Environmental Services

A German-Focused Update

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Environmental Services

Key Findings

- Equipment vendor portion of German market growing at a
  % CAGR
- Integrating systems and workplace technology is key driving force

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Market Segmentation

New Customer Services	
Professional Services	Environmental Services

- Consultancy
- Design
- Project mgmt.

- Computer room
- Cabling
- Power
- Installation

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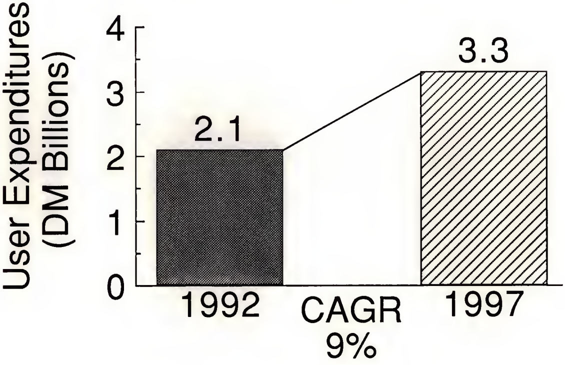
Environmental Services, Germany

Market Growth



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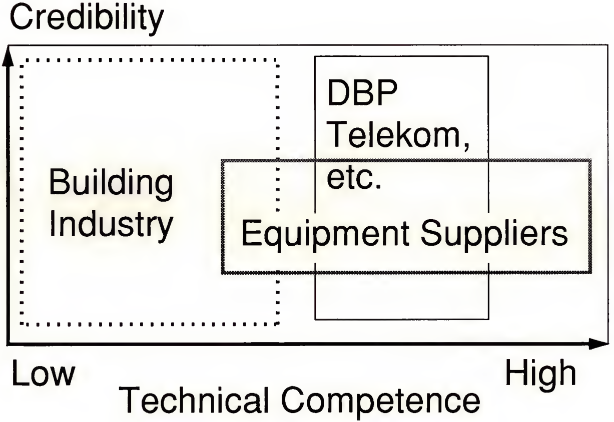
Vendor Positioning



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Downsizing: Customer Services Perspective

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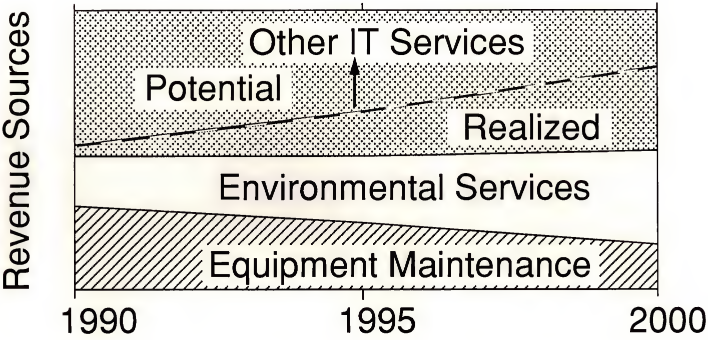
IT Customer Services



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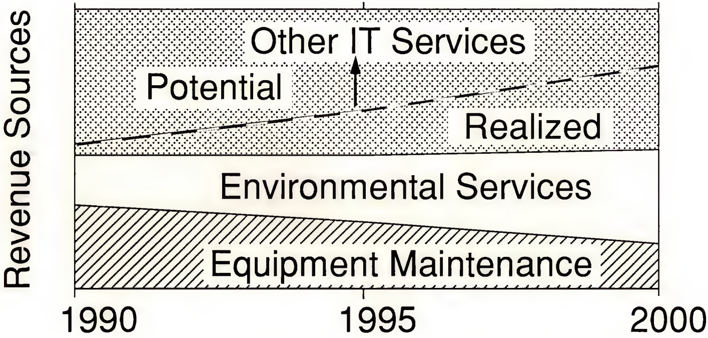
IT Customer Services



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Impact of Downsizing

- Maintenance squeezed
- Focus on SME/PME
- Desktop services

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Repositioning

- SI
- Business continuity
- Networks
- Human resources
- Cross-industry assimilation

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New Offerings

Percent of Business	Percent of Vendor Sample
≤10	50
11 - 20	25
21 - 25	8
26 - 40	17

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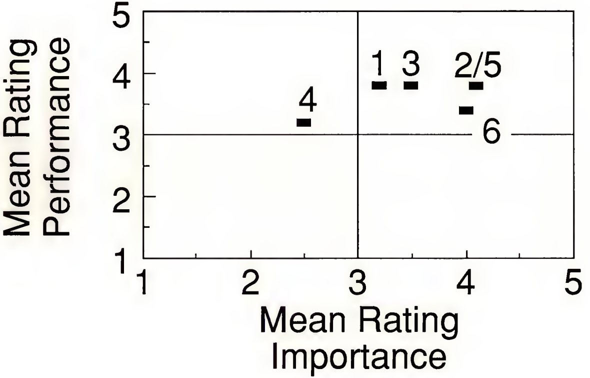
Performance vs. Importance



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Legend

1 = Planning & Design

2 = Network Services

3 = Software Services

4 = Human Resources

5 = Disaster Recovery

6 = Security Services

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Desktop Services

- One solution
- Open window
- Range of approaches

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Traditional Desktop

- PC supply
- Network/server
- PC/printer maintenance
- Installation
- Training

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New Services

- ASP supply/support
- Help desk selection/supply
- Problems management
- Planning/administration
- Network upgrades
- Application development

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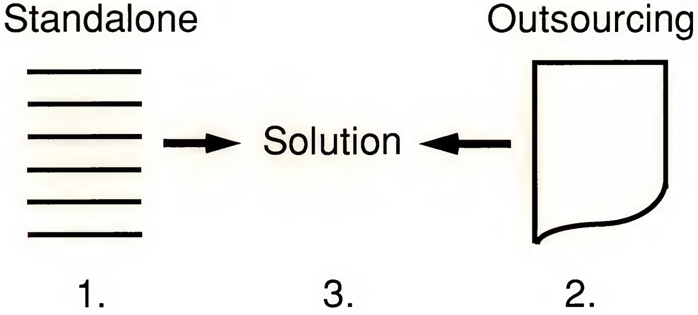
Approaches



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Selection Criteria

- Network expertise
- Single supplier
- Up-to-date
- Independence
- Pan-European

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Digital's Service Offering

- Part of Bespoke Services
- 4 service lines
- Mix and Match
- Sales - Force
  - DECdirect

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Digital

Strengths	Weaknesses
• Name	- Hardware image
• Catalogue	- Confusing offerings
• Networking	- Impartial?
• I-stop	- Not highlighted
• Multivendor	

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Hewlett-Packard's Service Offering

- Standard contracts
- Multivendor—includes 3rd-party software
- Consultancy/customisation
- Specialist groups

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Hewlett-Packard

Strengths	Weaknesses
• Premier on support	- Differentiated
• Tailored contracts	- Technical orientation
• Strong networking	- Weak SO
• Support for Oracle, Ingres, etc.	
• Own & multivendor	

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PrimeService's Service Offering

- Network planning/design
- Single-source 'Desktop'
- Standard supply/maintenance
- Multivendor 'One-Call'

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PrimeService

Strengths	Weaknesses
• Software skills	- Specialist
• Integration skills	- Technical
• Networking	- Commercial
• Multivendor	- Marketing clout
	- Weak SO

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Computeraid Service Offering

- Blank paper
- Selective large contracts
- Learn on the job

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Computeraid

Strengths	Weaknesses
• PC hardware maintenance	- ASP skills
• Help desk skills	- Maintenance culture
• Financial	- Selling to end users
• Clear strategy	

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Data Logic Service Offering

- Branded product/service
- Mix and match
- Installed base
- Pan-European intention

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Data Logic

Strengths	Weaknesses
• International	- Uneven
• Skills mix	- ASP skills
• Focussed service line	- Pan-European(?)
• Independent	

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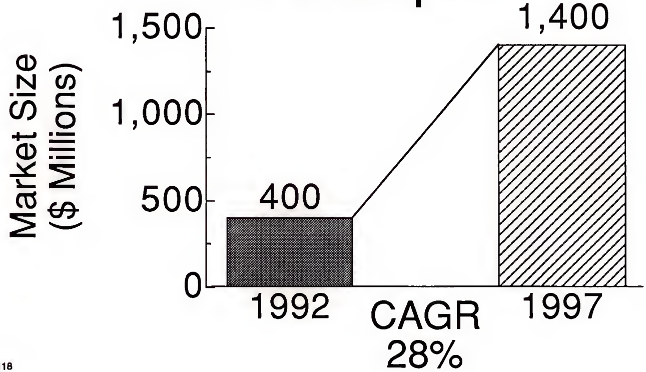
Desktop (+Maintenance) in Europe



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Equipment Suppliers

Strengths	Weaknesses
• Expertise	- Product oriented
• Large IBs	- Resources
• Financial	- Channel contention
• CS organisation	- Slow to change
	- Not impartial

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IMOs

Strengths	Weaknesses
• PC expertise	- Financial
• Incentive	- Software skills
• Independent	- Maintenance cultures

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Recommendations

- Strategic repositioning
- Acquire key skills
- Position migration

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IBM: Strengths and Weaknesses

Strengths	Weaknesses
Expertise	Cumbersome
Cabling system	Software
Credibility	Structures
Financial strength	Third-party relationships
Alliances	
Marketing	

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Digital:
Strengths and Weaknesses

Strengths	Weaknesses
Size and coverage	Lack of perceived indep.
Network expertise	Confusion over role
Building focus	Large enough to be threatening
Project management	CSO contention
Alliances	

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Systems Vendor: Strengths and Weaknesses

Strengths	Weaknesses
Growth	Spread too thin
Vertical marketing	Product orientation
Open systems	Management of alliances
Desktop emphasis	Not targeting

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Telekom: Strengths and Weaknesses

Strengths	Weaknesses
Size	Fragmented approach
Presence	Voice rather than data
Networking expertise	Marketing
	Image

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Specialist Consultants: Strengths and Weaknesses

Strengths	Weaknesses
Independent	Small
Specialist/professional	Limited scope
Networking	High-tech image
Project managers	Marketing

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Professional Services Vendor: Strengths and Weaknesses

Strengths	Weaknesses
Design and build	Small
Network expertise	Limited scope
Open interoperability	Dangerous middle ground
Alliances	OEM contention

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Building Technical Services: Strengths and Weaknesses

Strengths	Weaknesses
Range of expertise	Smaller mostly
Traditional image	Limited finance
Vertical marketing	Need alliances
Independent	Limited project size

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Customer Services, Europe
Changing Marketplace

I. Restructuring the Market Segments for Growth

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Restructuring for Growth

- Customer services in Germany and German-speaking countries
- Desktop services
- Multivendor service
- Services strategies

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Overall IT Market

Europe

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Restructuring for Growth

Key User Demands

- Effectiveness
- Cost reduction
- Value for money

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Restructuring for Growth

Improved Effectiveness from IT

- Business process re-engineering
- Simplification
- Speed of implementation
- Flexibility

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Restructuring for Growth

Seeking Cost Reduction for IT

- Downsizing
- Outsourcing
- 80% solutions

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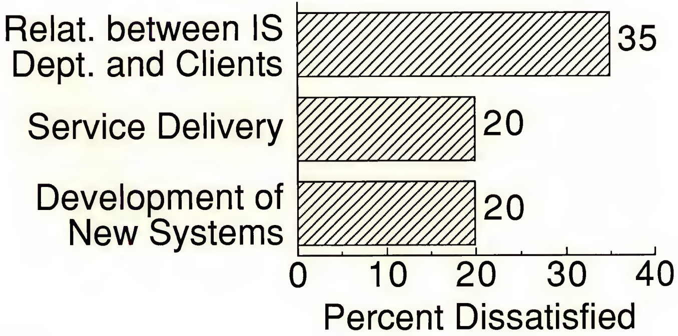
Major Challenges for IS Departments



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European IT Market

Category	User Expenditure $B 1992	CAGR (%)	1997
Systems	62	4	75
System Software	14	7	20
Equipment Services	24	3	28
All Other Services	72	11	123
Total	172	7	246

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Outsourcing Impact

Category	User Expenditure $B		
	1992	CAGR (%)	1997
Outsourcing	7	20	17
All Other External Expenditure	165	7	228
Total	172	7	245

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IT User Expenditure Europe Overview

Category	$B 1992
Systems	62
Software and Services	110
In-House Staff	66
Facilities	42
Total	280

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IT User Expenditure Europe—Historical Growth

Category	1981 ($B)	CAGR (%)	1991 ($B)
Systems	25	9	60
System SW	1	29	13
Equip. Servs.	6	14	23
All Other Servs.	8	23	65
Total	40	15	161

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Customer Services

The New Perspective

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Hardware Products Market

- Product sales
- Customer services
- Spares, media and supplies

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Customer Services—I

- Hardware maintenance
- System software support
- Professional services
- Education and training

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Customer Services—IIA

- Equipment services
  - Hardware maintenance
  - Environmental services
- Unique sectors

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Restructuring for Growth

Customer Services—IIB

- System software support
- Education and training
- (Other) professional services
- Business continuity services
- Not unique

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Presentation of Market Analyses

- Unique
- Non-unique
- All other services
- No software products

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Hardware Maintenance

- Includes
  - Contract
  - Ad hoc
  - Warranty
- On-site or workshop repair
- Excludes 4th party

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Hardware Maintenance Model

- 4 layers
  - Mainframe
  - Mid-range
  - Workstation and server
  - PC
- Volume and value attrition
- Fee rates

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Environmental Services

- Affect "environment"
- Computer room
- Cabling
- Power, air conditioning, etc.
- Network
- Buildings

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System Software Support

- Contract and ad-hoc
  - Installation, updates, etc.
- Associated activities
  - Problem analysis
  - Software diagnostics
  - Capacity tuning

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Education and Training

- Platform or network
- Operations
- User service
- Equipment suppliers

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Professional Services

- Consultancy
- Network administration
- System software evaluation
- Problems management
- Project management
- Configuration/capacity planning

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Business Continuity Services

- Contingency planning
- Disaster recovery
- Back-up for media
- Restart services

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Revenue Streams

- Customer services
  - Equipment vendors
  - Independent maintenance
  - Resellers/VARs
- Independent software and services vendors
- Non-industry vendors

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Non-Available Market

- Bundled
- User self-service
- Increasingly available

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1992 Findings

Europe

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Growth Over 1991

- 3% overall
- Ranging from -4% to +17% by sector
- Business continuity best
- Education and training worst

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U.K. Growth Over 1991

- 1% overall
- Ranging from -15% to +28% by sector
- Business continuity best
- Education and training worst

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Growth 1992 to 1997—I

Category	$ Billion 1992	1997	CAGR (%)
Hardware Maintenance	15.9	17.4	2
Environmental Services	7.9	10.2	5

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INPUT

U.K. Growth 1992 to 1997—I

Category	£ Billion 1992	£ Billion 1997	£ Billion CAGR (%)
Hardware Maintenance	1.6	1.7	1
Environmental Services	0.9	1.0	3

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2/2/93

INPUT

Growth 1992 to 1997—II

Category	$ Billion		
	1992	1997	CAGR (%)
System SW Support	1.9	2.8	8
Educ. and Training	1.3	1.6	4
Professional Servs.	0.8	1.4	11
Business Continuity	0.4	0.9	20

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9/30/92

INPUT

U.K. Growth 1992 to 1997—II

Category	£ Billion 1992	1997	CAGR (%)
System SW Support	0.3	0.4	9
Educ. and Training	0.1	0.1	0
Professional Servs.	0.1	0.2	12
Business Continuity	0.1	0.2	22

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2/2/93

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Growth 1992 to 1997—III

Category	$ Billion 1992	1997	CAGR (%)
Unique Services	23.8	27.6	3
Non-Unique Services	4.4	6.6	8
Total	28.1	34.3	4
Other Services	4.4	7.1	10

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U.K. Growth 1992 to 1997—III

Category	£ Billion 1992	1997	CAGR (%)
Unique Services	2.5	2.7	2
Non-Unique Services	0.5	0.8	10
Total	3.0	3.6	4
Other Services	0.4	0.7	11

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2/2/93

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1992 Findings

France

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Growth Over 1991

- 2% overall
- Ranging from -6% to +16% by sector
- Business continuity best
- Education and training worst

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Growth 1992 to 1997—I

Category	FF Billion		
	1992	1997	CAGR (%)
Hardware Maintenance	14.5	15.3	1
Environmental Services	6.6	8.4	5

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INPUT

Growth 1992 to 1997—II

Category	FF Billion 1992	FF Billion 1997	FF Billion CAGR (%)
System SW Support	1.1	1.3	4
Educ. and Training	1.2	1.5	4
Professional Servs.	0.8	1.3	11
Business Continuity	0.3	0.8	18

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Growth 1992 to 1997—III

Category	FF Billion 1992	FF Billion 1997	FF Billion CAGR (%)
Unique Services	21.1	23.7	2
Non-Unique Servs.	3.4	4.9	8
Total	24.5	28.6	3
Other Services	3.5	5.4	9

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Multivendor Maintenance

France and Europe

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Multivendor Maintenance

Open Systems

- From threat to reality
- Three-year transition
- Services strategy

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Redefinition of Multivendor

- TPM → Independent maintenance
- IM absorbed entirely
- Participants
  - IMOs
  - Equipment/system vendors
  - Dealers/distributors/VARs

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Multivendor Maintenance—France and Europe

Strategy Development

- Reorient perspective
- Transition opportunities
- Strategic options, e.g.
  - Prime contractor
  - Services vendor
  - Subcontract/FPM

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Definition

- Restated as
  - Hardware suppliers' multivendor
  - All independent maintainers'
- Multiservice contract with hardware maintenance

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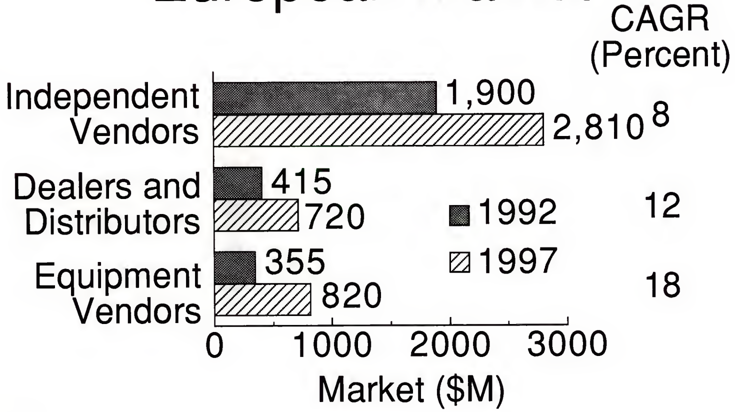
European Market



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Multivendor Maintenance—France and Europe

Country Markets—I

Country	$ Millions		
	1992	1997	CAGR (%)
France	500	680	6
Germany	270	460	11
U.K.	830	1,200	8
Italy	240	390	10

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INPUT

Multivendor Maintenance—U.K. and Europe

Country Markets—I

Country	$ Millions		
	1992	1997	CAGR (%)
France	500	680	6
Germany	270	460	11
U.K.	830	1,200	8
Italy	240	390	10

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Multivendor Maintenance—France and Europe

Country Markets—II

Country	$ Millions		
	1992	1997	CAGR (%)
Sweden	80	105	6
Netherlands	180	320	12
Belgium	90	145	12
Rest	490	1,050	16

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Multivendor Maintenance—France and Europe

1991 Top Suppliers—I

	Share
Granada	10
Olivetti	9
Thomainfor	8
Digital	4
Sorbus	4

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INPUT

Multivendor Maintenance—France and Europe

1991 Top Suppliers—I

	Share
Getronics	4
Nexor/Telub	2
ACT Support	2
NCR	1
Computeraid	1

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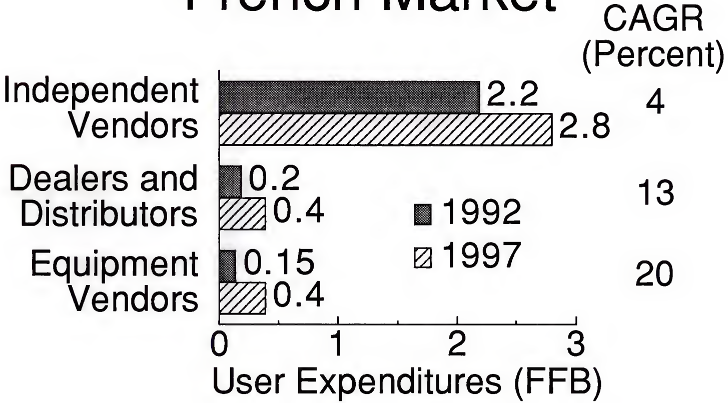
INPUT

French Market



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INPUT

Independent Suppliers 1991—France

Vendor	Share (%)
Thomainfor	40
TASQ	7
Granada	6
Sorbus	4
ITI	3

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Leading Equipment Suppliers 1991—France

Vendor	Share (%)
Olivetti	6
Digital	2
NCR	1
Bull	1
H-P	<1

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Trends
1992—France

- IMOs diversify to networking
- Downsizing
- Dealers weaken
- Partnering

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Multivendor Maintenance—Europe

Country Markets—III

Country	1992 ($M)	1997 ($M)	CAGR (%)
Denmark	22	35	10
Norway	26	43	10
Finland	23	34	8
Austria	24	44	13

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Multivendor Maintenance—Europe

Country Markets—IV

Country	1992 ($M)	1997 ($M)	CAGR (%)
Switzerland	55	81	8
Portugal	8	22	23
Greece	8	20	19
Ireland	8	14	10
E. Europe	120	250	16

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Multivendor Maintenance Market Europe

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10/23/92

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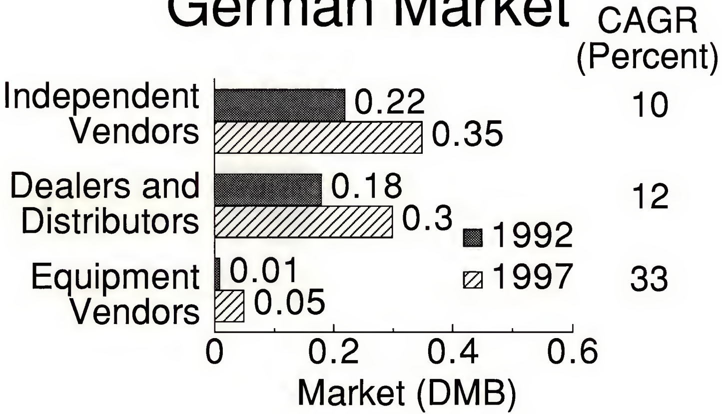
German Market



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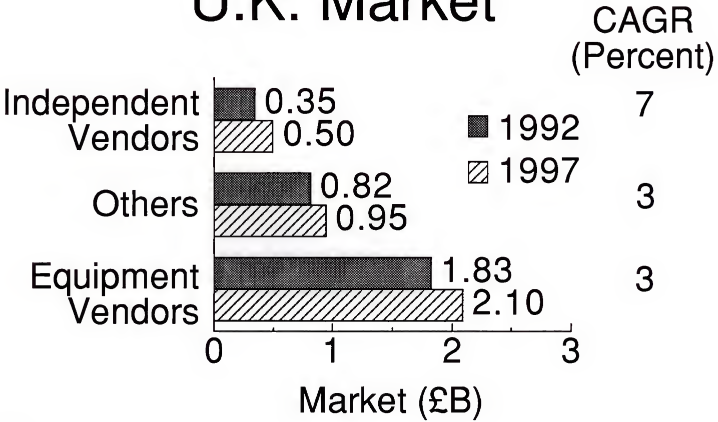
U.K. Market



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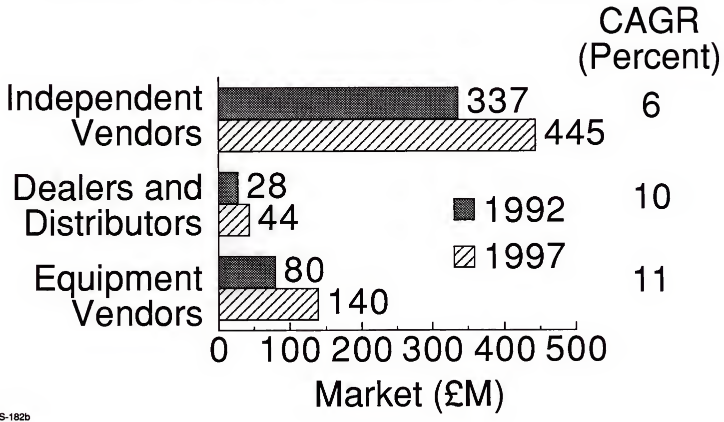
U.K. Multivendor Market



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Trends 1992—Germany

- IMOs—traditional vs. diversify
- Downsizing
- Dealers strengthen
- Partnering

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Trends 1992—U.K.

- Maintenance decline
- Downsizing
- Total service contracts
- Partnering/outsourcing
- Availability key

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2/2/93

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Trends 1992—U.K.

- IMOs diversify to software
- Downsizing
- Dealers weaken
- Partnering/outsourcing deals

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Independent Suppliers 1991—Germany

Vendor	Share (%)
Sorbus	9
Granada	8
Thomainfor	5
Telub Bitronic	4
Areatech	2

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INPUT

Leading Suppliers 1991—Europe

Vendor	Share (%)
IBM	13
Digital	9
SMI	6
Bull	4
AT&T/NCR	4

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Leading Suppliers 1991—U.K.

Vendor	Share (%)
IBM	11
Digital	10
ICL	10
H-P	4
Unisys	4

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2/2/93

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Independent Suppliers 1991—U.K.

Vendor	Share (%)
Granada	20
ACT	6
Computeraid	4
Sorbus	4
Servicetec	3

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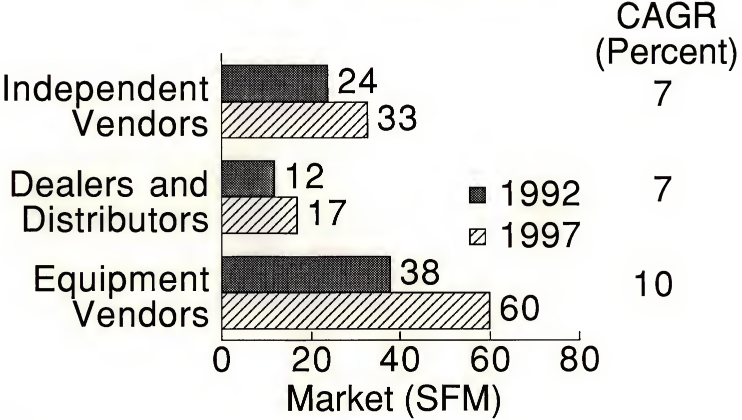
Swiss Market



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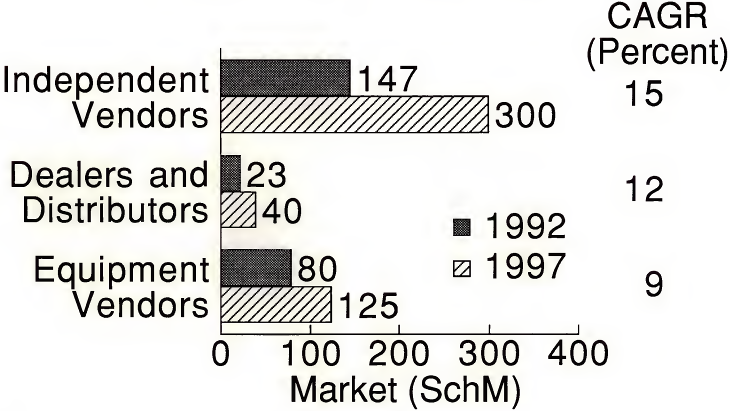
Austrian Market



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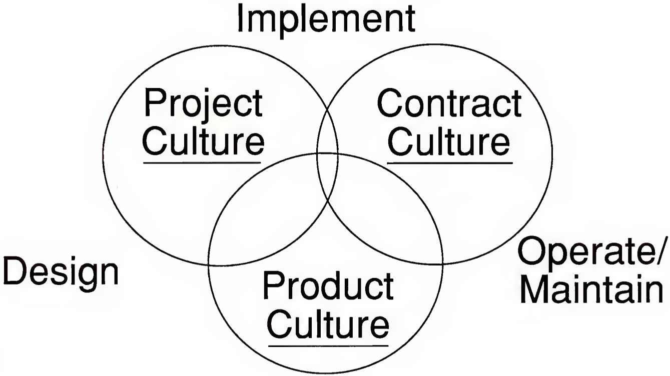
Business Cultures in the Life Cycle



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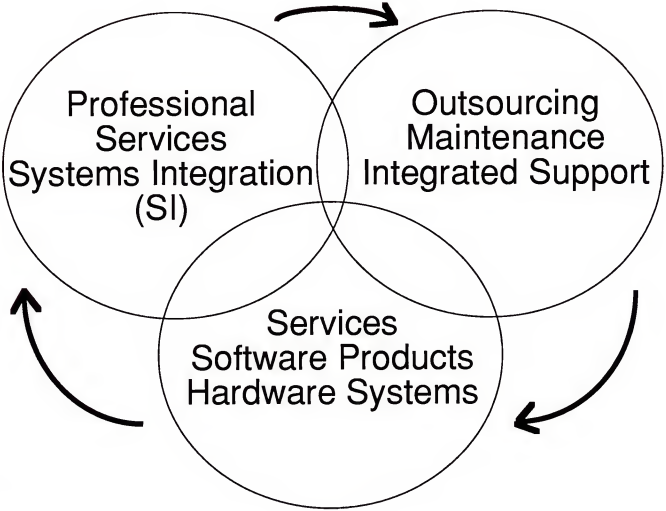
Professional
Services
Systems Integration
(SI)
Outsourcing
Maintenance
Integrated Support
Services
Software Products
Hardware Systems

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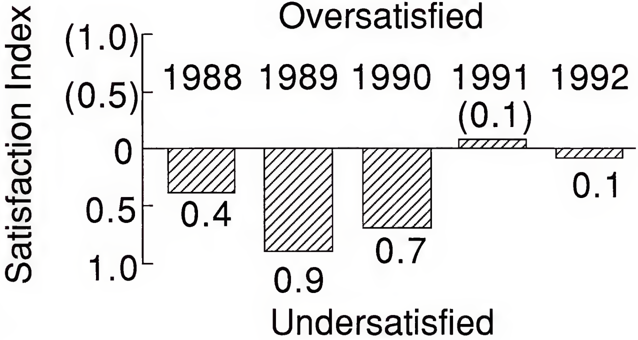
Europe

Hardware Service Satisfaction Trends



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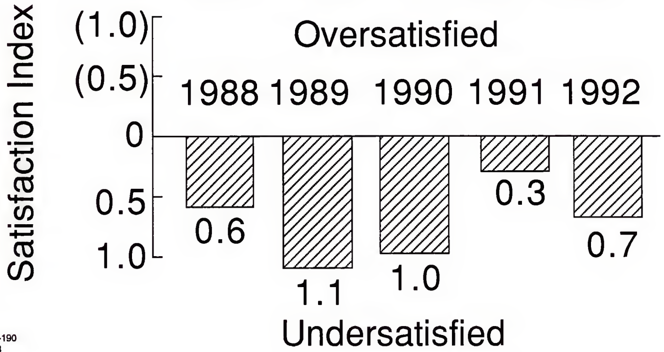
Europe

Systems Software Support Satisfaction Trends

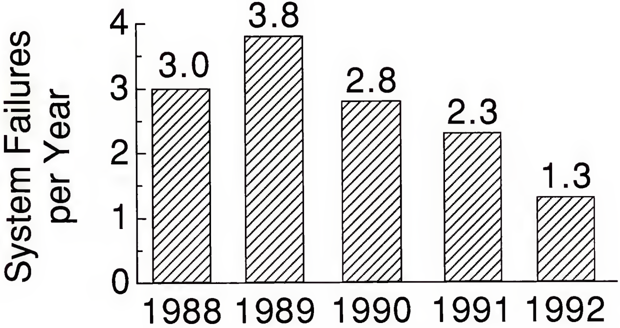


E-CS-190
2/2/93

INPUT

Europe

System Failure Rate Trends

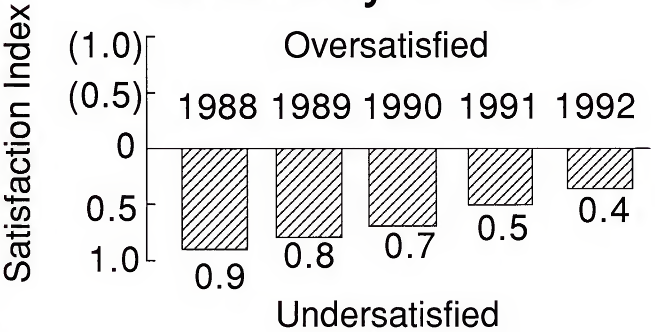


E-CS-191
2/2/93

INPUT

Europe

Satisfaction with System Availability Trends

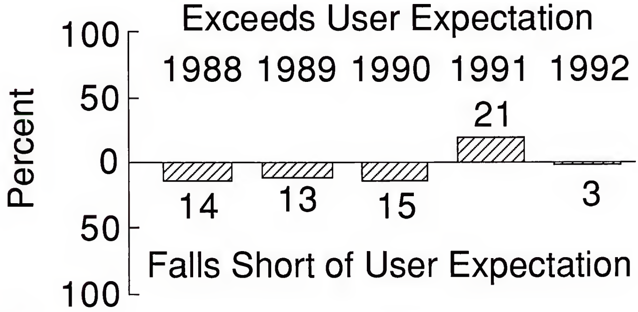


E-CS-192
2/2/93

INPUT

Europe

Response Time Trends
Hardware Service

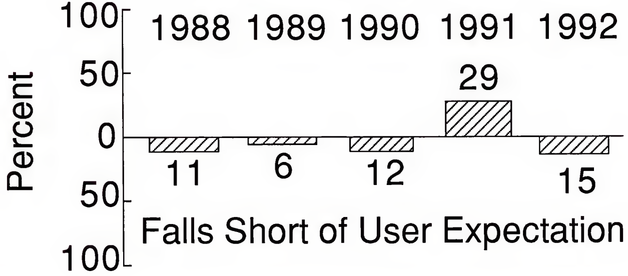


E-CS-193
2/2/93

Europe

Repair Time Trends
Hardware Service

Exceeds User Expectation

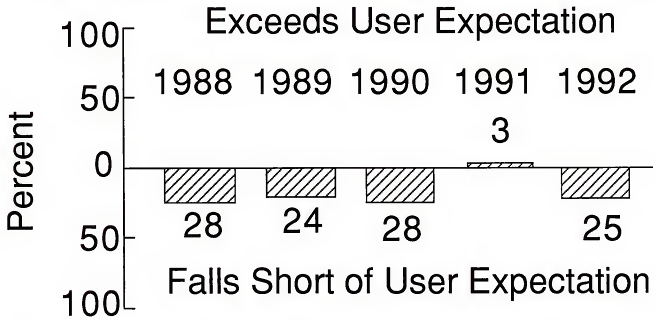


E-CS-194
2/2/93

INPUT

Europe

Response Time Trends Systems Software Support

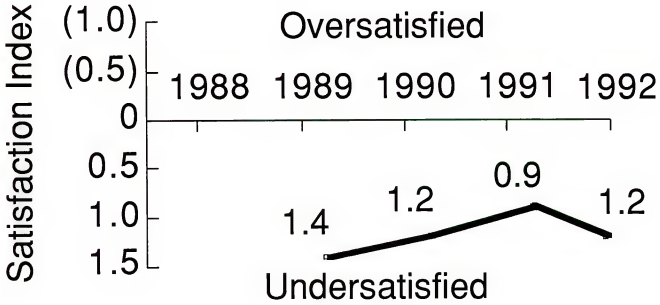


E-CS-195
2/2/93

INPUT

Europe

Vendor Quality—Image Systems Software Support

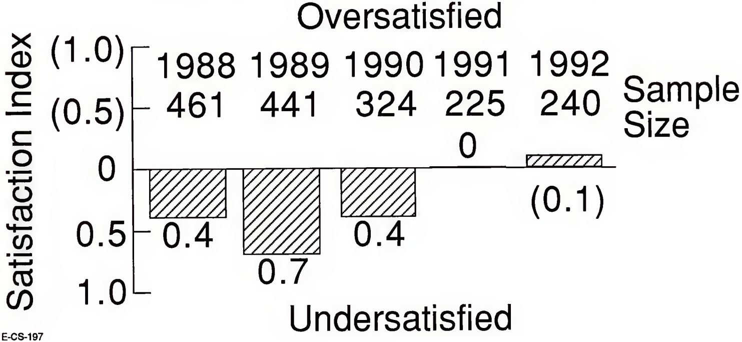


E-CS-196
2/2/93

INPUT

Europe—Large Systems

Hardware Service Satisfaction Trends

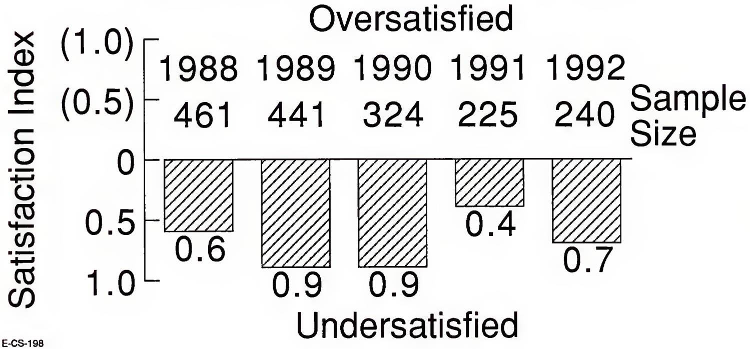


E-CS-197
2/2/93

INPUT

Europe—Large Systems

Systems Software Support Satisfaction Trends

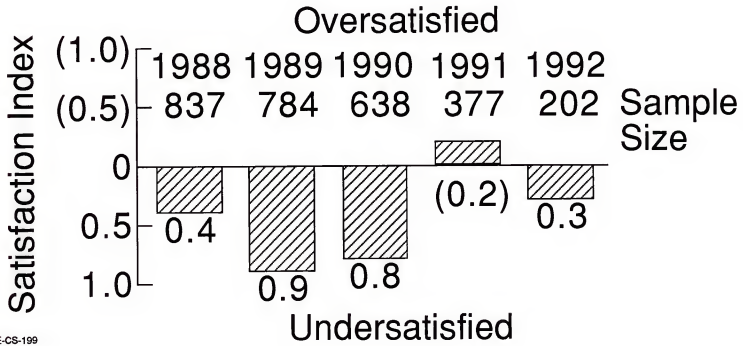


E-CS-198
2/2/93

INPUT

Europe—Medium/Mid-Range Systems

Hardware Service Satisfaction Trends

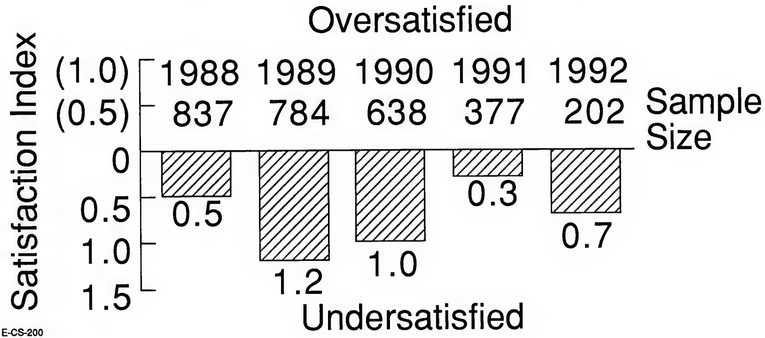


E-CS-199
2/2/93

INPUT

Europe—Medium/Mid-Range Systems

Systems Software Support Satisfaction Trends



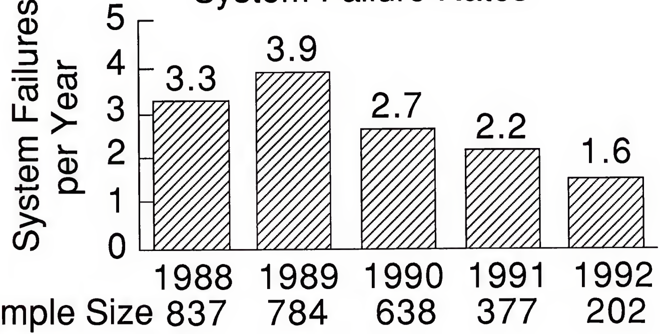
E-CS-200
2/2/93

INPUT

Europe—Medium/Mid-Range Systems

System Performance Trends

System Failure Rates



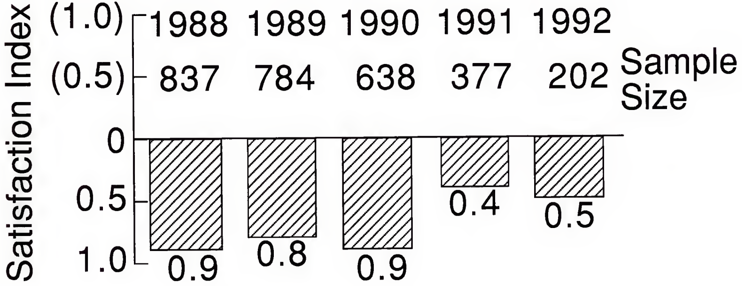
E-CS-201
2/2/93

INPUT

Europe—Medium/Mid-Range Systems

System Performance Trends

Satisfaction with Systems Availability



E-CS-202
2/2/93

INPUT

Germany

Growth Over 1991

- 3% overall
- Ranging from -1% to +9% by sector
- Professional services best
- Hardware service worst

E-CS-203
3/18/93

INPUT

Germany

Growth 1992 to 1997—I

Category	DM Billion 1992	DM Billion 1997	CAGR (%)
Hardware Maintenance	4.8	5.1	1
Environmental Services	2.3	2.9	5

E-CS-204
3/18/93

INPUT

Germany

Growth 1992 to 1997—II

Category	DM Billion 1992	DM Billion 1997	DM Billion CAGR (%)
System SW Support	0.6	0.8	7
Educ. and Training	0.4	0.5	3
Professional Servs.	0.2	0.3	9
Business Continuity	0.1	0.2	13

E-CS-205
3/18/93

INPUT

Germany

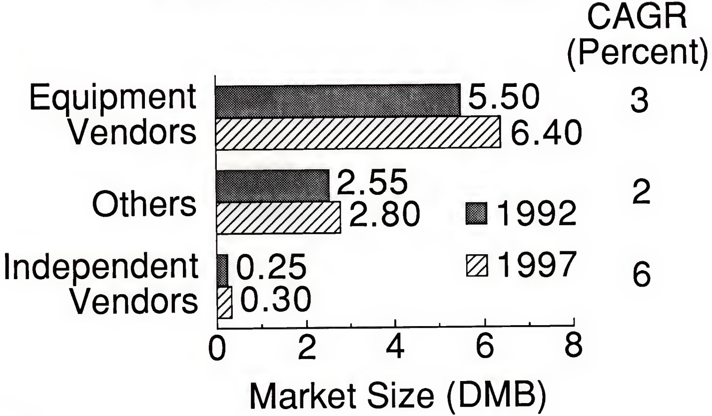
Growth 1992 to 1997—III

Category	DM Billion		
	1992	1997	CAGR (%)
Unique Services	7.1	7.9	2
Non-Unique Services	1.3	1.7	6
Total	8.3	9.7	3
Other Services	1.0	1.4	6

E-CS-206
3/18/93

INPUT

German Market



E-CS-207
3/18/93

INPUT

Germany

Trends 1992

- Maintenance decline slow
- Downsizing
- Total service contracts
- Partnering/outsourcing
- Traditional competition

E-CS-208
3/18/93

INPUT

Germany

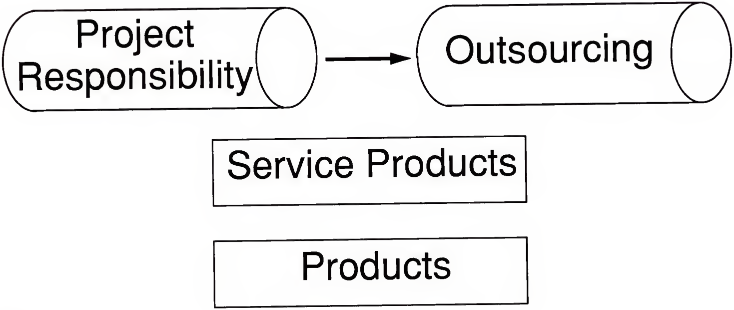
Leading Suppliers (1991)

Vendor	Share (%)
SNI	16
IBM	15
Digital	8
AT&T/NCR	4
Prime CV	2

E-CS-209
3/18/93

INPUT

Information Systems Market Scenario



E-CS-210
3/18/93

INPUT

Switzerland

Growth Over 1991

- 2% overall
- Ranging from -3% to +20% by sector
- Business continuity best
- Education and training worst

E-CS-211
3/18/93

INPUT

Switzerland

Growth 1992 to 1997—I

Category	SFr Billion		
	1992	1997	CAGR (%)
Hardware Maintenance	0.8	0.9	2
Environmental Services	0.5	0.6	3

E-CS-212
3/18/93

INPUT

Switzerland

Growth 1992 to 1997—II

Category	SFr Million		
	1992	1997	CAGR (%)
System SW Support	90	140	9
Educ. and Training	85	100	3
Professional Servs.	50	65	5
Business Continuity	10	30	18

E-CS-213
3/18/93

INPUT

Switzerland

Growth 1992 to 1997—III

	SFr Million		
Category	1992	1997	CAGR (%)
Unique Services	1.3	1.5	2
Non-Unique Services	0.2	0.3	7
Total	1.5	1.8	3
Other Services	0.2	0.3	8

E-CS-214
3/18/93

INPUT

Switzerland

Leading Suppliers (1991)

Vendor	Share (%)
Digital	12
AT&T/NCR	12
IBM	10
Unisys	8
SNI	5

E-CS-215
3/18/93

INPUT

Austria

Growth Over 1991

- 3% overall
- Ranging from -6% to +14% by sector
- Business continuity best
- Education and training worst

E-CS-216
3/18/93

INPUT

Austria

Growth 1992 to 1997—I

Category	Sch Billion 1992	Sch Billion 1997	Sch Billion CAGR (%)
Hardware Maintenance	3.1	3.3	2
Environmental Services	1.5	1.9	4

E-CS-217
3/18/93

INPUT

Austria

Growth 1992 to 1997—II

Category	Sch Million		
	1992	1997	CAGR (%)
System SW Support	390	560	8
Educ. and Training	240	270	3
Professional Servs.	110	170	9
Business Continuity	40	100	20

E-CS-218
3/18/93

INPUT

Austria

Growth 1992 to 1997—III

Category	Sch Billion 1992	1997	CAGR (%)
Unique Services	4.6	5.2	3
Non-Unique Services	0.8	1.1	7
Total	5.4	6.3	3
Other Services	0.6	0.8	6

E-CS-219
3/18/93

INPUT

Austria

Leading Suppliers (1991)

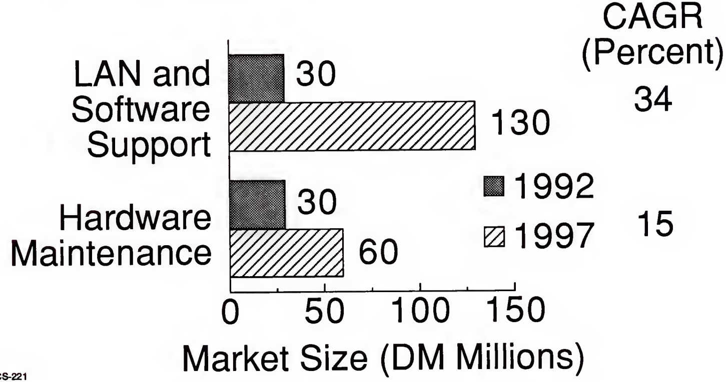
Vendor	Share (%)
Digital	20
IBM	17
SNI	12
Unisys	3
H-P	3

E-CS-220
3/18/93

INPUT

Germany

Desktop Services Market

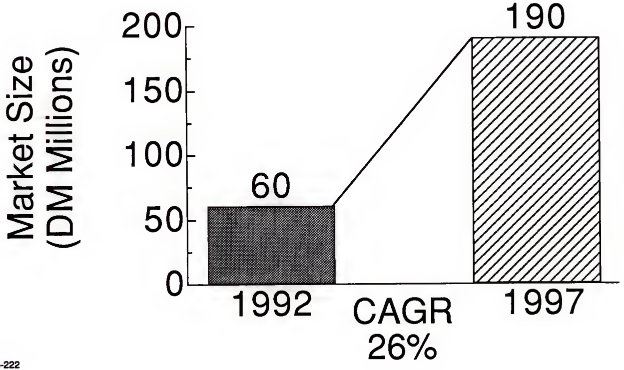


E-CS-221
3/18/93

INPUT

Germany

Desktop (+Maintenance)

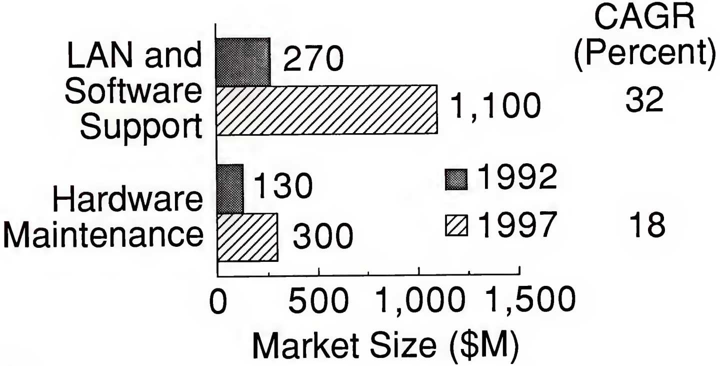


E-CS-222
3/18/93

INPUT

Europe

Desktop Services Market



E-CS-223
3/18/93

INPUT

Multivendor Maintenance Market Europe

The German-speaking Nations

E-CS-224
3/18/93

INPUT

Germany—Multivendor Maint.

Platform Category	DM Million			
	1991	1992	1997	CAGR (%)
Mainframe	40	40	55	+7
Mid-range	90	90	120	+6
Workstn./Servers	25	35	175	+39
PCs, Portables, LANs	225	245	350	+7
Total	375	410	700	+11

E-CS-225
3/18/93

INPUT

Multivendor Maintenance—Europe

Strategy Development

- Reorient perspective
- Transition opportunities
- Strategic options, e.g.
  - Prime contractor
  - Services vendor
  - Subcontract/FPM

E-CS-226
3/18/93

INPUT

Multivendor Maintenance—Europe

Country Markets—I

Country	$ Millions 1992	1997	CAGR (%)
France	500	680	6
Germany	270	460	11
U.K.	830	1,200	8
Italy	240	390	10

E-CS-227
3/18/93

INPUT

Multivendor Maintenance—Europe

Country Markets—II

Country	1992 ($M)	1997 ($M)	CAGR (%)
Sweden	80	105	6
Netherlands	180	320	12
Belgium	90	145	12
Spain	190	505	22

E-CS-228
3/18/93

INPUT

Part 1

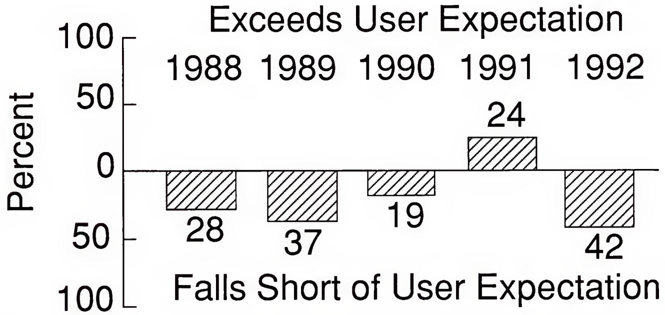
User Satisfaction

E-CS-229
5/20/93

INPUT

Europe

Fix Time Trends Systems Software Support



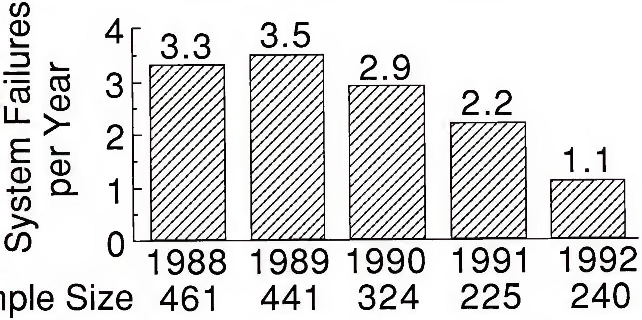
E-CS-230
5/20/93

INPUT

Europe—Large Systems

System Performance Trends

System Failure Rates



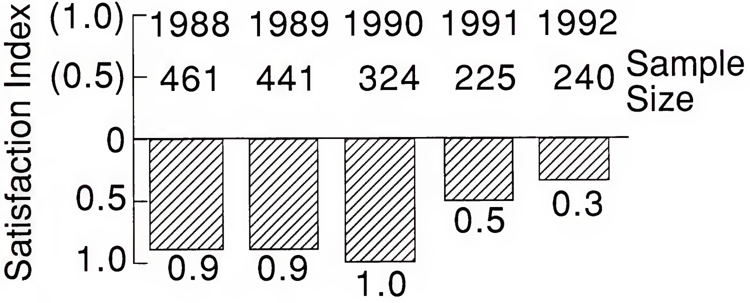
E-CS-231
5/20/93

INPUT

Europe—Large Systems

System Performance Trends

Satisfaction with Systems Availability

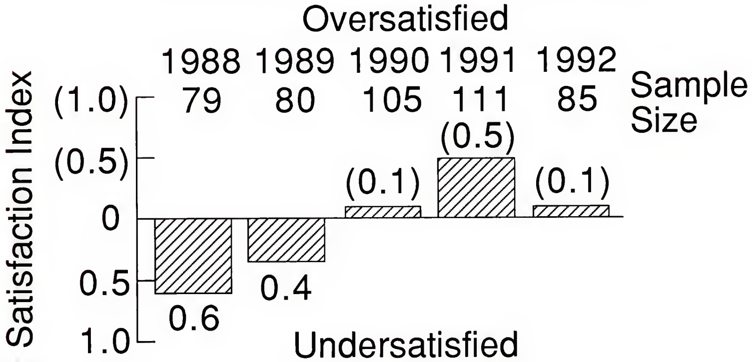


E-CS-232
5/20/93

INPUT

Amdahl

Hardware Service Satisfaction Trends

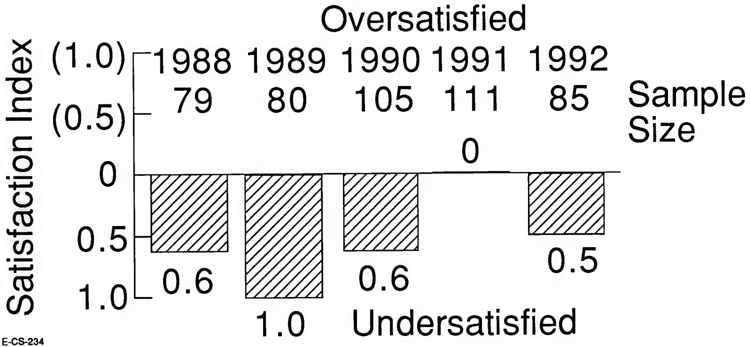


E-CS-233
5/20/93

INPUT

Amdahl

Systems Software Support Satisfaction Trends

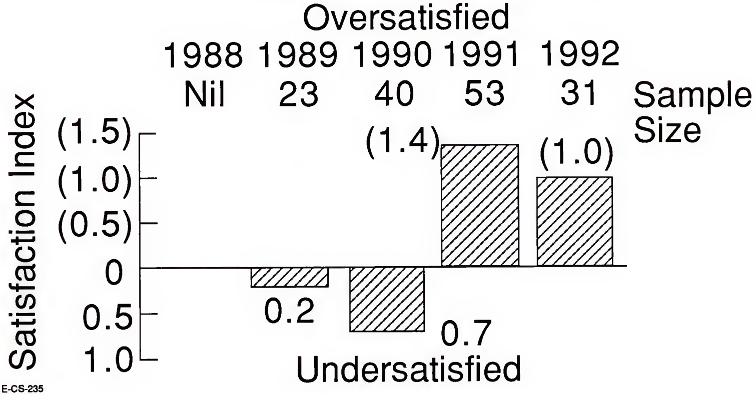


E-CS-234
5/20/93

INPUT

Stratus

Hardware Service Satisfaction Trends

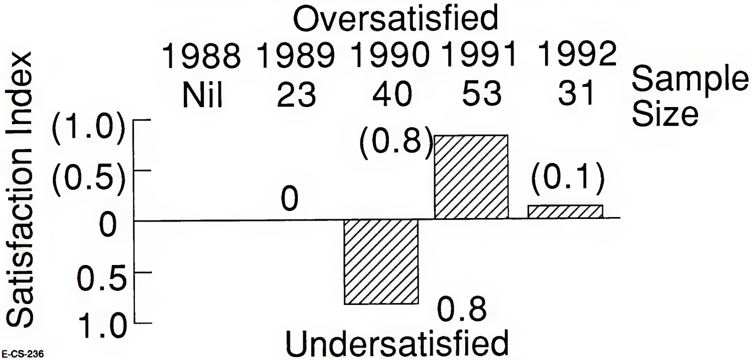


E-CS-235
5/20/93

INPUT

Stratus

Systems Software Support Satisfaction Trends



E-CS-236
5/20/93

INPUT

Part 2

Towards Open Systems

E-CS-237
5/20/93

INPUT

Integrated Support Model Concept

Support Focus

- Business activity
- Application use
- System building/integration
- Resources/components

E-CS-238
5/20/93

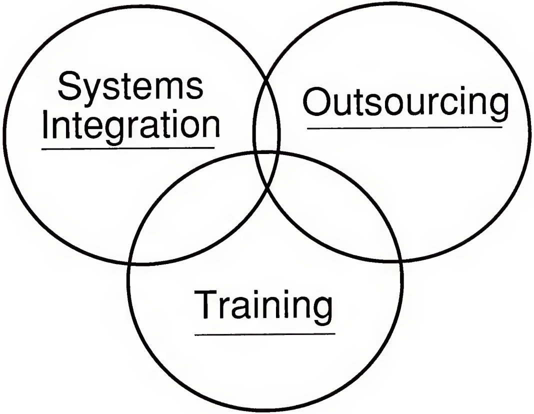
INPUT

Organisational Models for Open Systems Services

Model	Adoption Criterion
Single Sales Channel	Account Focus
Product and Service	Product Capability
Resource Pools	Vertical Orientation
Multiple Channel	Functional P/L Centres

E-CS-239
5/20/93

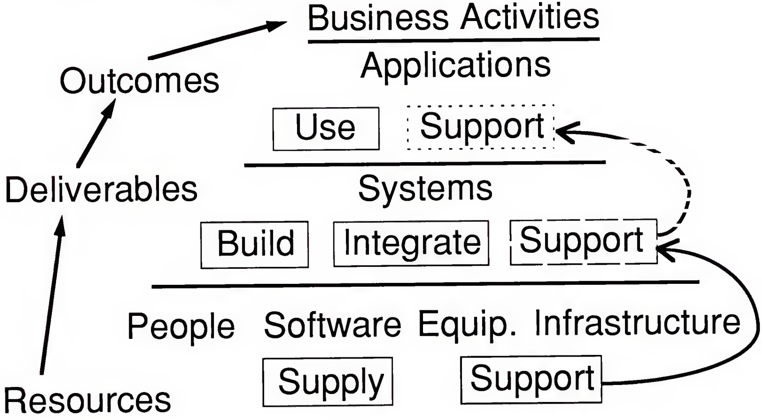
INPUT



E-CS-240
5/20/93

INPUT

The Integrated Support Model



E-CS-241
5/20/93

The Elements of Open Support

Function	Resources
System Operation	Operators
System Monitoring	Systems Engineers
Network Monitoring	Network Engineers
Problem Reporting	Help Desk
Problem Diagnosis	Help Desk
	Remote Diagnostics

E-CS-242
5/20/93

INPUT

The Elements of Open Support

Function	Resources
Problem Resolution-	
Operating Software	Software Support
Application Software	Software Support
Hardware	Systems Engineers
Network	Network Engineers
	Remote Support Tools

E-CS-243
5/20/93

INPUT

The Elements of Open Support

Function	Resources
Problem Escalation	Product Specialists
	Product Suppliers
System Enhancement	Systems Engineers
	Network Engineers
	Software Support

E-CS-244
5/20/93

INPUT

The Single Sales Channel Model

Customer

Sales Channel

Products

HW

SW

Services

HW Serv.

SW Serv.

Prof. Serv.

FM

etc.

Service delivery by service function

E-CS-245
5/20/93

The Product and Service Model

Customer

Sales Channel

Sales Channel

Products

Services

HW

SW

Service delivery by service function

E-CS-246
5/20/93

INPUT

The Resource Pool Model

Customer

Sales Channel

Delivery Channel

Service delivery by service function

E-CS-247
5/20/93

INPUT

The Multiple Channel Model

Customer

Sales Channel 1	Sales Channel 2	Etc.	Etc.	Etc.
Product 1	Product 2	Service 1	Service 2	Service 3

E-CS-248
5/20/93

INPUT

Resource Group Management Cultures

Resource Group	Dominant Mgmt. Culture		
	Product	Contract	Project
Product Design	✓		
Software Product Support	✓	✓	
Hardware Engineers	✓	✓	

E-CS-249
5/20/93

INPUT

Resource Group Management Cultures

Resource Group	Dominant Mgmt. Culture: Product	Contract	Project
Help Desk		✓	
Account Mgmt.		✓	
Operational Serv.		✓	

E-CS-250
5/20/93

INPUT

Resource Group Management Cultures

Resource Group	Dominant Mgmt. Culture: Product	Contract	Project
Consultants			✓
Systems Designers			✓
Software Devel.			✓
Sales			✓

E-CS-251
5/20/93

INPUT

Part 3

Where to Concentrate Your Efforts and Resources

E-CS-252
5/20/93

INPUT

Customer Services
Germany

	DM Billion		CAGR (Percent)
	1994	1999	
Proprietary (Closed)	4.8	3.5	-6
Open (Potentially)	4.8	6.3	+6

E-CS-253

INPUT

Customer Services Germany

	DM Billion		CAGR (Percent)
	1994	1999	
Single-platform	6.2	5.5	-2
Multi-platform	3.4	4.3	+5

E-CS-254

INPUT

Customer Services
Germany

	DM Billion 1994	DM Billion 1999	CAGR (Percent)
System Vendors	5.8	5.8	0
Other Vendors	3.8	4.0	1

E-CS-255

INPUT

Leading German CS Vendors

Revenues	1992 (DM Million)	
Vendor	CS	Other
SNI	1,335	930
IBM	1,190	1,180
Digital	590	-
HP	210	295
Unisys	175	30

E-CS-256

INPUT

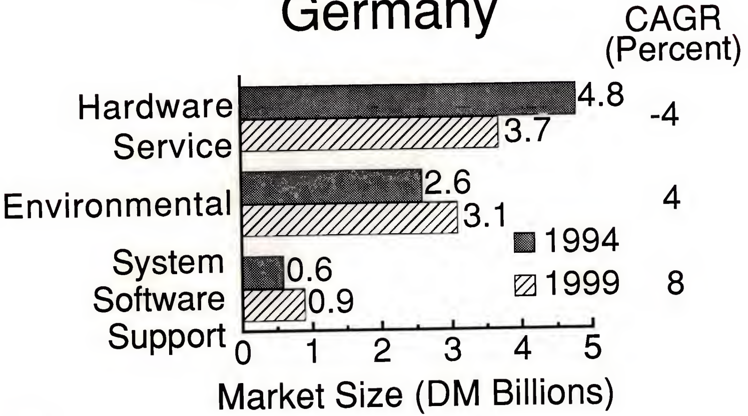
Leading German CS Vendors

Revenues	1992 (DM Million)	
Vendor	CS	Other
Bull	160	50
Comparex	150	-
AT&T (NCR)	135	45
Olivetti	100	10
Sun	85	5

E-CS-257

INPUT

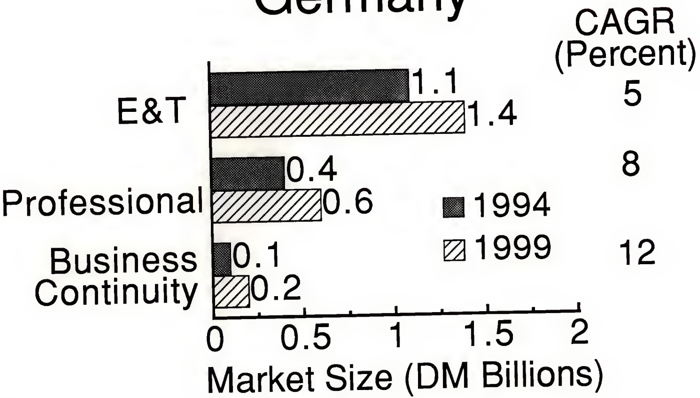
CS Sector Growth Germany



E-CS-258

INPUT

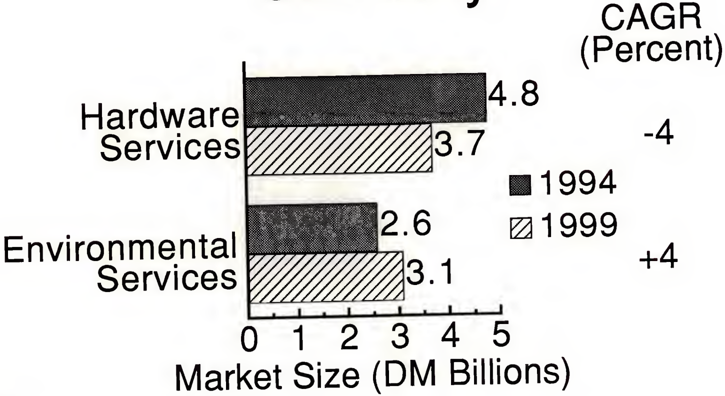
CS Sector Growth
Germany



E-CS-259

INPUT

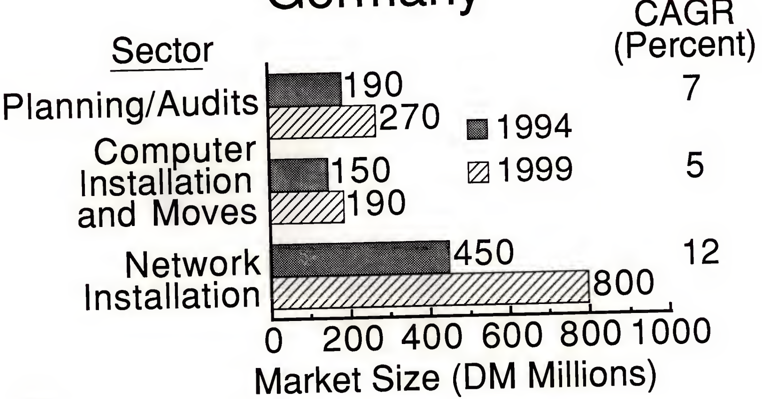
Customer Services Market Germany



E-CS-260

INPUT

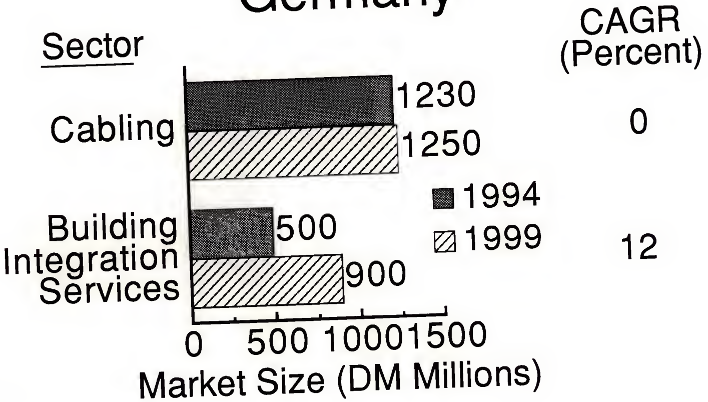
Environmental Services
Germany



E-CS-261

INPUT

Environmental Services
Germany



E-CS-262

INPUT