CSD "IT-buyers" segmentation
Marketing objectives

- Identify the prime target groups in the markets of current/potential customers for CSD's product families and services
- Propose leverage points for optimising Digital positioning
  - Based upon a quantified understanding of <u>*customer*</u> needs, perceptions, buying preferences and behaviour vis-a-vis the relevant IT vendors and their products.
- Recommendations on channels and communication
- Support for focussed resource allocation aimed at optimising market share in selected product areas

Deliverables (1)

- For each product area (across all countries), each country and overall/non-IT professionals:
  - Description of "needs"- based segments of IT buyers.
    - ★ Extensive statistical qualification of segments. $-sizing and growth estimates.
    - ★ Needs defined in terms of how an "ideal" product is viewed, its most important characteristics

    ---> What IT-buyer segments are out there, from which we could choose?

Deliverables (2)

- **For each product area (across all countries), each country and overall/non-IT professionals :**
  - **Market model for scenario evaluations**
    - ★ **Identification of the product, service, corporate or emotional attributes with highest potential to attract future customers to Digital**
    - ★ **Estimated potential share increase**
    - ★ **Identification of the prime *"marginals"* customer target group in terms of relative size and statistical "tags".**

---> Which are the customers we have a real chance of winning? What is their potential? What could trigger their moving to Digital?

Deliverables (3)

- **For each product area (across all countries), each country and overall:**
  - **Access to model for evaluation of impact on Digital of possible competitive moves.**
  - **Indication of possible emerging areas which are relevant in terms of "needs", but not yet exploited.**
  - **The option to evaluate 'new ideas" *(product or services concepts, channel strategies or advertising)* on the market models before committing significant development funds***

<u>Coverage</u> - countries, buyers, product areas

- USA, UK, France, Germany (ca. 55% FY94 NOR)
- IT purchases are rarely decided by one individual; usually several, plus committees *(varying degrees of importance attached to cost, technical adequacy and the vendor)*
- Sample of target group buyers will include:
  - Senior/middle non IT specialists (MD, FD, Dept Manager)
  - I/S technical people (IT Manager, Systems Manager, PC (?LAN) Manager)
  - Professional end-users (architect, graphist, scientist)
  - Large(ABU-type)/medium/small companies, across industries (ex. govt, home)
- VARs/ISVs to be included as separate sub-group
- Product areas to be confirmed by the research itself.

Research method - overview

- Primary market research surveys among IT buyers
- Development of SCRIBE choice models per product area, per country and overall
- Interrogation of models
  - Segmentation into “needs’ groups
  - Prime target group definition, sizing
  - Optimisation of positioning strategy vs competition (copy strategy definition) and evaluation of potential share gains
- Pre-testing of “tuned” or new product configurations, advertising

Research surveys
- Stage 1 qualitative -

- Qualitative 1-on-1 interviews (ca 20 per country)
  - Generation of exhaustive set of rational and emotional attributes relating to product families, associated services, vendor image, channels; preliminary look at potential IT "needs" groupings
  - Assessment of "product areas" perceptions
  - Review by Digital product and research teams

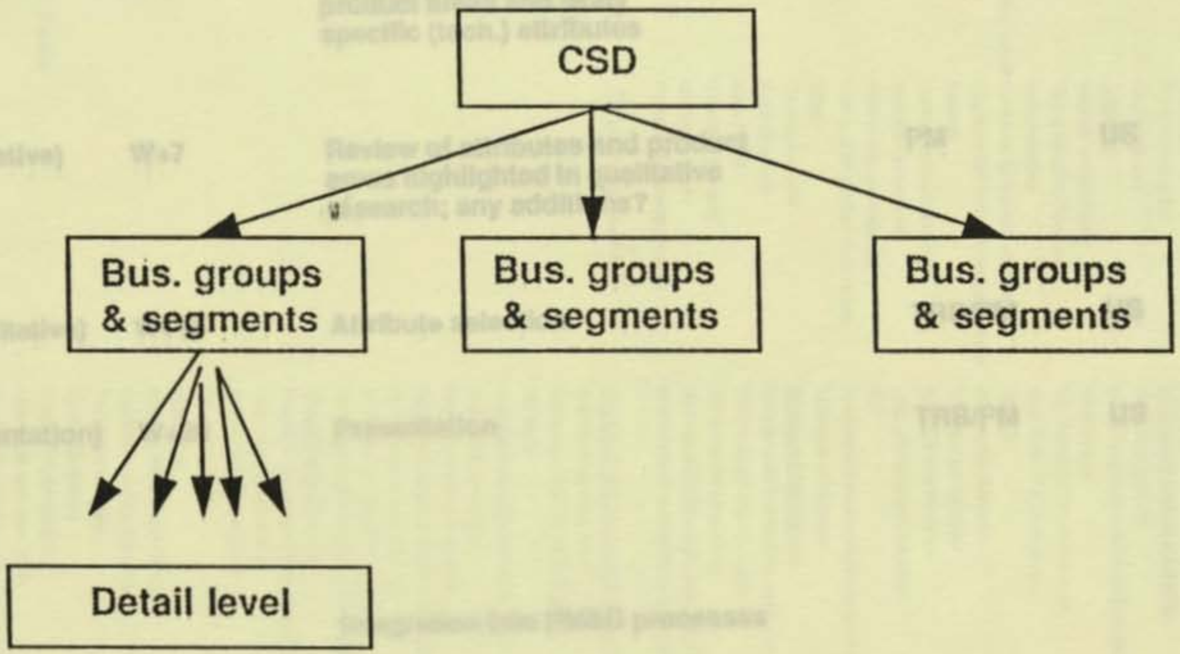
Research surveys
- Stage 2 quantitative -

- 50 computer-aided personal interviews (CAPI) per country among target group respondents
  - Quantitative validation of attributes across a sub-set of product lines in each product area, and of vendors
  - Statistical reduction down to those general and product-area-specific attributes offering
    - ★ max. discrimination between product lines/vendors
    - ★ minimum redundancy between each other.
  - Review by Digital product and research teams to ensure no important criteria have been dropped/overlooked.

Research surveys
- Stage 3 quantitative -

- Main quantitative survey
  - 300 CAPI interviews per country among representative groups of target customers (on/off base) covering all product areas
  - Rating of rational & emotional attributes covering product-specific aspects, channels and associated services
    - ★ IT technical buyers to rate
      - ➢System families within product areas
      - ➢Services, channels, vendor perceptions
    - ★ Non-technical buyers to rate
      - ➢Associated services, channels, vendor perceptions
  - Rating of "ideal" products/vendors, and buying preferences

PM&D involvement



PM&D involvement

Project Stage Date (approx)	Timing	Activity (with PM&D nominees)		Responsible	Location
Preamble	W-1	Project explanation, discuss product areas and likely specific (tech.) attributes	PM	US	Mid Nov '94
Phase 1 (qualitative)	W+7	Review of attributes and product areas highlighted in qualitative research; any additions?	PM	US	Mid Jan '95
Phase 2 (quantitative)	W+15	Attribute selection	TRB/PM	US	Mid Mar '95
Phase 3 (Presentation)	W+28	Presentation	TRB/PM	US	Mid June '95
Follow-on		Integration into PM&D processes			Ongoing

from PM+D Segm.

Servers

Good performance

- CPU performance
- I/O performance
- Interactive response times (actual workload)
- Computational power
- MTBF
- Network throughput
- Server disk access time
- Multiprocessing
- Multiple I/O channels
- Based on 64bit architecture
- Performance monitoring tools

High availability / reliability

- Across the total solution (HW, SW - OS/tools/apps)
- Mirrored drives
- RAID arrays
- ECC memorry
- Redundant components
- Hot swappable components
- Automated server failover
- On-board diagnostics
- Over life of solution (installation, operation, upgrades, repair

Other technical

Disk space availability
Clustering capability
Scalability
Flexibility
System management tools
System security
Multi-vendor interoperability
Mainframe connectivity
Compatible with existing systems
Robust UNIX operating environment
3rd party apps. available
Availability of middleware
Proprietary standards compliance

Range of options within same family

- System performance levels
- Consistent user interfaces
- SW comparible across systems
- Common networking / communication
- Consistent upgrade strategy
- Consistent service offerings

Convenience

Ease of use
Ease of set-up/installation
Ease of access to components
Ease of upgrading to future technologies

Open standards

- Operating environment
- Bus
- Storage options
- Load / back-up media
- Use of industry-standard components (PCI, SCSI, SIMMS)
- Networks / comms
- User interface
- DB, apps
- Industry standards compliance

Low cost of ownership

- Price/performance
- Price-point
- System
- SW (OS/tools/apps)
- Service (HW/SW)
- System/network management, operations
- Investment protection (trade-in, upgrade, SW migr., compat.)

Servers (cont.)

Other non-technical

On-site maintenance options
Extended warranty options
Best value for my needs
Many others will buy system
Primary computer vendor offers system
Long expected system lifetime

Workstations (extras)

Product throughput performance
Availability h/w & s/w configs.
Application availability
Graphics performance

PC's

Price/cost

Initial buying price
Operating cost

Technical

Memory management
High availability features
Interoperability
Conforms to industry standards
Upgradability motherboard/processor
Security
Technical documentation
Network compatibility
Multi-media compatibility
H/W & S/W configs meet needs

Other

On-site warranty
Ease of set-up
Ease of use
Extended warranty
Quality of finish
Product design/ergonomics
Environmental

O/S's

Overall quality

Reliability/dependability
Performance
Quality of code
Robustness
Scalability
Heterogeneous network management capability
Non-proprietary

Completeness

System security
C2 security level complaint
Network-wide system management/admin
Recovery from failure
File system robustness
Clustering capabilities
Storage/media management

Production system capabilites

Real time features
Multiprocessing-enhanced performance
Multitasking
High-level OLTP environment
High TCP-IP performance
Utilities
Messaging systems
File transfer services
Distributed databases

User environment features

GUI
Integrated systems management tools
Richness of features

Business/technical s/w

Off-the-shelf bus./comm. appl. s/w
Off-the-shelf eng./sci. appl. s/w
3rd party s/w availability
Vertical and horizontal apps. available
S/W versions available for all geographies

Complete business/technical s/w dev. environment

S/W development tools
3rd party CASE tools availability
DB tools
Database management s/w
High level languages
Object oriented languages
Extensive object-oriented class library
Distributed computing tools
Client-server development tools
Heterogeneous development environment

Ease of support, price

Requires minimum on-site expertise
Ease of s/w installation
OS vendor's s/w support
OS price-point

Openness

Can run on multiple h/w arch.
Growth/migration potential
Portability of apps.
X/open portability
Spec 1170 compliant
Open C/S app. dev. tools
Open C/S app./data distribution tools
H/W standards support (PCI, SCSI, SIMM, Ethernet)
S/W standards support (XOpen, XPG3/4, DEC,TCP-IP)

Internationalisation/documentation/training

Multiple character sets permitting international document exchange
Documentation
Training costs

Network O/S

Network h/w s/w support capabilities
Integrated network system management tools
Automated systems/network operations support
Distributed applications performance management
Supports performance simulation
Legacy environment interoperability
Mail/messaging/queueing in heterogeneous env.
Supports directory services
Supports naming services
Supports UNIX and PC's
Use of object-oriented technologies
Standards compliance (DCE, SQL, CORBA)
Ease of installation
Ease of use
Local language support

Middleware

Seamless integration of customer data/apps
Apps available on heterogeneous systems
Desktop productivity whilst maintaining security of enterprise computing environment/data
Availability management
Security management
System administration
Reliable TP integration with customer DB's
High credibility in data-access
High credibility in data integration
High credibility in object-oriented technologies
High credibility in DCE
High credibility in desktop integration with heterogeneous environments
Integrated ~~layered (?)~~ products
~~Layered (?)~~ products interoperability
Legacy products interoperability
PC standards compliance

Services

Planning/design services
Installation support
Distribution/installation of s/w
Performance management
Availability management
Security management
System administration
Software management
Network management
Multivendor maintenance
Support staff training
End-user training
Support calls
Fair fee-structures
Offers service warranties

Vendor's channels (policy)

Products widely available (++ channels)
Good partner relationships
Clear messages to partners
Easy to purchase their products thro' channel
Have trustworthy channels
- and other "image criteria"
Etc. +++

Vendor image

Financially stable
Trustworthy
Innovative
Flexible
Consistent
Friendly
Authoritative
Experienced
Offers independant advice
Openness of strategy/plans
Meets deadlines
No unexpected costs
Broad offering (to limit number of suppliers)
Rapidly addresses new technology needs
Rapid response to evolving customer needs
Customer/end-user focussed
Understands my business
Easy company to do business with
Provides practical solutions
Respects commitments
Enthusiastic sales reps.
Personnel turnover too high
Satisfactory invoicing administration
Simple software licensing
Interested in long-term relationships
High value of products/services to customer's business
Global knowledge/capabilities
Price/performance leadership
Expensive
Easy-to-use products
Hardware performance
Reliable hardware
Software performance
Reliable software
Standard software interfaces
Continuous new product offerings
Effective multivendor systems interoperability
Provides effective 3rd party solutions
Leverages outside technology/innovation through partnerships
Industry-standard warranty
Good systems maintenance
Multi-vendor systems maintenance capability
Strong professional services
Offers good training services
Supports industry standards
Has clear business strategy/plans
It is our policy to work with this company

' Business / economic benefits

Non end-user (VAR/ISV) needs

Create excitement about DEC vision/products

- Internal product positioning
- Long-term mktg strategy
- Technology strategy
- Simple statements

Create competitive edge, market demand

- Identify, deliver, announce competitive advantages
- Joint mktg progs with 3rd parties
- High visibility campaigns

Clear marketing strategy

- By vertical/horizontal market
- By type of application (technology/TG's/migr. strategy)

Current business practices

- Discounts/warranty/trade in or up/upgrades/leasing/SW licensin

Competitive prices for customer, margins for me

- Competitive discounts/allowances/T&Cs/licensing

Support low implementation costs

- Development/deployment/maintenance

Handle orders

- Quote for orders , close, schedule, deliver on time

Commit to and achieve product financial goals

- Cost
- Market goal (% share, profitability, etc.)
- Development costs (pricing, product assumptions, cannibalisation

Commit to and achieve product schedule goals

- Ship all system/solution components
- Announcement timing
- Evaluate and discuss schedule risks

CSD "IT buyers" segmentation
Possible "product areas" for individual choice models

Types of equipment

- High performance scientific
- Engineering WS
- Enterprise/TP servers
- DB / Appl. servers
- File & print servers
- Desktop PC
- Mobile PC

- High end server
- Low end server
- Workstations
- PCs

- PC's
- Low-end workstations (RISC)
- Low-end workstations (Intel)
- High-end workstations
- Low-end servers (RISC)
- Low-end servers (Intel)
- Dept./enterprise servers

Types of computer usage

Administration
- Office automation
- Accounting / administration
- Payroll
- Employee record management

Production
- Plant / manufacturing management
- Factory automation / CIM
- Experiment / process control
- Production / inventory management

Commercial
- Order / transaction processing
- Securities / currency trading
- Banking
- Reservation systems
- Claims processing
- Sales & marketing
- Customer servicing

Technical / professional
- Electronic design / analysis
- Mechanical design / analysis
- Systems simulation
- AI / expert systems
- Mathematical / statistical analysis
- Business / financial analysis
- Project management

Communication
- Image processing / enhancement
- Electronic publishing
- Education / training
- Graphic simulation / animation
- E-mail/fax/Internet

IT management & development
- Systems s/w development
- Applications s/w development
- Computer system / network managment
- Telecoms / datacoms

Other(s)

Business process automation
- Workflow automation
- Groupware
- Data warehousing
- E-mail
- Customer access to online data
- End-to-end BPA

Commercial/electronic commerce
- Order / transaction processing
- Securities / currency trading
- Banking
- Reservation systems
- Claims processing
- Sales & marketing
- Customer servicing
- EDI
- On-line info (eg Dow jones)

IT management & development
- Systems s/w development
- Applications s/w development
- Computer system / network managm
- Telecoms / datacoms
- Client/server SW development

Administration
- Office automation
- Accounting / administration
- Payroll
- Employee record management

Production
- Plant / manufacturing management
- Factory automation / CIM
- Experiment / process control
- Production / inventory management

Personal/managerial
- Mobile and/or remote access
- Telecomputing
- Decision support

Technical / professional
- Electronic design / analysis
- Mechanical design / analysis
- Systems simulation
- AI / expert systems
- Mathematical / statistical analysis
- Business / financial analysis
- Project management
- Visualization (VR)

Embedded intelligence
- eg "smart" buildings

CSD "IT buyers" segmentation
Some potential "passive variables"

Primary function(s) of dept.
- Finance/administration
- Marketing/sales
- Customer service
- Manufacturing
- Engineering
- Purchasing
- MIS/EDP
- Datacom/telecoms
- S/W development
- Education/training
- Research
- Consulting
- Personnel / HR

Primary end-product / service
- Automotive
- Aerospace
- Engineering
- Financial services
- Chemical/petroleum
- Insurance
- Electronics
- Transportation
- Computer S/W
- Computers / peripherals
- Computer distributor/OEM
- Utility
- Architechture/construction
- Heavy equipment / machinery
- Printing/publishing
- Defence
- Consulting / professional
- Pharaceutical / medical
- Telecommunications
- Food / agrculture
- Education
- Research
- Consumer / retail goods
- Hospitality

Primary computing applications (used/would like)
- Office automation
- Accounting / administration
- Payroll
- Employee record management
- Plant / manufacturing management
- Factory automation / CIM
- Experiment / process control
- Production / inventory management
- Distribution / warehouse management
- Order / transaction processing
- Securities / currency trading
- Banking
- Reservation systems
- Claims processing
- Sales & marketing
- Customer servicing
- Mathematical / statistical analysis
- Systems simulation
- AI / expert systems
- Electronic design / analysis
- Mechanical design / analysis
- Business / financial analysis
- Project management
- Graphic simulation / animation
- Image processing / enhancement
- Electronic publishing
- Education / training
- Systems s/w development
- Applications s/w development
- Computer system / network managment
- Database access / retrieval
- Telecoms / datacoms

Primary and "also used" computing systems installed

Primary and "also used" operating systems installed

Network OS's installed

CSD "IT buyers" segmentation
Some potential "passive variables" (2)

/K/ω

Annual budget for purchasing/ ~~renting~~ computers (S/W, SVCS)
- < 10K
- 10-50K
- 50-100K
- 100-500K
- 500K-2M
- > 2M ++ 5-10 10+.

Annual revenues / funding of company / institution
- < 5M
- 5-10M
- 10-20M
- 20-50M
- 50M-1B
- > 1B

Function(s) of respondent
- CEO
- CFO
- Dept. Head
- IT Director/Manager
- Staff
- Consultant
- Systems manager
- Engineer
- Researcher
- Systems analyst
- Systems programmer
- S/W developer
- Computer operations
- Other MIS/EDP professional
- Other

Industry
- Agriculture, mining, construction
- Manufacturing
- Transportation, communication, utilities
- Wholesale, retail
- Banking, investment, insurance
- Services (bus./prof./edp)

Geography
- USA
- France
- Germany
- UK

Role in buying decision
- Solely responsible for decision
- Make final decision based on recommendations
- Leader of group responsible for decision
- Member of group responsible for decision
- Make recommendation, not final decision
- Provide technical davice
- Do not participate in purchase decisions

Current situation in buying cycle (by product area)

Channels used/preferred
- Direct from vendor
- VAR/ISV
- Distributor
- Mass-merchandiser

Use of applications involving distributed infrastructure (middleware)

Processor preferences (RISC/Intel)

I **Technology adoption style**
- Early adopter/early majority/late majority/laggard

Centralised/decentralised company

Company situation
- Mature/stagnant
- Turnaround
- Rapid growth
- Rapid industry evolution underway

IT-buyers segmentation - initial attribute listing

"Applications" orientation

1. For accounting applications
2. For CAD
3. For engineering applications
4. For graphical applications
5. For laboratory applications
6. For large volume applications
7. For scientific applications
8. For specialist applications
9. For technical applications
10. Runs our applications

"Compatibility" orientation

11. Compatible with industry standards
12. Compatible with other systems
13. Integrates with existing systems
14. Provides ability to expand
15. Provides interoperability
16. Provides open systems

Networks/connectivity" orientation

17. Good for data comms
18. Makes good networks
19. Provides interconnectivity

"Hardware" orientation

20. Attractive designs
21. Faster systems
22. For large production systems
23. Good response times
24. High performance machines
25. Large capacity machines
26. Less down time
27. Provides migration path
28. Provides scalability
29. Technically strong
30. Upgradeable
31. Wide range of systems

"Software" orientation

32. Easy to use
33. Good environment for software development
34. Good for large databases
35. Good for multimedia
36. Good security
37. Good system management tools

"Service and support"

38. Good engineering support
39. Good service available
40. Has good third party support
41. Local service available
42. Offers good warranties
43. Provides good technical support

"Cost" orientation

44. Expensive
45. Good value for money — Good Price/Performance

"Vendor orientation"
(Can also refer to products)

46. A leader
47. Aggressive
48. American
49. Arrogant
50. Boring
51. Cold
52. Confident
53. Conservative
54. Creative
55. Dynamic
56. Fading
57. Fashionable
58. Financially strong
59. Flexible
60. Friendly
61. Good advertising
62. Good marketing
63. Good reputation
64. Has good customer relationships
65. Hungry
66. Informal
67. Innovative
68. Leading edge company
69. Listens to customers
70. Makes good client servers
71. Makes good large servers
72. Makes good mainframes
73. Makes good minis
74. Makes good network servers
75. Makes good workstations
76. Modern
77. Professional
78. Quality company
79. Reliable
80. Responsive
81. Sporty
82. Trustworthy
83. Young

"User stereotypes"

84. For computer experts
85. For designers
86. For financial people
87. For managers
88. For smaller businesses
89. For universities

*NB: **"Broad groupings"** only for purposes of gaining an overview; will not be included in research itself.*

Research survey - Stage 1 qualitative -

booked 1 hour
typically ran 2 hr.

- Qualitative 1-on-1 interviews
  - 18 per country (US, UK, Fr, Gy)
  - Semi-structured interview guideline
  - Deciders: IT specialists, CEO/CFO's, professional users, Dept. heads & business users. Digital and non-Digital base.

significant amount of non-product attributes.

- Generation of exhaustive set of rational and emotional attributes relating to product models/families, associated services, vendor image, channels
- Assessment of "product areas" perceptions
- Review by Digital PM&D and research teams

General conclusions (1)

- Reseach content
  - Significance of vendor image
  - Attributes tend not to be very technical
  - People not so much aware of system s/w, middleware, but talk more about the convenience which they deliver

- "Product area" segmentation
  - Both "machine type" and "business need / application type" appear to be possible.
    - ★Quantify in Stage 2 before decision.

General conclusions (2)

- Research method / sampling
  - Few respondents able to name or talk about several different systems with same level of specificity
    - ★Need to interview people recently/currently in buying cycle
    - ★Need to accept different levels of model specificity
  - Many non IT-specialists have little knowledge of, or are uninterested in computers, even if they are co-deciders
    - ★Drop non-specialist Dept. heads, business users
  - Certainly some "IT Mgrs" not especially knowledgeable; not necessarily confined to small companies / industry types
    - ★Maybe this is the real world - check quantitatively

1 ## Guideline content

- Business, sector, size or operation, job, content, reponsibilities
- Role in IT purchasing decisions
- Understand IT set-up in respondent's own language
  - WS, servers, PC's, OS's, appl. S/W
- Role/function of apps within company
- Performance needs of application
  - Features, benefits, service/support
  - Problems?
- Decision-making process (last acquisition)
  - Needs criteria, short-list, how options developed, decision criteria (system, OS, tools, middleware, NOS, openness, service, etc)
  - Any alternatives now
  - Relative importance of criteria
    - ★ Probe the most important for content
- Perceptions of companies/brands (those known)
  - Expertise, service, quality, user apps, end-user company type, corporate aims/ethos, business practices, relationships
  - Strengths, weaknesses
  - Brand/company personification, associations, user stereotypes
- Ideal world - systems, apps, suppliers, relationships
- "Open systems" probe
- "Middleware", "layered s/w", "networking needs", "seamless user interface networks" probes
  - Awareness, comprehension of specific middleware products
    (CORBA, SMALL TALK, VISUAL AGE, DCE, DBI, etc.)
- *CLOSE*

72 personal interviews (1-on-1), semi-structured questionnaire
USA, France, Germany, UK; fieldwork in February 1995

	IT Managers	CEO/CFO	Dept. Mgr	Prof. user	Non-prof. user	Total
Qualifications:	Min. 5 yrs IT	Sign-off major systems purchases	Keep up-to-date on IT	Keep up-to-date on IT	Use PC for genral business apps	
	Involved in spec.	Involved in strategic IT decisions	Specify IT needs for their Dept.	Use WS or similar	Not IT specialists	
	Co-decider	Coy. uses servers/WS	Specify servers/WS for Dept.	Not IT specialists	No budget for computers	
	Strongly involved in buying	Not MIS professionals	Co-decider in function of business needs	Use their systems for work frequently		
			Not IT specialist			
Typical titles	IT Director DP Manager System Manager Network Manager PC-LAN Manager	Chief Executive Officer Managing Director Chief Financial Officer Financial Director		Architect Graphist Engineer R&D scientists	Have become PC experts Influencers	
No employees (site)						
> 250 empl.	12 (12)	3 (8)	5 (4)	2 (4)	(-)	22 (28)
50-249 empl.	4 (12)	5 (8)	4 (4)	3 (8)	(-)	16 (32)
20-50 empl.	3 (-)	1 (-)	2 (4)	1 (4)	1 (4)	8 (12)
Non-specified	6	2	3	4	1	16
Total ACTUAL (TGT)	25 (24)	11 (16)	14 (12)	10 (16)	2 (4)	62 (72)

per establishment

Country	Size	Position	Industry
France	96	CFO-Finance Director	Tungstan distributor
France	87	CFO-Finance Director	Automotive
France	1000	Department Head	Finance/Investment
France	800	Department Head	Insurance
France	100	Department Head - Personnel Director	Building/Construction
France	270	End users - Administrator	Industrial Cleaner
France	100	Finance Director	Manufacture of Electronic Equipment
France	340	Head of IT	Manufacture of Astronautic Equipment
France	1000	IT Director	Dispensing Machine/Cash Point
France	500	IT Manager	Medical resp. and Pharmaceutical development
France	250	IT Manager	Detergent Manufacture
France	25	IT Manager	Research Lab
France	650	IT Manager	Technology Centre
France	30	IT Manager	Bio tech Lab
France	120	Professional user	Manufacture parts aerospace and nuclear
France	8000	Professional user-statistician	Finance
Germany	61	CEO	n/a
Germany	50	CEO	Food industry
Germany	3500	CEO	Industrial Manufacture
Germany	90	CEO	Public Services
Germany	150	Dept Head	n/a
Germany	n/a	Dept Head	Estate Agents
Germany	n/a	Dept Head	Bank
Germany	8	Dept Head	Bank
Germany	n/a	Dept Head	n/a
Germany	2500	IT Manager	Manufacture of TV equipment
Germany	140	IT Manager	Engineering

Country	Size	Position	Industry
Germany	270	IT Manager	Industrial Manufacture
Germany	250	IT Manager	Aircraft Parts manufacture
Germany	600	IT Manager	Metal industry
Germany	n/a	Professional User	Research Institute
Germany	n/a	Professional User	Industrial chemicals
Germany	n/a	Professional User	Skincare/cosmetics manufacture
Germany	25	User	Manufacture of electronic components
UK	8	Business Professional	Reprographics
UK	n/a	CEO - Finance Director	Air spares manufacturers
UK	100	Dept Head - Import Manager	Import Agent
UK	35	Dept Head - Operations Director	Publishing
UK	n/a	Finance Director (IT)	Manufacturing diaries & promotional items
UK	150	Accountant	Banking
UK	n/a	IT Manager	Manufacturer of springs and energy products
UK	n/a	IT Manager	Insurance
UK	n/a	IT Manager	Management Consultants
UK	n/a	Accountant (Responsible for IT)	Plastics Manufacturer/Moulder
UK	350-400	IT Manager - Group Project Manager	Electrical Heating Manufacture
UK	50,000 Worldwide	IT Manager - Telecoms manager	Manufacture industrial parts
UK	300 in UK	Professional User	Consultant engineers
UK	n/a	Professional user - Creative Services Manager	Typesetting/publishing
USA	n/a	Business Professional	Food
USA	n/a	CEO	Manufacturing
USA	20	CEO	Manufacturer of commercial furniture
USA	300	CEO - Director of Finance	Elevator installation and maintenance

Country	Size	Position	Industry
USA	500	CEO/Controller	Aerospace defence manufacture and design
USA	1000	Dept Head	Design & manufacture of business products
USA	280	Dept Head - director of engineering	n/a
USA	4000	IT Manager	Manufacture of Food Products
USA	n/a	IT Manager	Information Services
USA	2000	IT Manager	Life/Health Insurance
USA	200-250	IT Manager- Chief Information Officer	Apparel Retailer
USA	200	IT Manager - Director of Law Library & MIS Planner	Legal Education
USA	360	IT Manager - Supervisor of Technical Services	Healthcare Industry
USA	70	Prof user - Project engineer	Engineering
USA	300	Computer Specialist	Manufacture of household products
USA	100	Prof User - Manufacturing Engineer	Fire prevention (sprinkler systems)
USA	25	Prof User - Desinger	Manufacture of plastic granulations
USA	40	IT Manager	Energy Products Manufacturer

Project Finger

Attribute Analysis

ie, Vendor

Brand Personalities

CFO, Dept heads

+ other E-Us.

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
1	Absent-minded	BP	1			1
2	Active	BP			1	1
3	Adaptable	BP		1		1
4	Adventurous	BP		2		2
5	**Aggressive**	**BP**	**5**	**5**	**1**	**11**
6	Ambitious	BP	1		1	2
7	Amenable	BP		1		1
8	Approachable	BP			1	1
9	Arrogant	BP	1	2	1	4
10	Attractive	BP	1			1
11	Audacious	BP		1		1
12	Average	BP	1			1
13	Bold	BP	1			1
14	Boring	BP	1			1
15	Casual	BP	2			2
16	Challenging	BP	1	1	1	3
17	**Cold**	**BP**	**3**	**4**	**1**	**8**
18	Communicative	BP		1		1
19	Competent	BP	1			1
20	**Confident**	**BP**	**2**	**3**	**1**	**6**
21	Confused	BP		1		1
22	**Conservative**	**BP**	**9**	**8**	**5**	**22**
23	Creative	BP	1		1	2
24	Dazed	BP		1		1
25	Demanding	BP	1			1
26	Dependable	BP		1		1
27	Dignified	BP			1	1
28	Domineering	BP		1		1
29	**Dynamic**	**BP**	**5**	**5**	**2**	**12**
30	Elegant	BP	1			1
31	Entrepreneurial	BP	1			1
32	Fashionable	BP	1		1	2
33	Female	BP		1		1
34	Feminine	BP	1		1	2
35	Flexible	BP		2		2
36	Flirtatious	BP	1			1
37	**Friendly**	**BP**	**2**	**3**	**3**	**8**
38	Functional	BP		1		1
39	Go getter	BP		1		1
40	Honest	BP			1	1
41	Humble	BP	1			1
42	Hungry	BP		1		1
43	Informal	BP	1			1
44	**Innovative**	**BP**	**8**	**9**	**7**	**24**
45	Intellectual	BP		1		1
46	Light hearted	BP	1			1

47	Middle-aged	BP		1		1
48	**Modern**	**BP**	**4**	**1**	**3**	**8**
49	Mundane	BP		1		1
50	Older	BP		3	2	5
51	Outgoing	BP		1		1
52	**Professional**	**BP**	**6**	**7**	**3**	**16**
53	Progressive	BP	1			1
54	Quiet	BP	1			1
55	Relaxed	BP	1		1	2
56	**Reliable**	**BP**	**9**	**12**	**9**	**30**
57	Respectable	BP	1			1
58	Responsible	BP			1	1
59	Robust	BP	1			1
60	Safe	BP	1			1
61	Sexless	BP			1	1
62	Slim	BP			1	1
63	**Slow**	**BP**	**1**	**3**	**2**	**6**
64	Snobbish	BP			1	1
65	Solid	BP	1	1		2
66	Sophisticated	BP		1	1	2
67	Sporty	BP	3	1		4
68	Stable	BP			1	1
69	Straight	BP	1			1
70	Stylish	BP			1	1
71	Trendy	BP			1	1
72	**Trustworthy**	**BP**	**3**	**3**	**1**	**7**
73	Upstanding	BP	1			1
74	Young	BP	1		4	5

Company Rationals

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
75	**A leader**	**C**	**8**	**6**	**2**	**16**
76	A leader in technology	C			1	1
77	Able to maintain their systems	C		1		1
78	Able to supply spare parts	C		1		1
79	American	C	2		1	3
80	Attractive designs	C	1			1
81	Big in technical applications	C	1			1
82	Can build up in small blocks	C	1			1
83	Can communicate with non-IT people	C	1			1
84	Compatible with existing systems	C	1	1	1	3
85	Compatible with industry standards	C			1	1
86	Compatible with other suppliers	C			1	1
87	Compatible with other systems	C	1	1	2	4
88	Compatible with PCs	C		1		1
89	Creative company	C			1	1
90	Customer oriented	C	1			1
91	Do their own servicing	C	1	1		2
92	Easier to use	C	4	1		5
93	Easy to train users	C	1	1		2
94	Expensive	C	4	1		5
95	Experienced technicians	C		1		1
96	Fading	C	1	2		3
97	Faster machines	C	1	1	2	4
98	Faster systems	C	1		1	2
99	Financially strong	C		2	1	3
100	Flexible security systems	C	1			1
101	Going to stay in business	C		1		1
102	Gone to seed	C		1		1
103	Good advertising	C			1	1
104	Good back-up options	C		1		1
105	Good client relationships	C		1		1
106	Good data security	C			1	1
107	Good engineering support	C		2		2
108	Good for client servers	C		1		1
109	Good for communications	C		1		1
110	Good for graphics	C		1		1
111	Good for large servers	C			1	1
112	Good for multimedia	C			1	1
113	Good for networks	C		2		2
114	Good for workstations	C		1		1
115	Good marketing	C			1	1
116	**Good reputation**	**C**	**2**	**4**	**1**	**7**
117	**Good service available**	**C**	**5**		**1**	**6**
118	Good service record	C		3		3
119	Good value for money	C			1	1
120	Has beens	C	1			1

121	Has god servicing options	C		1		1
122	Has good customer care programme	C	1			1
123	Has good customer relationship	C	1			1
124	Has good guarantee	C	1			1
125	Has good range of third party support	C		1		1
126	Has good research and development	C		1		1
127	Has good servicing	C		1		1
128	Has good third party support	C	1			1
129	Has larger systems	C	1			1
130	Has local service	C	1			1
131	Has local supplier	C	1			1
132	Has pushy reps	C	1			1
133	Has wide range of products	C		1		1
134	Haughty	C	1			1
135	High quality products	C		1		1
136	Household name	C		1		1
137	Integrates with existing systems	C	1			1
138	Interloper	C			1	1
139	Is compatible with other products	C		1		1
140	Know where they are going	C		1		1
141	Large capacity machines	C	1		1	2
142	Large company	C		2	1	3
143	Large production ability	C		1		1
144	Leader in open systems	C			1	1
145	Leading edge company	C		2	2	4
146	Likely to be here in the future	C		1		1
147	Listens to users	C		1		1
148	Local service available	C			1	1
149	Low cost	C	1			1
150	Make good workstations	C		1		1
151	Make large systems	C			1	1
152	Makes faster machines	C		1		1
153	**Makes good mainframes**	**C**	**4**	**2**	**3**	**9**
154	Makes good minis	C	1			1
155	Makes good peripherals	C			1	1
156	**Makes good printers**	**C**	**4**	**1**	**3**	**8**
157	**Makes good workstations**	**C**	**1**	**4**	**1**	**6**
158	Makes high performance machines	C		1		1
159	Meets industry standards	C		1		1
160	More responsive for the end user	C		1		1
161	No middle men	C			1	1
162	Offers good advice	C	1			1
163	Offers wide range of systems	C		1		1
164	Old fashioned	C			2	2
165	Organised	C			1	1
166	Over the hill	C	1			1
167	Pioneers	C			1	1
168	Provide good WAN systems	C	1			1
169	Provides ability to expand	C			1	1
170	Provides faster machines	C			1	1

imp-ro prompting

171	Provides good security	C		1		1
172	Provides good software development environment	C		1		1
173	Provides good technical support	C		1	1	2
174	Provides interconnectivity	C	1	1		2
175	**Provides interoperability**	**C**		**8**	**1**	**9**
176	Provides migration path	C		1		1
177	Provides modular solutions	C		1		1
178	Provides more powerful machines	C	1			1
179	Provides networking	C		1		1
180	Provides open systems	C		1		1
181	Provides plug and play	C			1	1
182	Provides post-sale support	C	1			1
183	**Provides scalability**	**C**	**2**	**5**	**2**	**9**
184	Quality company	C	3	1		4
185	Quality products	C	2	2	1	5
186	Responds to users	C		1		1
187	Responsive	C			2	2
188	Responsive systems	C	1			1
189	Responsive to customers	C		1		1
190	Responsive to end users	C	1			1
191	Runs open software	C		1		1
192	Secure systems	C	1			1
193	Set in the past	C	1			1
194	Sets industry standards	C	2	1		3
195	Smaller businesses	C		1		1
196	Strong technology	C		1		1
197	Supports confidentiality	C	1			1
198	Supports existing databases	C		1		1
199	Supports large databases	C			1	1
200	Supports open systems	C	1			1
201	Systems are responsive to users	C			1	1
202	Technically strong	C			1	1
203	Traditional	C			1	1
204	Trying to catch up	C	1			1
205	Universal	C		1		1
206	Upgradeable	C	2	1		3
207	**User friendly**	**C**	**3**	**1**	**5**	**9**
208	**Value for money**	**C**	**3**		**3**	**6**
209	Well known	C		1		1
210	Wide range of platforms	C		1		1

Machine Rational Attributes

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
211	Able to control end users	M		1		1
212	Communicates with other systems	M	1			1
213	Easy for end users	M		1		1
214	Easy to use	M		1		1
215	Faster arithmetic	M			1	1
216	Faster processing	M	1		1	2
217	Gives users good turnaround	M			1	1
218	Gŏd environment for software development	M	1			1
219	Good performance	M		1		1
220	Good remote access	M	1			1
221	Good response times to users	M	1			1
222	Good security	M			1	1
223	Good system tools	M			1	1
224	Has good batch systems	M	1			1
225	Has multi-layered security	M		1		1
226	Less down time	M	1	1		2
227	Long time between down times	M		1	1	2
228	Provides audit trails	M	1			1
229	Runs our applications	M	1			1

& Usage

User Stereotypes

c 10

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
230	**For accounting applications**	**US**	**3**	**1**	**2**	**6**
231	For administrators	US			1	1
232	For advertising agencies	US		2	1	3
233	For banking	US		1	1	2
234	**For boffins**	**US**	**2**	**3**	**1**	**6**
235	For CAD/CAM	US		2	2	4
236	For commercial applications	US		2	1	3
237	**For computer experts**	**US**	**5**	**3**	**1**	**9**
238	For designers	US		1		1
239	For economists	US		1		1
240	For end users	US	1			1
241	**For engineering applications**	**US**	**3**	**2**	**1**	**6**
242	For financial people	US	1			1
243	For graphical applications	US		1	2	3
244	For home based workers	US			1	1
245	For IT people	US	1			1
246	For laboratory applications	US			1	1
247	For large applications	US	1			1
248	For large companies	US		1		1
249	For large databases	US	1			1
250	For large production systems	US			1	1
251	For large volume applications	US	3	1	1	5
252	For larger applications	US	1			1
253	**For managers**	**US**	**3**	**1**	**2**	**6**
254	For medical applications	US	1			1
255	For niche markets	US		1		1
256	For people who don't know about computers	US	2	1	1	4
257	For people who need reliability	US		1		1
258	For power applications	US		2		2
259	For power users	US	2			2
260	For powerful calculations	US		1		1
261	For professionals	US			1	1
262	**For scientific applications**	**US**	**10**	**9**	**7**	**26**
263	**For specialist applications**	**US**	**7**		**2**	**9**
264	For technicians	US		1		1
265	For universities	US	1	1		2
266	Mainly for end-users	US		1		1

Computers Mentioned

Computer	IT Managers	Prof Users	CEOs
310	1		
Amiga		1	
AP4	1		
Apple	5	4	3
AST	1		
Bull	2	1	
Burrows	1		
Compaq	6	3	12
Cray	1		
Dell	2	1	3
DEC	3	1	1
DEC MicroVAX	1	1	
DEC Mini			1
DEC VAX	3	1	1
Digital	9	6	12
Digital MicroVAX 3100 with VMS 6.1	1		
Digital VAX VMS	1		
Elonex			1
Epson	1		
Hitachi			1
HP	20	12	17
IBM	15	11	12
IBM 3090	1		
IBM 34/36			1
IBM 36		1	1
IBM 80			1
IBM 952	1		
IBM AS400	9	1	8
IBM RS6000	3	1	
MT	1		
NCR	2		
NEC	1		
Nixdorf			1
Nokia			1
Olivetti			1
Peacock			2
Philips			1
PowerPC		2	
Seimens		1	1
SGI	10	3	4
SUN	21	7	7
SUN Sparc station	2	1	
Tandon			1
Toshiba	1	1	2
Ultimate 1420			1

18, 10, 16

Operating Systems

Operating Systems	IT Managers	Prof Users	CEOs
AIX	1	1	
Apple OS	3	3	1
DOS	10	5	9
Gateway 2000		1	
IRO 33 (Nixdorf)			1
Novel	11	4	4
OS 2	3	1	
Solaris	1		
UNIX	19	8	9
VMS	4	1	2
VODIS			1
Voice 2			1
Windows	11	7	14
Windows NT	5		

Brand Personalities

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
1	Absent-minded	BP	*			*
2	Active	BP			*	*
3	Adaptable	BP		*		*
4	Adventurous	BP		**		*
5	Aggressive	BP	***	***	*	***
6	Ambituous	BP	*		*	*
7	Amenable	BP		*		*
8	Appraochable	BP			*	*
9	Arrogant	BP	*	**	*	**
10	Attractive	BP	*			*
11	Audacious	BP		*		*
12	Average	BP	*			*
13	Bold	BP	*			*
14	Boring	BP	*			*
15	Casual	BP	**			*
16	Challenging	BP	*	*	*	*
17	Cold	BP	**	***	*	***
18	Communicative	BP		*		*
19	Competent	BP	*			*
20	Confident	BP	**	**	*	**
21	Confused	BP		*		*
22	Conservative	BP	***	***	***	***
23	Creative	BP	*		*	*
24	Dazed	BP		*		*
25	Demanding	BP	*			*
26	Dependable	BP		*		*
27	Dignified	BP			*	*
28	Domineering	BP		*		*
29	Dynamic	BP	***	***	**	***
30	Elegant	BP	*			*
31	Entrepenurial	BP	*			*
32	Fashionable	BP	*		*	*
33	Female	BP		*		*
34	Feminine	BP	*		*	*
35	Flexible	BP		**		*
36	Flirtatious	BP	*			*
37	Friendly	BP	**	**	**	***
38	Functional	BP		*		*
39	Go getter	BP		*		*
40	Honest	BP			*	*
41	Humble	BP	*			*
42	Hungry	BP		*		*
43	Informal	BP	*			*
44	Innovative	BP	***	***	***	***
45	Intellectual	BP		*		*
46	Light hearted	BP	*			*

47	Middle-aged	BP		*		*
48	Modern	BP	***	*	**	***
49	Mundane	BP		*		*
50	Older	BP		**	**	**
51	Outgoing	BP		*		*
52	Professional	BP	***	***	**	***
53	Progressive	BP	*			*
54	Quiet	BP	*			*
55	Relaxed	BP	*		*	*
56	Reliable	BP	***	***	***	***
57	Respectable	BP	*			*
58	Responsible	BP			*	*
59	Robust	BP	*			*
60	Safe	BP	*			*
61	Sexless	BP			*	*
62	Slim	BP			*	*
63	Slow	BP	*	**	**	**
64	Snobbish	BP			*	*
65	Solid	BP	*	*		*
66	Sophisticated	BP		*	*	*
67	Sporty	BP	**	*		**
68	Stable	BP			*	*
69	Straight	BP	*			*
70	Stylish	BP			*	*
71	Trendy	BP			*	*
72	Trustworthy	BP	**	**	*	**
73	Upstanding	BP	*			*
74	Young	BP	*		***	**

Company Rationals

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
75	A leader	C	***	***	**	***
76	A leader in technology	C			*	*
77	Able to maintain their systems	C		*		*
78	Able to supply spare parts	C		*		*
79	American	C	**		*	*
80	Attractive designs	C	*			*
81	Big in technical applications	C	*			*
82	Can build up in small blocks	C	*			*
83	Can communicate with non-IT people	C	*			*
84	Compatible with existing systems	C	*	*	*	*
85	Compatible with industry standards	C			*	*
86	Compatible with other suppliers	C			*	*
87	Compatible with other systems	C	*	*	**	**
88	Compatible with PCs	C		*		*
89	Creative company	C			*	*
90	Customer oriented	C	*			*
91	Do their own servicing	C	*	*		*
92	Easier to use	C	***	*		**
93	Easy to train users	C	*	*		*
94	Expensive	C	***	*		**
95	Experienced technicians	C		*		*
96	Fading	C	*	**		*
97	Faster machines	C	*	*	**	**
98	Faster systems	C	*		*	*
99	Financially strong	C		**	*	*
100	Flexible security systems	C	*			*
101	Going to stay in business	C		*		*
102	Gone to seed	C		*		*
103	Good advertising	C			*	*
104	Good back-up options	C		*		*
105	Good client relationships	C		*		*
106	Good data security	C			*	*
107	Good engineering support	C		**		*
108	Good for client servers	C		*		*
109	Good for communications	C		*		*
110	Good for graphics	C		*		*
111	Good for large servers	C			*	*
112	Good for multimedia	C			*	*
113	Good for networks	C		**		*
114	Good for workstations	C		*		*
115	Good marketing	C			*	*
116	Good reputation	C	**	***	*	**
117	Good service available	C	***		*	**
118	Good service record	C		**		*
119	Good value for money	C			*	*
120	Has beens	C	*			*

121	Has god servicing options	C		*		*
122	Has good customer care programme	C	*			*
123	Has good custromer relationship	C	*			*
124	Has good guarentee	C	*			*
125	Has good range of third party support	C		*		*
126	Has good research and development	C		*		*
127	Has good servicing	C		*		*
128	Has good third party support	C	*			*
129	Has larger systems	C	*			*
130	Has local service	C	*			*
131	Has local supplier	C	*			*
132	Has pushy reps	C	*			*
133	Has wide range of products	C		*		*
134	Haughty	C	*			*
135	High quality products	C		*		*
136	Household name	C		*		*
137	Integrates with existing systems	C	*			*
138	Interloper	C			*	*
139	Is compatible with other products	C		*		*
140	Know where they are going	C		*		*
141	Large capicity machines	C	*		*	*
142	Large company	C		**	*	*
143	Large production ability	C		*		*
144	Leader in open systems	C			*	*
145	Leading edge company	C		**	**	**
146	Likely to be here in the future	C		*		*
147	Listens to users	C		*		*
148	Local service available	C			*	*
149	Low cost	C	*			*
150	Make good workstations	C		*		*
151	Make large systems	C			*	*
152	Makes faster machines	C		*		*
153	Makes good mainframes	C	***	**	**	***
154	Makes good minis	C	*			*
155	Makes good peripherals	C			*	*
156	Makes good printers	C	***	*	**	***
157	Makes good workstations	C	*	***	*	**
158	Makes high performance machines	C		*		*
159	Meets industry standards	C		*		*
160	More responsive for the end user	C		*		*
161	No middle men	C			*	*
162	Offers good advice	C	*			*
163	Offers wide range of systems	C		*		*
164	Old fashioned	C			**	*
165	Organised	C			*	*
166	Over the hill	C	*			*
167	Pioneers	C			*	*
168	Provide good WAN systems	C	*			*
169	Provides ability to exapnd	C			*	*
170	Provides faster machines	C			*	*

171	Provides good security	C		*		*
172	Provides good software development environment	C		*		*
173	Provides good technical support	C		*	*	*
174	Provides interconnectivity	C	*	*		*
175	Provides interoperability	C		***	*	***
176	Provides migration path	C		*		*
177	Provides modular solutions	C		*		*
178	Provides more powerful machines	C	*			*
179	Provides networking	C		*		*
180	Provides open systems	C		*		*
181	Provides plug and play	C			*	*
182	Provides post-sale support	C	*			*
183	Provides scalability	C	**	***	**	***
184	Quality company	C	**	*		**
185	Quality products	C	**	**	*	**
186	Responds to users	C		*		*
187	Responsive	C			**	*
188	Responsive systems	C	*			*
189	Responsive to customers	C		*		*
190	Responsive to end users	C	*			*
191	Runs open software	C		*		*
192	Secure systems	C	*			*
193	Set in the past	C	*			*
194	Sets industry standards	C	**	*		*
195	Smaller businesses	C		*		*
196	Strong technology	C		*		*
197	Supports confidentiality	C	*			*
198	Supports existing databases	C		*		*
199	Supports large databases	C			*	*
200	Supports open systems	C	*			*
201	Systems are responsive to users	C			*	*
202	Technically strong	C			*	*
203	Traditional	C			*	*
204	Trying to catch up	C	*			*
205	Universal	C		*		*
206	Upgradeable	C	**	*		*
207	User firendly	C	**	*	***	***
208	Value for money	C	**		**	**
209	Well known	C		*		*
210	Wide range of platforms	C		*		*

Machine Rational Attributes

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
211	Able to control end users	M		*		*
212	Commicates with other systems	M	*			*
213	Easy for end users	M		*		*
214	Easy to use	M		*		*
215	Faster arithmetic	M			*	*
216	Faster processing	M	*		*	*
217	Gives users good turnround	M			*	*
218	God environemt for software development	M	*			*
219	Good performance	M		*		*
220	Good remote access	M	*			*
221	Good response times to users	M	*			*
222	Good security	M			*	*
223	Good system tools	M			*	*
224	Has good batch systems	M	*			*
225	Has multi-layered security	M		*		*
226	Less down time	M	*	*		*
227	Long time between down times	M		*	*	*
228	Provides audit trails	M	*			*
229	Runs our applications	M	*			*

User Stereotypes

Rows	Title	Type	CEOs	IT Managers	Prof Users	Total
230	For accounting applications	US	**	*	**	**
231	For administrators	US			*	*
232	For advertising agencies	US		**	*	*
233	For banking	US		*	*	*
234	For boffins	US	**	**	*	**
235	For CAD/CAM	US		**	**	**
236	For commercial applications	US		**	*	*
237	For computer experts	US	***	**	*	***
238	For designers	US		*		*
239	For economists	US		*		*
240	For end users	US	*			*
241	For engineering applications	US	**	**	*	**
242	For financial people	US	*			*
243	For graphical applications	US		*	**	*
244	For home based workers	US			*	*
245	For IT people	US	*			*
246	For laboratory applications	US			*	*
247	For large applications	US	*			*
248	For large companies	US		*		*
249	For large databses	US	*			*
250	For large production systems	US			*	*
251	For large volume applications	US	**	*	*	**
252	For larger applications	US	*			*
253	For managers	US	**	*	**	**
254	For medical applications	US	*			*
255	For niche markets	US		*		*
256	For people who dont know about computers	US	**	*	*	**
257	For people who need reliabilty	US		*		*
258	For power applications	US		**		*
259	For power users	US	**			*
260	For powerful calculations	US		*		*
261	For professionals	US			*	*
262	For scientific applications	US	***	***	***	***
263	For specialist applications	US	***		**	***
264	For technicians	US		*		*
265	For universities	US	*	*		*
266	Mainly for end-users	US		*		*

General Observations

Very few people go beyond brand names. Very, very few talk about operating systems. Needs do not appear to be very 'technical'. The end users and professional users tended to be the least well informed. CEOs had a good knowledge of their own systems but were less aware of other systems.

Openness

For most people openness simply means "everything can talk to everything". For some people it means networks. For a few people openness is synonymous with UNIX.

Mainframes

Many of the interviewees had some form of mainframe (but I suspect that some of these were actually minis). Sign of hardware convergence "we either use the mainframe or on of the Macs" IT Manager.

Speed and Power

What these terms mean is defined by what the people are using the machine for. For people with batch systems it means finishing overnight. For others it means answering database enquires within a set time, for others it means processing ledgers or payroll on time, for others it was screen refresh rates. Speed was always referred to as outcomes not inputs (i.e. response time not MIPS).

Most people realise that they can configure speed and power from most of the manufacturers.

Reliability

No longer a criteria as its indispensable

Middleware and Layered Software

Many IT Managers had not heard of them.

Digital

The terms DEC and Digital seem interchangeable. Some IT managers had no awareness of Digital (other than the name). Several people mentioned financial trouble (and some said it was past). "I used to know DEC but I just don't what they are about anymore"

Market Alliances: Five Fronts

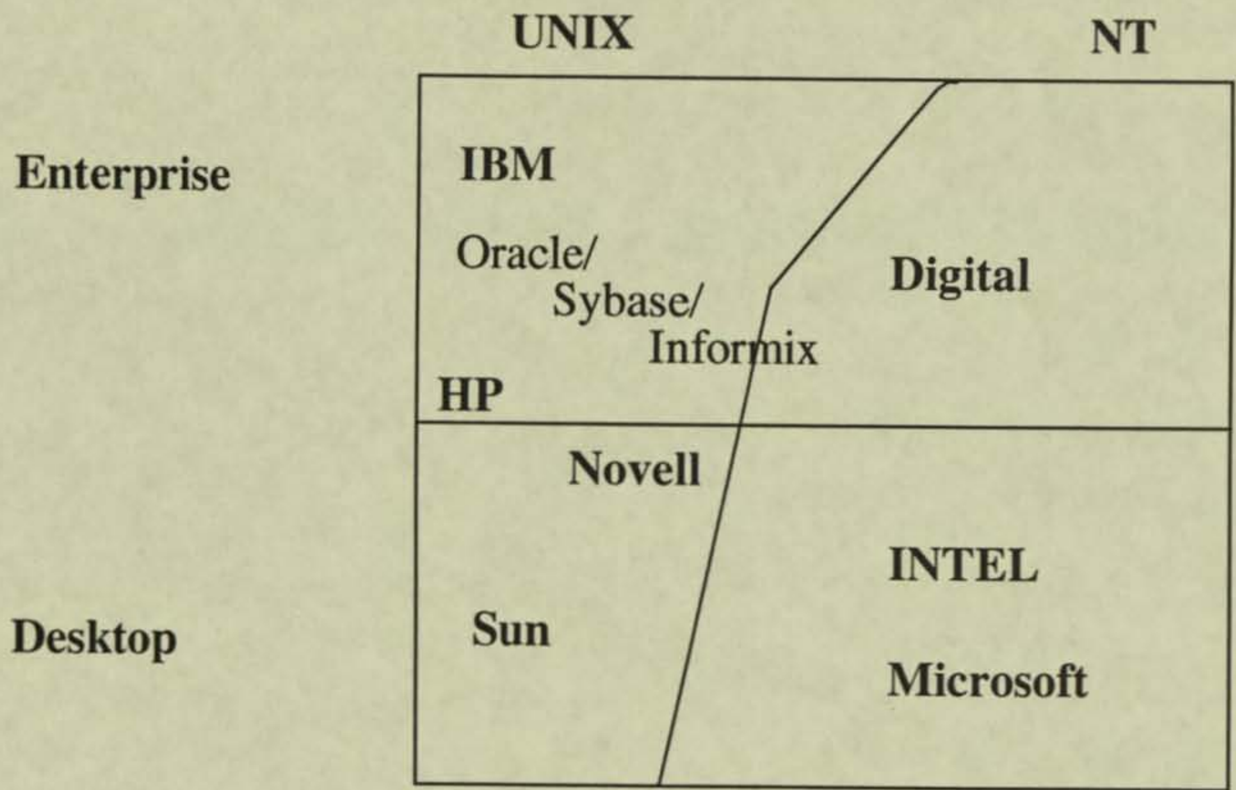
	Volume	Margin
Objects, Middleware	MS, Digital	IBM, HP, Apple Taligent
Database	MS SQLserver	Oracle, Sybase, Informix
Operating Systems	WindowsNT: MS, Digital	UNIX: IBM, HP, Sun
Chip Architecture: Today	CISC: INTEL IBM, DEC, HP	RISC: IBM, HP, Sun, Digital
Chip Architecture: Future	INTEL& HP	IBM, Apple, Sun, Digital

Commodity	**High Margin**
- 1000s of players	- Scale & Scope
- Short cycle	- Longer cycle
- Indir. channels	- Direct channels

UNIX/NT Landscape Today

	UNIX	NT
Enterprise	IBM Oracle/ Sybase/ Informix HP	Digital
Desktop	Novell Sun	INTEL Microsoft

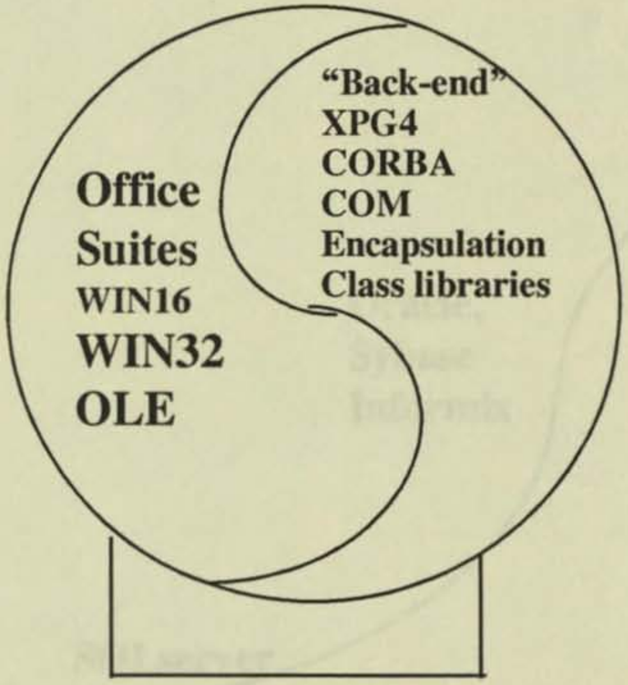
UNIX/NT Landscape Tomorrow



Software Vision for Digital

"Digital provides the Enterprise Back-end for desktop office suites."

Individual Desktop

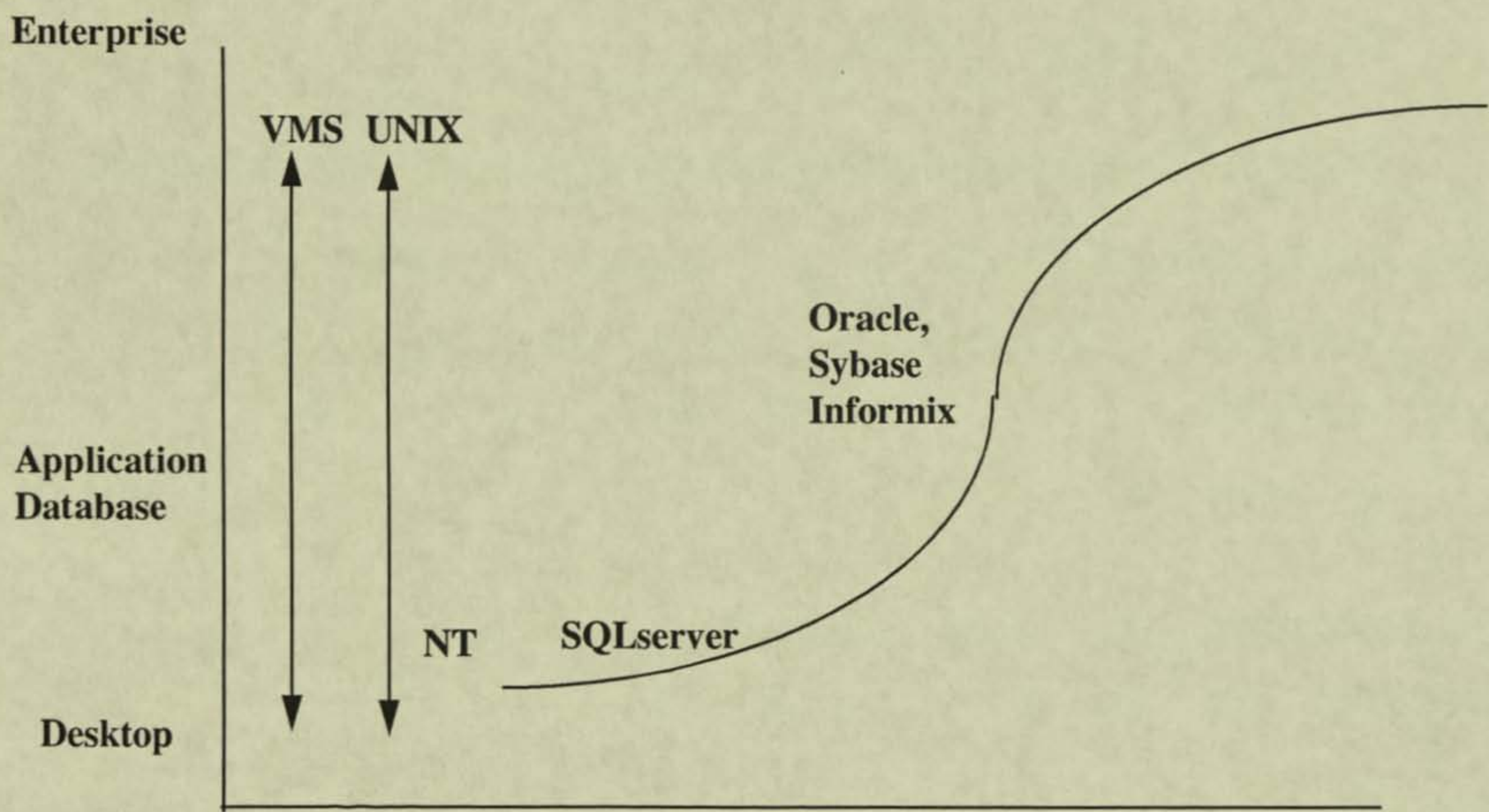


Enterprise Mission Critical

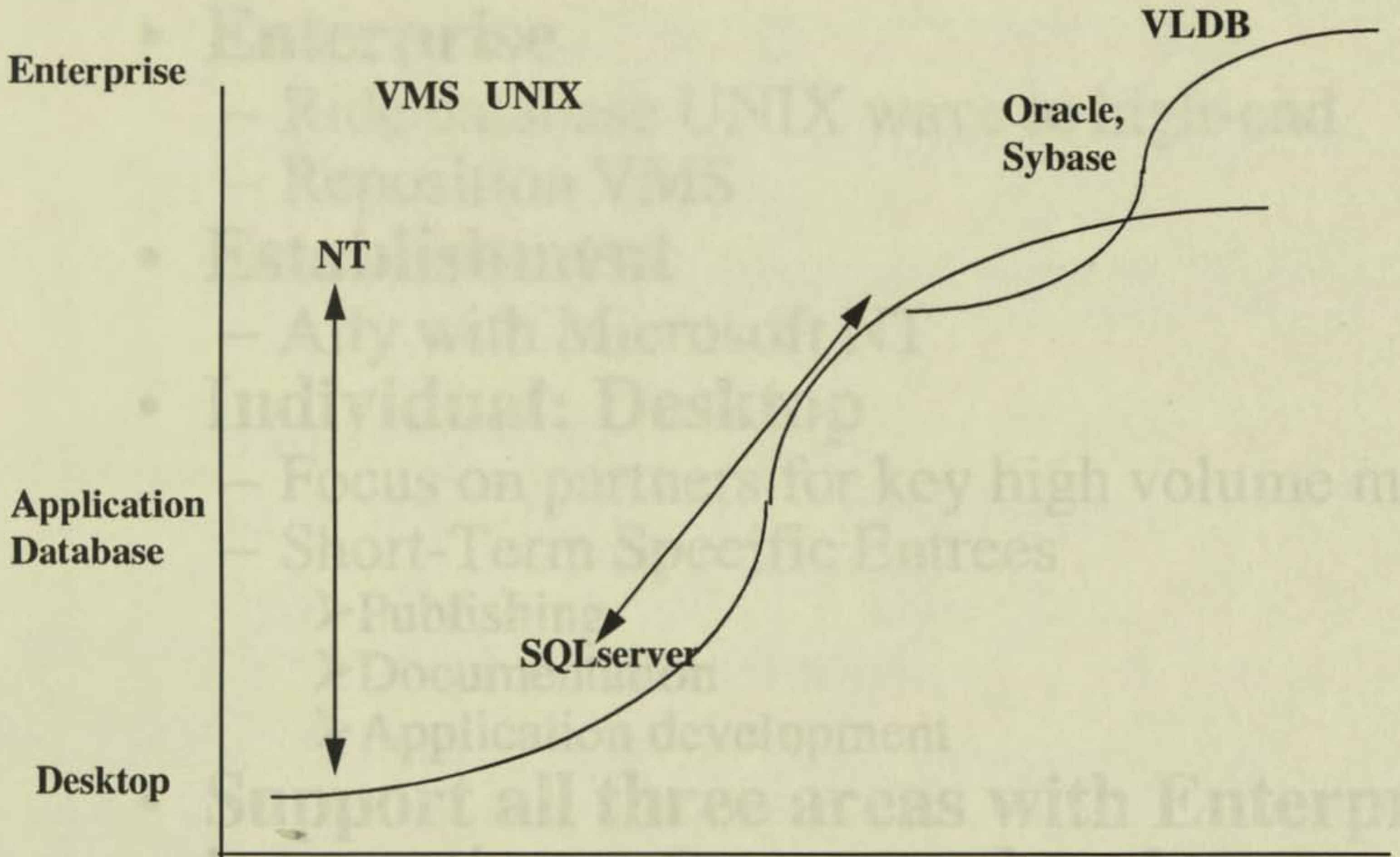
- Servers
- Networks
- Software
- Support

Individual in the Enterprise

Database S-Curves: Today



Database S-Curves: Tomorrow



Broad Strategies

- **Enterprise**
  - Ride database UNIX wave to high-end
  - Reposition VMS
- **Establishment**
  - Ally with Microsoft NT
- **Individual: Desktop**
  - Focus on partners for key high volume markets
  - Short-Term Specific Entrees
    - ➢Publishing
    - ➢Documentation
    - ➢Application development
- **Support all three areas with Enterprise integration software and tools**

Digital-Microsoft Strategic Goals

- **Windows NT in the Enterprise**
  - Strategy: Drive Digital's systems as the NT platform of choice
  - Add Microsoft's brand equity to Digital's, co-branding through joint:
- **Alpha/NT in Volume Desktop Markets**
  - Strategy: Target key markets to drive volume for Alpha/NT desktops
    - ➢Design automation
    - ➢Financial markets
    - ➢Desktop publishing.

PROJECT: CSD 'IT BUYERS' SEGMENTATION
RESP: E. Thomas, P. March

Background and purpose

One of the Business Strategy Group's (BSG) roles is to identify the market segments that will drive the future business of Digital. Segmentation based on an analysis of customer needs, attitudes, preferences and an understanding of buying behaviours enables focused product, business and market strategies to be pursued. The marketing objectives of this project are as follows:

- Identify prime target segments of current and potential customers for CSD's offerings;
- Gauge the relative size ($ value) of these segments, and the growth;
- Establish how Digital's current positioning and offerings could be optimised, and the potential impact of this on Digital's market share; simulate the impact of possible competitive moves;
- Prospectively identify the benefits or messages regarding the products which would offer the maximum leverage for converting potential customers into real Digital customers;
- Assist in the optimisation of a communications strategy - which messages will have greatest receptivity for these target segments;
- Contribute to the definition of an optimal channels strategy for reaching these customers;
- Indicate possible emerging product areas with potential for future development.

Research objectives

The above translates into the following research objectives:

- Identify descriptive segments of IT end-user and intermediary (VARs/ISV's) customers with similar IT needs and expectations, within defined computing areas. Quantify and qualify the segments in such a way that they can be matched with IT/market statistics for sizing and projected growth evaluations, and be reached for marketing operations.
  NB: These segments and product areas mayor may not fully map to Digital CSD products and services. The IT world is being viewed from the customer perspective, not necessarily ours.
- Within product/computing areas identify core target segments of current and "marginal" customers (i.e. those we have a real chance of convincing) for Digital products and services, based upon their objective and subjective perceptions of Digital and competitors' product lines, services, corporate image, etc. Provide statistical tagging to permit sizing and subsequent "findability".
- Identify those product/service benefits with respect to model lines with the greatest potential to convert Digital "marginals" into actual customers, with due regard to maintaining those criteria necessary to retain the current franchise.
- Build choice models of the product areas to simulate market share impact on Digital/competitors of changes in customers' perceptions of our products ("what-if" simulations), and the effect on Digital's market share of possible competitive moves.
- Evaluate "new ideas" (product concepts, channel strategies, advertising, etc.) on the models.
- Integrate the data and models within the appropriate PM&D groups and segments as an ongoing strategy development tool.

NB: The research is not targetted to do the following:
- Identifying the cost to Digital of the investments required to succeed in the target segments
- Identifying detailed technical characteristics; however it will suggest underlying customer needs
- Specifically spelling out new product descriptions, but will point to so far unanswered requirements
- Providing a target list of named customers or indirect channel partners for sales purposes.

Method

- Stage 1: Qualitative face-to-face interviews with IT buyers (approximately 20 per country) to generate a complete set of rational and emotional attributes relating to product families, associated services, vendor image, channels. Assessment of perceptions of "computer usage" or "product" areas.
- Stage 2: Personal fully structured interviews with target group respondents (65 per country) to quantitatively validate attribute sets which fully discriminate between product lines and vendors in each product area. Statistical reduction down to those attributes offering maximum discrimination between product lines/vendors, and minimum redundancy between each other.
- Stage 3: Main quantitative survey - 350 computer-aided personal interviews per country among representative groups of target customers, both Digital and non-Digital customers, covering each of the defined product areas. Rating of rational and emotional attributes covering product-specific aspects, channels and associated services. Rating of "ideal" products and vendors, and buying intentions. IT technical buyers will be asked to rate system families within product areas, and their perceptions of vendors, channels and services. Non-technical buyers will be asked to rate associated services, channels and vendor perceptions.
  Analyses: Needs-based segmentation of IT buyers within each product area. Development of 12 quantitative choice models relating customer perceptions of the IT vendors to customer preferences for them, and this within defined computing areas (7), for in the selected countries (4), and overall (1).
- Introduction of these on-line interactive models into the CSD Business Groups and BSG for use in product development, planning and marketing.

Coverage

- USA, UK, France and Germany
- Target group buyers to represent all those involved in purchase decisions - IT technical people, professional end-users, senior/middle level non-IT specialists (CEO, FD, Dept. Manager).
- VARs/ISVs are to be handled in a separate study, planned (but not so far budgeted) to start after completion of this first "IT buyers" survey.
- The "product areas" and attribute sets will come out of the research. Possible groupings/attributes are attached to this document.
- Home market, government administrations and non-profit organisations excluded.

Deliverables

- 11 descriptions of "needs" based segments of IT buyers, for each country and for each product area (across all countries). Each description will include:
  - Extensive statistical qualification of the segment, $ sizing, and growth estimates;
  - The needs derived from customer data based on their measured "ideals" and "importances".
- 12 on-line interactive choice models for scenario evaluations for each country and for each product area (across all countries), and overall. The models:
  - Identify the product, service, corporate or emotional attributes with the highest potential to attract future customers to Digital;
  - Estimate potential market share increases derived from simulated improvements on those attributes;
  - Identify the prime "marginal" customer target groups in terms of relative size and characteristics.
- These market models enable us to identify which new customers we have a real chance of winning, size the potential and identify what they expect from Digital, as well as indicating how best to retain existing customers.

Method

- Stage 1: Qualitative face-to-face interviews with IT buyers (approximately 20 per country) to generate a complete set of rational and emotional attributes relating to product families, associated services, vendor image, channels. Assessment of perceptions of "computer usage" or "product" areas.
- Stage 2: Personal fully structured interviews with target group respondents (65 per country) to quantitatively validate attribute sets which fully discriminate between product lines and vendors in each product area. Statistical reduction down to those attributes offering maximum discrimination between product lines/vendors, and minimum redundancy between each other.
- Stage 3: Main quantitative survey - 350 computer-aided personal interviews per country among representative groups of target customers, both Digital and non-Digital customers, covering each of the defined product areas. Rating of rational and emotional attributes covering product-specific aspects, channels and associated services. Rating of "ideal" products and vendors, and buying intentions. IT technical buyers will be asked to rate system families within product areas, and their perceptions of vendors, channels and services. Non-technical buyers will be asked to rate associated services, channels and vendor perceptions.
  Analyses: Needs-based segmentation of IT buyers within each product area. Development of 12 quantitative choice models relating customer perceptions of the IT vendors to customer preferences for them, and this within defined computing areas (7), for in the selected countries (4), and overall (1).
- Introduction of these on-line interactive models into the CSD Business Groups and BSG for use in product development, planning and marketing.

Coverage

- USA, UK, France and Germany
- Target group buyers to represent all those involved in purchase decisions - IT technical people, professional end-users, senior/middle level non-IT specialists (CEO, FD, Dept. Manager).
- VARs/ISVs are to be handled in a separate study, planned (but not so far budgeted) to start after completion of this first "IT buyers" survey.
- The "product areas" and attribute sets will come out of the research. Possible groupings/attributes are attached to this document.
- Home market, government administrations and non-profit organisations excluded.

Deliverables

- 11 descriptions of "needs" based segments of IT buyers, for each country and for each product area (across all countries). Each description will include:
  - Extensive statistical qualification of the segment, $ sizing, and growth estimates;
  - The needs derived from customer data based on their measured "ideals" and "importances".
- 12 on-line interactive choice models for scenario evaluations for each country and for each product area (across all countries), and overall. The models:
  - Identify the product, service, corporate or emotional attributes with the highest potential to attract future customers to Digital;
  - Estimate potential market share increases derived from simulated improvements on those attributes;
  - Identify the prime "marginal" customer target groups in terms of relative size and characteristics.
- These market models enable us to identify which new customers we have a real chance of winning, size the potential and identify what they expect from Digital, as well as indicating how best to retain existing customers.

Timing and costs, research supplier

- Total costs amount to $650K. Opportunity to stop after Stage 2 ($160K) if intermediate findings were not thought to be promising.
- Final presentation is due 15 Sept. 95.
- Supplier is The Research Business, London.

Project integration within Digital

- The project has been presented to PM&D management, the BSG and then individually to senior nominees of the PM&D groups and segments before starting out.. These nominees have also been asked to contribute at certain stages during the research, when their input and critical review will be both valuable and indeed necessary (eg. for attribute selection). Two rounds of meetings of this kind are foreseen, before the final presentations.
- After the final presentations, on-line access to the models will be arranged and on-the-spot training in their usage and a proper manual provided to the PM&D groups/segments. Plus a hot-line as required.

* * * * * * *

Attachments:
1. Prospective attributes, "product areas", passive variables *(segmentn.xls)*
2. Model lines which may be included *(prodlist.xls)*

CSD "IT-buyers" segmentation

Project overview

prepared for

Mr Peter Conklin

Geneva, 22nd February 1995

Case study

Car-line Europe - BMW

- ➢Brands and attributes
- ➢Needs segmentation
- ➢Repositioning "hot buttons"
- ➢Target group definition

Brand and Attribute Lists

Brands	Attributes
Alfa Romeo	A Popular Car
Aston Martin	Approved by Experts
Audi	Attractively Styled
BMW	Better Cornering
Bentley/Rolls Royce	Better Crash Protection
Citroen	Better Workmanship
Daihatsu	Better for Rough Terrain
FSO	Better for the Environment
Ferrari	Businessmen
Fiat	Career Women
Ford	Clever Advertising
Honda	Conventional/Conservative
Hyundai	Cute
Isuzu	Dependable/Reliable
Jaguar/Daimler	Factory Workers
Lada	Families with Children
Lancia	Flamboyant/Showy
Land Rover/Range Rover	Flexible for Carrying People/Cargo
Lotus	For Outdoor Sports/Recreation
Mazda	Friendly
Mercedes	Good After Sales Service
Mitsubishi	Good Resale Value
Morgan	Good for Slippery Roads
Nissan	Has Many Dealers
Peugeot	Housewives
Porsche	International Reputation
Reliant	Luxurious Interior
Renault	Made in Britain
Rover	Manufacturer Subject to Strikes
SEAT	More Aerodynamic
Saab	More Expensive to Buy
Skoda	Quick Acceleration
Suzuki	Quieter Inside
Toyota	Roomy Interior
Vauxhall	Seats More People
Volkswagen	Sexy
Volvo	Sporty
Yugo	Technically More Sophisticated
Other Vehicles	Typically European
	Uses More Fuel

Mind Share Table

Original Share	
24.7	Ford
15.2	Vauxhall
11.8	Rover
5.7	Volkswagen
5.6	Nissan
5.3	Peugeot
3.4	Volvo
3.3	BMW
3.0	Fiat
2.9	Renault
2.5	Citroen
1.9	Mercedes
1.5	Other Vehicles
1.5	Audi
1.5	Toyota
1.4	Honda
1.3	Land Rover/Range Rover
1.2	Mazda
1.0	Jaguar/Daimler
.9	Saab
.5	Mitsubishi
.4	Porsche
.4	Daihatsu
.4	Bentley/Rolls Royce
.4	Lada
.3	Ferrari
.3	Alfa Romeo
.3	Aston Martin
.3	SEAT
.2	Suzuki
.2	FSO
.2	Skoda
.1	Morgan
.1	Lancia
.1	Lotus
.1	Yugo
.1	Isuzu
.0	Hyundai
.0	Reliant

Aggregate Importance Weights

Weight	Attribute
5.77	More Expensive to Buy
3.22	Families with Children
3.17	Businessmen
3.13	Flexible for Carrying People/Cargo
3.11	For Outdoor Sports/Recreation
3.10	Housewives
2.92	Flamboyant/Showy
2.91	Luxurious Interior
2.85	Factory Workers
2.81	Seats More People
2.70	Roomy Interior
2.69	Has Many Dealers
2.64	More Aerodynamic
2.60	Sporty
2.59	Uses More Fuel
2.57	Attractively Styled
2.55	Quieter Inside
2.53	Quick Acceleration
2.52	Career Women
2.44	A Popular Car
2.41	Conventional/Conservative
2.35	Technically More Sophisticated
2.31	Better Crash Protection
2.30	Friendly
2.30	Good Resale Value
2.26	Dependable/Reliable
2.22	Better for Rough Terrain
2.21	Better for the Environment
2.21	Sexy
2.18	Approved by Experts
2.17	Better Cornering
2.14	Better Workmanship
2.11	Good for Slippery Roads
1.95	Made in Britain
1.93	Good After Sales Service
1.88	International Reputation
1.86	Cute
1.68	Clever Advertising
1.54	Typically European
0.94	Manufacturer Subject to Strikes

Carline UK

Motivation cluster analysis

Summary

While life style analysis segments the population on the basis of demographics and attitudinal measures, motivational cluster analysis segments the population on the basis of the needs and desires which motivate their purchase intention.

The motivational cluster analysis was carried out on the UK Carline Model sample. Six clusters were identified, accounting for 79% of the sample.

1. Economical housewives car (19%)
2. Luxury and styling (13%)
3. Sporty (16%)
4. Basic down-market (9%)
5. Family car (9%)
6. Off road (13%)

Method

Respondents were clustered on the basis of their patterns of ideal car ratings and importance weights. Therefore, people in a given cluster have the same needs, placing importance on the same aspects of car image.

Cluster 1 - Economical, housewives car.

Cluster 1 accounted for 19% of the sample. This cluster consists of those looking for a small reliable car, probably a second car. This was one of the groups most likely to have a second car and the group most likely to have a third car. This second car is likely to be an Austin, while the main car owned is likely to be a Ford, Vauxhall, or Nissan.

These respondents are looking for a less expensive car, suitable for housewives. Both low fuel consumption and environment friendliness are important to this group. This group would also prefer a car made in Britain. While a car should ideally have better crash protection, this factor is not actually important in brand choice.

Ideals difference from total		**Importance weights difference from total**	
Housewives	12	Has many dealers	1.95
Better crash protection	10	Fuel consumption	1.93
Better for the environment	9	Housewives	1.19
Made in Britain	8	Better for the environment	.95
		Made in Britain	.91
Uses more fuel	-19	Flexible for carrying goods/people	-1.24
Flamboyant / showy	-17	Better crash protection	-1.75
Sexy	-16	Good for slippery roads	-1.06
Expensive	-15	Attractively styled	-0.87

Cluster 1 - Economical, housewives car (cont.).

Respondents in this groups tended to be women aged between 30 and 59 , with a household income of £15,000 to £25,000, in social class A or B. The household tended to consist of either two or four people, suggesting couples with older children, who may have left home.

Age	Cluster 1	Total
Under 20	3%	8%
20-29 years	24%	32%
30-39 years	25%	20%
40-49 years	24%	20%
50-59 years	20%	11%
60 and over	5%	3%

H/H income	Cluster 1	Total
Under £10,000	13%	14%
£10,000 to £14,999	28%	26%
£15,000 to £24,999	45%	39%
£25,000 and over	14%	20%

No. in H/H	Cluster 1	Total
1	7%	11%
2	31%	29%
3	21%	24%
4	27%	24%
5+	14%	12%

SE Group	Cluster 1	Total
A/B	39%	32%
C/D/E	61%	68%

Sex	Cluster 1	Total
Male	64%	78%
Female	36%	22%

Line	Cluster 1	Total
Ford Fiesta	9.23	6.67
Vauxhall Nova	4.26	2.40
Nissan Micra	3.25	2.48
Peugeot 205	2.42	2.25
Renault 5	2.32	1.75
Rover Maestro	2.05	1.69
Rover Mini	1.96	0.70
Fiat Panda	1.69	0.95
Lada Riva	1.38	0.40
Citroen AX	0.87	0.65
Citroen 2CV	0.82	0.22
VW Jetta	0.63	0.37
Fiat 126	0.43	0.15

Cluster 2 - Luxury and styling.

Cluster 2 comprises 13% of the sample. This group want a prestige car. The styling of the car is important, as is comfort, with a luxurious interior and quiet interior being important motivators. The car should also handle well, both in acceleration and in cornering. Neither fuel consumption nor initial cost are very important.

Ideal difference from total

Luxurious interior	17
Aerodynamic	15
Technically more sophisticated	15
Businessmen	14
Quick acceleration	14
Attractively styled	14
Uses more fuel	-11
Cute	-11
Housewives	-10
Manufacturer subject to strikes	-9

Importance weight difference from total

Attractively styled	1.84
Luxurious interior	1.78
Quieter inside	1.71
Better cornering	1.41
Approved by experts	1.31
More expensive to buy	-2.58
Housewives	-1.76
Uses more fuel	-1.53
Better for rough terrain	-0.88

Cluster 2 - Luxury and styling (cont.)

The range of cars selected by this group are those normally thought of as businessmen's cars, which is suggested already by the high ideal on this attribute.

These respondents tend to be younger, well-off men aged between 20 and 39, earning over £25,000 and living alone or with one other. Interestingly, this group is not distinguished by social class.

Age	Cluster 2	Total
Under 20	8%	8%
20-29 years	35%	32%
30-39 years	26%	20%
40-49 years	20%	20%
50-59 years	9%	11%
60 and over	1%	3%

H/H income	Cluster 2	Total
Under £10,000	14%	14%
£10,000 to £14,999	20%	26%
£15,000 to £24,999	39%	39%
£25,000 and over	28%	20%

No. in H/H	Cluster 2	Total
1	16%	11%
2	33%	29%
3	19%	24%
4	21%	24%
5+	11%	12%

SE Group	Cluster 2	Total
A/B	33%	32%
C/D/E	67%	68%

Sex	Cluster 2	Total
Male	84%	78%
Female	16%	22%

Line	Cluster 2	Total
BMW 3 Series	3.04	1.69
Mercedes 190	2.58	0.79
Rover 800 Series	2.48	1.37
Renault 21	2.28	1.04
Citroen BX	1.71	1.25
BMW 5 series	1.64	0.51
Jaguar XJ6	1.38	0.41
Mercedes 200/300	1.09	0.39
Toyota Corolla	0.76	0.47
Honda Accord	0.72	0.33
Audi Quattro	0.68	0.26
Range Rover	0.55	0.25
Mercedes S Series	0.48	0.15

Cluster 3 - Sporty.

This group makes up 16% of the sample. They want a sports car, a car that is sexy, sporty and flamboyant. In terms of the car they intend to puchase next, this wish translates into a range of cars, from 2 seater sports models to hot hatchbacks such as the Volkswagen Golf.

Ideals difference from total		Importance weights difference from total	
Sexy	27	Sporty	3.62
Sporty	24	Sexy	3.12
Flamboyant / showy	23	Flamboyant / showy	1.80
Uses more fuel	16	Attractively styled	1.68
Quick acceleration	14	Better workmanship	1.46
Families with children	-18	Roomy interior	-1.41
Housewives	-12	Better crash protection	-1.16
Flexible for carrying people/luggage	-12	Better for rough terrain	-1.11
		Better for the environment	-0.96

Cluster 3 - Sporty (cont)

These are men aged under 29, with a household income of £25,000. However, as they tend to be living with 3 others, they may still be in their parents home. This group tend to be in social classes C, D or E. This group is also more likely than average to have two cars at the moment. They are more likely to have an Audi as a main car or a Volkswagen as a second car than the total sample.

Age	Cluster 3	Total
Under 20	12%	8%
20-29 years	42%	32%
30-39 years	23%	20%
40-49 years	14%	20%
50-59 years	7%	11%
60 and over	1%	3%

H/H income	Cluster 3	Total
Under £10,000	15%	14%
£10,000 to £14,999	27%	26%
£15,000 to £24,999	33%	39%
£25,000 and over	25%	20%

No. in H/H	Cluster 3	Total
1	11%	11%
2	30%	29%
3	20%	24%
4	26%	24%
5+	12%	12%

SE Group	Cluster 3	Total
A/B	25%	32%
C/D/E	75%	68%

Sex	Cluster 3	Total
Male	86%	78%
Female	14%	22%

Line	Cluster 3	Total
Ford Escort	10.85	8.35
Volkswagen Golf	4.09	2.68
BMW 3 Series	3.17	1.69
Volkswagen Polo	2.63	1.54
Rover 200 H/B	2.54	2.15
Jaguar XJS	1.08	0.30
Toyotal Celica	0.92	0.21
Porsche	0.66	0.18
Audi Quattro	0.55	0.26
BMW 7 series	0.54	0.24
VW Scirocco	0.51	0.15
Aston Martin	0.49	0.11
Ferrari	0.40	0.10
BMW 6 Series	0.31	0.10
Toyota MR2	0.31	0.07
Mazda RX-7	0.30	0.07
Morgan	0.26	0.07
Toyota Supra	0.15	0.05
Nissan 200SX	0.09	0.03
Renault GTA	0.06	0.03

BMW

Original Share = 3.31

Share Change	Gain	Loss	New Share	Growth	Adjustment	Attribute
0.32	0.34	0.02	3.63	10%	10	Better Crash Protection
0.29	0.30	0.01	3.60	9%	10	Dependable/Reliable
0.29	0.33	0.04	3.60	9%	10	Roomy Interior
0.28	0.30	0.02	3.59	8%	10	Approved by Experts
0.28	0.30	0.02	3.59	8%	10	Good for Slippery Roads
0.27	0.30	0.03	3.58	8%	10	Better Workmanship
0.27	0.29	0.02	3.58	8%	10	Good After Sales Service
0.26	0.29	0.03	3.57	8%	10	Attractively Styled
0.26	0.29	0.03	3.57	8%	10	Good Resale Value
0.25	0.29	0.04	3.56	8%	10	Families with Children
0.24	0.28	0.04	3.55	7%	10	Quieter Inside
0.23	0.27	0.04	3.54	7%	10	Flexible for Carrying People/Cargo
0.22	0.24	0.02	3.53	7%	10	Better Cornering
0.22	0.28	0.06	3.53	7%	10	Seats More People
0.21	0.27	0.06	3.52	6%	10	Businessmen
0.21	0.25	0.04	3.52	6%	10	For Outdoor Sports/Recreation
0.20	0.26	0.06	3.51	6%	10	Luxurious Interior
0.19	0.20	0.01	3.50	6%	10	Better for the Environment
0.19	0.21	0.02	3.50	6%	10	Clever Advertising
0.19	0.21	0.02	3.50	6%	10	International Reputation
0.18	0.22	0.04	3.49	5%	10	A Popular Car
0.18	0.20	0.02	3.49	5%	10	Career Women
0.17	0.21	0.04	3.48	5%	10	Friendly
0.17	0.22	0.05	3.48	5%	10	Has Many Dealers
0.17	0.22	0.05	3.48	5%	10	Technically More Sophisticated
0.16	0.19	0.03	3.47	5%	10	Better for Rough Terrain
0.16	0.21	0.05	3.47	5%	10	Quick Acceleration
0.15	0.17	0.02	3.46	5%	10	Made in Britain
0.13	0.17	0.04	3.44	4%	10	Conventional/Conservative
0.13	0.19	0.06	3.44	4%	10	More Aerodynamic
0.13	0.18	0.05	3.44	4%	10	Sexy
0.13	0.18	0.05	3.44	4%	10	Sporty
0.12	0.19	0.07	3.43	4%	10	Flamboyant/Showy
0.09	0.15	0.06	3.40	3%	10	Factory Workers
0.09	0.17	0.08	3.40	3%	10	Housewives
0.08	0.10	0.02	3.39	2%	10	Typically European
0.06	0.15	0.09	3.37	2%	-10	Uses More Fuel
0.02	0.06	0.04	3.33	1%	10	Manufacturer Subject to Strikes
0.01	0.08	0.07	3.32	.	10	Cute
.	0.15	0.15	3.31	.	-10	More Expensive to Buy
-0.01	0.12	0.13	3.30	.	10	More Expensive to Buy
-0.04	0.02	0.06	3.27	-1%	-10	Manufacturer Subject to Strikes
-0.04	0.07	0.11	3.27	-1%	10	Uses More Fuel

BMW

Original Share = 3.31

Share Change	Gain	Loss	New Share	Growth	Adjus tment	Attribute
-0.06	0.04	0.10	3.25	-2%	-10	Cute
-0.08	0.03	0.11	3.23	-2%	-10	Factory Workers
-0.09	0.05	0.14	3.22	-3%	-10	Housewives
-0.09	0.02	0.11	3.22	-3%	-10	Typically European
-0.15	0.06	0.21	3.16	-5%	-10	Sexy
-0.16	0.02	0.18	3.15	-5%	-10	Conventional/Conservative
-0.16	0.08	0.24	3.15	-5%	-10	Flamboyant/Showy
-0.16	0.01	0.17	3.15	-5%	-10	Made in Britain
-0.16	0.05	0.21	3.15	-5%	-10	Sporty
-0.19	.	0.19	3.12	-6%	-10	Better for the Environment
-0.20	0.04	0.24	3.11	-6%	-10	Quick Acceleration
-0.20	0.06	0.26	3.11	-6%	-10	Technically More Sophisticated
-0.21	0.01	0.22	3.10	-6%	-10	Better for Rough Terrain
-0.21	0.04	0.25	3.10	-6%	-10	More Aerodynamic
-0.22	0.01	0.23	3.09	-7%	-10	A Popular Car
-0.22	0.01	0.23	3.09	-7%	-10	Career Women
-0.22	.	0.22	3.09	-7%	-10	Clever Advertising
-0.22	0.01	0.23	3.09	-7%	-10	Friendly
-0.23	0.03	0.26	3.08	-7%	-10	Families with Children
-0.23	0.03	0.26	3.08	-7%	-10	For Outdoor Sports/Recreation
-0.23	0.01	0.24	3.08	-7%	-10	International Reputation
-0.24	0.01	0.25	3.07	-7%	-10	Has Many Dealers
-0.24	0.04	0.28	3.07	-7%	-10	Seats More People
-0.25	0.05	0.30	3.06	-8%	-10	Businessmen
-0.25	0.05	0.30	3.06	-8%	-10	Luxurious Interior
-0.27	0.01	0.28	3.04	-8%	-10	Better Cornering
-0.28	0.02	0.30	3.03	-8%	-10	Flexible for Carrying People/Cargo
-0.29	0.02	0.31	3.02	-9%	-10	Attractively Styled
-0.29	0.03	0.32	3.02	-9%	-10	Quieter Inside
-0.30	0.01	0.31	3.01	-9%	-10	Good for Slippery Roads
-0.31	0.01	0.32	3.00	-9%	-10	Approved by Experts
-0.31	0.02	0.33	3.00	-9%	-10	Roomy Interior
-0.32	0.01	0.33	2.99	-10%	-10	Good After Sales Service
-0.32	0.01	0.33	2.99	-10%	-10	Good Resale Value
-0.34	0.01	0.35	2.97	-10%	-10	Better Workmanship
-0.36	0.01	0.37	2.95	-11%	-10	Better Crash Protection
-0.37	.	0.37	2.94	-11%	-10	Dependable/Reliable

Carline UK - Attribute Intercorrelations (all brands)

1	A Popular Car																																							
2	0.11	Approved by Experts																																						
3	0.04	0.17	Attractively Styled																																					
4	0.07	0.22	0.12	Better Cornering																																				
5	0.06	0.21	0.18	0.20	Better Crash Protection																																			
6	0.07	0.22	0.20	0.12	0.31	Better Workmanship																																		
7	0.06	0.12	0.05	0.07	0.18	0.17	Better for Rough Terrain																																	
8	0.08	0.09	0.05	0.11	0.07	0.00	0.11	Better for the Environment																																
9	0.10	0.18	0.14	0.12	0.19	0.17	0.11	0.06	Businessmen																															
10	0.09	0.12	0.14	0.17	0.03	0.10	0.04	0.11	0.25	Career Women																														
11	0.20	0.08	0.15	0.09	0.08	0.06	0.08	0.06	0.08	0.12	Clever Advertising																													
12	0.06	0.07	-0.04	0.07	0.10	0.03	0.04	0.01	0.12	0.08	0.05	Conventional/Conservative																												
13	0.07	0.01	-0.01	0.05	-0.04	0.01	-0.02	0.08	-0.02	0.09	0.03	-0.03	Cute																											
14	0.15	0.15	0.19	0.13	0.22	0.25	0.09	0.08	0.14	0.06	0.13	0.10	-0.05	Dependable/Reliable																										
15	0.15	-0.07	-0.07	-0.01	-0.08	-0.09	0.00	0.11	-0.05	0.07	0.08	0.07	0.05	0.00	Factory Workers																									
16	0.14	0.09	0.07	0.07	0.19	0.05	0.11	0.09	0.18	0.12	0.07	0.16	-0.07	0.15	0.09	Families with Children																								
17	0.06	0.13	0.18	0.11	0.19	0.20	0.07	-0.05	0.25	0.15	0.04	0.08	0.09	0.08	-0.16	0.05	Flamboyant/Showy																							
18	0.13	0.16	0.10	0.09	0.20	0.14	0.20	0.08	0.18	0.05	0.15	0.14	-0.09	0.16	0.03	0.27	0.08	Flexible for Carrying People/Cargo																						
19	0.04	0.13	0.13	0.18	0.20	0.21	0.17	0.09	0.15	0.12	0.08	0.00	0.03	0.12	-0.01	0.08	0.10	0.14	For Outdoor Sports/Recreation																					
20	0.10	0.13	0.12	0.07	0.08	0.09	0.11	0.08	0.10	0.13	0.07	0.08	0.18	0.09	0.11	0.10	0.09	0.06	0.09	Friendly																				
21	0.12	0.24	0.11	0.14	0.23	0.23	0.09	0.03	0.19	0.06	0.06	0.04	0.03	0.24	0.02	0.09	0.10	0.11	0.13	0.13	Good After Sales Service																			
22	0.10	0.16	0.18	0.17	0.24	0.23	0.12	0.06	0.21	0.16	0.06	0.09	0.07	0.21	-0.06	0.08	0.19	0.08	0.12	0.19	0.22	Good Resale Value																		
23	0.05	0.17	0.13	0.18	0.21	0.20	0.15	0.09	0.13	0.09	0.03	0.06	0.05	0.16	-0.03	0.06	0.12	0.14	0.14	0.14	0.22	0.20	Good for Slippery Roads																	
24	0.24	0.04	0.01	0.07	0.02	-0.01	0.04	0.11	0.09	0.09	0.15	0.11	0.04	0.11	0.13	0.17	0.01	0.15	0.02	0.02	0.14	0.10	0.09	Has Many Dealers																
25	0.19	-0.05	-0.10	-0.04	-0.10	-0.08	-0.03	0.11	-0.09	0.04	0.08	0.09	0.14	0.06	0.28	0.12	-0.14	0.01	-0.06	0.10	0.00	-0.04	-0.03	0.22	Housewives															
26	0.14	0.16	0.15	0.10	0.15	0.23	0.08	-0.01	0.10	0.10	0.09	0.00	0.06	0.16	-0.06	0.07	0.15	0.03	0.15	0.07	0.17	0.13	0.04	0.04	-0.08	International Reputation														
27	0.00	0.17	0.24	0.16	0.23	0.20	0.09	0.06	0.28	0.14	0.10	0.09	0.02	0.11	-0.14	0.15	0.29	0.14	0.14	0.13	0.14	0.19	0.15	0.02	-0.13	0.14	Luxurious Interior													
28	0.14	0.06	0.03	0.06	0.08	0.10	0.09	-0.03	0.05	0.03	0.05	0.06	0.01	0.05	0.08	0.03	0.06	0.14	0.05	0.07	0.10	0.14	0.06	0.20	0.05	0.05	0.06	Made in Britain												
29	0.14	0.02	0.00	0.04	-0.03	-0.03	0.05	-0.02	0.06	0.05	0.16	0.10	0.06	-0.03	0.09	0.05	0.00	0.08	0.01	0.09	-0.01	0.02	0.03	0.16	0.11	0.00	0.00	0.22	Manufacturer Subject to Strikes											
30	0.03	0.10	0.20	0.15	0.19	0.16	0.04	0.02	0.21	0.15	0.06	0.02	0.00	0.07	-0.05	0.12	0.19	0.09	0.13	0.01	0.12	0.16	0.12	0.09	-0.08	0.09	0.20	-0.02	-0.01	More Aerodynamic										
31	0.02	0.20	0.15	0.17	0.22	0.20	0.13	-0.03	0.26	0.08	0.05	0.04	-0.03	0.06	-0.18	0.06	0.24	0.13	0.11	0.04	0.17	0.21	0.15	0.01	-0.18	0.14	0.27	-0.02	0.00	0.20	More Expensive to Buy									
32	0.07	0.14	0.23	0.19	0.20	0.19	0.07	0.00	0.21	0.09	0.11	0.03	-0.05	0.13	-0.09	0.09	0.22	0.00	0.14	0.04	0.15	0.18	0.12	0.03	-0.10	0.13	0.17	0.01	-0.04	0.25	0.24	Quick Acceleration								
33	0.07	0.18	0.21	0.14	0.23	0.19	0.09	0.07	0.17	0.14	0.10	0.10	-0.04	0.15	-0.02	0.14	0.19	0.18	0.09	0.12	0.19	0.22	0.21	0.08	-0.06	0.09	0.26	0.05	-0.02	0.19	0.18	0.19	Quieter Inside							
34	0.08	0.15	0.16	0.10	0.26	0.20	0.20	0.03	0.19	0.11	0.10	0.06	-0.08	0.15	-0.02	0.22	0.13	0.30	0.15	0.02	0.16	0.12	0.19	0.12	-0.13	0.14	0.17	0.10	0.01	0.12	0.17	0.12	0.20	Roomy Interior						
35	0.00	0.17	0.17	0.05	0.26	0.19	0.22	0.05	0.19	0.06	0.10	0.13	-0.09	0.16	-0.02	0.25	0.10	0.29	0.12	0.04	0.12	0.11	0.15	0.10	-0.09	0.06	0.16	0.12	0.05	0.10	0.12	0.08	0.19	0.31	Seats More People					
36	-0.05	0.10	0.17	0.10	0.14	0.10	0.05	0.00	0.17	0.19	0.02	0.07	0.18	0.06	-0.07	-0.01	0.34	0.00	0.12	0.13	0.11	0.18	0.14	-0.04	-0.11	0.08	0.21	-0.03	0.00	0.16	0.17	0.14	0.17	0.03	0.01	Sexy				
37	0.03	0.12	0.17	0.21	0.09	0.12	0.04	0.01	0.17	0.12	0.09	-0.02	0.11	0.07	-0.08	-0.01	0.25	-0.01	0.14	0.11	0.14	0.14	0.13	0.02	-0.04	0.13	0.20	0.00	0.00	0.22	0.20	0.22	0.12	0.03	0.01	0.26	Sporty			
38	0.00	0.22	0.20	0.21	0.19	0.20	0.15	0.03	0.26	0.17	0.09	0.08	0.00	0.09	-0.12	0.04	0.24	0.10	0.14	0.07	0.14	0.15	0.20	0.03	-0.16	0.17	0.25	-0.01	-0.02	0.22	0.26	0.20	0.28	0.15	0.17	0.21	0.19	Technically More Sophisticated		
39	0.07	-0.01	0.04	0.01	0.06	0.06	-0.02	0.07	0.03	0.03	0.13	0.04	0.02	0.11	0.09	0.03	0.01	0.02	0.01	-0.03	0.01	0.03	0.01	0.02	0.09	0.04	-0.03	-0.07	-0.01	0.05	-0.06	0.05	-0.05	0.03	0.03	0.03	-0.03	-0.03	Typically European	
40	-0.05	0.09	0.10	0.07	0.12	0.12	0.08	-0.09	0.17	0.01	-0.01	0.08	-0.06	0.03	-0.23	0.06	0.19	0.10	0.04	-0.05	0.04	0.10	0.07	-0.03	-0.19	0.06	0.22	-0.02	0.01	0.10	0.31	0.17	0.12	0.10	0.15	0.13	0.15	0.17	-0.03	Uses More Fuel
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Choice modelling Project overview

Career Women

100

90

80

70

60

BMW Mercedes IDEAL

Ford Vauxhall
50 Audi Peugeot Porsche Volkswagen
Mazda Volvo
Citroen Renault Rover Saab Jaguar/Daimler
Alfa Romeo Ferrari Honda Lotus Nissan
SEAT Toyota
40 Fiat
Hyundai Aston Martin Other Vehicles
Suzuki
Lancia Mitsubishi Bentley/Rolls Royce
Land Rover/Range Rover Yugo Daihatsu
30 Morgan
FSO Isuzu
Lada

Skoda

20

Reliant

10

0

Better Cornering

100

90

80

IDEAL
Lotus
70
Ferrari
Porsche Saab
Audi BMW
Jaguar/Daimler Mercedes Volvo
60 Vauxhall Aston Martin
Ford Bentley/Rolls Royce Mazda Peugeot
Land Rover/Range Rover Volkswagen Alfa Romeo Morgan Nissan Renault
Honda Rover Daihatsu
Toyota
50 Citroen Mitsubishi
Other Vehicles
Fiat
SEAT Lancia
Hyundai Yugo
40 FSO Lada Suzuki

Isuzu Reliant Skoda

30

20

10

0

Better Crash Protection

100	
90	
80	IDEAL
	Bentley/Rolls Royce
70	Saab Land Rover/Range Rover Volvo
	BMW
	Mercedes
	Jaguar/Daimler
60	Aston Martin
	Audi
	Ford
	Vauxhall Daihatsu
	Peugeot Porsche Volkswagen
50	Mitsubishi Renault Toyota Honda Nissan
	Ferrari Mazda Rover
	Isuzu Citroen
	Alfa Romeo Lotus Other Vehicles
40	Lancia Lada
	Fiat
	Hyundai SEAT
	FSO Morgan Suzuki
	Skoda Yugo
30	
	Reliant
20	
10	
0	

Better Workmanship

100	
90	
80	
	IDEAL
	Bentley/Rolls Royce
70	Aston Martin Jaguar/Daimler Morgan Porsche Ferrari Mercedes
	BMW Volvo Lotus Saab
	Alfa Romeo Audi Land Rover/Range Rover Volkswagen
60	Peugeot Mazda Vauxhall
	Ford Nissan Toyota
	Mitsubishi
	Rover Citroen Honda
	Renault
50	Daihatsu
	Suzuki
	Hyundai Yugo Other Vehicles
	Fiat
	Lancia Reliant
40	FSO
	SEAT
	Isuzu
	Lada
	Skoda
30	
20	
10	
0	

Mind Share Table
+5 Better crash protection
+4 Better workmanship

Original Share	Gain	Loss	Net Change	New Share	Brand Growth	% Draw	Change Across Brands = 0.220
.260	.	.001	-.001	.259	.	.	Alfa Romeo
.257	.	.003	-.003	.254	-1%	-1%	Aston Martin
1.529	.	.008	-.008	1.521	-1%	-4%	Audi
3.305	.237	.017	.220	3.525	7%	100%	BMW
.367	.	.001	-.001	.366	.	.	Bentley/Rolls Royce
2.492	.	.005	-.005	2.487	.	-2%	Citroen
.394	.	.	.	.394	.	.	Daihatsu
.201	.	.	.	.201	.	.	FSO
.289	.	.001	-.001	.288	.	.	Ferrari
3.033	.001	.001	.	3.033	.	.	Fiat
24.690	.002	.036	-.034	24.656	.	-15%	Ford
1.397	.	.013	-.013	1.384	-1%	-6%	Honda
.033	.	.	.	.033	.	.	Hyundai
.075	.	.	.	.075	.	.	Isuzu
.981	.	.005	-.005	.976	-1%	-2%	Jaguar/Daimler
.359	.	.	.	.359	.	.	Lada
.140	.	.	.	.140	.	.	Lancia
1.295	.	.002	-.002	1.293	.	-1%	Land Rover/Range Rover
.110	.	.	.	.110	.	.	Lotus
1.187	.	.003	-.003	1.184	.	-1%	Mazda
1.904	.	.033	-.033	1.871	-2%	-15%	Mercedes
.525	.	.001	-.001	.524	.	.	Mitsubishi
.147	.	.001	-.001	.146	-1%	.	Morgan
5.624	.	.010	-.010	5.614	.	-5%	Nissan
5.311	.001	.012	-.011	5.300	.	-5%	Peugeot
.395	.	.003	-.003	.392	-1%	-1%	Porsche
.017	.	.	.	.017	.	.	Reliant
2.926	.	.004	-.004	2.922	.	-2%	Renault
11.828	.003	.018	-.015	11.813	.	-7%	Rover
.256	.	.	.	.256	.	.	SEAT
.879	.	.002	-.002	.877	.	-1%	Saab
.159	.	.	.	.159	.	.	Skoda
.227	.	.001	-.001	.226	.	.	Suzuki
1.471	.	.006	-.006	1.465	.	-3%	Toyota
15.200	.001	.027	-.026	15.174	.	-12%	Vauxhall
5.709	.001	.015	-.014	5.695	.	-6%	Volkswagen
3.406	.	.017	-.017	3.389	.	-8%	Volvo
.090	.	.	.	.090	.	.	Yugo
1.532	.	.003	-.003	1.529	.	-1%	Other Vehicles

Families with Children

100

90

80

70

IDEAL

Volvo

60 Ford

Peugeot

Vauxhall

BMW Land Rover/Range Rover Renault Rover Saab

50 Nissan Other Vehicles

Citroen Daihatsu Volkswagen Audi

FSO Lada Honda Toyota

Isuzu Mitsubishi

Mazda Skoda Hyundai

40 Fiat Mercedes

Jaguar/Daimler Suzuki Alfa Romeo SEAT

Bentley/Rolls Royce

Yugo Lancia

30

Aston Martin

Ferrari Lotus

Porsche

20 Reliant

Morgan

10

0

Flexible for Carrying People/Cargo

100	
90	
80	
	Land Rover/Range Rover IDEAL
70	
	Volvo
	Mitsubishi
	Daihatsu Ford
60	BMW Saab Vauxhall
	Peugeot Bentley/Rolls Royce
	Isuzu Audi Rover Suzuki Other Vehicles
	Citroen Renault Nissan
	Mazda Toyota Volkswagen
50	Honda Jaguar/Daimler Mercedes
	Yugo Alfa Romeo Lada
	SEAT Fiat
	Hyundai
	FSO
40	Skoda
	Aston Martin
	Lancia
30	Porsche
	Reliant
	Lotus
	Ferrari
	Morgan
20	
10	
0	

Seats More People

100

90

80

70

Bentley/Rolls Royce IDEAL
Land Rover/Range Rover
Saab Volvo

60 BMW
Ford
Vauxhall Renault
Mitsubishi Peugeot
Audi Jaguar/Daimler

50 Citroen Daihatsu Nissan
Mercedes Rover Other Vehicles Toyota
Volkswagen Honda
Isuzu
Alfa Romeo Mazda Lada

40 Hyundai Suzuki Skoda
Fiat
Aston Martin SEAT

Porsche Yugo

30 FSO Lotus
Lancia Reliant
Ferrari
Morgan

20

10

0

Mind Share Table
Families +5, Seats more people +5

Original Share	Gain	Loss	Net Change	New Share	Brand Growth	% Draw	Change Across Brands = 0.196
.260	.	.001	-.001	.259	.	-1%	Alfa Romeo
.257	.	.001	-.001	.256	.	-1%	Aston Martin
1.529	.	.006	-.006	1.523	.	-3%	Audi
3.305	.230	.035	.195	3.500	6%	99%	BMW
.367	.	.001	-.001	.366	.	-1%	Bentley/Rolls Royce
2.492	.001	.006	-.005	2.487	.	-3%	Citroen
.394	.	.	.	.394	.	.	Daihatsu
.201	.	.	.	.201	.	.	FSO
.289	.	.	.	.289	.	.	Ferrari
3.033	.001	.001	.	3.033	.	.	Fiat
24.690	.007	.042	-.035	24.655	.	-18%	Ford
1.397	.	.003	-.003	1.394	.	-2%	Honda
.033	.	.	.	.033	.	.	Hyundai
.075	.	.	.	.075	.	.	Isuzu
.981	.	.003	-.003	.978	.	-2%	Jaguar/Daimler
.359	.	.	.	.359	.	.	Lada
.140	.	.	.	.140	.	.	Lancia
1.295	.	.002	-.002	1.293	.	-1%	Land Rover/Range Rover
.110	.	.	.	.110	.	.	Lotus
1.187	.	.003	-.003	1.184	.	-2%	Mazda
1.904	.	.014	-.014	1.890	-1%	-7%	Mercedes
.525	.	.001	-.001	.524	.	-1%	Mitsubishi
.147	.	.	.	.147	.	.	Morgan
5.624	.001	.007	-.006	5.618	.	-3%	Nissan
5.311	.002	.012	-.010	5.301	.	-5%	Peugeot
.395	.	.002	-.002	.393	-1%	-1%	Porsche
.017	.	.	.	.017	.	.	Reliant
2.926	.001	.004	-.003	2.923	.	-2%	Renault
11.828	.005	.029	-.024	11.804	.	-12%	Rover
.256	.	.	.	.256	.	.	SEAT
.879	.	.003	-.003	.876	.	-2%	Saab
.159	.	.	.	.159	.	.	Skoda
.227	.	.001	-.001	.226	.	-1%	Suzuki
1.471	.	.022	-.022	1.449	-1%	-11%	Toyota
15.200	.008	.028	-.020	15.180	.	-10%	Vauxhall
5.709	.002	.013	-.011	5.698	.	-6%	Volkswagen
3.406	.	.017	-.017	3.389	.	-9%	Volvo
.090	.	.	.	.090	.	.	Yugo
1.532	.	.002	-.002	1.530	.	-1%	Other Vehicles

Quieter Inside

100	
90	
80	
	IDEAL
70	Bentley/Rolls Royce
	Jaguar/Daimler
	Saab
	BMW
	Mercedes
60	Audi
	Volvo
	Aston Martin Ferrari Ford Porsche Vauxhall
	Lotus Mazda Peugeot Nissan Renault Rover Toyota
50	Mitsubishi Volkswagen
	Honda
	Citroen Alfa Romeo
	Land Rover/Range Rover
	Daihatsu Hyundai Other Vehicles
40	Fiat SEAT Yugo
	Suzuki
	Isuzu Lada
	Lancia Skoda
	FSO
30	Morgan Reliant
20	
10	
0	

Luxurious Interior

100	
90	
80	
70	Bentley/Rolls Royce Jaguar/Daimler
	BMW Ferrari
	IDEAL
	Mercedes Saab Aston Martin
	Porsche
60	
	Audi Lotus Volvo
	Renault Mazda
	Toyota Vauxhall Alfa Romeo Ford Mitsubishi
50	Honda Land Rover/Range Rover Nissan Peugeot
	Citroen Rover Volkswagen
	Lancia Morgan
	Other Vehicles
40	Daihatsu Fiat
	Hyundai Lada
	Yugo
	Isuzu SEAT Skoda
30	Suzuki
	Reliant FSO
20	
10	
0	

Mind Share Table
+5 Quieter inside

Original Share	Gain	Loss	Net Change	New Share	Brand Growth	% Draw	Change Across Brands = 0.125
.260	.	.	.	.260	.	.	Alfa Romeo
.257	.	.001	-.001	.256	.	-1%	Aston Martin
1.529	.	.004	-.004	1.525	.	-3%	Audi
3.305	.145	.021	.124	3.429	4%	99%	BMW
.367	.	.001	-.001	.366	.	-1%	Bentley/Rolls Royce
2.492	.	.004	-.004	2.488	.	-3%	Citroen
.394	.	.	.	.394	.	.	Daihatsu
.201	.	.	.	.201	.	.	FSO
.289	.	.001	-.001	.288	.	-1%	Ferrari
3.033	.001	.	.001	3.034	.	1%	Fiat
24.690	.003	.024	-.021	24.669	.	-17%	Ford
1.397	.	.007	-.007	1.390	-1%	-6%	Honda
.033	.	.	.	.033	.	.	Hyundai
.075	.	.	.	.075	.	.	Isuzu
.981	.	.003	-.003	.978	.	-2%	Jaguar/Daimler
.359	.	.	.	.359	.	.	Lada
.140	.	.	.	.140	.	.	Lancia
1.295	.	.001	-.001	1.294	.	-1%	Land Rover/Range Rover
.110	.	.	.	.110	.	.	Lotus
1.187	.	.002	-.002	1.185	.	-2%	Mazda
1.904	.	.011	-.011	1.893	-1%	-9%	Mercedes
.525	.	.	.	.525	.	.	Mitsubishi
.147	.	.	.	.147	.	.	Morgan
5.624	.	.005	-.005	5.619	.	-4%	Nissan
5.311	.001	.007	-.006	5.305	.	-5%	Peugeot
.395	.	.002	-.002	.393	-1%	-2%	Porsche
.017	.	.	.	.017	.	.	Reliant
2.926	.	.002	-.002	2.924	.	-2%	Renault
11.828	.004	.013	-.009	11.819	.	-7%	Rover
.256	.	.	.	.256	.	.	SEAT
.879	.	.001	-.001	.878	.	-1%	Saab
.159	.	.	.	.159	.	.	Skoda
.227	.	.001	-.001	.226	.	-1%	Suzuki
1.471	.	.004	-.004	1.467	.	-3%	Toyota
15.200	.001	.017	-.016	15.184	.	-13%	Vauxhall
5.709	.001	.010	-.009	5.700	.	-7%	Volkswagen
3.406	.	.012	-.012	3.394	.	-10%	Volvo
.090	.	.	.	.090	.	.	Yugo
1.532	.	.002	-.002	1.530	.	-2%	Other Vehicles

Better for the Environment

100

90

80

70

IDEAL

60

Audi
Volkswagen Ford Volvo
BMW Honda Vauxhall Fiat Nissan Peugeot Rover
Citroen Daihatsu Mazda

50

Renault Saab Alfa Romeo Reliant Suzuki Toyota
Mercedes Mitsubishi SEAT Land Rover/Range Rover
Lada Other Vehicles Hyundai Lancia Yugo
Jaguar/Daimler Isuzu
Bentley/Rolls Royce Aston Martin Skoda

40

FSO Porsche Lotus Morgan
Ferrari

30

20

10

0

Mind Share Table
BMW +5 on 'Better for the environment'

Original Share	Gain	Loss	Net Change	New Share	Brand Growth	% Draw	Change Across Brands = 0.098
.260	.	.	.	.260	.	.	Alfa Romeo
.257	.	.001	-.001	.256	.	-1%	Aston Martin
1.529	.	.002	-.002	1.527	.	-2%	Audi
3.305	.105	.007	.098	3.403	3%	100%	BMW
.367	.	.	.	.367	.	.	Bentley/Rolls Royce
2.492	.	.002	-.002	2.490	.	-2%	Citroen
.394	.	.	.	.394	.	.	Daihatsu
.201	.	.	.	.201	.	.	FSO
.289	.	.	.	.289	.	.	Ferrari
3.033	.	.001	-.001	3.032	.	-1%	Fiat
24.690	.001	.022	-.021	24.669	.	-21%	Ford
1.397	.	.002	-.002	1.395	.	-2%	Honda
.033	.	.	.	.033	.	.	Hyundai
.075	.	.	.	.075	.	.	Isuzu
.981	.	.001	-.001	.980	.	-1%	Jaguar/Daimler
.359	.	.	.	.359	.	.	Lada
.140	.	.	.	.140	.	.	Lancia
1.295	.	.001	-.001	1.294	.	-1%	Land Rover/Range Rover
.110	.	.	.	.110	.	.	Lotus
1.187	.	.001	-.001	1.186	.	-1%	Mazda
1.904	.	.005	-.005	1.899	.	-5%	Mercedes
.525	.	.	.	.525	.	.	Mitsubishi
.147	.	.	.	.147	.	.	Morgan
5.624	.	.002	-.002	5.622	.	-2%	Nissan
5.311	.	.005	-.005	5.306	.	-5%	Peugeot
.395	.	.001	-.001	.394	.	-1%	Porsche
.017	.	.	.	.017	.	.	Reliant
2.926	.	.003	-.003	2.923	.	-3%	Renault
11.828	.001	.013	-.012	11.816	.	-12%	Rover
.256	.	.	.	.256	.	.	SEAT
.879	.	.001	-.001	.878	.	-1%	Saab
.159	.	.	.	.159	.	.	Skoda
.227	.	.	.	.227	.	.	Suzuki
1.471	.	.001	-.001	1.470	.	-1%	Toyota
15.200	.	.017	-.017	15.183	.	-17%	Vauxhall
5.709	.	.008	-.008	5.701	.	-8%	Volkswagen
3.406	.	.009	-.009	3.397	.	-9%	Volvo
.090	.	.	.	.090	.	.	Yugo
1.532	.	.002	-.002	1.530	.	-2%	Other Vehicles

Flamboyant/Showy

100	
90	
80	
	Porsche
	Ferrari
70	
	Aston Martin Bentley/Rolls Royce
	Lotus Mercedes
60	Jaguar/Daimler BMW Morgan Saab
	Audi IDEAL
	Mazda Mitsubishi
50	Alfa Romeo Toyota Honda
	Peugeot
	Ford Land Rover/Range Rover Nissan Renault Vauxhall Volvo
	Citroen Rover
	Volkswagen Daihatsu Lancia Suzuki
40	Other Vehicles SEAT
	FSO
	Isuzu Hyundai
	Fiat
30	
	Lada Yugo
	Reliant
20	Skoda
10	
0	

Mind Share Table
BMW +5 on 'Flamboyant / showy'

Original Share	Gain	Loss	Net Change	New Share	Brand Growth	% Draw	Change Across Brands = 0.067
.260	.	.	.	.260	.	.	Alfa Romeo
.257	.	.002	-.002	.255	-1%	-3%	Aston Martin
1.529	.	.003	-.003	1.526	.	-4%	Audi
3.305	.097	.036	.061	3.366	2%	91%	BMW
.367	.	.001	-.001	.366	.	-1%	Bentley/Rolls Royce
2.492	.001	.004	-.003	2.489	.	-4%	Citroen
.394	.	.	.	.394	.	.	Daihatsu
.201	.	.	.	.201	.	.	FSO
.289	.	.001	-.001	.288	.	-1%	Ferrari
3.033	.002	.	.002	3.035	.	3%	Fiat
24.690	.005	.015	-.010	24.680	.	-15%	Ford
1.397	.	.002	-.002	1.395	.	-3%	Honda
.033	.	.	.	.033	.	.	Hyundai
.075	.	.	.	.075	.	.	Isuzu
.981	.001	.003	-.002	.979	.	-3%	Jaguar/Daimler
.359	.	.	.	.359	.	.	Lada
.140	.	.	.	.140	.	.	Lancia
1.295	.	.001	-.001	1.294	.	-1%	Land Rover/Range Rover
.110	.	.	.	.110	.	.	Lotus
1.187	.	.002	-.002	1.185	.	-3%	Mazda
1.904	.001	.007	-.006	1.898	.	-9%	Mercedes
.525	.001	.	.001	.526	.	1%	Mitsubishi
.147	.	.	.	.147	.	.	Morgan
5.624	.001	.002	-.001	5.623	.	-1%	Nissan
5.311	.003	.005	-.002	5.309	.	-3%	Peugeot
.395	.	.002	-.002	.393	-1%	-3%	Porsche
.017	.	.	.	.017	.	.	Reliant
2.926	.001	.002	-.001	2.925	.	-1%	Renault
11.828	.006	.009	-.003	11.825	.	-4%	Rover
.256	.	.	.	.256	.	.	SEAT
.879	.	.001	-.001	.878	.	-1%	Saab
.159	.	.	.	.159	.	.	Skoda
.227	.	.001	-.001	.226	.	-1%	Suzuki
1.471	.	.002	-.002	1.469	.	-3%	Toyota
15.200	.004	.010	-.006	15.194	.	-9%	Vauxhall
5.709	.002	.007	-.005	5.704	.	-7%	Volkswagen
3.406	.001	.007	-.006	3.400	.	-9%	Volvo
.090	.	.	.	.090	.	.	Yugo
1.532	.	.001	-.001	1.531	.	-1%	Other Vehicles

Summary table - simulated image changes on BMW

	Original Market Shares	Better crash protection +5 Better workmanship +4	Families & kids +5 Seats more people +5	Quieter + 5	Better for environment +5	Flamboyant +5
	%	%	%	%	%	%
BMW	3.3					
Brand growth		+7	+6	+4	+3	+2
Source of share						
Ford	24.7	-15	-18	-17	-21	-15
Vauxhall	15.2	-12	-10	-13	-17	-9
Rover	11.8	-7	-12	-7	-12	-4
Volkswagen	5.7	-6	-6	-7	-8	-7
Volvo	3.4	-8	-9	-10	-9	-9
Audi	1.6	-4	-3	-3	-2	-4
Mercedes	1.9	-15	-7	-9	-5	-9
Jaguar / Daimler	1.0	-2	-2	-2	-1	-3

"Mind shares" - Shares of intention to purchase

Potential target brands, from which BMW could gain share

	Total sample	BMW intenders			BMW non-intenders
		Total	"Primaries"	Marginals	
	[100%]	*[29%]*	*[4%]*	*[25%]*	*[71%]*
BMW	3.3	11.5	43.3	7.1	0.0
Ford	24.7	18.5	9.6	19.8	27.2
Vauxhall	15.2	12.5	5.3	13.5	16.3
Rover	11.8	10.2	4.3	11.0	12.5
Volkswagen	5.7	6.3	5.4	6.4	5.5
Peugeot	5.3	5.8	4.0	6.0	5.1
Volvo	3.4	4.4	2.5	4.6	3.0
Nissan	5.6	3.9	0.6	4.3	6.3
Mercedes	1.9	3.5	5.9	3.2	1.3
Renault	2.9	2.9	1.4	3.1	2.9
Citroen	2.5	2.6	1.4	2.8	2.5
Toyota	1.5	2.3	1.2	2.5	1.1
Fiat	3.0	1.7	0.2	1.9	3.6
Audi	1.5	2.1	3.9	1.9	1.3
Honda	1.4	1.6	1.9	1.5	1.3
Jaguar/Daimler	1.0	1.4	2.1	1.3	0.8
Mazda	1.2	1.2	1.0	1.2	1.2
Saab	0.9	0.9	1.9	0.8	0.9
Land Rover/Range Rover	1.3	0.8	0.8	0.8	1.5
Porsche	0.4	0.6	1.2	0.5	0.3
Other Vehicles	5.5	5.5	2.2	6.0	5.4

Sorted according to mind shares of the Marginal group

Choice modelling

"Mind shares" - Shares of intention to purchase

Potential target brands, from which BMW could gain share

	Total sample	BMW intenders			BMW non-intenders
		Total	**"Primaries"**	**Marginals**	
	[100%]	*[29%]*	*[4%]*	*[25%]*	*[71%]*
BMW	**3.3**	**11.5**	**43.3**	**7.1**	**0.0**
British makes					
Ford	24.7	18.5	9.6	19.8	27.2
Vauxhall	15.2	12.5	5.3	13.5	16.3
Rover	11.8	10.2	4.3	11.0	12.5
Jaguar/Daimler	1.0	1.4	2.1	1.3	0.8
Land Rover/Range Rover	1.3	0.8	0.8	0.8	1.5
German makes					
Volkswagen	5.7	6.3	5.4	6.4	5.5
Mercedes	1.9	3.5	5.9	3.2	1.3
Audi	1.5	2.1	3.9	1.9	1.3
Porsche	0.4	0.6	1.2	0.5	0.3
Other European					
Peugeot	5.3	5.8	4.0	6.0	5.1
Volvo	3.4	4.4	2.5	4.6	3.0
Renault	2.9	2.9	1.4	3.1	2.9
Citroen	2.5	2.6	1.4	2.8	2.5
Fiat	3.0	1.7	0.2	1.9	3.6
Saab	0.9	0.9	1.9	0.8	0.9
Japanese					
Nissan	5.6	3.9	0.6	4.3	6.3
Toyota	1.5	2.3	1.2	2.5	1.1
Honda	1.4	1.6	1.9	1.5	1.3
Mazda	1.2	1.2	1.0	1.2	1.2

BMW summary

Target group definition, positioning strategy

Prime target group

- Defined in terms of product/image criteria relevant for brand choice, plus statistical description (passives).
- Target group size/characteristics can be tracked over time.

1) BMW target group (marginals) amounts to some 25% of car owners
(NB. 71% are not in the target group.)

2) The target group is sensitive to BMW image improvements in as follows:

"Crash protection", "better workmanship" (potential = ca. + 7% share)
"Quieter inside" "luxurious interior" (potential = ca +4% share)
"Flamboyant/showy" (potential = ca +2% share)

"Families with kids", "seats more people" (potential + ca +6% share), and "better for environment" (potential = ca + 3% share) are interesting, but involve the risk of cannibalisation on Rover.

Other criteria are potentially less effective in increasing BMW share.

3) Main sources of business (ie. of growth)

Major UK brands:
Ford, Vauxhall; also Rover for "families/seats more" 35% - 50%

German brands:
Audi, Volkswagen; Mercedes notably for "Crash protection" 20% - 25%
NB: German brands (& Ford) are particularly affected 'by "Flamboyant"

4) Descriptive statistics

- Demographics
- Brands currently owned
- Buying own car, choosing company car
- Car usage patterns
- Etc.

Project overview

CSD "IT-buyers" segmentation
Marketing objectives

- Identify the prime target groups in the markets of current/potential customers for CSD's product families and services
- Propose leverage points for optimising Digital positioning
  - Based upon a quantified understanding of <u>*customer*</u> needs, perceptions, buying preferences and behaviour vis-a-vis the relevant IT vendors and their products.
- Recommendations on channels and communication
- Support for focussed resource allocation aimed at optimising market share in selected product areas

Deliverables (1)

- **For each product area (across all countries), each country and overall/non-IT professionals:**
  - **– Description of "needs"- based segments of IT buyers.**
    - **★ Extensive statistical qualification of segments. $-sizing and growth estimates.**
    - **★ Needs defined in terms of how an "ideal" product is viewed, its most important characteristics**

      ---> What IT-buyer segments are out there, from which we could choose?

Choice modelling

Deliverables (2)

- For each product area (across all countries), each country and overall/non-IT professionals :
  - Market model for scenario evaluations
    - ★ Identification of the product, service, corporate or emotional attributes with highest potential to attract future customers to Digital
    - ★ Estimated potential share increase
    - ★ Identification of the prime *"marginals"* customer target group in terms of relative size and statistical "tags".

      ---> *Which are the customers we have a real chance of winning? What is their potential? What could trigger their moving to Digital?*

Deliverables (3)

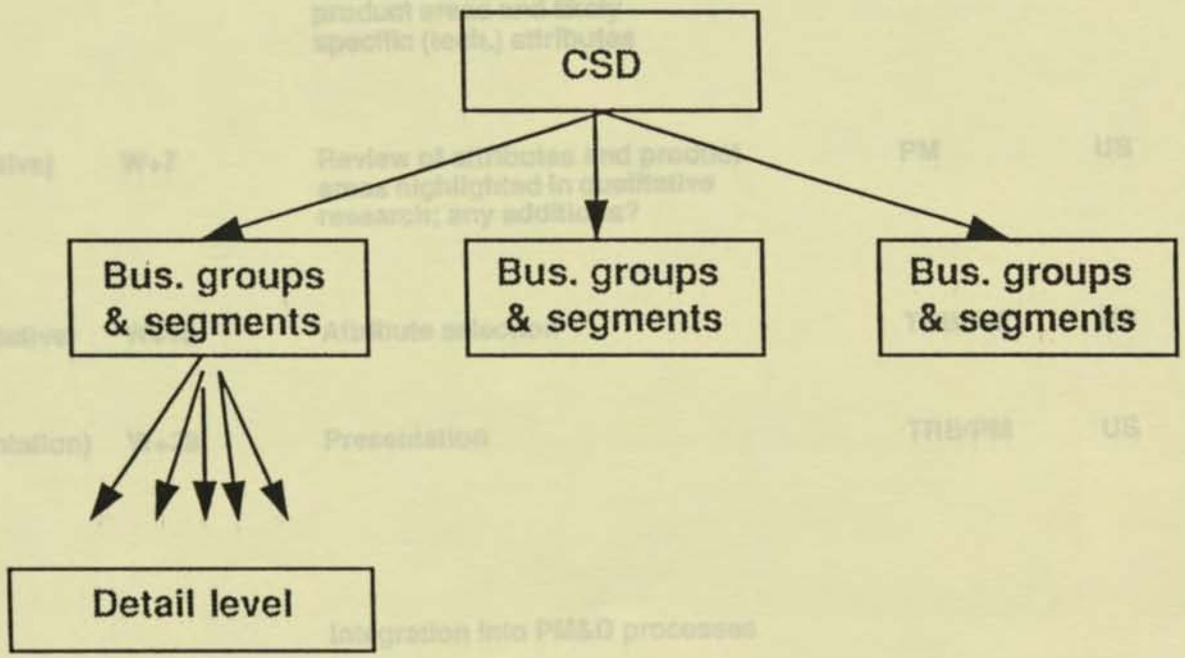
- **For each product area (across all countries), each country and overall:**
  - **– Access to model for evaluation of impact on Digital of possible competitive moves.**
  - **– Indication of possible emerging areas which are relevant in terms of "needs", but not yet exploited.**
  - **– The option to evaluate 'new ideas" *(product or services concepts, channel strategies or advertising)* on the market models before committing significant development funds***

Choice modelling

<u>Coverage</u> - countries, buyers, product areas

- USA, UK, France, Germany (ca. 55% FY94 NOR)
- IT purchases are rarely decided by one individual; usually several, plus committees *(varying degrees of importance attached to cost, technical adequacy and the vendor)*
- Sample of target group buyers will include:
  - Senior/middle non IT specialists (MD, FD, Dept Manager)
  - I/S technical people (IT Manager, Systems Manager, PC (?LAN) Manager)
  - Professional end-users (architect, graphist, scientist)
  - Large(ABU-type)/medium/small companies, across industries (ex. govt, home)
- VARs/ISVs to be included as separate sub-group
- Product areas to be confirmed by the research itself.

PM&D involvement



PM&D involvement

Project Stage Date (approx)	Timing	Activity (with PM&D nominees)		Responsible	Location
Preamble	W-1	Project explanation, discuss product areas and likely specific (tech.) attributes	PM	US	Mid Nov '94
Phase 1 (qualitative)	W+7	Review of attributes and product areas highlighted in qualitative research; any additions?	PM	US	Mid Jan '95
Phase 2 (quantitative)	W+15	Attribute selection	TRB/PM	US	Mid Mar '95
Phase 3 (Presentation)	W+28	Presentation	TRB/PM	US	Mid June '95
Follow-on		Integration into PM&D processes			Ongoing

Choice modelling

Potential attributes / product areas

Product lines

Objective of "choice modelling"

- Explain the relationship between perceived attributes and the buying preferences for all vendors/products known to the the buyer in a given area
  - ★ Attribute battery must cover all criteria relevant for product line / vendor choice (rational and emotional)
  - ★ Relative importance of attributes in generating buying preference must be derived mathematically
  - ★ Each buyer analysed individually (dissaggregated)
  - ★ Focus of analysis on the "marginal" buyer

SCRIBE choice model - calculating importances

Introduction

- The aim of the model is to understand the statistical relationship between
  (a) image perceptions of all known products/brands/services in a given usage area,
  (b) preferences for those products,
  so as to identify which attributes are most driving buyers' choices of products.
- Measured product image ratings alone cannot validly explain preferences, since this would assume equal importance for each image attribute in product choice. The ratings must first be weighted by their individual importance, and this for each respondent individually (disaggregated basis). Thus effectively a model is effectively built for each respondent, and the overall model for that particular usage area is made up of the sum of the individuals' weighted data.
- In order to calculate the image attribute importances in a given usage area, three measures are needed for all known products:
  - Image ratings for each product
  - Image rating for the "ideal" product
  - Buying intentions for each product

  Additionally the image attribute battery needs to be statistically optimised to ensure that it explains at least 90% of measured buying preferences. This normally requires prior qualitative and then quantified attribute development research
- The importance weights are then calculated for each respondent as follows:

  Chart 1
  The "ideal" product is positioned in multi-dimensional space against all attributes. The chart only shows two attributes, as an example.

  Chart 2
  The distance of each product from the "ideal" is calculated in multi-dimensional space across all attributes; again, two have been exemplified in the chart.

  Chart 3
  Here the Chart 2 unweighted product image positioning points are labelled with hypothetical preference scores, to show that a product's distance from the "ideal" across all attributes does not match directly its preference level. "B" should be closest to the "ideal" since it has the highest preference score, but based on the raw image ratings "E" (with the fourth highest preference) is maps closest.

  Chart 4
  On the hypothesis that all attributes may not be equally important to explain this respondent's preferences, using an iterative process weights (representing importances) are attached to each attribute until a solution is found whereby the euclidean distance of each product from the "ideal" correlates ($r2 = > 0.9$) with its respective level of preference. For subsequent simulation purposes (modelling) it is these individual importance weights

which are used. The overall importance weights presented to users are in fact the aggregate of these individual values.

Chart 5

Shows how "marginal" buyers (and hence target group) respondents can be identified. The horizontal axis shows the euclidean distance from the "ideal" of all products within the perceptual product space of the individual, based on all the sum of all weighted image attributes. The product positions on this axis total 100%, and in aggregate (assuming a representative sample) would virtually equate to user (site) share. The vertical axis shows preference levels. The "S" curve is the response function; it is calculated taking into account the individual measured preferences for the products, and their euclidean distance from the "ideal" within that individual's perceptual product space.

Thus for this particular individual the "B" product which is closest to his "ideal" also has the highest preference. More interestingly, one notes that improving his image perceptions of products "C", "A" (and to a lesser extent "E") would give a proportionally greater increase in preference for those products than would result from a similar image improvement for products "D" and "F". This particular respondent is "marginal" on "C" and "A", less so on "E", and not at all on "D" and "F". Across a representative sample one could thus see who is "marginal" for instance on Digital, thus defining our key target group (via passive variables); the model will then indicate on which image attributes improvements are most likely to result in higher preferences.

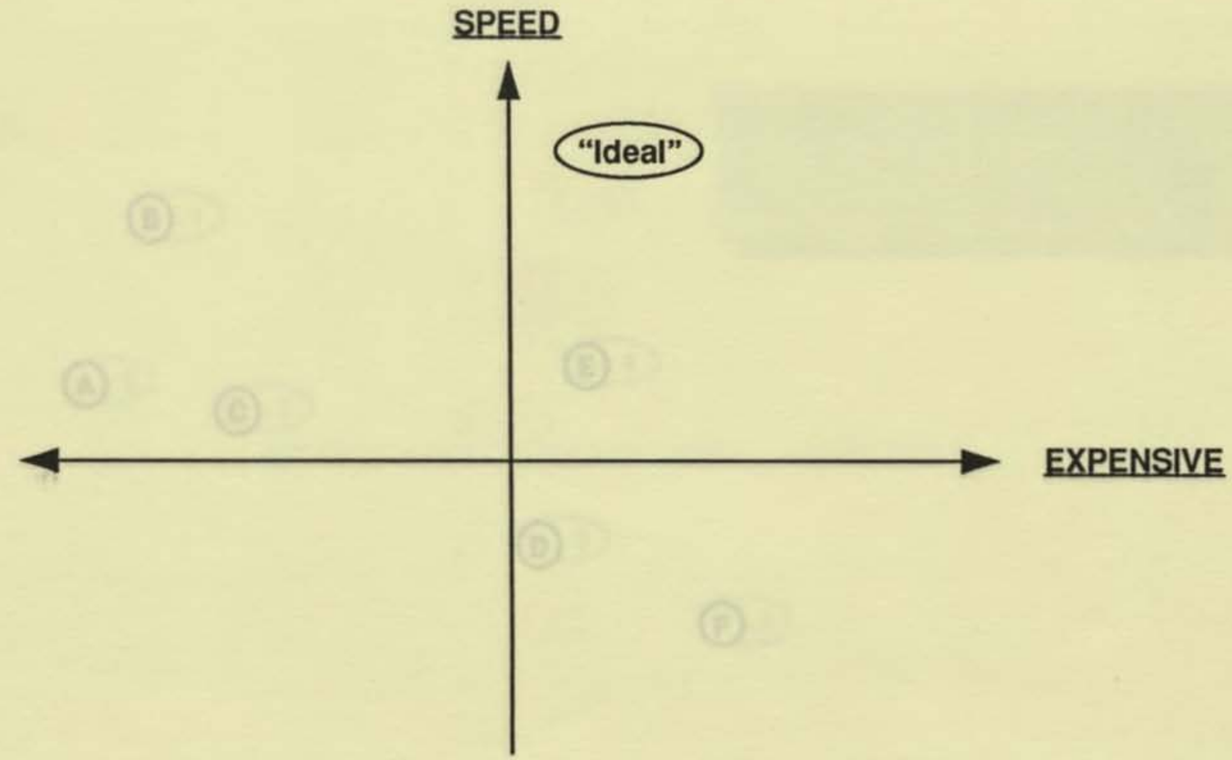
This SCRIBE technique thus allows us to size and describe the prime target group, and define the copy strategy necessary to persuade them to view Digital as closer/closest to their ideal in the particular usage area. It also helps ensure we do not invest in trying to reach individuals who are for Digital effectively "non-users" and likely to remain so.

Charts 6 & 7

Summarise the SCRIBE model building and image scenario simulation procedures.

1

The "SCRIBE" choice model. "Ideal" product positioning

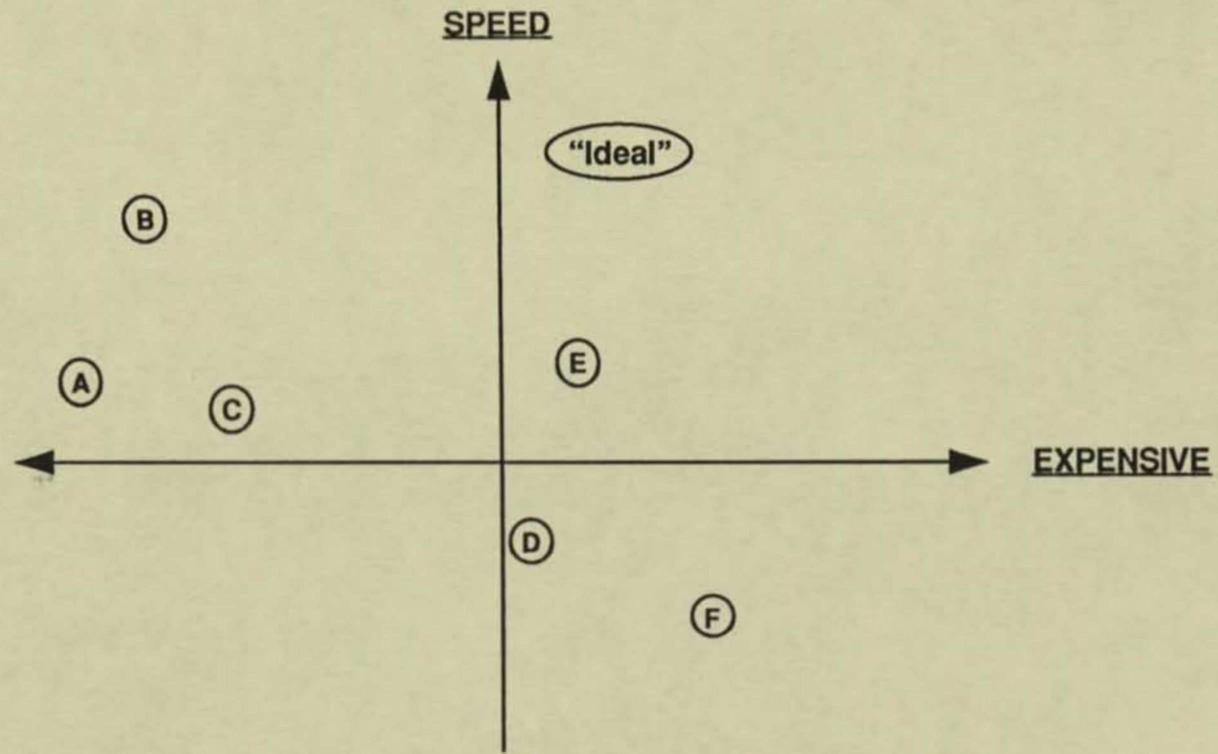


The positioning of the "ideal" product/vendor is calculated against all factors and attributes, although only "speed" and 'expensive" are shown

BMW Case Study | Project descrip. / Ti | Product lines | Potential attributes / product areas

(2)

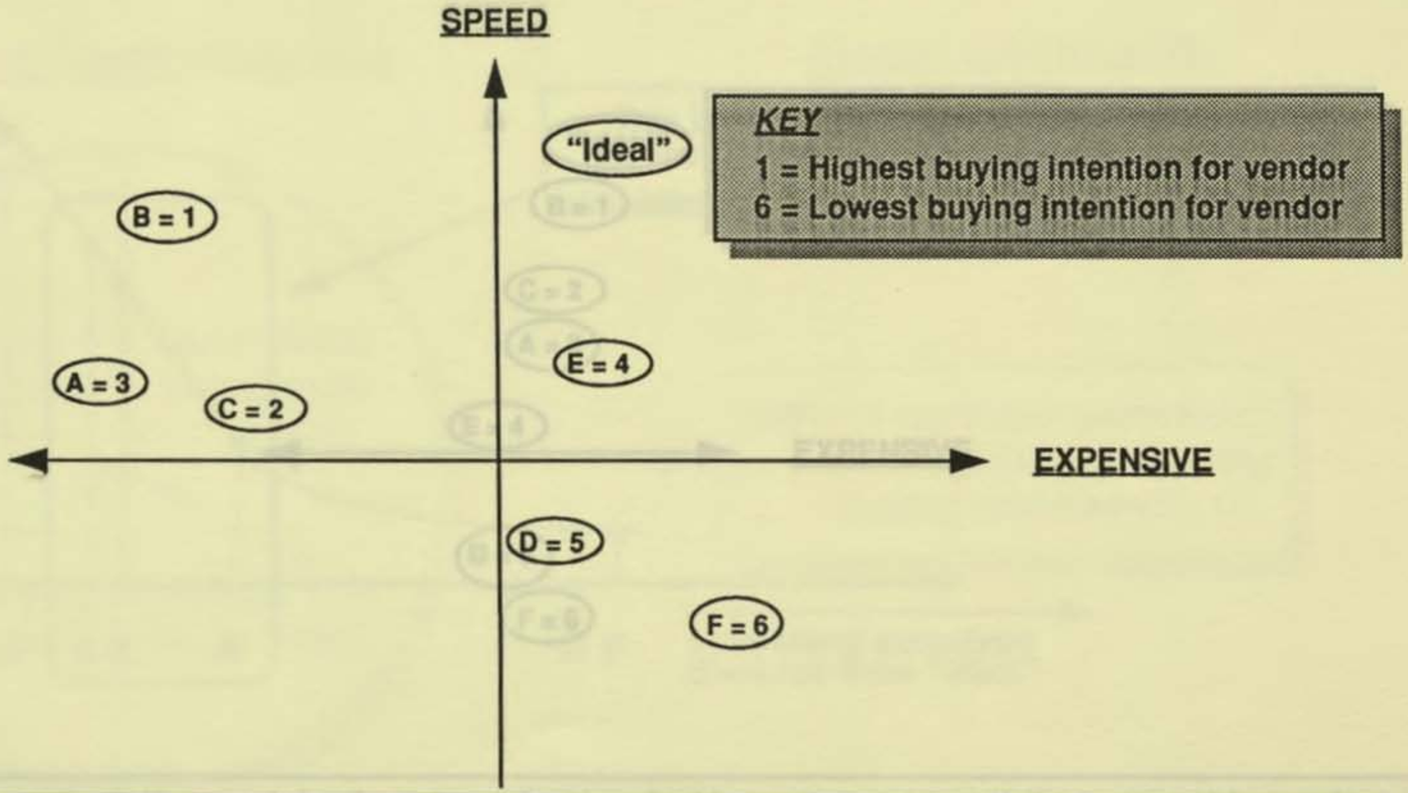
Positioning of all vendors vs the "ideal" vendor



The distance of each vendor from the "ideal" is calculated for all combinations of factors/attributes

3

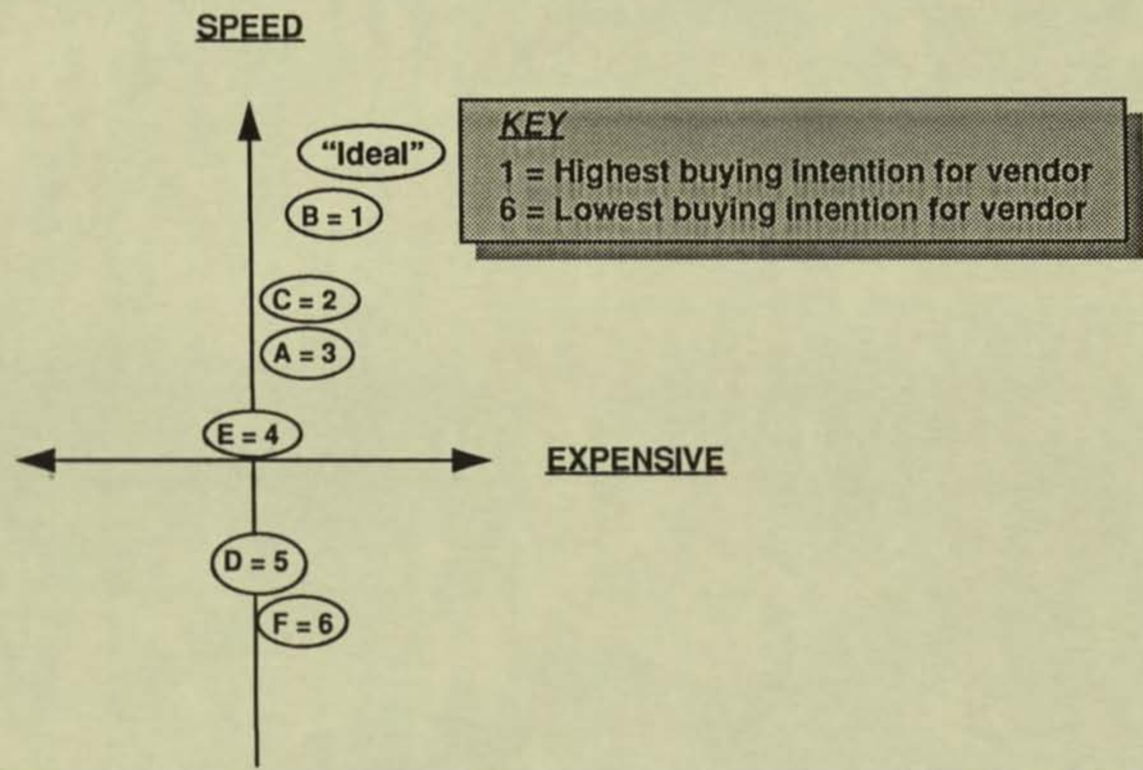
Preferences between the vendors



No relationship between preferences and distance from the "ideal" ! But the scales used for the plot are identical, thus assuming both attributes are equally important for the explanation of buying intentions.

(4)

Hypothesis: Attributes may not be equally important for explaining preferences

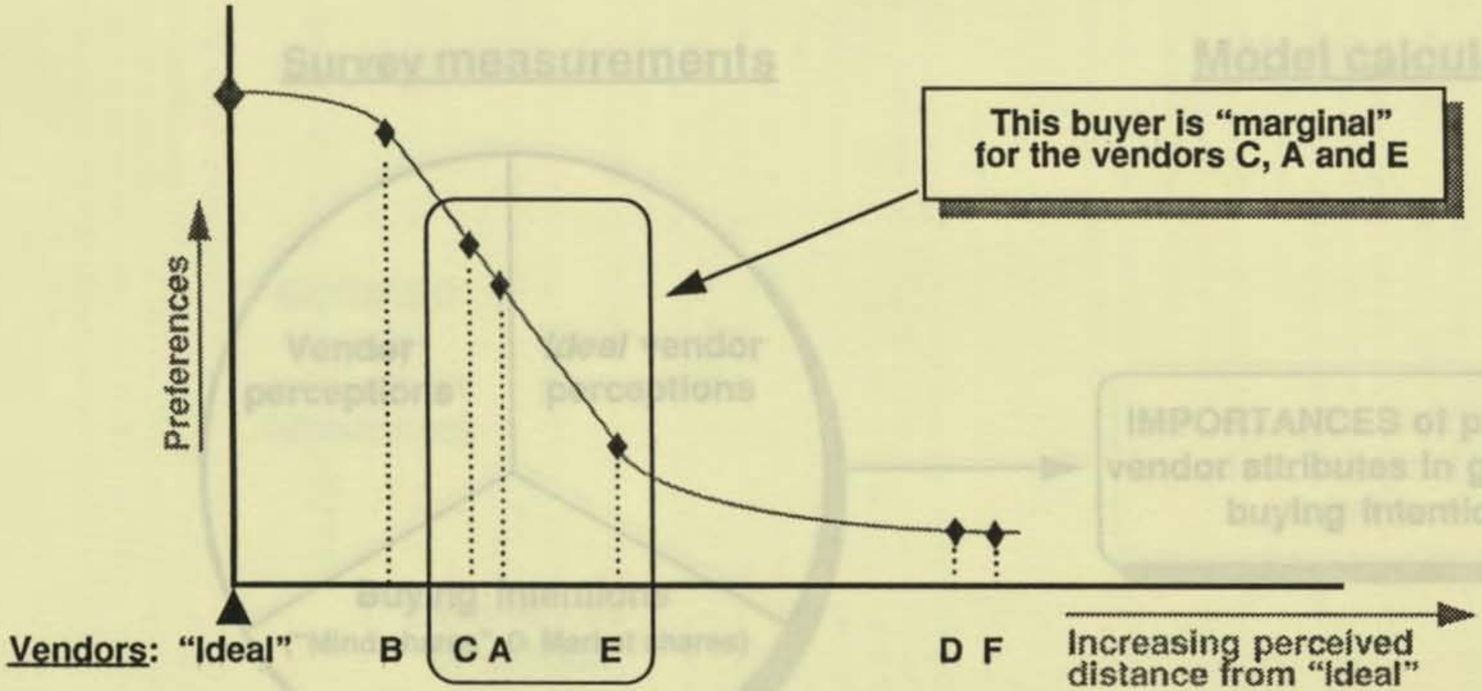


Separately for each respondent, the model calculates what level of importance the attributes must have, for the distance of each vendor to the "ideal" to correlate (r^2 = > 0.9) with its respective level of buying intention.

The model has thus calculated the importance of the attributes for generating preference.

(5)

The "marginal" buyer



—

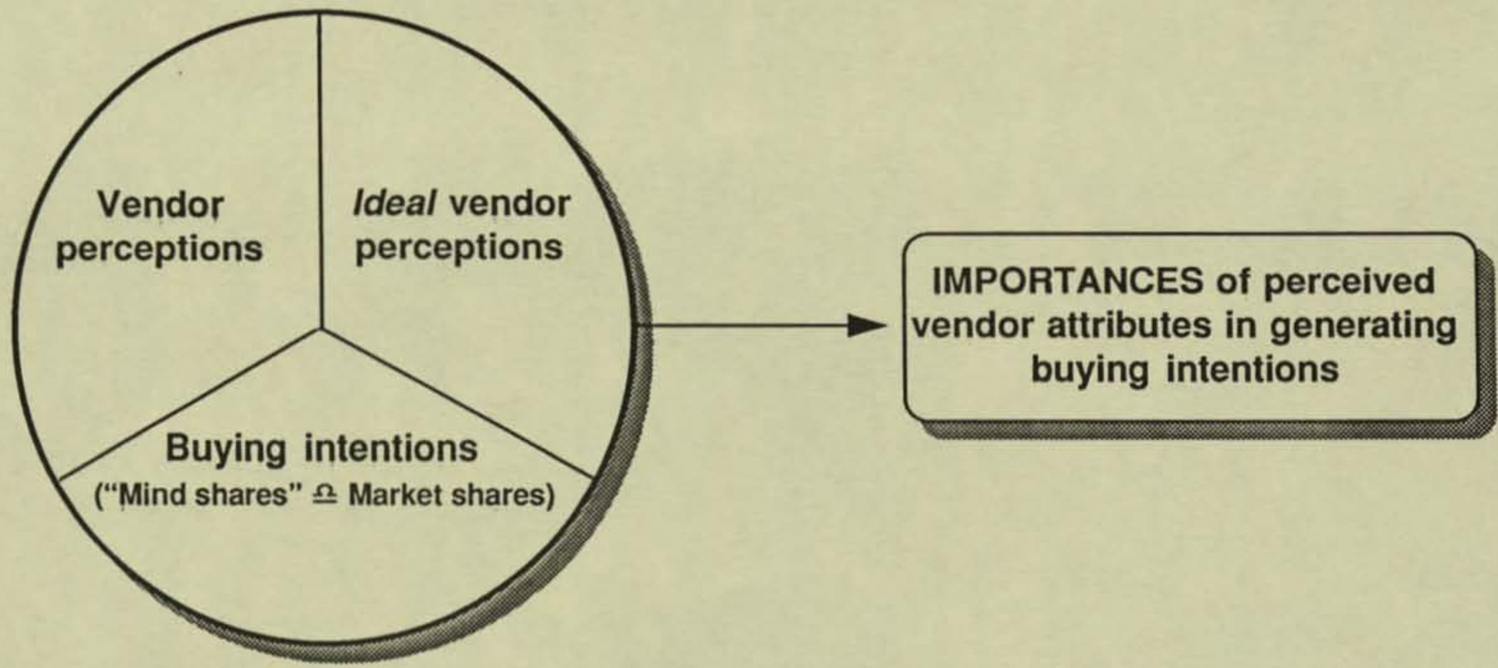
Improving buyers' perceptions of a vendor brings it closer to the "Ideal", and increases buying intentions. This buyer is "marginal" for vendors C, A and E. An improvement in his/her perceptions of vendors C, A & E brings a proportionally greater increase in buying intentions for them than would be the case for vendors D or F.

Product lines   Potential attributes / product areas

6

Summary: Model building ...

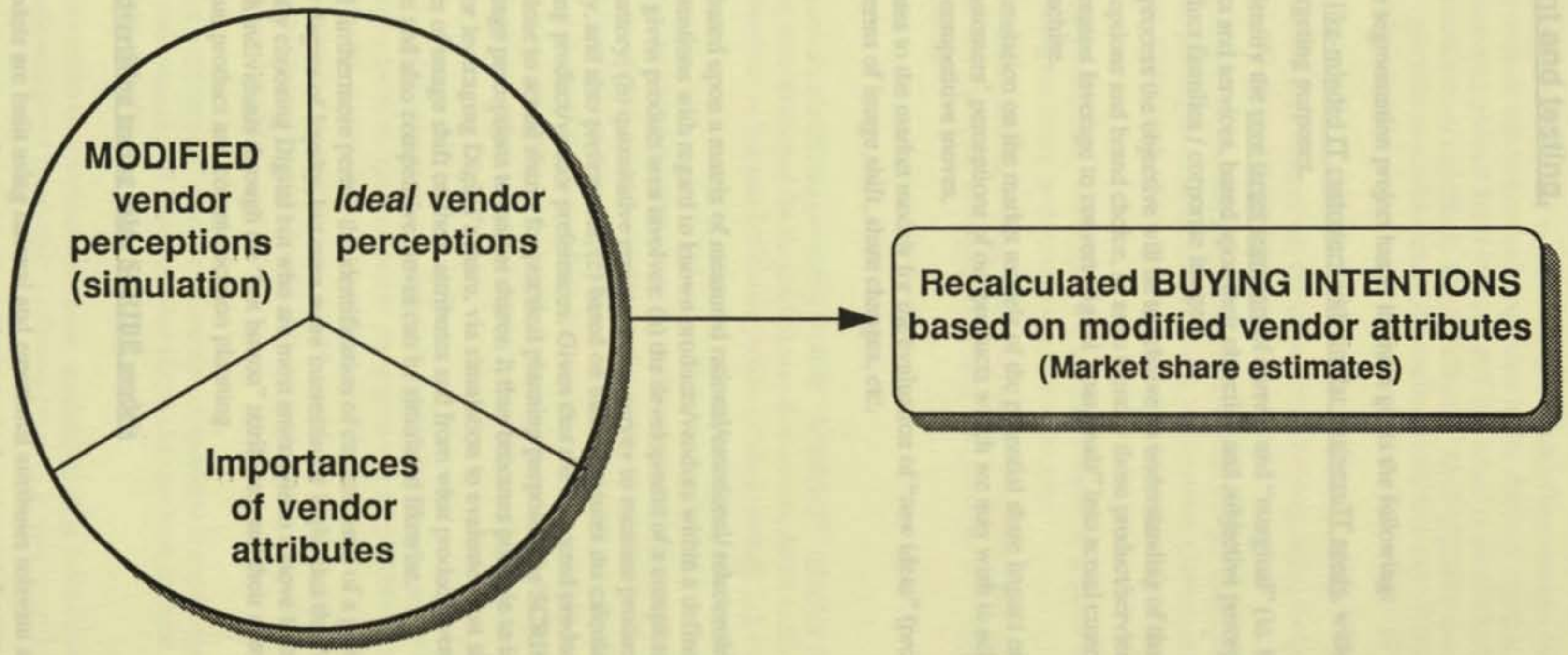
Survey measurements | **Model calculation**



7

...... "Market scenarios simulation"

User simulation | **Model calculation**



DTW case study | Project descrip. / ... | Product lines | Potential attributes / product areas

Contribution of SCRIBE choice models and associated research techniques to advertising development and testing.

Background

As has been described above, the segmentation project has as its main goals the following:

- Identification of segments of like-minded IT customers with similar business/IT needs, within defined computing areas for broad targeting purposes.
- Within computing areas to identify the core target segments of current and "marginal" (ie. high potential) customers for Digital products and services, based upon their objective and subjective perceptions of Digital and competitors' product families / corporate images.

  Using this choice modelling process the objective will be to achieve an understanding of the relationship between product/vendor perceptions and brand choice, so as to identify those product/service/vendor characteristics offering the greatest leverage to convert Digital "marginals" into actual customers, whilst still retaining the current franchise.
- Business scenario testing - simulation on the market models of the potential share impact on Digital and competitors of changes in customers' perceptions of our products which we may wish to achieve; also effects on Digital of possible competitive moves.
- A research system which relates to the market models for the evaluation of "new ideas" (product concepts, advertising), with results in terms of image shift, share changes, etc.

SCRIBE models

A SCRIBE model is essentially based upon a matrix of measured rational/emotional/ relationship perceptions (attributes), ideals and buying intentions with regard to known products/vendors within a defined product area. Building such models for a given product area involves: (a) the development of a complete and statistically optimised attribute battery; (b) quantitative representative survey to measure products/vendors and ideals against the attribute battery, and also preferences; (c) based on these measures the calculation of attribute importances in generating product/vendor preferences. Given that the measured product/vendor preferences will be sufficiently close to actual shares for practical planning purposes, the SCRIBE model is in effect relating product/vendor image perceptions to market shares. It thus becomes possible to indicate which attributes are the "hot buttons" for leveraging Digital's share, via simulation to evaluate what share increase can be expected for given degrees of image shift on these attributes and from what products/vendors this extra share would be taken. Concurrent and also competitive moves can be simulated likewise.

The data in SCRIBE models will furthermore permit the identification of current users of a given product, giving valuable insight into their degree of loyalty, but even more interestingly highlights the "marginals", those potential buyers not currently choosing Digital but who are most amenable to a move to our products. Understanding how to reach such individuals through the "hot button" attributes, and their comparative size in the marketplace permits optimal product and communication planning.

Copy strategy definition and advertising testing using SCRIBE models

1. Copy strategy

On the premise that SCRIBE models are built using rational and emotional attributes relevant and fully explicative for any given product area, where the survey respondents properly represent buyers/co-deciders and assuming that the marketing objective was the enhancement of the Digital product's current positioning, the "hot button" attributes are in fact those which form the basis for defining the key communication objectives of the copy strategy. It should be noted here that we are not only referring to rational attributes directly related to the product field, but additionally to emotional and relationship criteria which, although only rarely taken into account in research can be extremely important in the choice of vendors. One would then want to look at other attributes with perhaps lower leverage and less power to discriminate between products/vendors, but which are nonetheless important - image "slippage" can be highly damaging. And there will be other potential concerns - possible cannibalisation of the Digital product on other Digital products, likely competitive moves, etc. - which can and should be taken into account using the SCRIBE's simulation facilities.

Hence SCRIBE is designed to indicate copy strategy (ie. the key communication criteria) for optimizing product/vendor market postioning and share. There are however some *caveats:*

- SCRIBE can help set copy strategy, but not executional treatment. It indicates the image areas the advertising should address and the degree of image shift required, but it cannot address problems of creative style, colours, text, etc. Other more *ad hoc* research tools are of course available to deal with such issues.
- Strategic planners must carefully consider to what extent it is actually possible to achieve image shifts which SCRIBE indicates as being necessary to obtain the targeted share gain.
- The timing and investment necessary to achieve image shifts in the real world must also be considered. SCRIBE assumes comparable share of voice vs leading advertisers, and normally also 100% media reach (different levels can be simulated).

2. <u>Advertising testing</u>

The SCRIBE research suite includes an advertising pretesting module "APPRAISE" which is normally used once a SCRIBE choice model has been developed for the product area in question. APPRAISE is primarily for evaluating advertising concepts/executions, but also for looking at new product ideas, <u>before</u> engaging often heavy development costs.

What sets APPRAISE apart from classical advertising pretesting techniques is that after exposing a small sample of respondents to the advertising/ad. concept, it measures their perceptions of <u>all</u> relevant products/vendors rather than just those for the advertised product. Since APPRAISE uses the same attribute battery and preference measures as in the SCRIBE model for that product area, it is not only possible to see precisely what image shifts have been achieved by the advertisement, but also what share changes in the product area the ad. may be expected to produce and which products/vendors would gain or lose how much share.

The research technique involves indirectly exposing a small sample (ca 80-100N) of buyers/co-deciders, representative for the product area in question (and matched to the structure of the SCRIBE model sample for that product area), to the advertisement. Respondents then complete the same interview as for the SCRIBE survey (500N +). The APPRAISE data is then projected up onto the model using data fusion techniques (matching by ideals, importances and demographics). Results take the form of the image shift achieved by the ad., and the resultant projected share changes.

APPRAISE thus allows the vendor to understand how a proposed advertisement will impact perceptions of the product - have the "hot buttons" been pushed, and have any other image changes been effected - desirable or otherwise ? What is the likely share outcome ?

What APPRAISE will not do is to explain why a given advertising <u>executional style</u> is not achieving a desired image shift. If this is required, some additional small-scale qualitative research is usually sufficient.

<u>APPRAISE will however clearly show whether an advertisement (campaign) is on strategy or not, or whether a product idea has potential or not.</u>

Potential attributes/product areas

Servers

Good performance

- CPU performance
- I/O performance
- Interactive response times (actual workload)
- Computational power
- MTBF
- Network throughput
- Server disk access time
- Multiprocessing
- Multiple I/O channels
- Based on 64bit architecture
- Performance monitoring tools

High availability / reliability

- Across the total solution (HW, SW - OS/tools/apps)
- Mirrored drives
- RAID arrays
- ECC memorry
- Redundant components
- Hot swappable components
- Automated server failover
- On-board diagnostics
- Over life of solution (installation, operation, upgrades, repair

Other technical

Disk space availability
Clustering capability
Scalability
Flexibility
System management tools
System security
Multi-vendor interoperability
Mainframe connectivity
Compatible with existing systems
Robust UNIX operating environment
3rd party apps. available
Availability of middleware
Proprietary standards compliance

Range of options within same family

- System performance levels
- Consistent user interfaces
- SW comparible across systems
- Common networking / communication
- Consistent upgrade strategy
- Consistent service offerings

Convenience

Ease of use
Ease of set-up/installation
Ease of access to components
Ease of upgrading to future technologies

Open standards

- Operating environment
- Bus
- Storage options
- Load / back-up media
- Use of industry-standard components (PCI, SCSI, SIMMS)
- Networks / comms
- User interface
- DB, apps
- Industry standards compliance

Low cost of ownership

- Price/performance
- Price-point
- System
- SW (OS/tools/apps)
- Service (HW/SW)
- System/network management, operations
- Investment protection (trade-in, upgrade, SW migr., compat.)

Servers (cont.)

Other non-technical

On-site maintenance options
Extended warranty options
Best value for my needs
Many others will buy system
Primary computer vendor offers system
Long expected system lifetime

Workstations (extras)

Product throughput performance
Availability h/w & s/w configs.
Application availability
Graphics performance

PC's

Price/cost

Initial buying price
Operating cost

Technical

Memory management
High availability features
Interoperability
Conforms to industry standards
Upgradability motherboard/processor
Security
Technical documentation
Network compatibility
Multi-media compatibility
H/W & S/W configs meet needs

Other

On-site warranty
Ease of set-up
Ease of use
Extended warranty
Quality of finish
Product design/ergonomics
Environmental

O/S's

Overall quality

Reliability/dependability
Performance
Quality of code
Robustness
Scalability
Heterogeneous network management capability
Non-proprietary

Completeness

System security
C2 security level complaint
Network-wide system management/admin
Recovery from failure
File system robustness
Clustering capabilities
Storage/media management

Production system capabilites

Real time features
Multiprocessing-enhanced performance
Multitasking
High-level OLTP environment
High TCP-IP performance
Utilities
Messaging systems
File transfer services
Distributed databases

User environment features

GUI
Integrated systems management tools
Richness of features

Business/technical s/w

Off-the-shelf bus./comm. appl. s/w
Off-the-shelf eng./sci. appl. s/w
3rd party s/w availability
Vertical and horizontal apps. available
S/W versions available for all geographies

Complete business/technical s/w dev. environment

S/W development tools
3rd party CASE tools availability
DB tools
Database management s/w
High level languages
Object oriented languages
Extensive object-oriented class library
Distributed computing tools
Client-server development tools
Heterogeneous development environment

Ease of support, price

Requires minimum on-site expertise
Ease of s/w installation
OS vendor's s/w support
OS price-point

Openness

Can run on multiple h/w arch.
Growth/migration potential
Portability of apps.
X/open portability
Spec 1170 compliant
Open C/S app. dev. tools
Open C/S app./data distribution tools
H/W standards support (PCI, SCSI, SIMM, Ethernet)
S/W standards support (XOpen, XPG3/4, DEC,TCP-IP)

Internationalisation/documentation/training

Multiple character sets permitting international document exchange
Documentation
Training costs

Product lines
Project descrip. / Ex
... Case Study

Network O/S

Network h/w, s/w support capabilities
Integrated network system management tools
Automated systems/network operations support
Distributed applications performance management
Supports performance simulation
Legacy environment interoperability
Mail/messaging/queueing in heterogeneous env.
Supports directory services
Supports naming services
Supports UNIX and PC's
Use of object-oriented technologies
Standards compliance (DCE, SQL, CORBA)
Ease of installation
Ease of use
Local language support

Middleware

Seamless integration of customer data/apps
Apps available on heterogeneous systems
Desktop productivity whilst maintaining security of enterprise computing environment/data
Availability management
Security management
System administration
Reliable TP integration with customer DB's
High credibility in data-access
High credibility in data integration
High credibility in object-oriented technologies
High credibility in DCE
High credibility in desktop integration with heterogeneous environments
Integrated ~~layered (?)~~ products
~~Layered (?)~~ products interoperability
Legacy products interoperability
PC standards compliance

Services

Planning/design services
Installation support
Distribution/installation of s/w
Performance management
Availability management
Security management
System administration
Software management
Network management
Multivendor maintenance
Support staff training
End-user training
Support calls
Fair fee-structures
Offers service warranties

Vendor's channels (policy)

Products widely available (++ channels)
Good partner relationships
Clear messages to partners
Easy to purchase their products thro' channel
Have trustworthy channels
- and other "image criteria"
Etc. +++

Vendor image

Financially stable
Trustworthy
Innovative
Flexible
Consistent
Friendly
Authoritative
Experienced
Offers independant advice
Openness of strategy/plans
Meets deadlines
No unexpected costs
Broad offering (to limit number of suppliers)
Rapidly addresses new technology needs
Rapid response to evolving customer needs
Customer/end-user focussed
Understands my business
Easy company to do business with
Provides practical solutions
Respects commitments
Enthusiastic sales reps
Personnel turnover too high
Satisfactory invoicing administration
Simple software licensing
Interested in long-term relationships
High value of products/services to customer's business
Global knowledge/capabilities
Price/performance leadership
Expensive
Easy-to-use products
Hardware performance
Reliable hardware
Software performance
Reliable software
Standard software interfaces
Continuous new product offerings
Effective multivendor systems interoperability
Provides effective 3rd party solutions
Leverages outside technology/innovation through partnerships
Industry-standard warranty
Good systems maintenance
Multi-vendor systems maintenance capability
Strong professional services
Offers good training services
Supports industry standards
Has clear business strategy/plans
It is our policy to work with this company
+ Business / economic benefits

Non end-user (VAR/ISV) needs

Create excitement about DEC vision/products

- Internal product positioning
- Long-term mktg strategy
- Technology strategy
- Simple statements

Create competitive edge, market demand

- Identify, deliver, announce competitive advantages
- Joint mktg progs with 3rd parties
- High visibility campaigns

Clear marketing strategy

- By vertical/horizontal market
- By type of application (technology/TG's/migr. strategy)

Current business practices

- Discounts/warranty/trade in or up/upgrades/leasing/SW licensin

Competitive prices for customer, margins for me

- Competitive discounts/allowances/T&Cs/licensing

Support low implementation costs

- Development/deployment/maintenance

Handle orders

- Quote for orders , close, schedule, deliver on time

Commit to and achieve product financial goals

- Cost
- Market goal (% share, profitability, etc.)
- Development costs (pricing, product assumptions, cannibalisation

Commit to and achieve product schedule goals

- Ship all system/solution components
- Announcement timing
- Evaluate and discuss schedule risks

CSD "IT buyers" segmentation
Some potential "passive variables"

Primary function(s) of dept.

- Finance/administration
- Marketing/sales
- Customer service
- Manufacturing
- Engineering
- Purchasing
- MIS/EDP
- Datacom/telecoms
- S/W development
- Education/training
- Research
- Consulting
- Personnel / HR

Primary end-product / service
- Automotive
- Aerospace
- Engineering
- Financial services
- Chemical/petroleum
- Insurance
- Electronics
- Transportation
- Computer S/W
- Computers / peripherals
- Computer distributor/OEM
- Utility
- Architechture/construction
- Heavy equipment / machinery
- Printing/publishing
- Defence
- Consulting / professional
- Pharaceutical / medical
- Telecommunications
- Food / agrculture
- Education
- Research
- Consumer / retail goods
- Hospitality

Primary computing applications (used/would like)
- Office automation
- Accounting / administration
- Payroll
- Employee record management
- Plant / manufacturing management
- Factory automation / CIM
- Experiment / process control
- Production / inventory management
- Distribution / warehouse management
- Order / transaction processing
- Securities / currency trading
- Banking
- Reservation systems
- Claims processing
- Sales & marketing
- Customer servicing
- Mathematical / statistical analysis
- Systems simulation
- AI / expert systems
- Electronic design / analysis
- Mechanical design / analysis
- Business / financial analysis
- Project management
- Graphic simulation / animation
- Image processing / enhancement
- Electronic publishing
- Education / training
- Systems s/w development
- Applications s/w development
- Computer system / network managment
- Database access / retrieval
- Telecoms / datacoms

Primary and "also used" computing systems installed

Primary and "also used" operating systems installed

Network OS's installed

CSD "IT buyers" segmentation
Possible "product areas" for individual choice models

Types of equipment

- High performance scientific
- Engineering WS
- Enterprise/TP servers
- DB / Appl. servers
- File & print servers
- Desktop PC
- Mobile PC

- High end server
- Low end server
- Workstations
- PCs

- PC's
- Low-end workstations (RISC)
- Low-end workstations (Intel)
- High-end workstations
- Low-end servers (RISC)
- Low-end servers (Intel)
- Dept./enterprise servers

Types of computer usage

Administration
- Office automation
- Accounting / administration
- Payroll
- Employee record management

Production
- Plant / manufacturing management
- Factory automation / CIM
- Experiment / process control
- Production / inventory management

Commercial
- Order / transaction processing
- Securities / currency trading
- Banking
- Reservation systems
- Claims processing
- Sales & marketing
- Customer servicing

Technical / professional
- Electronic design / analysis
- Mechanical design / analysis
- Systems simulation
- AI / expert systems
- Mathematical / statistical analysis
- Business / financial analysis
- Project management

Communication
- Image processing / enhancement
- Electronic publishing
- Education / training
- Graphic simulation / animation
- E-mail/fax/Internet

IT management & development
- Systems s/w development
- Applications s/w development
- Computer system / network managment
- Telecoms / datacoms

Other(s)

Business process automation
- Workflow automation
- Groupware
- Data warehousing
- E-mail
- Customer access to online data
- End-to-end BPA

Commercial/electronic commerce
- Order / transaction processing
- Securities / currency trading
- Banking
- Reservation systems
- Claims processing
- Sales & marketing
- Customer servicing
- EDI
- On-line info (eg Dow jones)

IT management & development
- Systems s/w development
- Applications s/w development
- Computer system / network managm
- Telecoms / datacoms
- Client/server SW development

Administration
- Office automation
- Accounting / administration
- Payroll
- Employee record management

Production
- Plant / manufacturing management
- Factory automation / CIM
- Experiment / process control
- Production / inventory management

Personal/managerial
- Mobile and/or remote access
- Telecomputing
- Decision support

Technical / professional
- Electronic design / analysis
- Mechanical design / analysis
- Systems simulation
- AI / expert systems
- Mathematical / statistical analysis
- Business / financial analysis
- Project management
- Visualization (VR)

Embedded intelligence
- eg "smart" buildings

Product lines

Project descrip. / tim

BMW case study

CSD "IT buyers" segmentation
Some potential "passive variables" (2)

/H/W

Annual budget for purchasing/ ~~renting~~ computers (S/W, SVCS)
- < 10K
- 10-50K
- 50-100K
- 100-500K
- 500K-2M
- > 2M ++ 5-10 10+ .

Annual revenues / funding of company / institution
- < 5M
- 5-10M
- 10-20M
- 20-50M
- 50M-1B
- > 1B

Function(s) of respondent
- CEO
- CFO
- Dept. Head
- IT Director/Manager
- Staff
- Consultant
- Systems manager
- Engineer
- Researcher
- Systems analyst
- Systems programmer
- S/W developer
- Computer operations
- Other MIS/EDP professional
- Other

Industry
- Agriculture, mining, construction
- Manufacturing
- Transportation, communication, utilities
- Wholesale, retail
- Banking, investment, insurance
- Services (bus./prof./edp)

Geography
- USA
- France
- Germany
- UK

Role in buying decision
- Solely responsible for decision
- Make final decision based on recommendations
- Leader of group responsible for decision
- Member of group responsible for decision
- Make recommendation, not final decision
- Provide technical davice
- Do not participate in purchase decisions

Current situation in buying cycle (by product area)

Channels used/preferred
- Direct from vendor
- VAR/ISV
- Distributor
- Mass-merchandiser

Use of applications involving distributed infrastructure (middleware)

Processor preferences (RISC/Intel) ?

I **Technology adoption style**
- Early adopter/early majority/late majority/laggard

Centralised/decentralised company

Company situation
- Mature/stagnant
- Turnaround
- Rapid growth
- Rapid industry evolution underway

Product Lines

Product line lists (Page 1)

Workstations	Digital (all)		HP (all)		IBM (all)		Silicon Graphics (all)	
Low-end	DEC 3000-300LX	VMS	HP 9000-712	Unix HP-UX	RS 6000-20	Unix AIX	Indy PC	UNIX IRIX
	DEC 3000-300LX	Unix OSF/1	HP 9000 715/64	Unix HP-UX	RS 6000-25T	Unix AIX	Indy SC/R4000	Unix IRIX
	DEC AlphaStation 200 4/166	VMS	HP Vectra 486/66 XM2 PC	Windows	ValuePoint 4682-LV1 PC	Windows		
	DEC AlphaStation 200 4/166	Unix OSF/1	HP Vectra 486/66 XM2 PC	NT	ValuePoint 4682-LV1 PC	NT		
	DEC AlphaStation 200 4/166	NT	HP Vectra 486/66 XM2 PC	OS2	ValuePoint 4682-LV1 PC	OS2		
	DEC Celebris 466d2 PC	Windows						
	DEC Celebris 466d2 PC	NT						
	DEC Celebris 466d2 PC	OS2						
Midrange	DEC AlphaStation 3000-700	VMS	HP 9000 715/100	Unix HP-UX	RS 6000-3AT	Unix AIX	Indigo 150	Unix IRIX
	DEC AlphaStation 3000-700	Unix OSF/1	HP 9000 735/125	Unix HP-UX	RS 6000-3BT	Unix AIX		
	DEC AlphaStation 3000-700	NT			PC 730 P90	Windows		
	DECpc XL 590	Windows			PC 730 P90	NT		
	DECpc XL 590	NT			PC 730 P90	OS2		
	DECpc XL 590	OS2						
High-end	DEC AlphaStation 3000-900	VMS	HP 9000 755	Unix HP-UX	RS 6000 59H	Unix AIX	Crimson	Unix IRIX
	DEC AlphaStation 3000-900	Unix OSF/1						
	DEC AlphaStation 3000-900	NT						

Product line lists (Page 2)

Workstations	Sun (all)		Compaq (all)		Dell (all)		SNI (Germany)	
Low-end	Sun Classic	Unix SunOS	DeskPro XE4/66 M270 PC	Windows	Optiplex 466/MXe PC	Windows	RW 320-360	Unix SINIX
	Sun Classic	Unix Solaris	DeskPro XE4/66 M270 PC	NT	Optiplex 466/MXe PC	NT	RW 320-340	Unix SINIX
	Sun SparcStation 5/70	Unix SunOS	DeskPro XE4/66 M270 PC	OS2	Optiplex 466/MXe PC	OS2		
	Sun SparcStation 5/70	Unix Solaris						
	Sun SparcStation 5/85	Unix SunOS						
	Sun SparcStation 5/85	Unix Solaris						
Midrange	Sun SparcStation 20/61	Unix SunOS			Optiplex XL 590 PC	Windows	RW 362	Unix SINIX
	Sun SparcStation 20/61	Unix Solaris			Optiplex XL 590 PC	NT		
					Optiplex XL 590 PC	OS2		
High-end	Sun SparcStation 20/612MP	Unix Solaris					RW 460	Unix SINIX
	Sun SparcStation 20/514MP	Unix Solaris						

BMW Case Study

Project descrip. / timing

Product line lists (Page 2)

Workstations	Sun (all)		Compaq (all)		Dell (all)		SNI (Germany)	
Low-end	Sun Classic	Unix SunOS	DeskPro XE4/66 M270 PC	Windows	Optiplex 466/MXe PC	Windows	RW 320-360	Unix SINIX
	Sun Classic	Unix Solaris	DeskPro XE4/66 M270 PC	NT	Optiplex 466/MXe PC	NT	RW 320-340	Unix SINIX
	Sun SparcStation 5/70	Unix SunOS	DeskPro XE4/66 M270 PC	OS2	Optiplex 466/MXe PC	OS2		
	Sun SparcStation 5/70	Unix Solaris						
	Sun SparcStation 5/85	Unix SunOS						
	Sun SparcStation 5/85	Unix Solaris						
Midrange	Sun SparcStation 20/61	Unix SunOS			Optiplex XL 590 PC	Windows	RW 362	Unix SINIX
	Sun SparcStation 20/61	Unix Solaris			Optiplex XL 590 PC	NT		
					Optiplex XL 590 PC	OS2		
High-end	Sun SparcStation 20/612MP	Unix Solaris					RW 460	Unix SINIX
	Sun SparcStation 20/514MP	Unix Solaris						

Product line lists (Page 3)

Workstations	Data General (Germany)		Escom (Germany)	Highscreen (Vobis) (Germany)	Zenith ZDS (France)	Macintosh (France)
Low-end	AV 530/532 AV 410/412	Unix DG-UX Unix DG-UX				
Midrange	AV 500	Unix DG-UX				
High-end	AV 550	Unix DG-UX				

DMW case study

Project descrip./timing

Product line lists (Page 4)

Workstations	Olivetti (UK)	AST (UK)	Elonex (UK)	Gateway (UK)
Low-end				
Midrange				
High-end				

Product line lists (Page 5)

	Digital		HP		IBM		Silicon Graphics
Servers							
"Workgroup"	DEC AlphaServer 1000 4/200	VMS	HP 9000 E25	Unix HP-UX	RS 6000-250	Unix AIX	
	DEC AlphaServer 1000 4/200	Unix OSF/1	HP 9000 E45	Unix HP-UX	RS 6000-390	Unix AIX	
	DEC AlphaServer 1000 4/200	NT	HP 9000 E55	Unix HP-UX	AS400 Server 30S-2411	OS400	
	DEC MicroVAX 3100-85	VMS	HP Netserver 4/66 LF PC	WfW	PC server 466	WfW	
	DEC MicroVAX 3100-95	VMS	HP Netserver 4/66 LF PC	Netware	PC server 466	Netware	
	DEC MicroVAX 4000-105A	VMS	HP Netserver 4/66 LF PC	NT/server	PC server 466	NT/server	
	DEC Prioris XL 466 PC	WfW	HP Netserver 4/66 LF PC	SCO-Unix	PC server 466	SCO-Unix	
	DEC Prioris XL 466 PC	Netware	HP Netserver 4/66 LF PC	OS2/server	PC server 466	OS2/server	
	DEC Prioris XL 466 PC	NT					
	DEC Prioris XL 466 PC	SCO-Unix					
	DEC Prioris XL 466 PC	OS2					
"Department"	DEC AlphaServer 2000 4/200	VMS	HP 9000 G50	Unix HP-UX	RS 6000 58H	Unix AIX	
	DEC AlphaServer 2000 4/200	Unix OSF/1	HP 9000 H60	Unix HP-UX	RS 6000 G30	Unix AIX	
	DEC AlphaServer 2000 4/200	NT	HP 9000 H70	Unix HP-UX	RS 6000 590	Unix AIX	
	DEC AlphaServer 2100 4/200	VMS	HP 9000 H170	Unix HP-UX	RS 6000 J30	Unix AIX	
	DEC AlphaServer 2100 4/200	Unix OSF/1	HP Netserver 5/90 LM PC	WfW	RS 6000 59H	Unix AIX	
	DEC AlphaServer 2100 4/200	NT	HP Netserver 5/90 LM PC	Netware	AS400 Server 20S-2010	OS400	
	DEC AlphaServer 2100 4/275	VMS	HP Netserver 5/90 LM PC	NT/server	AS400 Server 30S-2412	OS400	
	DEC AlphaServer 2100 4/275	Unix OSF/1	HP Netserver 5/90 LM PC	SCO-Unix	PS/2 Server 95 5/90	WfW	
	DEC AlphaServer 2100 4/275	NT	HP Netserver 5/90 LM PC	OS2/server	PS/2 Server 95 5/90	Netware	
	DEC VAX 4000-505A	VMS	HP Netserver 5/90 LM2 (dual pr.) PC	WfW	PS/2 Server 95 5/90	NT/server	
	DEC VAX 4000-705A	VMS	HP Netserver 5/90 LM2 (dual pr.) PC	Netware	PS/2 Server 95 5/90	SCO-Unix	
	DEC Prioris HX590 PC	WfW	HP Netserver 5/90 LM2 (dual pr.) PC	NT/server	PS/2 Server 95 5/90	OS2/server	
	DEC Prioris HX590 PC	Netware	HP Netserver 5/90 LM2 (dual pr.) PC	SCO-Unix			
	DEC Prioris HX590 PC	NT/server	HP Netserver 5/90 LM2 (dual pr.) PC	OS2/server			
	DEC Prioris HX590 PC	SCO-Unix					
	DEC Prioris HX590 PC	OS2/server					
	DEC Prioris HX590 (dual pr.) PC	WfW					
	DEC Prioris HX590 (dual pr.) PC	Netware					
	DEC Prioris HX590 (dual pr.) PC	NT/server					
	DEC Prioris HX590 (dual pr.) PC	SCO-Unix					
	DEC Prioris HX590 (dual pr.) PC	OS2/server					
"Enterprise"	DEC AlphaServer 7000-700	VMS	HP 9000 T500	Unix HP-UX	RS 6000 R24 clusters	Unix AIX	
	DEC AlphaServer 7000-700	Unix OSF/1			RS 6000 R30 clusters	Unix AIX	
	DEC VAX 7000-700	VMS					
PCs	DEC Venturis 433dx PC	Windows	HP Vectra VL2 4/33dx2 PC	Windows	IBM Aptiva 4/33dx2 PC	Windows	
	DEC Celebris 466d2 PC	Windows	HP Vectra XM2 4/66dx2 PC	Windows	IBM Value Point 4/66dx2 I	Windows	
	DECpc XL 5/90 PC	Windows	HP Vectra XP60 5/60 PC	Windows	IBM 330 P/90 PC	Windows	
	DEC Prioris HX5/90 PC	Windows	HP Vectra XU60 5/60 PC	Windows	IBM 730 P54C/90 PC	Windows	

DRW case study

Project descrip. / timing

Product line lists (Page 6)

	Sun		Compaq		Dell		SNI	
Servers								
"Workgroup"	Sun SparcServer 5/85	Unix Solaris	Prosignia 466 M1050	WfW			RM 220-120	Unix SINIX
	Sun SparcServer 20/61	Unix Solaris	Prosignia 466 M1050	Netware			RM 220-125	Unix SINIX
			Prosignia 466 M1050	NT			RM 400-220	Unix SINIX
			Prosignia 466 M1050	SCO-Unix			RM 400-420	Unix SINIX
			Prosignia 466 M1050	OS2			RM 400-430	Unix SINIX
"Department"	Sun SparcServer 20/612	Unix Solaris	Proliant 1000 5/60	WfW	Power-Edge XE2 5/90 (dual pr.)	WfW	RM 400-440	Unix SINIX
	Sun SparcServer 1000E	Unix Solaris	Proliant 1000 5/60	Netware	Power-Edge XE2 5/90 (dual pr.)	Netware	RM 400-540	Unix SINIX
			Proliant 1000 5/60	NT/server	Power-Edge XE2 5/90 (dual pr.)	NT/server	RM 400-6XX	Unix SINIX
			Proliant 1000 5/60	SCO-Unix	Power-Edge XE2 5/90 (dual pr.)	SCO-Unix		
			Proliant 1000 5/60	OS2/server	Power-Edge XE2 5/90 (dual pr.)	OS2/server	RM 600-220	Unix SINIX
			Proliant 2000 5/60 (dual pr.)	WfW			RM 600-230	Unix SINIX
			Proliant 2000 5/60 (dual pr.)	Netware			RM 600-240	Unix SINIX
			Proliant 2000 5/60 (dual pr.)	NT/server				
			Proliant 2000 5/60 (dual pr.)	SCO-Unix				
			Proliant 2000 5/60 (dual pr.)	OS2/server				
"Enterprise"	Sun Sparc~~server~~ center 2000E	Unix Solaris					BS 2000	Unix SINIX
PCs			Compaq Prolinea 4/33S PC	Windows	Dell Optiplex LE 4/66dx2 PC	Windows	SNI DT 486dx2-33 PC	Windows
			Compaq DeskPro XE4/66 PC	Windows	Dell Optiplex LE 4/66dx2 PC	Windows	SNI DT 486dx2-66 PC	Windows
			Compaq DeskPro XL 5/90 P(	Windows	Dell Optiplex L 560 PC	Windows	SNI DT 5/90 PC	Windows

Product line lists (Page 7)

	Data General		Escom		Highscreen (Vobis)		Zenith ZDS		Macintosh	
Servers										
"Workgroup"	AV 4605	Unix DG-UX								
	AV 4625	Unix DG-UX								
"Department"	AV 5500	Unix DG-UX								
	AV 8500	Unix DG-UX								
"Enterprise"	AV 9500	Unix DG-UX								
PCs			Escom DT 486dx-33 PC	Windows	Highscreen 400 ZE-4/80dx2 PC	Windows	Zenith Select 100 4/33Sc PC	Windows	Mac LC	MacOS
			Escom DT 486dx2-66 PC	Windows	Highscreen 500 ZE-5/60 PC	Windows	Zenith Station 500 4/66Sh PC	Windows	PowerMac 7100/60	MacOS
			Escom DS Pentium PC	Windows	Highscreen 500 ZE-5/90 PC	Windows	Zenith Station EX 540 PC	Windows	PowerMac 8100/100	MacOS

Product line lists (Page 8)

	Olivetti	AST	Elonex	Gateway
Servers "Workgroup" "Department" "Enterprise"				
PCs	Olivetti Modulo M4 4/50dx2 PC Windows Olivetti M4 82 5/60 PC Windows Olivetti M6-640 5/90 PC Windows	AST Bravo 4/66dx2 PC Windows AST Bravo MS P/90 PC Windows AST Premmia GX P/90 PC Windows	Elonex 450M 4/50dx2 PC Windows Elonex 560M 5/60 PC Windows Elonex 590M 5/90 PC Windows	Gateway 4/50dx2 PC Windows Gateway P5/60 PC Windows Gateway P5/90 PC Windows

DMW Case Study

Project descrip. / timing

Consultant agreement

This AGREEMENT is made between Digital Equipment Corporation, its successors and its subsidiaries worldwide ("DIGITAL") and The Research Business Group, Holford Mews, Cruikshank St., London WC1X 9HD, UK and its subsidiaries The Research Business, The Research Business International, Focus-on-Research and Sandpiper International all at the same address and its agents, servants, employees and subcontractors (collectively the "CONSULTANT") for the purpose of setting forth the exclusive terms and conditions by which DIGITAL acquires the CONSULTANT's services on a temporary basis.

In consideration of the mutual obligations specified in this AGREEMENT, and any compensation paid to the CONSULTANT for its services, the parties agree to the following:

A) Order

DIGITAL commissions the CONSULTANT to undertake a Market Segmentation and Modelling project in four countries (USA, UK, France, Germany) in line with the CONSULTANT's proposal No 4758 dated 7th October 1994 and the modification No 4758R of 9th December 1994. Key elements of the programme as a whole, and terms and conditions for its execution, are set out below:

1. Qualitative research

1.1 To provide an understanding of:
- The IT purchasing decision processes
- Purchasers' perceptions of IT product "groups/areas", and key competitive product families within them.
- Product group and vendor image attributes for subsequent quantitative reduction.
- Distribution channel perception attributes and criteria.
- Evaluation of usable passive variables

1.2 Sample of 18N individual interviews per country (total 72N) among technical (IT/Systems/PC-LAN Managers) and non-technical (senior/middle business managers such as Managing/Financial Directors or professional end-users) buyers, working in firms with large/medium/small IT user levels, covering PC's, workstations, servers, etc., as proposed.

1.3 Interviews to be conducted face-to-face in the vernacular by experienced IT interviewers who are local nationals; interview length up to 60 minutes. Summary analysis, report, listings in English and local language.

2. Quantification/selection of product groups / attribute batteries

2.1 Based on quantified survey of target group (possibly with additional Digital inputs), select attribute sets for product groups and overall vendor perceptions offering maximum discrimination with minimum redundancy between vendors/product families. Also check survey functionality of distribution channel attributes and passive variables.

2.2 Personal interviews (CAPI) with samples of 63N target group respondents per country rating first key products within product groups familiar to them, then overall vendor perceptions, product/vendor buying intentions, finally passive variables.

2.3 Whilst checking for significant country specificities, the analysis will in principle be based upon the cross-country survey data by product groups, and overall for vendors. Main analysis and attribute selection to take place on-line interactively with client using Sandpiper Attribute Selection S/W Suite. Final output consists of report with recommended product groups, attribute listings per product group and for overall vendor evaluations (listings in English and local language), passive variables, attribute dictionaries.

3. Main quantitative survey

3.1 Final specification to depend on outcome of Stages 1+2. The objective will be to provide the survey basis for producing "like-minded" (ie. similar " need" structures) buyer segmentations, then interactive choice models (a) overall, (b) individually for each country and (c) for up to 7 product groups across all countries, each "tagged" with appropriate passive variable identifiers for subsequent marketing utilisation.

3.2 Personal interviews (CAPI) at the place of work with samples of 375N professional and 63N non-professional target group respondents per country rating:

Within product groups:

- Attributes for products familiar to them
- Ideal product for each of their needs on all attributes
- Buying intentions for each product in the context of each of their needs

On overall basis:

- Attributes for vendors known to them, channels attributes
- Ideal vendor for each of their needs on all attributes
- Buying intentions for each vendor in the context of each of their needs
- Passive variables

BMW Case Study

3.3 Deliverables

- Multivariate segmentations into "need state" groups, defined on the basis of "ideal product" ratings and of attribute importances, tagged by passive variables to allow detailed identification, sizing and subsequent "findability". The premise here is that it is the usage need which drives the purchase decision and hence provides the best understanding of behaviour. Segmentations to be produced as indicated under Para 3.1 above. Client preview to be foreseen prior to definitive choice of the appropriate solution (ie. number of segments).
- 13 SCRIBE choice models to be built (for the time being also as per Para 3.1; depending on results it may be decided to substitute "need state" models for certain of those listed). Each model analysed/reported as follows:
  - Disaggregated calculation of importances.
  - Mapping(s).
  - Thermometer charts.
  - Sensitivity analyses
  - Evaluation of optimal image shifts and necessary image holds for Digital products and for "Digital" as a corporate entity, with share implications. Also for some key competitors.
  - Brand user analysis for named Digital products, Digital and some key competitors, with passive variable crosstabs.
  - Loyalty index
  - Stand-out analyses.
  - Analyses in reponse to a limited number of specific marketing questions, to be defined by Digital.

  Models to be available on-line electronically to permit simulation work conducted from various Digital sites (max. 5).
- Each model should yield a recommendation for optimal marketing, channels and communication strategies (current and marginal target groups, channels and messages) together with an estimate of market potential, for Digital and named products, and (as appropriate) feedback on agreed marketing questions.
- Additional models and consultancy to be available on ad hoc basis.
- Final presentation and final report including segmentation and model data tabulations, marketing conclusions and recommendations.

4. Timing, costs, other provisions

4.1 Timing

Project Stage	Timing	Activity	Responsible	Location	Duration
Phase 1	W1	Kick-off meeting Qualitative phase (1)	TRB/PM/ET	London	1 day
	W6	Presentation meeting / briefing Phase 2	TRB/PM/ET	Geneva	
	W7	*Review of findings with PM&D*	*PM/PM&D*	*Telecon*	
Phase 2	W8	Quantitative phase - Attribute Selection	TRB		
	W14	Preview of results meeting with TRB	PM/TRB	London	1 day
	W15	Attribute selection meeting with PM&D; briefing Phase 3	TRB/PM/PM&D	USA	2 days
Phase 3	W16	Quantitative phase - Main Survey	TRB		
	W27	Pre-presentation meeting with TRB	PM/TRB	London	1 day
	W28	Presentation meeting	TRB/PM/ET/PM&D	USA	1 day
	W32	Final report	TRB		

NB: PM&D is the Digital-USA client for this study

4.2 Costs (UK pounds sterling)

UK	France	Germany	USA	Total
95'029	82'739	102'359	116'839	396'966

- The above costs include all expenditures associated with the execution of the research, eg. questionnaire translations, incentives, fieldwork, analysis, project consultancy and management, presentations and the time commitments forseen in fulfilling the above meeting schedule. Availability will also be required from the project staff for project-related telephone discussions, and is also included.
- Billing will be 70% on commissioning, 30% on delivery of the final report; terms of payment are 30 days net. Phase 1+2, and then separately Phase 3, will be considered as discrete sections of the project, and thus be billed separately.
- Travel and subsistence costs for which prior approval has been obtained from Digital will be reimbursed at cost provided they meet Digital travel policy guidelines. Courier charges will also be reimbursed. Copies of invoices required.
- Above costs assume LGB/local currency exchange rates quoted in proposal; changes +/- >5% would trigger corresponding readjustment.
- Costs of extra models would be LGB 7'500, including modelling, analysis and a written debrief.

DMW Case Study

- Fees for additional ad hoc consultancy would be LGB 1'000 (Director level - Ray Poynter) and LGB 750 (Associate Director level - Myriam Comber) per day plus travel OOP's.

4.3 <u>Other provisions</u>

- The proposed CONSULTANT research team is acceptable to DIGITAL. We do however require that the quantitative phases be carried out under the responsibility of the CONSULTANT's Sandpiper personnel as proposed, with Dr. Myriam Comber as Manager for the project, and with the research design input and ongoing availability for consultancy of Mr. Ray Poynter. It is also required and agreed that both Myriam Comber and Ray Poynter will attend the briefing and debriefing/ presentation sessions with DIGITAL.
- Given the strategic importance of this research project to DIGITAL, its considerable scope and the attendant plethora of research issues, DIGITAL wishes to be fully informed on progress, and as appropriate involved, notably at the design, analysis and research/marketing conclusion stages. DIGITAL therefore requires that the CONSULTANT researchers and consultant be readily available for the necessary ongoing discussions, telecons, etc., and that the CONSULTANT makes its best endeavours to carry out the research project as defined in this AGREEMENT. On its side DIGITAL will provide the CONSULTANT with the names of the personnel representing DIGITAL and responsible for managing the project, who may be readily contacted by the CONSULTANT, and who will ensure ongoing support from DIGITAL.
- It is agreed that DIGITAL is responsible for providing the CONSULTANT with the specified quantities of addresses for conducting the research.
- In commissioning the overall project DIGITAL nevertheless reserves the right not to proceed with Stage 3, if in its view the results of Stages 1 + 2 are not satisfactory or do not indicate sufficient practical marketing usability of models built on that basis. Costs for the attribute development/selection part of the research (Stages 1 + 2) amount to LGB 98'090, and should DIGITAL decide not to continue at that point, its liability to the CONSULTANT would be limited to LGB 98'090 (plus any approved travel costs/incidentals).
- The CONSULTANT's proposals regarding confidentiality are acceptable to DIGITAL, but must furthermore exclude the possibility of any aspect of the research project being communicated to its parent company Maritz Holdings Ltd. This should kindly please be confirmed in CONSULTANT's formal Research Confirmation letter.
- As proposed, it is agreed that this research project shall be conducted in line with the AMSO Code of Conduct.

B) The CONSULTANT shall acknowledge and return the signed copy of the order with 15 days of receipt.

C) In the event that any provision of the AGREEMENT is found to be legally unenforceable, such unenforceability shall not prevent enforcement of any other provision of the AGREEMENT.

D) CONSULTANT warrants that its fees and charges to DIGITAL are no more than those charges to any other CONSULTANT customer for a similar project.

E) To avoid conflict of interest in its dealings with third parties (eg. technical and/or business advice), the CONSULTANT agrees not to advise any third parties with respect to the subject matter of the concerned dealing during or after termination of its Consultancy Agreement with DIGITAL.

F) This AGREEMENT shall be governed by English law.

IN WITNESS THEREOF, the parties hereto have executed this agreement this .... day of ...., 1994.

Digital Equipment Corporation	The Research Business Group Consultant
______________________	______________________
Authorised representative	Authorised agent
Date: ______________________	Date: ______________________

BMW Case Study

End-user segmentation study				
Schedule				
	Start		**End**	**No working days**
Stage 2				
Lists arrive	6-Mar			
Recruitment spec agreed	17-Mar			
Lists despatched	20-Mar			
Sampling	21-Mar	to	24-Mar	4
Pre-recruitment can start	27-Mar			
Briefing meeting	10-Mar			
Questionnaire development - paper	13-Mar	to	14-Mar	2
Approval of paper questionnaire	16-Mar			3
Questionnaire programming	17-Mar		22-Mar	4
Draft CAPI questionnaire checked	23-Mar			2
Revisions to CAPI questionnaire	24-Mar	to	27-Mar	2
Final approval of CAPI questionnaire	28-Mar			2
Despatch of disks	30-Mar			3
Fieldwork period	3-Apr	to	21-Apr	15
Data received by	25-Apr			3
Internal attribute delete	27-Apr	to	4-May	3
Pre-debrief to PM	8-May			8
Full debrief	11-May			4
Stage 3				
Commission Stage 3	19-May			7
Lists arrive	25-May			
Recruitment spec agreed	23-May			
Lists despatched	23-May			
Sampling	24-May	to	31-May	
Pre-recruitment can start	1-Jun			
Questionaire development (paper)	22-May	to	25-May	4
Approval of paper questionnaire	30-May			4
Questionnaire programming	1-Jun	to	7-Jun	5
Draft CAPI disk for approval	8-Jun			2
Revisions to CAPI disk	12-Jun		15-Jun	4
Final approval of CAPI disk	19-Jun			3
Despatch of disks	21-Jun			3
Fieldwork period	23-Jun	to	3-Aug	30
Last disks returned	7-Aug			3
Data processing	8-Aug	to	21-Aug	10
Analysis	22-Aug	to	4-Sep	10
Pre debrief	8-Sep			5
Debrief	14-Sep			5
				135

MC 10/2/95

BMW Case Study