

Putting Downsizing in Perspective

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Notes

Downsizing

Topics

- Introduction
- Types of Downsizing
- Downsizing Plans
- Conclusions

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Information Technology Environment

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ID- 3

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11/15/91

Downsizing

Revolution and Opportunities

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Downsizing

Types of Downsizing

- Platform driven
- Application driven
- Organization driven

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Downsizing

Platform Driven Description

- Replacement of the core processing capability (platform) on a price/performance basis.

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Downsizing

Platform Driven Technologies Supporting

- SQL servers
- RISC
- Cooperative processing
- LANs—client/servers
- Open systems

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Downsizing

Platform Driven Driving Forces

- Price/performance
- Costs
- Purchased applications
- Ease of use of technology
- Reaction time

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Application Driven Description

- Transfer of the application, either user interface or all, to a workstation or LAN environment.

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Downsizing

Application Driven Technologies Supporting

- SQL
- Client/server
- Distributed data base management systems
- LANs—client/servers

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Application Driven Driving Forces

- User involvement in application development
- Re-engineering of business processes
- Many information technologies
- Proving IS can be cost effective

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Application Driven—Example

- Executive Information System
 - LAN-based server
 - SQL data base
 - PC interface—user can customize
 - Structured interfaces to operational data bases

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Downsizing

Platform Driven—Example

- Food processing—beer company
- 1 mainframe to 3 RISC servers
- Complete replacement of applications (purchased)
- Budget reduced by 40%
- Implementation—2 years

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Downsizing

Organization Driven Description

- The role of information systems becomes focused on advising and consulting, not performing.

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Downsizing

Organization Driven Driving Forces

- Re-engineering of the total organization
- User involvement in IS process
- IS performance problems
- Client/server and RISC technology

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Organization Driven Impacts

- IS process becomes owned by user
- IS becomes integrated with the business
- IS decisions become business driven

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Downsizing

Downsizing Plans

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Downsizing

Survey

- Information systems executives
- Information services vendors
- Same questions
 - What are the underlying issues?
 - What will be the rate of progress?
- Goal - Is there conflict or confusion?

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Notes

Downsizing

Overall Attitude Overvalued or Underrated

Concept	Users	Vendors
Downsizing	Over	Over
Client-server	Under	Under
Cooperative processing	Under	Under
Portability	Under	-

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Downsizing

Platform Attributes

Question: Rank the platforms
for each of the attributes.

Mainframe

Minicomputer

RISC

Personal computer

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Downsizing

Platform Attributes

- Agreement on mainframe & PC
- Confusion on minicomputer and RISC
 - Vendors favor RISC
 - Users favor minicomputers

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Platform Attributes Mainframe

- Security
- Connectivity
- Reliability
- Network mgmt.
- Vendor support
- Architecture
- Commercial applications
- Data management
- Complex
- Application software

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Downsizing

Platform Attributes PC

- Cost effective
- Bargain
- Easy to program
- Easy to use
- Open architecture
- Easy to operate

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Downsizing

Platform Attributes Minicomputers

Users	Vendors
Distributed server	Commercial applications
Architecture	Architecture
Data management	Easy to program
Connectivity	Application software
Easy to program	Complex

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Notes

Downsizing

Platform Attributes RISC

- Attributes
 - Distributed server
 - Open architecture
 - Cost effective/bargain

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Notes

Downsizing

Platform Attributes RISC

- Users modest ratings
- Vendors very high ratings
- Vendors investing

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Downsizing

Forces Prompting—Importance

Concept	IS Execs.	Vendors
Lower IS costs	High	High
Hardware price/perf.	High	High
Reduced development costs	High	Med-High
Need to re-engineer	Medium	Medium
Decentralize	Med-Low	Med-Low

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ID- 27

Notes

Downsizing

Forces Prompting—Importance

Concept	IS Execs.	Vendors
Improved service	Medium	High
User control	Medium	High
Improve info. quality	Medium	High
Organization flexibility	Medium	Med-High
Open systems	Low	Medium

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ID-28

Notes

Downsizing

Forces Inhibiting—Importance

Concept	IS Execs.	Vendors
Data quality	High	High
Increased network complexity	High	Medium
Reprogramming costs	Med-High	Med-High
DB conversion costs	Med-High	Medium
Increased DBM costs	Med-Low	Low

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ID-29

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Downsizing

Forces Inhibiting—Importance

Concept	IS Execs.	Vendors
No applications software	Med-High	Medium
Lack of systems software	Medium	Med-high
Centralized control	Medium	Medium
Vendor reliability	Med-Low	Med-Low
Increased software costs	Med-Low	Low

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Downsizing

Application and Data Base Plans

Question: Where is each
application or data base planned
to reside in 1991 and 1995?

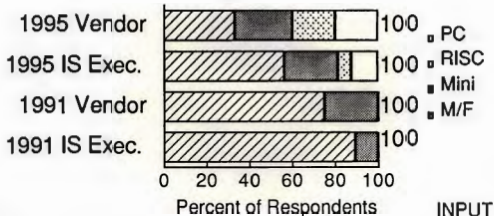
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Application Plans— Accounting

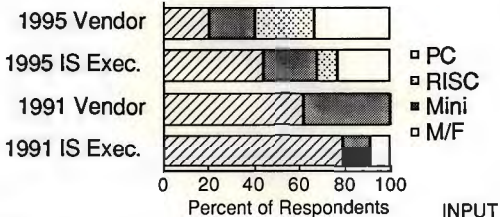


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Application Plans— Purchasing

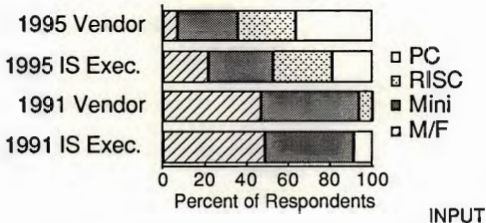


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Application Plans— Production

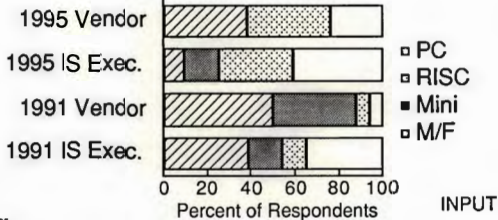


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Application Plans— Image Processing

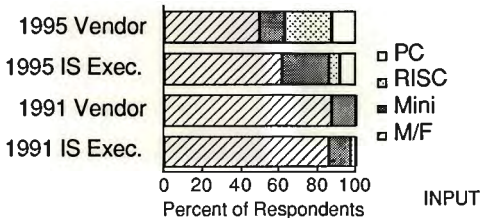


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Data Bases Plans— Finance/Accounting

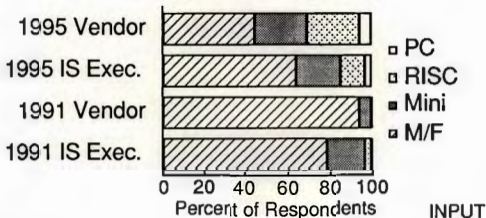


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Data Base Plans— Operating

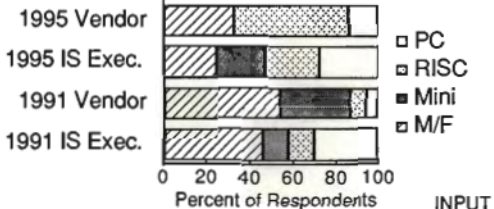


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Downsizing

Data Base Plans— Image



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Downsizing

Plans

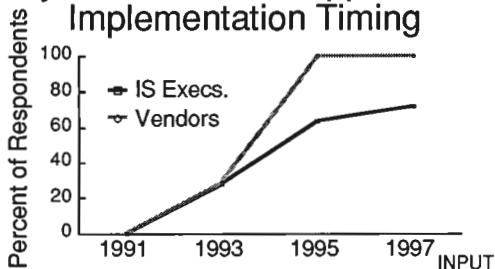
Question: When will the statement
apply to IS infrastructure?

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Downsizing Major Client/Server Applications Implementation Timing

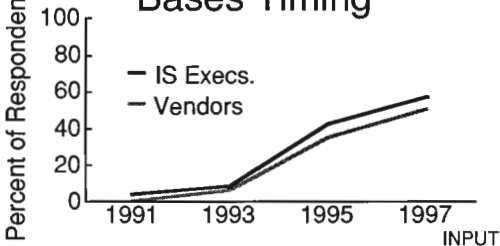


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Significant Distributed Data Bases Timing

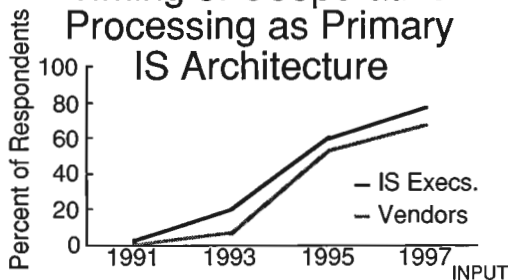


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Timing of Cooperative Processing as Primary IS Architecture

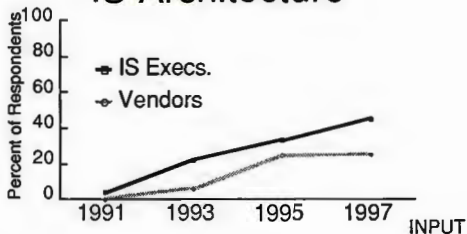


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Timing of SAA As Primary IS Architecture



ID- 43

Notes

Downsizing

Benefits and Consequences

Question: Agree or disagree the following benefits or consequences result from downsizing innovations.

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ID- 44

Notes

Downsizing

Benefits

Concept	% Agreeing	
	IS Execs.	Vendors
Improve user responsiveness	83	89
Faster development	77	61
More effective IT	75	89
IS role/expense reduced	62	78
Reduced software costs	46	44

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ID- 45

Notes

Downsizing

Benefits

Concept	% Agreeing	
	IS Execs.	Vendors
Improved productivity	62	94
Reduced hardware costs	65	88
Improved business planning	58	89
Improved control of IR	33	62

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ID- 46

Notes

Downsizing

Distribution of Function

Question: What is proper platform for following functions?

Mainframe

Minicomputer

RISC

Personal computer

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Notes

Downsizing

Distribution of Function

Appropriate Platform Function	IS Execs.	Vendors
Secure data bases	M/F	M/F
Repository mgmt.	M/F	M/F
Critical data bases	M/F	M/F

M/F = Mainframe

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ID-48

Notes

Downsizing

Distribution of Function

Appropriate Platform Function	IS Execs.	Vendors
Image processing	All	M/F-PC
Network management	M/F	RISC-All
Transaction processing	M/F	M/F-RISC

M/F = Mainframe PC = Personal computer

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Notes

Downsizing

Distribution of Function

Appropriate Platform Function	IS Execs.	Vendors
Distributed DBs	M/F-Mini	RISC-Mini
Program development	PC	PC

M/F = Mainframe PC = Personal computer

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ID- 50

Notes

Downsizing

Issues

- Information Systems
 - Shifting underlying technology
 - Re-engineering without losing data integrity
 - Managing the transition
 - Buying from new vendors

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Notes

Downsizing

Issues

- Information services vendors
 - Where to invest: RISC, UNIX, SQL?
 - How fast will IS move?
 - Is the underlying technology ready?
 - Learning to sell to the user

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Notes

Downsizing

Conclusions

- Confusion—but many plans
- IS execs. and vendors do not agree
- User demands and technology drive the revolution

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Notes

Downsizing

Conclusions

- Information systems
 - Basis for re-engineering/re-investment
 - Does not negate role of IS
 - Opportunity to provide real ROI
 - Opportunity to market increased IT benefits

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Notes

Downsizing

Conclusions

- Information services vendors
 - Source of new opportunities
 - Shifts investment from old to new
 - Cause change in market strategy
 - May increase pricing and profit pressures

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Notes

Downsizing

Recommendations

- IS Execs.
 - The 90s—Age of Architecture
 - Integration, integration, integration
- Vendors
 - Clarity of direction
 - Balance your investments

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ID- 56

Notes

Conclusions

- Vendors more optimistic than buyers
- Some applications will lead
- Data bases move more slowly than applications

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Notes

Downsizing

INPUT 1992 Research Plans

- Downsizing and IT architectures
- Client/server application development
- Impacts on IT vendors
- Impacts on role of information systems
- Case studies

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Notes

Downsizing Revolution

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Notes

Downsizing Topics

- Overview
 - Issues
 - Client/Server
-

- Planning
- Architecture
- Case Studies

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Notes

The Systems Industry—Past

Demand increase - 30% to 40% per year

+

Price/performance improvement - 20%
per year

=

Industry growth - 10% to 20% per year

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Notes

The Systems Industry—Past

Demand increase - 30% to 40% per year

+

Price/performance improvement - 20%
per year

=

Industry growth - 10% to 20% per year

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Notes

The Systems Industry— Now

Demand increase - 30% per year ?
+
Price/performance improvement - 40%
per year
=
Industry Shrinkage

ID-63

INPUT

Notes

The Systems Industry— Now

Demand increase - 30% per year ?
+
Price/performance improvement - 40%
per year
=
Industry Shrinkage

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Notes

Downsizing

Types of Downsizing

- Platform driven
- Application driven
- Organization driven

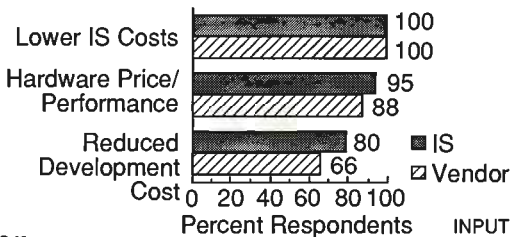
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Notes

Downsizing

Driving Forces Most Important

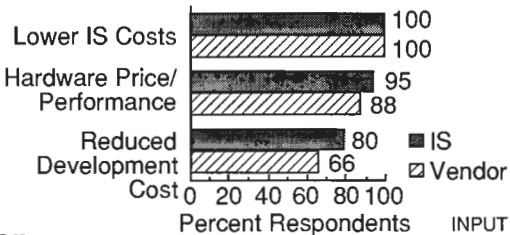


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Notes

Downsizing

Driving Forces Most Important

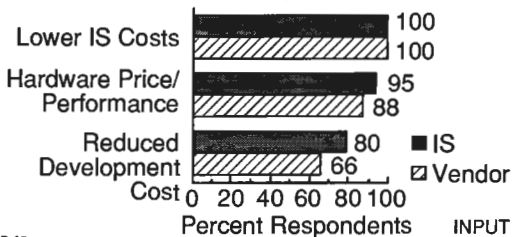


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Notes

Downsizing

Driving Forces Most Important

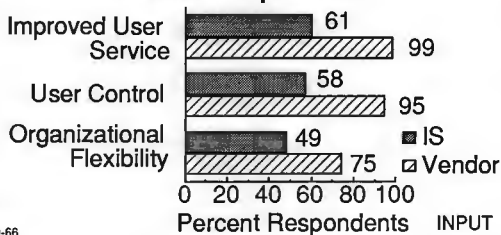


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Notes

Downsizing

Driving Forces Most Important

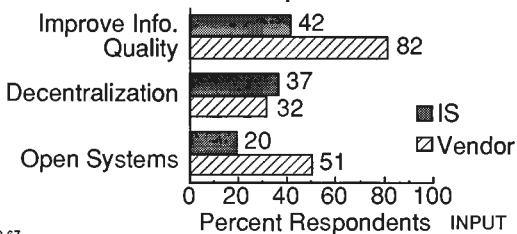


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Notes

Downsizing

Driving Forces Least Important

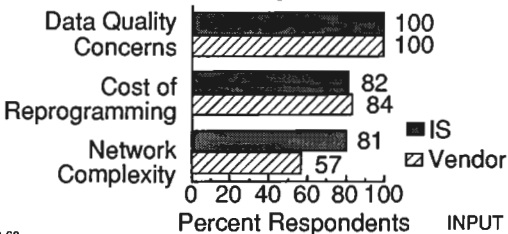


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Notes

Downsizing

Inhibiting Forces Most Important

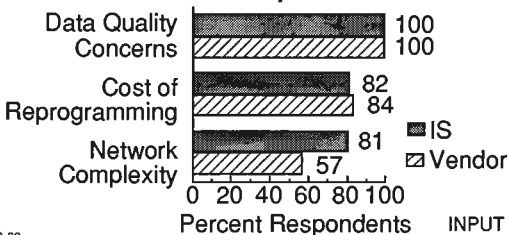


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Notes

Downsizing

Inhibiting Forces Most Important

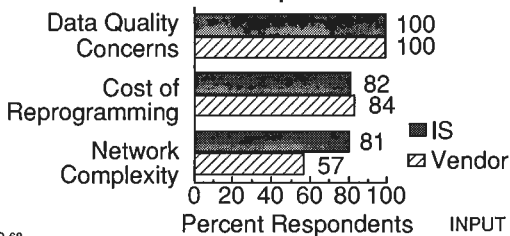


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Notes

Downsizing

Inhibiting Forces Most Important

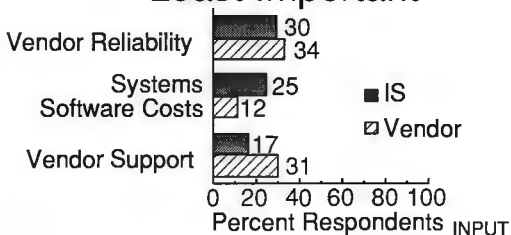


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Notes

Downsizing

Inhibiting Forces Least Important



ID-69

Notes

Downsizing

Key Issues

- User
 - User acceptance of IT ownership
 - Management of distributed data
 - Re-engineering the IT architecture
 - Top-down or bottom-up implementation

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ID-70

Notes

Downsizing

Key Issues

- User
 - User acceptance of IT ownership
 - Management of distributed data
 - Re-engineering the IT architecture
 - Top-down or bottom-up implementation

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Notes

Downsizing

Key Issues

Vendor

- Re-investment in products/services
- Retraining sales force
 - Products
 - Customers
- Shifting the client to new technology

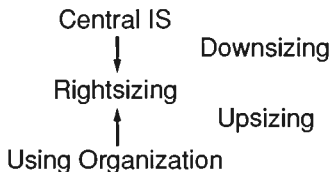
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Notes

Downsizing

Planning—Point of View



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Notes

Downsizing

Top Down or Bottom Up

Integrated	or	Piecemeal
Architecture	or	Application
Controlled	or	Experimental
IS	or	User

ID-73

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Notes

Downsizing

Planning Issues

- Progress with relational DBMS
- Cost goals vs. business goals
- Shifting costs to user
- IS vs. user responsibilities
- Purchased vs. internal applications
- Data vs. all types of information

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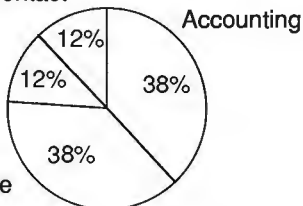
Downsizing

Applications Completed

Point-of-Contact

Scientific and
Engineering

Administrative



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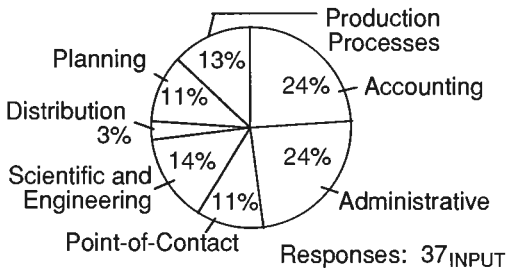
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Downsizing

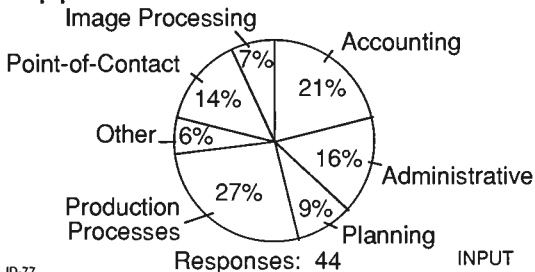
Applications Planned, 1992



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Notes

Downsizing Applications Planned—Future



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Notes

Downsizing

Cost Issues

Cost Factor	Data Center	Network
Application Support	0	0
Processor	0	0
Systems Support	+	+
Staffing	0	+
Transition	+	+

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ID-78

Notes

Downsizing

Cost Issues

Cost Factor	Developer	User
Application Support	-	0
Processor	0	+
Systems Support	+	0
Staffing	-	-
Transition	+	+

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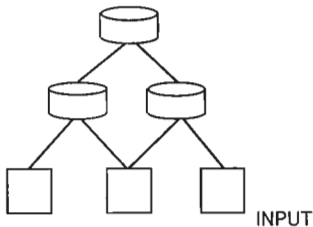
Downsizing

Architecture Allocation of Function

Superserver

Distributed
Servers

Clients



ID-80

Notes

Downsizing

Architecture Allocation of Function

Superserver

- Transaction reservoirs
- Archival data warehouses
- Back-up to distributed applications
- Enterprise repository

ID-81

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Notes

Downsizing

Architecture Allocation of Function

Distributed Servers

- Distributed data base management
- Network management

ID-82

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Notes

Downsizing

Architecture Allocation of Function

Distributed Servers

- Integration of business systems
- Object management
- Connectivity

ID-83

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Notes

Downsizing

Architecture Allocation of Function

Clients

- Automated processes
- Secure processes
- Intelligent data entry

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Notes

Downsizing

Architecture Allocation of Function

Clients

- Information retrieval and analysis
- Personal computing

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Notes

Downsizing

Examples

Organization	Objective
Food processory	Cost savings
Semiconductor Mfr.	IT strategy (AS/400 vs. RISC)
University	Information architecture

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Notes

Downsizing

Cost Savings—Example

- Food processing—beer company
- 2 mainframes to 3 RISC servers
- Complete replacement of applications (purchased) and staff
- Budget reduced by 40%
- Implementation—2 years

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ID-87

Notes

Downsizing

IT Strategy—Example

- Engineering driven company
- RISC technology critical
- Driving use of RISC for commercial applications

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Notes

Downsizing

IT Strategy—Example

- Implications/Issues
 - Retraining IS staff
 - Data quality and security
 - Completeness of UNIX

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Notes

Downsizing

Information Architecture Example

- Decentralized style of university
- Existence of significant distributed power
- Client/server and packaged software appealing

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Notes

Downsizing

Information Architecture Example

- Implementation/Issues
 - Data quality
 - Creation of superserver structure
 - Availability of support staff at distributed level

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Notes

Downsizing

Conclusions

- Opportunities are being pursued
- Client/server technology is a facilitator
- Top-down approach recommended
- IS and services vendors have much to learn

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Notes

The Systems Industry— Now

Open Systems

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Notes

The Systems Industry— Now

Open Systems

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ID-93

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Notes

- Introduction
- Downsizing Issues
- Desktop Services
- Conclusion

ID-94

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Notes

- Introduction
- Downsizing Revolution
- Impact of Downsizing on Outsourcing
- Desktop Services Opportunity
- Conclusion

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Notes

The Systems Industry— Past

Operating environments protected
core systems prices

INPUT

ID-95

Notes



The Systems Industry— Past

Operating environments
protected core systems prices

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Notes

Transition Management

- Requires outsourcer as agent of change
- Transition difficult to accomplish
- Transition takes time
- Dual operational environments required

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Notes

Transition Management

- IS architecture transition is from centralized mainframes to downsized client/server
- IS ownership from central IS unit to user organizations

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Notes

Transition Management

- Client can outsource existing operations
 - Frees resources for new approach
- Opportunities for all types of IS outsourcing

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Notes

Transition Management

- Client can outsource existing operations
 - Frees resources for new approach
- Opportunities for all types of IS outsourcing

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Notes

Conclusion

Impact of Downsizing on IS Outsourcing

- Changes systems operations
- Changes and enhances network management
- Greater opportunities for transition management

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Notes

Conclusion

Impact of Downsizing on IS Outsourcing

- Causes desktop services growth
- Greater transition management opportunities
- Positive overall impact on IS outsourcing
 - Negative on some parts and vendors

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Notes

Documenting the Downsizing Trend

CIO survey results show

- 80% have identified target applications suites
- 40% have projects or pilots underway

...A significant opportunity exists!

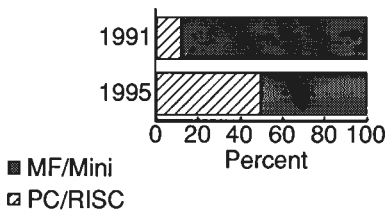
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Notes

Platform Trends

Production Applications



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Driving Forces for Downsizing

- Business operations downsizing
- Business process re-engineering
- User demands for rapid response to changing requirements

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Notes

Driving Forces for Downsizing

- Executive demands to lower IS costs through
 - Platform price performance improvements
 - Platform independence
 - Reduced software costs

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Notes

Factors Inhibiting Downsizing (Ranked from Survey Results)

Rank	Factor
1	Data quality problems
2	Transition costs
3	Increased network complexity
4	Applications software not available

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Notes

**Realized Benefits
Post-Downsizing**
(Ranked from Survey Results)

Rank	Factor
1	Improved user responsiveness
2	Broader range of choices
3	Faster systems development
4	More effective use of IT

ID-107

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Notes

Changing Management Requirements

Data center mgt. → Distributed network mgt.

De facto IBM stds. → Heterogeneous stds.

Centralized dev. → Decentralized dev.

Centralized support → Distributed support

Cobol based sys. → New dev. environments

... *Are users ready?*

ID-108

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Notes

Critical Issues Impacting IS Management

- Staffing and training for the downsized environment
 - Scarcity of technological skills
 - Transition of IS staff to user staff

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Notes

Critical Issues Impacting IS Management

- Interlocking the technical strategy with business strategy
- Remaining actively involved in business re-engineering
- Facilitating the transition

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Notes

Key Opportunities for Vendors

- “Desktop services”—support and transition mgt.
- Distributed integrated platform offerings (*integrated workstation/ LAN/OS environments*)

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Notes

Key Opportunities for Vendors

- Transition management services
- Applications software products/
development (*distributed
environments*)

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Notes

Key Moves for Industry Participants

Class	Opportunity
Out-sourcers	<ul style="list-style-type: none">• Transitional outsourcing• Desktop services• Downsizing SI contracts

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Notes

Key Moves for Industry Participants

Class	Opportunity
Software products	• Distributed integrated platforms (DIP)
Turnkey systems	• Desktop services
	• Apps. development—distributed

ID-117

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Notes

Key Moves for Industry Participants

Class	Opportunity
Network Proc. Svcs.	<ul style="list-style-type: none">• Outsourcing of network requirements• Distributed network mgt.• Specialized transaction processing

ID-118

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Notes

Downsizing Impacts Future Industry Growth

- Software and services
 - Future growth will sustain or exceed current levels—1992-1997

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Notes

Downsizing Impacts Future Industry Growth

- Hardware
 - Level growth—1992-1997
 - Increased unit sales
 - Declining prices

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Notes



Topics

- Introduction
- Impacts on software product vendors
- Impacts on software distribution and pricing
- Custom vs. package applications
- Impact on markets
- Conclusions

INPUT

ID-124

Notes

Introduction

ID-125

INPUT

Notes

IS Model for the '90s

Platform	M/F	Mini	Micro/WS
User	Cent. IS	Dept. IS	Pwr User/User
Envmt.	Client/Server		
Appl. SW Prod.	Enterprise-Critical	Dept.-Critical	Prodtvty

INPUT

ID-126

Notes

Downsizing Driving Applications

- 52 IS executives surveyed
- 22 execs. identified 44 applications scheduled/considered for downsizing
 - 37% accounting and administration
 - 27% production processes
 - 7% image processing
 - 2% knowledge-based systems

INPUT

ID-127

Notes

Software Market

- Downsizing changing SW paradigm
- Mission-critical applications
 - Wide variance in content
 - Replacement is accelerating
 - 1/3 of appl. less than 2 years old
- End user initiating change/purchasing software

INPUT

ID-128

Notes

Impact of Downsizing on Software Product Vendors

- What's changing?...Everything!
- Who's affected?...Everyone!

ID-129

INPUT

Notes

Software Product

Attributes

Features

Updates

Sales

Cost of sales

Price

Customers

Old

Fixed

Infrequent

Field

Labor bias

\$10,000+

100s

New

Constantly adding

Frequent

Direct/indirect

Advertising bias

\$100+

100,000s

ID-130

INPUT

Notes

Operating Systems SW Product Vendors

- Users less concerned with op. sys.
- PCs: bundled, Windows isolates user
- Minis: operating system bundled
- M/Fs: use standard mfg.'s op. sys.
- Battle for control of operating system
- What about networks?

INPUT

ID-131

Notes

Software Development Tool Vendors

- PC users moving to “plug and play” appl.
- Compilers
 - Users not interested (as comm. prod.)
 - Mostly power users buy compilers
- DBM bundled with applications
- Tools sold to developers, not end users

INPUT

ID-132

Notes

Distribution—Mechanics

- PCs: floppies and bundled SW
- Mainframes/minis: traditional methods
- Networks
 - Downline load distrib. appl.
 - Monitoring, maint., prob. resolution
- Important: currency/control of gen.

INPUT

ID-133

Notes

Distribution—Mechanics

CD ROM = Supermedia!

- Holds code, documentation, video
- Cheap and nondestructive
- Popular in downsized environment
- Eventually used for all software

ID-134

INPUT

Notes

Software Products

Impacts of Downsizing on Distribution and Pricing

ID-135

INPUT

Notes

Distribution—Channels

	<u>Trend</u>	<u>Platform(s)</u>
• Direct sales	More	PC
• Indirect sales	More	PC, all
• Telemarketing	More	PC
• Field sales	Less	M/F, mini

INPUT

ID-136

Notes

Pricing

- Bundling—users want it both ways
 - Advantages of bundled pricing
 - Only bundle what user needs
- Client/server pricing
 - Isolated or shared mode
- Pricing options: purchase, lease, usage, bundled, subscription

INPUT

ID-137

Notes

Custom vs. Packaged Applications

ID-138

INPUT

Notes

New User Development Environment

- Has limited resources
- Wants "off-the-shelf" applications
- Doesn't want to worry about DB, op. sys., network, integrity/reliability
- Will seek help to modify standard SW
- Traditional products at risk

INPUT

ID-139

Notes

New User Will Look for Software Products That Are...

- Packaged—useful as is
- Packaged—easily modifiable
- Scalable
- Templates
- OOP compatible

INPUT

ID-140

Notes

Who'll Modify/Change Software Products?

- Few "pure" custom jobs
- Limited resources in distributed IS
- Done by vendor or PS
 - Product vendor now provides svc.
 - Looks like, acts like, *is* a svcs. co.!
 - If not —————> it will disappear ... INPUT

ID-141

Notes

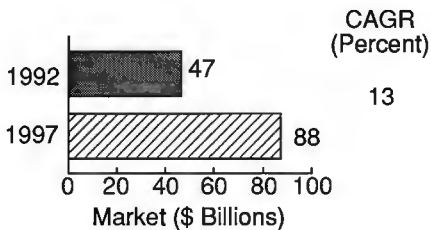
Impact on Markets

ID-142

INPUT

Notes

Software Products Market

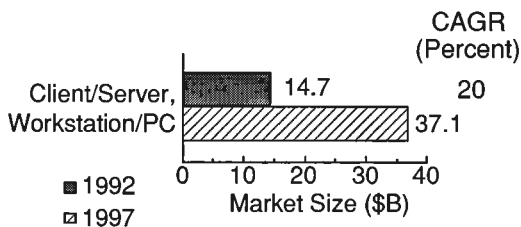


ID-143

INPUT

Notes

Software Products Market



ID-144a

INPUT

Notes

Conclusions

ID-145

INPUT

Notes

Market Realities

- Downsizing changes operations mgmt.
 - Systems mgmt. → network mgmt.
 - Central DBM → Distr. DBM
 - Network/DBM → integrated
 - AI = Lights out!
- Sys. architecture is still a battleground
- Ltd. user market for devmt. tools

INPUT

ID-146

Notes

Market Realities

- Security/Integrity
 - Downsizing synonymous/networking
 - Networking synonymous/access
 - Access synonymous/risk!
- Hardware is a commodity
- Software is where the value is

INPUT

ID-147

Notes

Applications That Will Succeed

- Can be (easily) used as is
- Can be (easily) modified
- Will be part of a suite ...
 - That can be upsized or downsized
 - Run with mainframes, servers (for C/S)

INPUT

ID-148

Notes

Companies That Will Succeed

- Scalable application suites
- Combine necessary tools, op. sys. with product
- Increase distribution channels
- Emphasize ease of installation
- Identify/satisfy user mission-critical needs

INPUT

ID-149

Notes

Companies That Will Succeed

- Will offer applications that
 - Isolate user from mechanics of op. sys.
 - Can be easily modified
 - Have on-line (networking) capability
 - Have demonstrated cost-effectiveness
- Will have strong customer support
- Will look a lot like services companies

INPUT

ID-150

Notes

Competitive Advantage Opportunities!

- Data management will be key
- Concentrate on delivery options
 - Templates
 - Scalable applications

ID-151

INPUT

Notes

Competitive Advantage Opportunities!

- Intelligent application or expert systems
- Software products vendor must provide support services, or PS will. Start to look like a service company!

ID-152

INPUT

Notes

Process Downsizing—The Disappearing Data Center?

- Introduction
 - How the data center got that way—and why
 - What is motivating downsizing?
- How organizations are going about downsizing

INPUT

ID-153

Notes

Process Downsizing—The Disappearing Data Center?

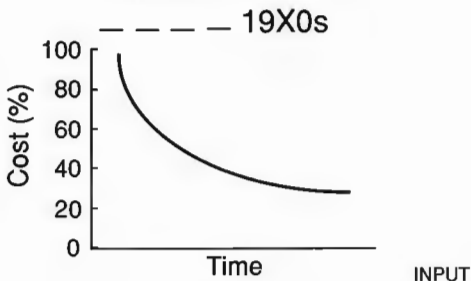
- Management considerations in downsizing
- Organizational and technological impacts
- Conclusions and recommendations

INPUT

ID-154

Notes

The Cost Curve



ID-155

Notes

Filling in the Blanks

- Centralization and decentralization—1950s
- Clerical costs—1960s
- Economy of scale—1970s
- Office “automation”—1980s
- Downsizing—1990s

ID-156

INPUT

Notes

Why Data Centers?

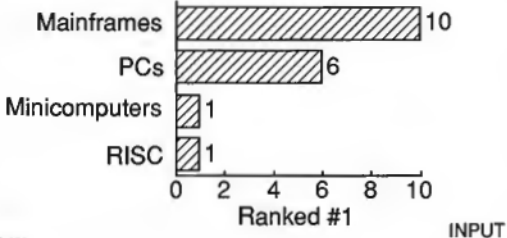
- “Efficiency” and cost savings
- File transfer and data problems
- Standards
- Centralized planning and control
- Limited human resources
- Maintain “traditional” client-vendor relationship

INPUT

ID-157

Notes

How Platforms Stack Up (Attributes)



ID-158

Notes

What Is Motivating Downsizing?

- It obviously isn't...
 - Technical and architectural quality
- It may be...
 - Cost, ease of use, and open systems
- But, it definitely is coming from...
 - End user dissatisfaction
 - Management dissatisfaction

ID-159

INPUT

Notes

How the Castle Crumbles

1970s



1980s



1990s



ID-160

INPUT

Notes

How Organizations Are Going About Downsizing

- Extension of continuing revolution
 - Scientific vs. commercial
 - Literate vs. illiterate
- Distribution of function(s) to C/S predominates

ID-161

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Notes

How Organizations Are Going About Downsizing

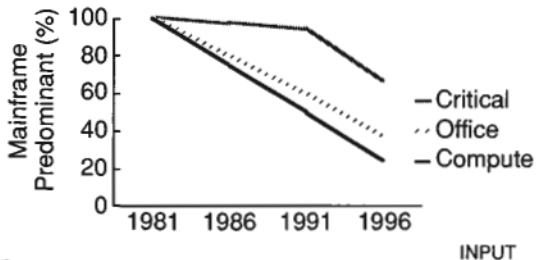
- Application downsizing
 - Compute intensive
 - Office automation
 - Business critical
- Controlled data distribution

ID-162

INPUT

Notes

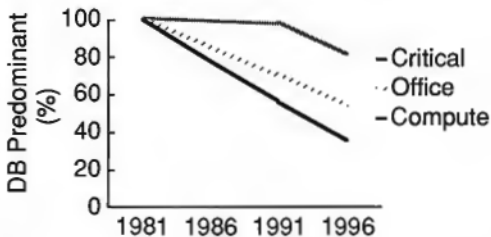
Applications Downsized (50 Respondents)



ID-163

Notes

DBs Downsized



ID-164

Notes

What Is Really Happening

- “Scientific” users have seized control (again)
- Management has downsized office applications

ID-165

INPUT

Notes

What Is Really Happening

- IS management attempting to “control”
 - Viewing with alarm
 - Justifiable technical concerns
 - Retain central data bases
 - Develop a “plan”
- Few mainframes being replaced

INPUT

ID-166

Notes

When Mainframes Are Replaced

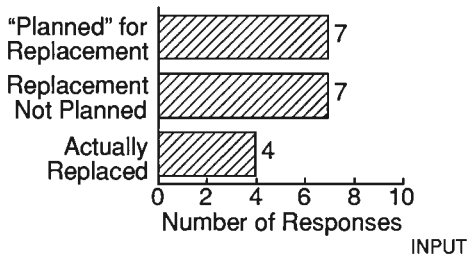
- They are small
- Single application
- Single user set
- Little data sharing
- Mainframe data dependency remains

ID-167

INPUT

Notes

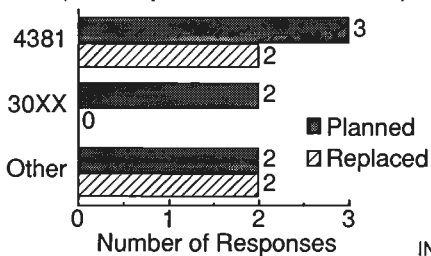
Replacement Status (18 Case Studies)



ID-168

Notes

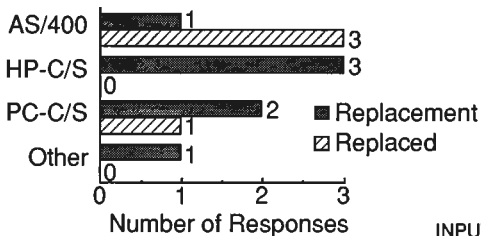
Mainframes Targeted (11 Replaced or Planned)



ID-169

Notes

Replacing Systems (11 Replaced or Planned)



ID-170

Notes

Speaking about the Unspeakable

AS/400

ID-172

INPUT

Notes

Management Considerations in Downsizing

- Conversion vs. re-engineering
- Visible vs. hidden costs
- Wither responsibility?
- Viability of new technologies
- Risk and management mind-set?
- Cost analysis

INPUT

ID-173

Notes

Critical Assumptions

- Mainframe cost can be reduced
- Data base integrity can be maintained
- Development and maintenance cost can be reduced

INPUT

ID-174

Notes

Critical Assumptions

- Transition costs can be controlled
- The “solution” will work
- Improved productivity

ID-175

INPUT

Notes

Organizational and Technological Impact

- IS doesn't have resources
- IS responsibility for downsizing
- Some IS problems → users
- Hardware costs will rise during transition

ID-176

INPUT

Notes

Organizational and Technological Impact

- Data center cost recovery—a problem!
- Distributed DBM is key
- Technological miracles required
- SAA—open systems coexistence

INPUT

ID-177

Notes

Conclusions

- Downsizing and upsizing = client/server
- Mainframes are not going to disappear
- Transition costs are key
- Mainframe costs aren't scalable

ID-178

INPUT

Notes

Conclusions

- SAA & AS/400 cannot be ignored
- Technological miracles unlikely
- Help (divine or otherwise) needed
- Opportunities everywhere—for everything

ID-179

INPUT

Notes

Recommendations

- Develop mainframe strengths as server level
- Select platforms that speed transition
- Simplify integration for IS and users

ID-180

INPUT

Notes

Recommendations

- Assist in mainframe replacement
 - “Help” with SAA
 - Make outsourcing attractive

ID-181

INPUT

Notes

Recommendations

- Unlimited potential for miracles
 - Decision support and competitive advantage
 - AI/expert systems
 - Less paper

ID-182

INPUT

Notes

Knowledge Encouraging Use of PS

Type of Knowledge	User Rating
Downsizing, client/server	4.1
Network technology	4.1
Distributed data bases	3.4
Open systems	2.8
CASE and/or re-engineering	2.7
Imaging	2.4

ID-186

INPUT

Notes

Impact on New PS Buyer (User)

- Downsizing forcing user responsibility
- Acquiring limited IS resources
- Has budget—budget's tight
- Needs help with:
 - Consulting
 - Training and education
 - Software dev., maint., mgmt.

ID-189

INPUT

Notes

Changing Needs—Consulting

Old (IS)	New (User)
Technical skills	Tech. <i>and</i> business skills
Gen. support	Specific support
Planning	Implementation
Network design	Network implementation
Long projects	Short projects
Appls. design	Applications selection

ID-190

INPUT

Notes

Changing Needs Training and Education

	Old (IS)	New (User)
Philosophy	Teach teacher	Teach user
Emphasis	Planning Tech. detail	Implementation How to use/do
Method	Varied curriculae	Specific courses
Schedule	Ongoing/long	As needed/short

ID-191

INPUT

Notes

Changing Needs Software Support

Support	Old (IS)	New (User)
Op. sys., tools	Heavy	Little need
Appls. dev.	Heavy	Light
Appls. mod.	Heavy (build hooks)	Light (use hooks)
Installation	Assist	Do
Integration	Heavy	Medium

ID-192

INPUT

Notes

Downsizing—Impact on PS Vendors

- Buyer less often is IS dept., more often is the user
- Needs of the user vary more widely
- More emphasis on
 - Business skills for business solutions
 - Integration of technology

ID-193

INPUT

Notes

Software Downsizing PS Impact

- Emphasis:
 - Assembling/integrating standard SW
 - Modifications to customize SW
 - Supporting NW, sys., DBM rqmts.
 - Technology/SW support hand-holding

ID-194b

INPUT

Notes

Software Downsizing PS Impact

PS vendors will need:

- Strong client/server skills
- Mini, micro, W/S literacy
- Comfort W/scalable appls., templates
- Skills in SW price/performance eval.
- To help client use PS effectively
- Patience

ID-195

INPUT

Notes

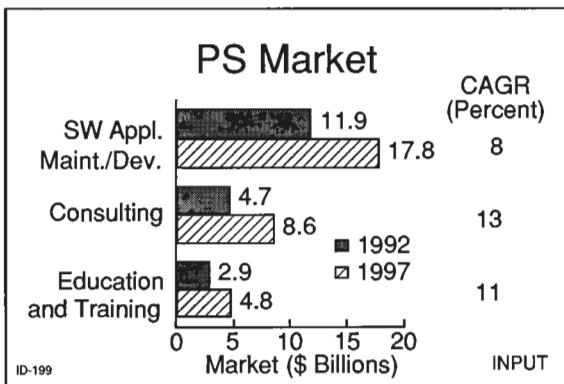
5-Year Outlook for PS

- Consulting has fastest growth rate
- Broadest skill set to help users
- Ed./trng. has steady growth rate
- New user market for IS training
- SW/appls., maint./dev./supt. lower growth rate
- Fewer big, long IS jobs

ID-198

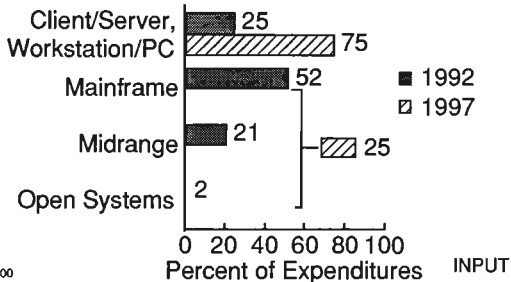
INPUT

Notes



Notes

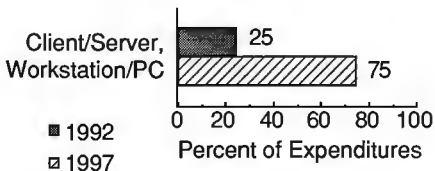
User PS Expenditures by Hardware Platform



ID-200

Notes

User PS Expenditures by Hardware Platform

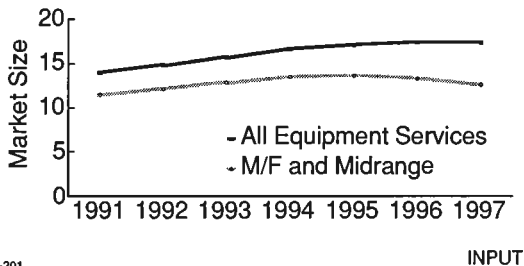


ID-200a

INPUT

Notes

Effect of Downsizing on Equipment Services Market



ID-201

Notes

Be Prepared to Recommend and Conduct PS Activities That:

- Are shorter in length or duration
- Are cost constrained
- Emphasize doing, *not* advising
- Directly involve the end-user
- Require a broader
(not-traditional) knowledge base

ID-202

INPUT

Notes

Key PS Vendor Strategies

- Invest in ind./tech. knowledge to help users downsize - consider alliances
- Use/recommend software products
 - With data base, reporting capabilities
 - That can be easily customized
 - That can be implemented quickly
- Broaden the base

ID-203

INPUT

Notes

The IS Department Must:

- Recognize changing support needs
- Facilitate downsizing—Don't fight it!
- Help end-users define function/support requirements
- Show user how PS can help

ID-204

INPUT

Notes

Downsizing

- Trends and factors
- User issues
- Interaction with outsourcing

ID-205

INPUT

Notes

Changing Requirements—SW

Attributes	Old	New
Features	Fixed	Constantly adding
Updates	Infrequent	Frequent
Sales	Field	Direct/indirect
Costs of sales	Labor bias	Advertising bias
Price	\$10,000+	\$100+
Customers	100s	100,000s

INPUT

ID-206

Notes

Changing Requirements Professional Services

Aspect	Old	New
Prof. Skills	Primarily technical	Technical and business
Support Focus	General	Specific
Practice Focus	Planning	Implementation

ID-207a

INPUT

Notes

Changing Requirements Professional Services

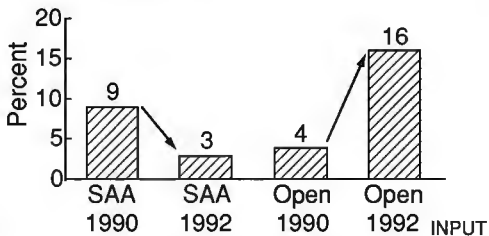
Aspect	Old	New
Telecomm.	Design	Implementation
Projects	Long	Short
Applications	Design orientation	Software selection/modification

ID-207b

INPUT

Notes

Movement to Open Systems in 900 Downsizing Documents



ID-208

Notes

User Issues

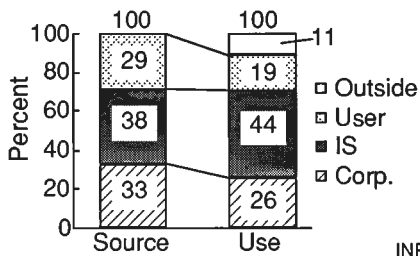
- Funding the downsizing effort
- Re-alignment of management responsibilities
- New skill requirements
- Transition management/strategy

ID-209

INPUT

Notes

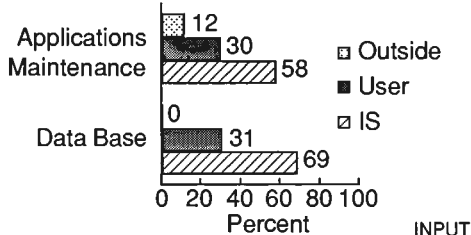
Downsizing Funding



ID-210

Notes

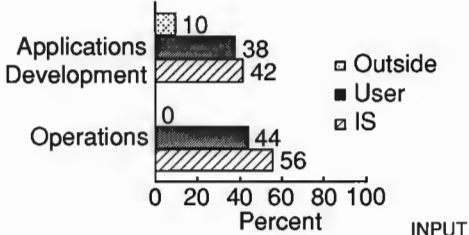
Post-Downsizing Responsibilities



ID-211a

Notes

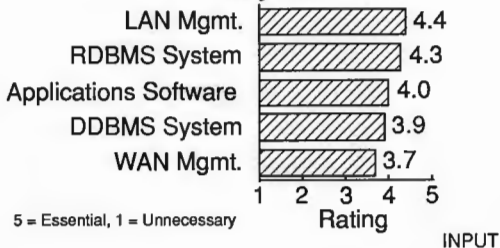
Post-Downsizing Responsibilities



ID-211b

Notes

Downsizing Capabilities Analysis



ID-212

Notes

Transition Strategy Key Decisions*

- Re-engineering versus conversion
- Standardized versus heterogeneous platforms
- Distribution of processing versus distribution of processing and data
- Open versus proprietary architecture

ID-213

INPUT

Notes

*Top four from 60 user surveys

Downsizing—Interaction with Outsourcing

- Threats
- Opportunities
 - Desktop services
 - Transition management

ID-214

INPUT

Notes

Threats

- Reduced number of mainframe shops
- Remaining installations likely to be smaller
- Shorter contracts with negative growth characteristics

INPUT

ID-215

Notes

Outsourcing Opportunities Desktop Services

Supply Services	Equipment Software Purchasing mgmt.
Equipment Support	Maintenance/installation Logistics
Connectivity Svcs.	LAN as management Network interfaces

ID-216

INPUT

Notes

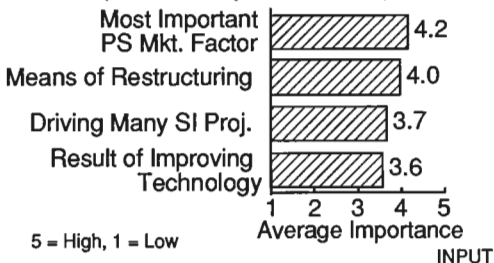
Impact of Downsizing on Professional Services (PS) Markets

ID-217

INPUT

Notes

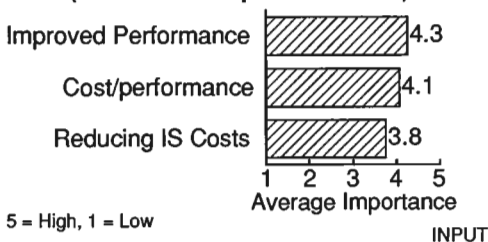
Assessment of Downsizing (PS Respondents)



ID-218

Notes

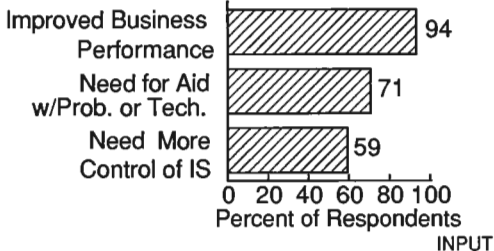
Forces Driving Downsizing (User Respondents)



ID-219

Notes

Impact of Downsizing on End Users

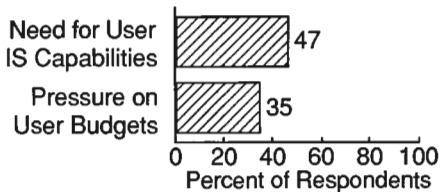


ID-220a

Notes

Multiple choices possible

Impact of Downsizing on End Users



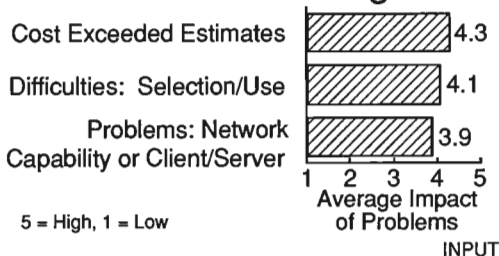
ID-220b

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Notes

Multiple choices possible

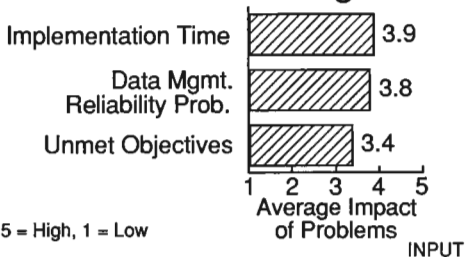
Problems Encountered with Downsizing



ID-221a

Notes

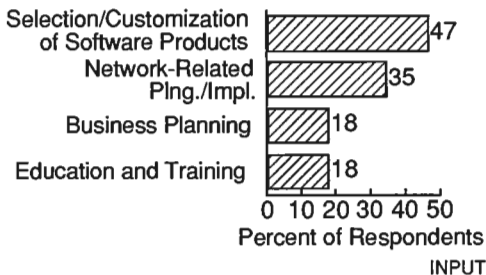
Problems Encountered with Downsizing



ID-221b

Notes

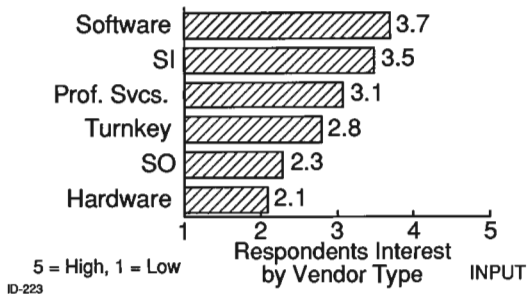
Type of Aid Sought



ID-222

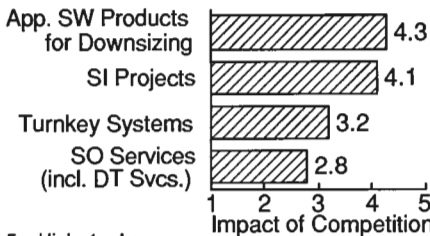
Notes

Types of Vendors Contacted



Notes

Downsizing Competition for PS Vendors



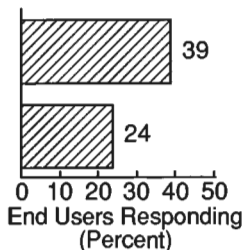
ID-224

Notes

Use of PS With Downsizing (DS)

Used SW Products
with Ltd. Vendor Aid

Used SW PS and
SI Firms to Aid/
Modify SW Products



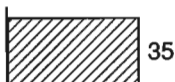
ID-225a

INPUT

Notes

Use of PS With Downsizing (DS)

Used SI Services to
Integrate, Modify, and
Implement Components



Used PS to Develop
Downsized Systems



0 10 20 30 40 50
End Users Responding
(Percent)
INPUT

ID-225b

Notes

Impact of Downsizing on Central IS

Factor	Reported Impact
Central IS budget	Reductions of 20% to 40%
Central staff reduction	Reductions of 15% to 70%
Support to users	Increases to support downsized environment

ID-226a

INPUT

Notes

Impact of Downsizing on Central IS

Factor	Reported Impact
Technological skills	May need increased skills to support end users or may have to transfer certain skills to users
Relation with end users	Closer relation required to stay current with user planning

ID-226B

INPUT

Notes

Critical Downsizing Issues Identified by Central IS

- Growth of end-user centers
- Disinterested support of end users
- Training for end users
- Responsibility for downsizing problems

INPUT

ID-227a

Notes

Critical Downsizing Issues Identified by Central IS

- Facilitating transition of work to end-user control
- Adjusting plans and budgets to reflect downsizing changes

INPUT

ID-227b

Notes

Conclusions

- Use of downsizing is rising rapidly
- Business benefits are the prime motivator
- New technology is a strong stimulus
- Client/server technology is highly utilized
- End users are more active as buyers

INPUT

ID-228a

Notes

Conclusions

- Successes and problems are being encountered
- Downsizing is changing the use of IT
- Professional services use can decrease
- There are new opportunities for vendors

INPUT

ID-228b

Notes

Conclusions

- Price is not always the major vendor selection criterion
- Professional services vendors must plan responses
- Downsizing will lead to growth of local IS facilities

INPUT

ID-228c

Notes

PS Opportunities Enhanced by Downsizing

- Consulting for planning downsizing
- Special training classes
- Selecting and aiding with software products
- Aiding with network and client/server technology

INPUT

ID-229a

Notes

PS Opportunities Enhanced by Downsizing

- Transition management
- SI services
- Defining equipment and software support

INPUT

ID-229b

Notes

Recommendations for PS Vendors

- Skills to support downsizing must be gained
- User problems and need for aid should be reviewed
- User and IS roles must be assessed in each account

ID-230a

INPUT

Notes

Recommendations for PS Vendors

- Proactive contact is needed to uncover opportunities
- Industry/functional knowledge necessary
- PS vendors must redirect attention from work with larger platforms

ID-230b

INPUT

Notes

