25 TV as alternatives
  - Declining growth rate of new business users

INPUT

Notes



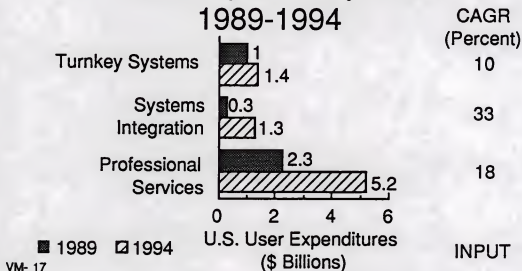
## Banking and Finance Sector Forecast by Delivery Mode, 1989-1994



Notes



## Banking and Finance Sector Forecast by Delivery Mode, 1989-1994



Notes





**Banking/Finance Industry  
Trends—Examples  
Changing Outlook for Individual  
Products/Services**

- Product creation/evolution proceeding at more rapid pace
- 24 hour/automated trading systems
- Increased demand for electronic information services

INPUT

VM- 19

Notes



## Banking/Finance Industry Trends—Vendor Impact Extension into Multiple Lines of Business

- Good for consulting, systems integration
- Mixed for software, processing services, turnkey

VM- 20

INPUT

Notes



## State and Local Government Driving Forces

- Need for new programs and services
- More reliance on information
- Budget pressures
- Expanding wealth of technology
- "Unique" applications

VM- 23

INPUT

Notes



## State and Local Government Driving Forces

- Changes in information systems organization
- Lack of internal staff expertise
- Reliance on information services vendors

VM-24

INPUT

Notes





## Issues for IS Departments

- Rising expectations of key users and officials
- User demands for more complex solutions
- Planning for changes in technology
- Productivity and backlogs
- Integration of data/technology applications
- Budgeting and funding

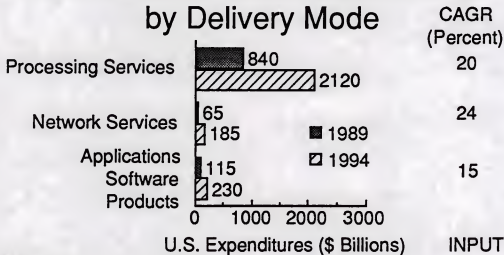
INPUT

VM- 25

Notes



## State and Local Government Sector Information Services Expenditures by Delivery Mode

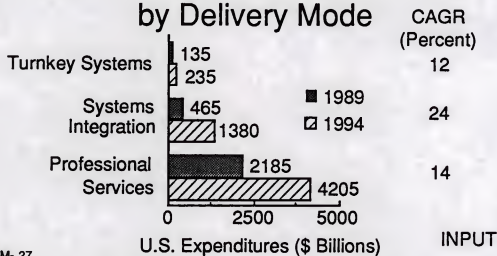


VM- 26

Notes



## State and Local Government Sector Information Services Expenditures by Delivery Mode



VM-27

Notes



# Federal Government Sector Issues

- 'Peace dividend'
- Cost containment
- Acquisition reforms
- Budget deficit control measures

VM- 29

INPUT

Notes

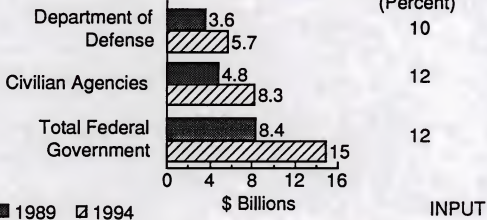




## Federal Government Sector Market Forecast

1989-1994 (Calendar Year) CAGR

(Percent)



VM-31

Notes



## Federal Government Sector Driving Forces

- Rising service demands
- Equipment obsolescence
- High maintenance costs
- End-user computing needs

VM- 32

INPUT

Notes



# Federal Government Sector Driving Forces

- Connectivity requirements
- Improved security/privacy demands
- Presidential priority programs

VM- 33

INPUT

Notes



# Competitive Trends

CT-1

INPUT

Notes





# Vendor Activities

## Demonstrate 1990s Trends

- Andersen Consulting
- Computer Associates
- Computer Sciences
- Electronic Data Systems

CT-2

INPUT

Notes



## Vendor Activities Demonstrate 1990s Trends

- Microsoft
- Oracle
- Digital Equipment
- IBM
- Japanese vendors

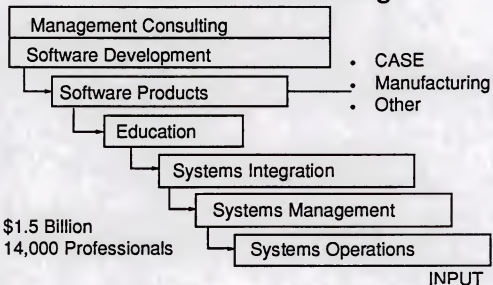
CT-3

INPUT

Notes



# Andersen Consulting



CT-4

Notes



## Computer Sciences Corp

- Continues strong in federal markets
  - Primarily professional services/SI
- Resurgent interest in commercial markets
  - Health and insurance
  - Tax and credit
  - Professional services/SI

INPUT

CT-8

Notes





## EDS

- Industry leader in systems operations
- Aiming for very large accounts
- Industry-oriented
  - Finance
  - Insurance
  - State and local government
  - Banking

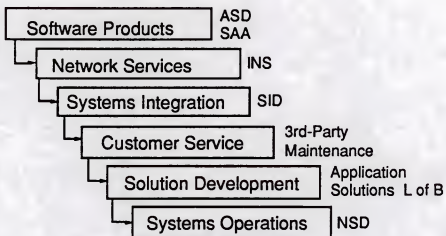
CT-12

INPUT

Notes



# IBM



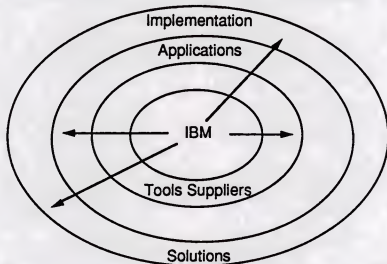
CT-15

INPUT

Notes



# IBM Investment Strategy



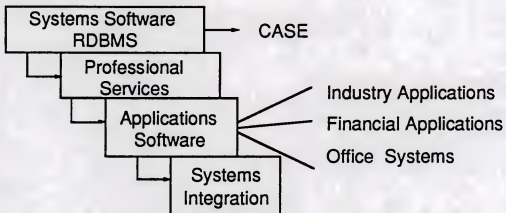
CT-22

INPUT

Notes



# Oracle



CT-24

INPUT

Notes





## European Companies

- CAP Gemini Sogetti (CAP-SESA) is parent of CAP GEMINI AMERICA (CGA)
  - Close to \$1 billion in 1989
  - Focus on professional services

CT-27a

INPUT

Notes



# European Companies

- Aggressive acquirer
- Will not attack operations market directly
  - Provide support services
  - Emphasizes development market

CT-27b

INPUT

Notes



## Japanese Vendors

- Large companies already exist
- Close scrutiny of U.S., European markets
- Cautious approach to investment
- Alliances likely to come first
- Entering markets with Japanese clients
- Usually part of corporate family
- Attacking secondary markets

CT-29

INPUT

Notes



# Summary and Conclusions

SC-1a

INPUT

Notes





## Environment for Information Services in Year 2000

- Worldwide network infrastructure in place (ISDN)
  - Voice
  - Data
  - Text
  - Graphics

SC-2

INPUT

Notes



## Environment for Information Services in Year 2000

- Simultaneous language translation/transmission
- Active home/consumer use of videotex, data base access

SC-3

INPUT

Notes



## Environment for Information Services in Year 2000

- Image processing is routine
- Portable, desktop computers used by all professional/clerical/managerial workers
- Standards in place for OS, graphical interfaces

SC-4

INPUT

Notes



## Environment for Information Services in Year 2000

- Fewer hardware vendors
- Solutions delivered, not products
- Software customized by nonprogrammers

SC-5

INPUT

Notes





## Conclusions

- Shorter lifecycle calls for fast response
- People skills/retention are key
- Internationalism to increase
- Technology creates opportunities

SC-7

INPUT

Notes



## Conclusions

- Services (people) will be the key
  - Recruiting
  - Motivation
  - Compensation
  - Training
- Targeted, disciplined marketing
- Have platforms that serve all markets
- Develop 'critical mass' in target markets
- Seek leverage from standards

INPUT

SC-8a

Notes



## Conclusions

- Double-digit annual growth for all vendors
- no longer "automatic"
- Worldwide markets offer real opportunities

SC-8b

INPUT

Notes



## Opportunity for 1990s

- Attack in-house budgets
- Opportunity \$75-100 billion/year in U.S.

SC-11

INPUT

Notes

