Putting Downsizing in Perspective

INPUT

ID- 1

Downsizing

Topics

- Introduction
- Types of Downsizing
- Downsizing Plans
- Conclusions

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ID- 2

Information Technology Environment

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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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Downsizing

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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Downsizing

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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Downsizing

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

INPUT

Downsizing

Organization Driven Description

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

INPUT

Downsizing

Organization Driven Driving Forces

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

INPUT

Downsizing

Organization Driven Impacts

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

INPUT

Downsizing

Downsizing Plans

INPUT

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?

INPUT

Downsizing

Overall Attitude
Overvalued or Underrated

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

INPUT

ID-18

Downsizing

Platform Attributes

Question: Rank the platforms for each of the attributes.

- Mainframe
- Minicomputer
- RISC
- Personal computer

INPUT

ID-20

Downsizing

Platform Attributes

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

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Downsizing

Platform Attributes
Mainframe

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

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ID-22

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

INPUT

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Downsizing

Platform Attributes RISC

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

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ID- 25

Downsizing

Platform Attributes RISC

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

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ID- 26

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

INPUT

ID- 27

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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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

INPUT

ID- 29

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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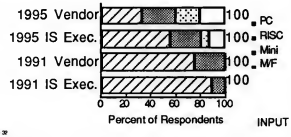
Downsizing

Application Plans— Accounting



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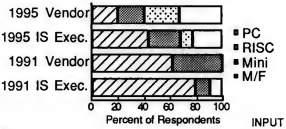
Downsizing

Application Plans— Purchasing



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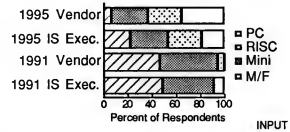
Downsizing

Application Plans— Production



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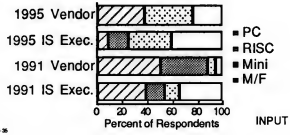
Downsizing

Application Plans— Image Processing



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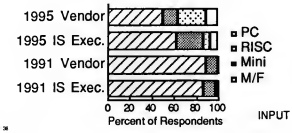
Downsizing

Data Bases Plans— Finance/Accounting



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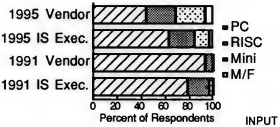
Downsizing

Data Base Plans—Operating



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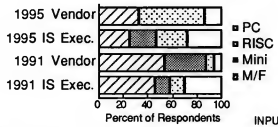
Downsizing

Data Base Plans—Image



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Downsizing

Plans

Question: When will the statement apply to IS infrastructure?

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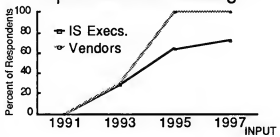
Downsizing

Major Client/Server Applications Implementation Timing



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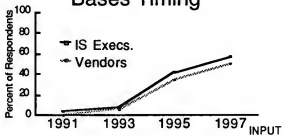
Downsizing

Significant Distributed Data Bases Timing



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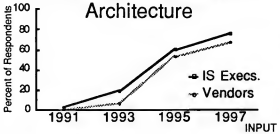
Downsizing

Timing of Cooperative Processing As Primary IS Architecture



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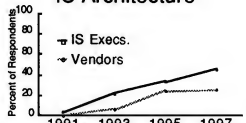
Downsizing

Timing of SAA As Primary IS Architecture



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Downsizing

Benefits and Consequences

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

INPUT

ID-44

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

INPUT

ID-45

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

INPUT

ID-46

Downsizing

Distribution of Function

Question: What is proper platform for following functions?

- Mainframe
- Minicomputer
- RISC
- Personal computer

INPUT

ID-47

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

INPUT

ID-48

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

INPUT

ID- 49

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

INPUT

ID- 50

Downsizing

Issues

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

INPUT

ID- 51

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

INPUT

ID- 52

Downsizing

Conclusions

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

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ID-53

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

INPUT

ID- 54

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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ID-56

Downsizing

Recommendations

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

INPUT

ID-56

Conclusions

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

INPUT

ID-57

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

INPUT

ID-58

Downsizing Revolution

INPUT

ID-58

Downsizing Topics

- Overview
- Issues
- Client/Server

- Planning
- Architecture
- Case Studies

INPUT

ID-60

The Systems Industry—Past

Demand increase - 30% to 40% per year
+
Price/performance improvement - 20% per year
=
Industry growth - 10% to 20% per year

INPUT

ID-62

The Systems Industry— Now

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

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ID-63

Downsizing

Types of Downsizing

- Platform driven
- Application driven
- Organization driven

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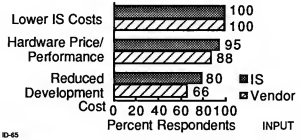
ID-64

Downsizing

Driving Forces Most Important



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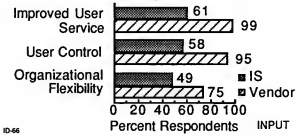
Downsizing

Driving Forces Most Important



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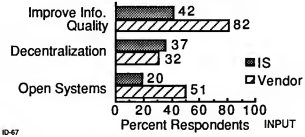
Downsizing

Driving Forces Least Important



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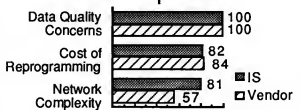
Downsizing

Inhibiting Forces Most Important



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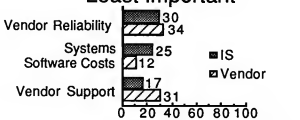
Downsizing

Inhibiting Forces Least Important



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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

Downsizing

Key Issues

Vendor

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

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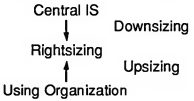
Downsizing

Planning—Point of View



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Downsizing

Top Down or Bottom Up

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

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ID-73

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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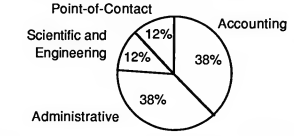
ID-74

Downsizing

Applications Completed



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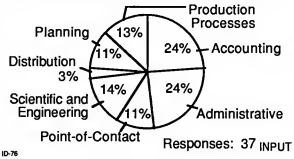
ID-75

Downsizing

Applications Planned, 1992

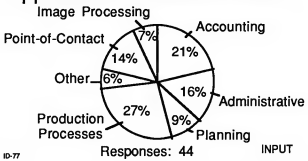


Responses: 37 INPUT

ID-76

Downsizing

Applications Planned—Future



Responses: 44 INPUT

ID-77

Downsizing

Cost Issues

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

INPUT

ID-78

Downsizing

Cost Issues

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

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ID-79

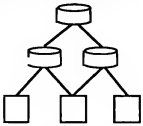
Downsizing

Architecture Allocation of Function

Superserver

Distributed Servers

Clients



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ID-80

Downsizing

Architecture Allocation of Function

Superserver

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

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ID-81

Downsizing

Architecture Allocation of Function

Distributed Servers

- Distributed data base management
- Network management

INPUT

ID-82

Downsizing

Architecture Allocation of Function

Distributed Servers

- Integration of business systems
- Object management
- Connectivity

INPUT

ID-83

Downsizing

Architecture Allocation of Function

Clients

- Automated processes
- Secure processes
- Intelligent data entry

INPUT

ID-84

Downsizing

Architecture Allocation of Function

Clients

- Information retrieval and analysis
- Personal computing

INPUT

ID-85

Downsizing

Examples

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

ID-86

INPUT

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

ID-87

INPUT

Downsizing

IT Strategy—Example

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

ID-88

INPUT

Downsizing

IT Strategy—Example

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

ID-89

INPUT

Downsizing

Information Architecture Example

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

ID-90

INPUT

Downsizing

Information Architecture Example

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

ID-91

INPUT

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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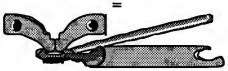
ID-92

The Systems Industry—Now

Open Systems

=



INPUT

ID-93

- Introduction
- Downsizing Issues
- Desktop Services
- Conclusion

INPUT

ID-94

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

INPUT

ID-94a

The Systems Industry—Past

Operating environments protected core systems prices

INPUT

ID-95

IS Environment

"Old" Traditional	"New" Downsized
Mainframe	Client/server
Shared	Dedicated
Remote	Local
IS operated	User operated

INPUT

ID-96

Transition Management

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

INPUT

ID-97

Transition Management

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

INPUT

ID-98

Transition Management

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

INPUT

ID-99

Conclusion

Impact of Downsizing on IS Outsourcing

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

INPUT

ID-100

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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ID-101

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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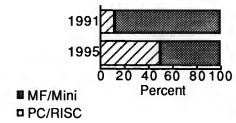
ID-102

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

ID-104

INPUT

Driving Forces for Downsizing

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

ID-105

INPUT

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

ID-106

INPUT

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

INPUT

Changing Management Requirements

Data center mgt. → Distributed network mgt.
Defacto IBM stds. → Heterogeneous stds.
Centralized dev. → Decentralized dev.
Centralized support → Distributed support
Cobol based sys. → New dev. environments

... *Are users ready?*

ID-108

INPUT

Impacts on Central IS

Responsibility	Before	After
Data center operations	High	Low
Network management	High	High
Infrastructure planning/stds.	High	High
Applications development	High	Low
Applications maintenance	High	Low

... Reduced control, but on-going responsibility

ID-109 INPUT

Impacts on Central IS

- Lower central budgets (20% to 40%)
- Significant staff reduction (15% to 70%)
- Short-term emphasis—transition management

ID-110 INPUT

Critical Issues Impacting IS Management

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

ID-111 INPUT

Critical Issues Impacting IS Management

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

ID-112 INPUT

Key Opportunities for Vendors

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

ID-114a INPUT

Key Opportunities for Vendors

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

ID-114b INPUT

Key Moves for Industry Participants

Class	Opportunity
SI and PS	• SI for downsized environments
	• Methodology for apps. downsizing
	• Templates for distributed apps.

ID-115 INPUT

Key Moves for Industry Participants

Class	Opportunity
Out-sourcers	• Transitional outsourcing
	• Desktop services
	• Downsizing SI contracts

ID-116 INPUT

Key Moves for Industry Participants

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

ID-117 INPUT

Key Moves for Industry Participants

Class	Opportunity
Network Proc. Svcs.	• Outsourcing of network requirements
	• Distributed network mgt.
	• Specialized transaction processing

ID-118 INPUT

Shape of the Industry

- Alliances/mergers to generate complete distributed integrated platforms
- Increased opportunity for PC applications products firms in niche markets

ID-119 INPUT

Shape of the Industry

- *Doomsday* for mainframe applications products companies unless they offer a downsized strategy
- Opportunities for network and processing services...If they take initiative

ID-120 INPUT

Conclusions

- Lack of open systems standards not a serious inhibitor to users—but...a problem for vendors
- For mainframe product vendors—a turning point

ID-121 INPUT

Key Issues Impacting Growth

- Selling to multiple buying points
- Changing product channels
- New pricing strategies

ID-122 INPUT

Downsizing Impacts Future Industry Growth

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

ID-123a INPUT

Downsizing Impacts Future Industry Growth

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

ID-123b INPUT

Topics

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

ID-124 INPUT

Introduction

ID-125 INPUT

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

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

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

Impact of Downsizing on Software Product Vendors

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

INPUT

ID-129

Software Product

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

INPUT

ID-130

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

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

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

Distribution—Mechanics

CD ROM = Supermedia!

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

INPUT

ID-134

Software Products

Impacts of Downsizing on Distribution and Pricing

INPUT

ID-135

Distribution—Channels

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

INPUT

ID-136

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

Custom vs. Packaged Applications

INPUT

ID-138

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

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

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

INPUT

ID-140

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

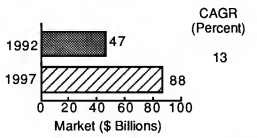
ID-141

Impact on Markets

INPUT

ID-142

Software Products Market



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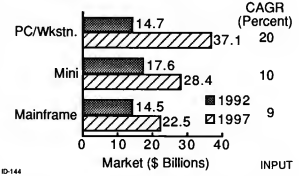
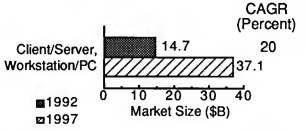
ID-143

Software Products Market



ID-144 INPUT

Software Products Market



ID-144a INPUT

Conclusions

ID-145 INPUT

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

ID-146 INPUT

Market Realities

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

ID-147 INPUT

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)

ID-148 INPUT

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

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

Competitive Advantage Opportunities!

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

INPUT

ID-151

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!

INPUT

ID-152

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

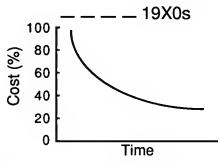
Process Downsizing—The Disappearing Data Center?

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

INPUT

ID-154

The Cost Curve



INPUT

ID-155

Filling in the Blanks

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

INPUT

ID-156

Why Data Centers?

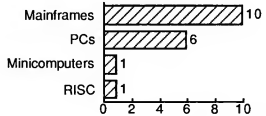
- "Efficiency" and cost savings
- File transfer and data problems
- Standards
- Centralized planning and control
- Limited human resources
- Maintain "traditional" client-vendor relationship

INPUT

ID-157

How Platforms Stack Up

(Attributes)



INPUT

ID-158

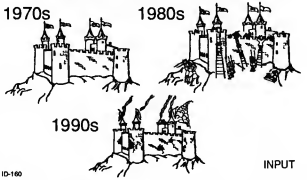
What Is Motivating Downsizing?

- 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

INPUT

ID-159

How the Castle Crumbles



INPUT

ID-160

How Organizations Are Going About Downsizing

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

INPUT

ID-161

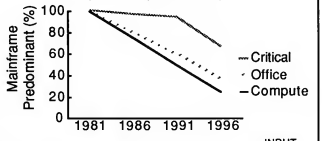
How Organizations Are Going About Downsizing

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

INPUT

ID-162

Applications Downsized (50 Respondents)



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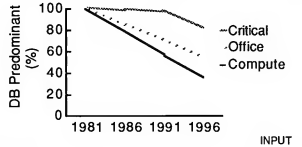
ID-163

DBs Downsized



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ID-164

What Is Really Happening

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

INPUT

ID-165

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

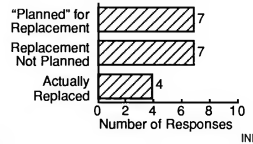
When Mainframes Are Replaced

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

INPUT

ID-167

Replacement Status
(18 Case Studies)



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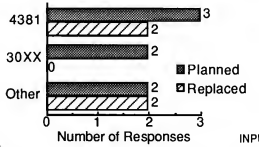
ID-168

Mainframes Targeted
(11 Replaced or Planned)



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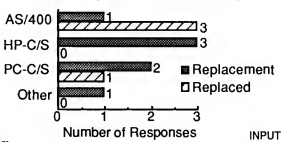
ID-169

Replacing Systems
(11 Replaced or Planned)



INPUT

ID-170

Speaking about the Unspeakable

AS/400

ID-172

INPUT

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

ID-173

INPUT

Critical Assumptions

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

ID-174

INPUT

Critical Assumptions

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

ID-175

INPUT

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

Organizational and Technological Impact

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

ID-177

INPUT

Conclusions

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

INPUT

ID-178

Conclusions

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

INPUT

ID-179

Recommendations

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

INPUT

ID-180

Recommendations

- Assist in mainframe replacement
  - "Help" with SAA
  - Make outsourcing attractive

INPUT

ID-181

Recommendations

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

INPUT

ID-182

Traditional PS Market

- Client is the IS department
- Services performed by PS
  - IS/IT consulting
  - IS-related training and education

INPUT

ID-183

Traditional PS Market

- Services performed by PS
  - Application software development, maintenance, and management
  - Some systems integration (SI)

ID-184 INPUT

Traditional PS Market Characteristics

- Big systems, budgets, staffs, projects
- Long-term, never-ending projects
- IS sophisticated; end-user not unsoph.
- PS driven by IS goals for IT
- Vendors respond to client needs/environment

ID-185 INPUT

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

IS Function Major Buyer Issues

Rank	Issue
1	User role in planning and decision making
2	Use of client/server technology
3	Budget pressures and cost sensitivity

ID-187a INPUT

IS Function Major Buyer Issues

Rank	Issue
4	Pressures to increase quality/ effectiveness
5	Restructuring of business activity
6	Downsizing business functions and systems

ID-187b INPUT

PS Projects—Who Decides?

Decision Maker	Now	Future
User alone	3.5	Greater
User and IS	3.0	Greater
Top mgmt./CEO	2.5	Less
CIO	1.9	Less
Non-CIO IS mgr.	1.4	Less

ID-188 INPUT

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

Changing Needs—Consulting

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

ID-190 INPUT

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

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

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

Software Downsizing PS Impact

- PS software development, maintenance, and applications management staff:
  - Work more often, more closely with user

ID-194a INPUT

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

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/perform evaul.
- To help client use PS effectively
- Patience

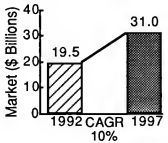
ID-195 INPUT

5-Year Outlook for PS

- IS and users both will be prospects/clients
- User population will grow faster
- Increasing complexity of IT/IS products/services
- Steady, growing market for PS

ID-196 INPUT

PS Market



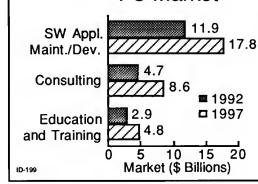
ID-197 INPUT

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

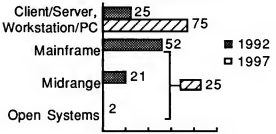
ID-198 INPUT

PS Market



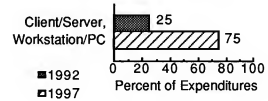
ID-199 INPUT

User PS Expenditures by Hardware Platform



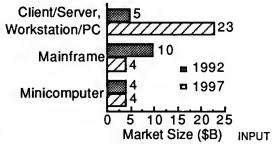
ID-200 INPUT

User PS Expenditures by Hardware Platform



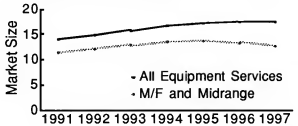
ID-200a INPUT

Professional Services Market by Platform Size



ID-200b INPUT

Effect of Downsizing on Equipment Services Market



ID-201 INPUT

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

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

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

Downsizing

- Trends and factors
- User issues
- Interaction with outsourcing

ID-205 INPUT

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

ID-206 INPUT

Changing Requirements Professional Services

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

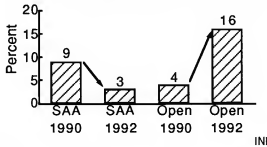
ID-207a INPUT

Changing Requirements Professional Services

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

ID-207b INPUT

Movement to Open Systems in 900 Downsizing Documents



ID-208 INPUT

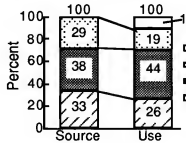
User Issues

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

INPUT

ID-209

Downsizing Funding



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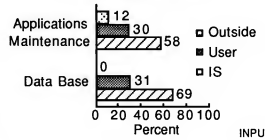
ID-210

Post-Downsizing Responsibilities



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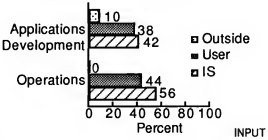
ID-211a

Post-Downsizing Responsibilities



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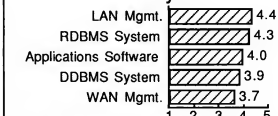
ID-211b

Downsizing Capabilities Analysis



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ID-212

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

INPUT

ID-213

Downsizing—Interaction with Outsourcing

- Threats
- Opportunities
  - Desktop services
  - Transition management

INPUT

ID-214

Threats

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

INPUT

ID-215

Outsourcing Opportunities Desktop Services

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

INPUT

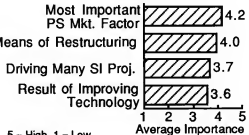
ID-216

Impact of Downsizing on Professional Services (PS) Markets

INPUT

ID-217

Assessment of Downsizing (PS Respondents)

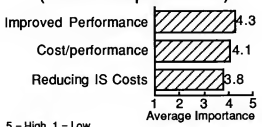


5 = High, 1 = Low

INPUT

ID-218

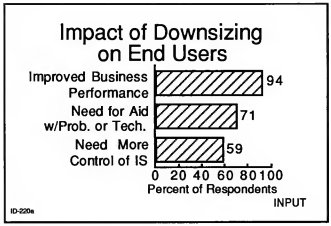
Forces Driving Downsizing (User Respondents)

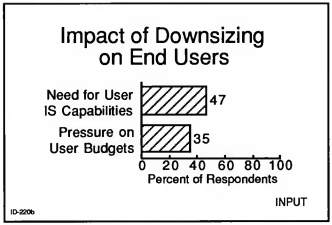


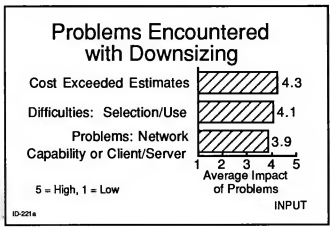
5 = High, 1 = Low

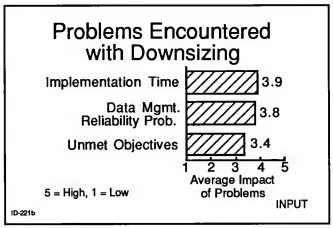
INPUT

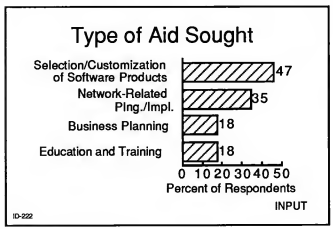
ID-219

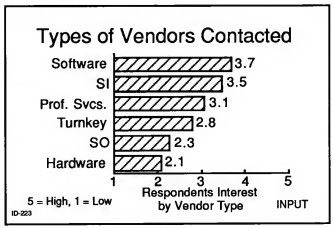

Impact of Downsizing on End Users
Improved Business Performance
94
Need for Aid w/Prob. or Tech.
71
Need More Control of IS
59
0 20 40 60 80 100
Percent of Respondents
INPUT
ID-220a


Impact of Downsizing on End Users
Need for User IS Capabilities
47
Pressure on User Budgets
35
0 20 40 60 80 100
Percent of Respondents
INPUT
ID-220b

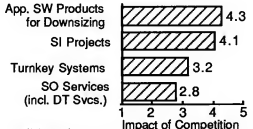

Problems Encountered with Downsizing
Cost Exceeded Estimates
4.3
Difficulties: Selection/Use
4.1
Problems: Network Capability or Client/Server
3.9
1 2 3 4 5
Average Impact of Problems
5 = High, 1 = Low
INPUT
ID-221a


Problems Encountered with Downsizing
Implementation Time
3.9
Data Mgmt. Reliability Prob.
3.8
Unmet Objectives
3.4
1 2 3 4 5
Average Impact of Problems
5 = High, 1 = Low
INPUT
ID-221b


Type of Aid Sought
Selection/Customization of Software Products
47
Network-Related Plng./Impl.
35
Business Planning
18
Education and Training
18
0 10 20 30 40 50
Percent of Respondents
INPUT
ID-222


Types of Vendors Contacted
Software
3.7
SI
3.5
Prof. Svcs.
3.1
Turnkey
2.8
SO
2.3
Hardware
2.1
1 2 3 4 5
Respondents Interest by Vendor Type
5 = High, 1 = Low
INPUT
ID-223

Downsizing Competition for PS Vendors

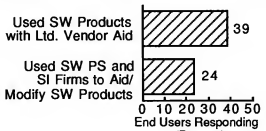


5 = High, 1 = Low

INPUT

ID-224

Use of PS With Downsizing (DS)



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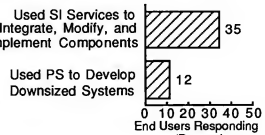
ID-225a

Use of PS With Downsizing (DS)



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ID-225b

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

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ID-226a

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

INPUT

ID-226B

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

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

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

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

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

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

PS Opportunities Enhanced by Downsizing

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

INPUT

ID-229b

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

INPUT

ID-230a

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

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ID-230b