

FUTURE SERVICE REQUIREMENTS
NAS EUROPEAN CUSTOMER SURVEY

JUNE 1987



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ABSTRACT

This report contains the results of research conducted by NAS and analysed by INPUT during the first half of 1987.

The report examines the perceptions of existing customers about the extent and quality of NAS services and makes recommendations for new services based on an analysis of the response and general technical and commercial evolution of the maintenance sector in the computer market.

Problem areas also are identified by type of service or by country and appropriate recommendations made to ensure that NAS is able to optimise their profile in the marketplace.

This report contains 107 pages, including 54 exhibits.



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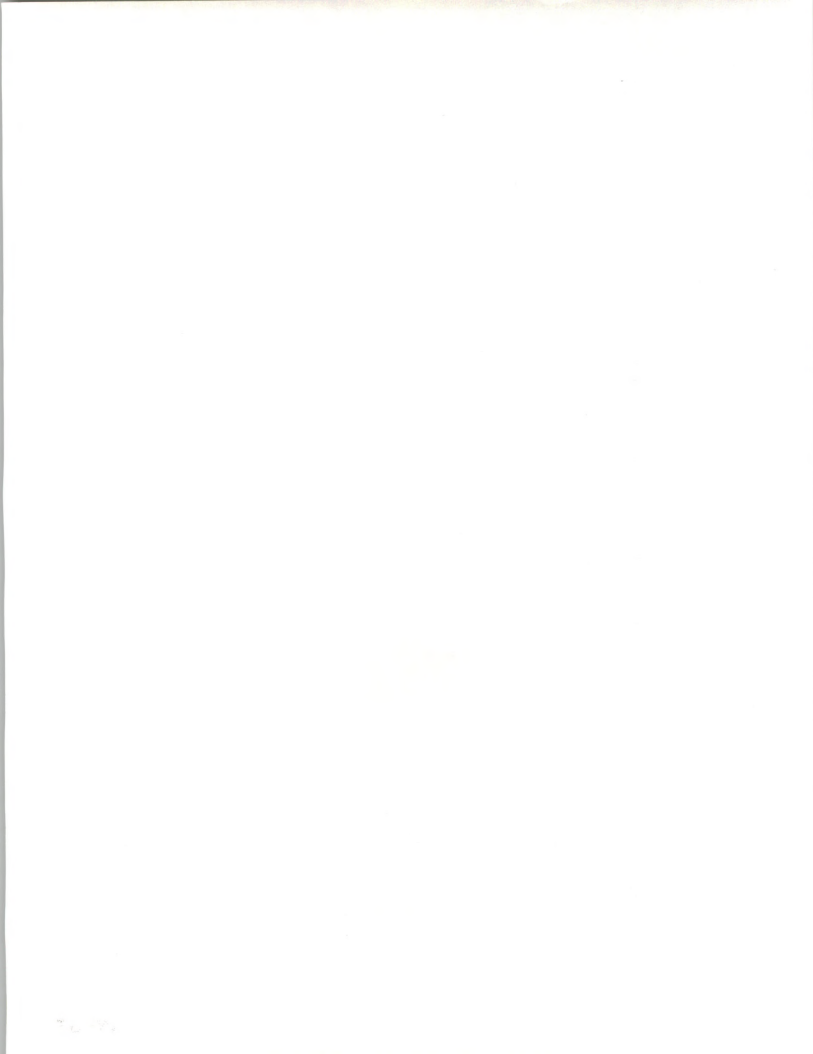


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I INTRODUCTION

I INTRODUCTION

A. PURPOSE AND SCOPE OF REPORT

- This report gives the results of interviews with NAS customers, carried out by NAS with a questionnaire designed by NAS and INPUT.
- The overriding aim of the study was to obtain insight into customer attitudes towards additional services that could be provided by NAS.
- Within this overall aim, the study also attempted to:
 - Determine the user 'view' of NAS services.
 - Determine the likely future service needs.
 - Determine necessary NAS actions resulting.
- The results have been analysed by INPUT and are presented together with recommendations for the future.
- The user market base covered comprises the following countries:
 - Austria.
 - Belgium.



- Denmark.
 - France.
 - Germany.
 - Holland.
 - Israel.
 - Italy.
 - Sweden.
 - Switzerland.
 - U.K.
- The user sample size was 161.
 - The incidence of non-NAS equipment has been established in order to determine service policy on 'mixed' sites.
 - In addition, the relative importance of the business sector is established to define strong and weak market areas.
 - The breakdown by country seeks to illustrate cultural or market differences so that future policy in these separate areas can be evaluated.



B. METHODOLOGY

- The data for this study was collected by NAS personnel in face-to-face and telephone interviews during the first half of 1987.
- This data was then sorted and analysed at INPUT and the results tabulated and examined for interpretation.
- The sample size and distribution is shown in Exhibit I-1.

C. REPORT STRUCTURE

- The report comprises three main parts for ease of reference and reading:
 - The Executive Overview, giving a concise summary (Chapter II).
 - The body of the report, giving detail and interpretation (Chapters III through VIII).
 - Summary and Recommendations, giving a review and consolidation of the purpose and interpretation (Chapter IX).
- The chapters are divided as follows:
 - Chapter II: The Executive Overview takes the main findings from each of the other sections and presents these in a simple form as a 'quick guide'.
 - Chapter III: Customer Hardware and Software Covered details the business sectors in which the respondent customers operate, the main



EXHIBIT I-1

SAMPLE SIZE

COUNTRY	SAMPLE SIZE
Austria	26
Belgium	3
Denmark	7
France	10
Germany	31
Holland	8
Israel	21
Italy	24
Sweden	15
Switzerland	4
United Kingdom	12

COUNTRY	SAMPLE SIZE BY NAS REGION
Area Countries*	80
Germany	31
Italy/Switzerland	28
United Kingdom	12
France	10

*Area Countries: Austria, Belgium, Denmark, Holland, Israel, and Sweden.



types of computing hardware, and the operating (software) systems used on this hardware.

- Chapter IV: Support Issues presents the findings related to customer support, engineer call-out, and the general satisfaction levels pertaining to working hours covered and the engineers response time within those hours.
- Chapter V: Potential New Services looks at both customer and NAS suggested new or enhanced services.
- Chapter VI: Bundling and Extended Service Contracts investigates the customers attitude to bundling and individual pricing of services as well as to the provision of an extended service contract.
- Chapter VII: Specific German Requirements details the response to a detailed addition to the questionnaire for Germany only, covering such items as guaranteed response time and guaranteed system availability.
- Chapter VIII: Contact Procedures deals with the customer satisfaction levels registered for the account coordinator, the actual contact procedure between NAS and the customer, and the customer satisfaction levels registered for the equipment performance report produced by NAS.



II EXECUTIVE OVERVIEW

II EXECUTIVE OVERVIEW

- This Executive Overview is designed in a presentation format in order to:
 - Help the busy reader quickly review key research findings.
 - Provide a ready-to-go executive presentation, complete with script, to facilitate group communication.
- The key points of the entire report are summarised in Exhibits II-1 through II-4. On the left-hand page facing each exhibit is the script explaining its content.



A. THE MARKET BASE

- The key results are shown in Exhibit II-1.
- These show a clear bias towards manufacturing, whereas the growth areas in most developed economies are likely to be in finance and services.
- When analysed by country and taking the survey numbers as indicating market base in each country, the four main sectors are finance, government, manufacturing, and services.
- However, market share would apparently be better increased by concentrating on one, or at the most two, business sectors for each individual country.
- But a clear definition of the growth areas of each country economy must be considered at the same time in order to give a planned, and attainable, growth over a five-year period.
- Of the customers surveyed, NAS is really in competition only with IBM, with the two companies covering 94% of the CPUs between them.
- However, in the case of peripherals, NAS has a minimum of 94% of the site population, which should be used as a strong base from which to attack the IBM CPU share.
- There is no strong correlation between type of operating system and business sector or country except for the U.K. (83%), Denmark (80%), and Switzerland (75%).
- However, 96% of the 33 large system NAS customers are on MVS.



KEY RESULTS - MARKET BASE

Business Sectors	Manufacturing & Finance
CPU Population	56% NAS 38% IBM
Peripherals	94% NAS
Operating Systems	96% of Large Systems MVS
	83% of U.K. on MVS
	75% of Switzerland on VM



B. SUPPORT ISSUES

- The key results are shown in Exhibit II-2.
- Sixty percent of the customers felt it unnecessary to have remote support in addition to the call-out engineer:
 - Customers like face-to-face contact.
 - Security is a worry.
- On call-out, France, Holland, Israel, and Italy gave a 100% satisfied response, and these areas should be investigated to see if the 'culture' can be transferred to Belgium, which has a very low satisfaction rating.
- At the 70% significance level only France, Germany, Italy, and the U.K. found the current hours acceptable.
- As a whole, the respondents were just about satisfied with the current hours, but many alternatives were offered, with 40% wanting cover from 144 to 168 hours per week.
- Practically every country has a different requirement for response time, during the day, shift, or week, but, all in all, 97% want the response to be within two hours.
- For finance and manufacturing, applications the response might need to be somewhat quicker if there were no back-up system.



KEY RESULTS - SUPPORT ISSUES

Remote Support	Only 8% Want
Call-Out	93% Satisfied
Current Hours	40% Want Long Cover
Response Time	97% Want within 2 Hours



C. NEW SERVICES

- The key results are shown in Exhibit II-3.
- Ninety-one percent of the customers detailed enhanced services that they wanted, the chief of these being networks and communications.
- The main opportunity areas in customer-originated suggestions, by reason of their customer base size and strength of response, are Austria and Germany.
- From the list of possible enhanced services detailed by NAS, education came top overall, but there were significant variations by country.
- The key opportunity areas here are France and Italy, with overall high levels of interest.
- NAS will need to formulate a strategy on the offers of these new services either:
 - Across the board to all countries according to average strength of interest.
 - To specific countries with high interest.
- 'Bundling' gave one of the highest responses, the majority (77%) requiring debundling, mostly as long as it saves them money.
- Extended service gave a much more even balance with only 41% stating a requirement for it; this might be tied to concerns over cost.
- Seven items were listed by the 31 German respondents, but only the two shown in Exhibit II-3 have significant scores.



KEY RESULTS - NEW SERVICES

New Services	91% Want Enhanced Services
Bundling	77% Want Debundling
Extended Service	Only 41% Would Like
Germany	Guaranteed Response Time and Availability



D. CUSTOMER CONTACT

- The key results are shown in Exhibit II-4.
- The account coordinator is well liked overall, and this would be enhanced by training for a better knowledge of operating software.
- There is also the opportunity of image enhancement if more information could be provided, via this route, on environmental subjects and new hardware.
- Overall, 90% of customers were satisfied with the contact procedure although attention needs to be paid to the Belgian customers.
- There was a high response to the question on equipment performance reports but only a marginal satisfaction level; in this respect it would be interesting, if not obligatory, to determine what is so right in Italy and so wrong in Belgium.



KEY RESULTS - CUSTOMER CONTACT

Account Coordinator	Good Rating at 84%
Contact Procedure	90% Satisfied
Equipment Performance Reports	68% Satisfied



III CUSTOMER HARDWARE AND SOFTWARE COVERED

III CUSTOMER HARDWARE AND SOFTWARE COVERED

- Chapter III analyses the responses concerning:
 - Business sectors addressed.
 - The incidence of NAS CPUs.
 - The incidence of other manufacturers' CPUs.
 - The incidence of main alternative models.
 - The incidence of types of operating software.

A. BUSINESS SECTOR OF RESPONDENTS

- As seen in Exhibit III-1, the first choice business sector ranking is manufacturing at 25%, followed by finance and service at 20% and 16%, respectively; hence, these three sectors comprise 61% of the sample.
- Broken down by NAS business sector, as shown in Exhibit III-2, the area countries show a heavy weighting towards banking and government, but this is spread over a large geographical area.



EXHIBIT III-1

BUSINESS SECTOR IMPORTANCE

SECTOR	NUMBER OF RESPONDENTS	PERCENT
Manufacturing	41	25
Banking/Finance	32	20
Service	26	16
Government	19	12
Retail/Distribution	12	8
Education	3	2
Other	28	17
Total	161	100

Note: First responses only.



EXHIBIT III-2

BUSINESS SECTOR ANALYSIS BY NAS REGION

	MANUFACTURING	BANKING/ FINANCE	OTHER	SERVICE	GOVERNMENT	RETAIL/ DISTRIBUTION	EDUCATION	TOTAL
Area Countries	12	20	10	12	18	5	3	80
France	1	2	1	5	-	1	-	10
Germany	18	1	7	3	-	2	-	31
Italy/ Switzerland	8	5	6	3	1	4	-	27
United Kingdom	2	4	3	3	-	-	-	12
Total	41	32	27	26	19	12	3	160

Note: 1. Area Countries: Austria, Belgium, Denmark, Holland, Israel, Sweden.

2. First responses only.



- To determine the market sector to address, more research is needed into the likely business trends in the countries of the main respondents, namely Germany, Austria, Italy, and Israel (see also Exhibit III-3).
- For instance, in the U.K., manufacturing industry as a percentage of GDP is in decline, whereas the finance and service sectors are in a strong growth and computerisation mode; this pattern will not necessarily apply to other countries.
- With reference to Exhibit III-3, it can be seen that the major responses exclude:
 - Retail/distribution.
 - Education.
- The responses given will be a function of how NAS itself has addressed the marketplace in the past, but need constant reappraisal of market strategy in order to ensure that the growth areas in each separate country are identified and used as a basis for future strategy and sales drives.

B. HARDWARE

- NAS CPUs were quoted in 56% of the mentions with IBM coming in at 38%: other manufacturers were, therefore, only marginally represented.
- Some of the country samples were quite small but, from Exhibit III-4, it can be seen that the highest NAS CPU density by user country ranks:



EXHIBIT III-3

MAJOR BUSINESS SECTORS BY COUNTRY

COUNTRY	SECTOR	PERCENT OF RESPONSES
Austria	Finance	31
	Government	23
	Other	19
Denmark	Finance	57
France	Services	50
Germany	Manufacturing	58
	Other	23
Israel	Government	52
	Manufacturing	19
Italy	Manufacturing	29
	Other	25
	Finance	21
Sweden	Other	27
	Finance	20
	Service	20
United Kingdom	Finance	33
	Service	25
	Other	25



EXHIBIT III-4

NAS CPUs

COUNTRY	66XX	80XX	90XX	XL	OTHER	TOTALS	WEIGHTED AVERAGE INCIDENCE
Austria	4	3	2	1	12	22	0.84
Belgium	-	1	-	-	1	2	0.67
Denmark	-	-	-	1	-	1	0.14
Holland	1	5	2	-	1	9	1.13
Israel	4	4	-	-	-	8	0.38
Sweden	3	3	2	1	-	9	0.60
France	2	4	4	-	1	11	1.10
Germany	4	6	6	2	11	29	0.93
Italy	4	2	4	1	4	15	0.63
Switzerland	1	1	-	-	1	3	0.25
United Kingdom	1	4	7	-	-	12	1.00
Total	24	33	27	6	31	121	0.75

Note: Weighted Average Incidence, taken as total CPUs registered divided by the number (of customers) in each group.



- Holland 1.13 per customer
 - France 1.10
 - U.K. 1.00
 - Germany 0.93
- Likewise, from Exhibit III-5 it can be seen that the equivalent IBM density by user country ranks as follows;
 - Holland 2.00 per customer
 - Sweden 1.47
 - Belgium 0.67
 - Israel 0.62
 - A breakdown of IBM CPUs is given in Exhibit III-6. (Note: User density is determined by the number of machines divided by number of sites.)
 - NAS peripherals comprised, worst case, 94% of the total (see Exhibit III-7). (Note: There was some ambiguity in the returns and the lowest figure for NAS peripherals was taken.)
 - Seventy-six percent of all respondents had 7380 and/or 7900 peripherals, and 53% had other machines/models, of which 13% were not NAS.
 - Surprisingly, for an educated computer market, only 3% of the respondents had mixed manufacturer equipment on site.



EXHIBIT III-5

OTHER MANUFACTURERS' CPUs

COMPANY	MAKER	TOTAL	WEIGHTED AVERAGE INCIDENCE*	MAKER	TOTAL
Austria	IBM	8	0.31	Sperry/UNIVAC	2
				BASF	1
Belgium	IBM	2	0.67	Fujitsu	1
France	IBM	1	0.10	BASF	1
Holland	IBM	16	2.00	DEC	2
Israel	IBM	13	0.62		
Italy	IBM	14	0.58	Hitachi	2
				Fujitsu	1
				Olivetti	2
				Siemens	1
Sweden	IBM	22	1.47	Compax	1
Switzerland	IBM	1	0.25		
United Kingdom	IBM	4	0.33		
Total		81	0.50		14

Note: Weighted Average Incidence, taken as the number of CPUs registered divided by the number (of customers) in each group.



EXHIBIT III-6

IBM MACHINES

MACHINE	NUMBER OF MACHINES
4381	24
3090	12
4341	11
3084	8
3081	7
3083	3
3033	3
Total	68

Note: Out of 81 Responses on CPU Types (84%)

Out of 161 Responses all up (42%)



EXHIBIT III-7

PERIPHERALS

COUNTRY	7380	7900	OTHER*	TOTAL
Austria	19	1	17	37
Belgium	3	2	1	6
Denmark	7	4	1	12
Holland	7	-	6	13
Israel	17	4	14	35
Sweden	13	4	5	22
France	6	-	7	13
Germany	20	4	13	37
United Kingdom	9	2	2	13
Italy	14	3	16	33
Switzerland	3	1	3	7
Totals	118	25	85	228

*117 Units of Peripherals Listed



C. OPERATING SYSTEMS

- The prime operating system was found to be MVS with 68 users out of the 161 total; VM next with 39; hence, 66% of the users use the two systems or their derivatives.
- Sixty-four percent of users in the finance sector were on MVS as against only 17% in Retail.
- Fifty-eight percent of users in the retail sector were on VM as against only 10% in manufacturing.
- There appeared to be no strong correlation of software with country, however:
 - U.K. 83% MVS
 - Denmark 80% MVS
 - Switzerland 75% VM
 - Holland 50% VM
- Of the 33 sites which have large machines (see Exhibit III-8), 24 customers stated the operating software and 96% of these were on MVS and its derivatives.
- There was no correlation between those 13 customers willing to accept remote support and the variety of operating software:
 - MVS 6
 - VM 5
 - Two did not state the operating systems used.



EXHIBIT III-8

LARGE SYSTEMS VERSUS OPERATING SYSTEMS

COUNTRY	90XX	XL	OPERATING SYSTEM
Austria	2	1	MVS/XA
Denmark	-	1	MVS/XA
France	1 3	- -	VM/XA MVS
Germany	6	2	Not Stated
Holland	2	-	VM (1)
Italy	4	-	MVS
Sweden	2	1	MVS/XA
United Kingdom	7	-	MVS
Total	27	6	

Note: 96% of those who answered question are using MVS.



- Of the 91 sites which later stated an interest in software support, 36 were on VM/DOS and 41 on MVS. However, of these:
 - Fifteen percent of MVS users strongly require software support.
 - Eight percent of VM/DOS users strongly require software support.
- To give a better idea of the customer requirement for support for each of these systems, the information is shown in Exhibit III-9.



EXHIBIT III-9

STRENGTH OF REQUIREMENT FOR MVS/VM SUPPORT

COUNTRY	MVS	STRENGTH OF INTEREST*	VM	STRENGTH OF INTEREST*
Austria	9	8.1	7	7.7
Belgium	1	5.0	1	7.0
Denmark	3	5.3	-	-
France	4	7.3	4	7.3
Germany	-	-	-	-
Holland	1	9.0	4	7.5
Israel	2	6.5	4	7.5
Italy	10	7.5	3	7.3
Sweden	4	6.8	2	6.0
Switzerland	-	-	1	3.0
United Kingdom	7	5.0	1	7.0
Total	41	7.2	27	6.8

*Strength of interest on a scale of 1 to 10; treat 7+ as significant.

= Base



IV SUPPORT ISSUES

IV SUPPORT ISSUES

A. REMOTE SUPPORT AS REPLACEMENT FOR CALL-OUT ENGINEER

- Sixty percent of the customers felt that it was unnecessary to have remote support in addition to the call-out engineer (see Exhibits IV-1 and IV-2). On the face of it, this appears to be an odd response as any enhanced support is normally welcomed, especially when price is not mentioned, but for the reasons, see the comments in Exhibit IV-3.
- On top of this, 20% actively did not want remote support, as against the 8% who did.
- It is worth noting that, in Belgium, which has a somewhat diffident view of call-out and contact procedures, the one comment was in favour, given correct pricing.
- The main points coming out of the comments are as follows:
 - Customer feels happier with face-to-face contact.
 - Security is a major worry.
 - Could be useful for diagnostic speed-up.
 - Welcome if service level improved.



EXHIBIT IV-1

REMOTE SUPPORT BY NAS REGION
AREA COUNTRIES

COUNTRY	NOT IN ADDITION (Percent)	WANTED (Percent)	NOT WANTED (Percent)
Austria	50	12	35
Belgium	33	-	67
Denmark	43	-	-
Holland	75	12	-
Israel	29	19	19
Sweden	87	-	-
Averages	53	14	40

Note: Non-answers were discounted for statistical purposes.



EXHIBIT IV-2

REMOTE SUPPORT BY NAS REGION
OTHER REGIONS

COUNTRY	NOT IN ADDITION (Percent)	WANTED (Percent)	NOT WANTED (Percent)
France	80	-	20
Germany	58	6	35
United Kingdom	75	8	33

COUNTRY	NOT IN ADDITION (Percent)	WANTED (Percent)	NOT WANTED (Percent)
Italy	83	8	-
Switzerland	50	-	-
Averages	67	4	-

All Countries	60	8	20
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Note: Non-answers were discounted for statistical purposes.



EXHIBIT IV-3

COMMENTS ON REMOTE SUPPORT

AUSTRIA

Not allowed due to data protection.
Depending on success rate.

BELGIUM

If for cost reason NAS would implement it, we are not against.

DENMARK

Think RSF is great idea and guarantees me a quick solution.
I want my local engineer to repair my problems.
I don't want the operator to make the fault finding.

FRANCE

It would be possible to make an immediate diagnosis
Contact with a technician is very important.

GERMANY

The user will have more or additional problem determination.

HOLLAND

Maybe later with correction of microcode on-line.
Yes for CPU problems, no for peripherals.

ISRAEL

Security (5 responses).
If it improves the service level - welcome.

ITALY

Only a diagnostic tool - no for problem solution.
Already used on Fujitsu/Siemens.

SWEDEN

If NAS could perform remote analysis and remote IPL it would be of interest.
Need to evaluate safety aspects before deciding.
Impressed with 3090-type 'autocall' remote support.
Remote support is a compliment to the man outside.

SWITZERLAND

Likes the personal contact.
No, has CPU but was accepted for TPM.

UNITED KINGDOM

Classified site - security aspects.
IBM 3090 remote support works well.
Not aware we have the capability.



- There was no correlation between the type of operating system and the response to this question of remote support.
 - MVS 7
 - VM/DOS 5

- Again, there was no correlation between size of installation (CPU) and the use of remote support (see Exhibit IV-4).

B. CALL-OUT

- With reference to Exhibit IV-5, it can be seen that 93% of all respondents are positively happy with the call-out procedures, and further analysis shows only 4% positively unhappy.
- France, Holland, Israel, and Italy gave a 100% satisfied response, and it might be advantageous to see if there are any different approaches in those areas.
- Although Belgium had a very small sample, the level of dissatisfaction, at 67%, is sufficient to warrant an urgent investigation into customer relations, and the comment recorded in Exhibit IV-6 should be noted.

C. SATISFACTION WITH CURRENT HOURS COVERED

- While significant response is given indicating that the current working hours are acceptable, there is also a high response for alternative hours, and nowhere is there 100% satisfaction with those hours offered.



EXHIBIT IV-4

'YES' ANSWER TO REMOTE SUPPORT
BY MACHINE TYPE

COUNTRY	66XX	80XX	90XX	XL	OTHER
Austria	-	-	-	-	7000 3083 3090
Germany	-	1	-	-	-
Holland	-	-	1	-	4381 4361
Israel	1	-	-	-	4341 4381
Italy	-	1	-	-	7000 4341
United Kingdom	-	-	1	-	3084

Note: Some sites have more than one CPU.



EXHIBIT IV-5

AGREEMENT WITH CALL-OUT PROCEDURES

COUNTRY	PERCENT	RESPONDENTS	SAMPLE
Austria	88	23	26
Belgium	33	1	3
Denmark	71	5	7
Holland	100	8	8
Israel	100	21	21
Sweden	93	14	15
France	100	10	10
Germany	97	29	31
United Kingdom	84	10	12
Italy	100	24	24
Switzerland	75	3	4
Total	93	148	161



EXHIBIT IV-6

COMMENTS ON CALL-OUT PROCEDURES

AUSTRIA

For 5 X 24 hours O.K.

Start of offices hours (8.30) too late (on-line has to be up at 8.00 latest).

BELGIUM

Concerning dispatching after hours, (standby) which is done by outside company: contacted person does not seem to be concerned.

Would prefer direct contact with NAS rather than going through an outside CIE.

Communicate extension telephone line for Jerome de Block/Richard Gillis dispatching.

DENMARK

The reason for 'don't know' is that I have not seen any problems on my NAS equipment. On the other hand, I have a complete belief that they will handle the situation to my satisfaction.

FRANCE

Preventive maintenance much appreciated.

Have quick escalation procedure.

GERMANY

Never needed hardware support.

Customer wants to do only one phone call to get in contact with a CE (does not like Euro call).

HOLLAND

No change necessary.

No serious problems but little trouble with response time.

Phoned back within 30 minutes, response 2 hours.

Continued



EXHIBIT IV-6 (Cont.)

COMMENTS ON CALL-OUT PROCEDURES

SWEDEN

None - good response to calls.

Has not had any problems yet.

In Sweden we use a standby beeper, why can't customers have immediate contact: time between when customers place a call and when standby man calls back feels very long.

None - customer very happy with the 2 CSS&S people he sees frequently.

Has had few problems but service has been efficient and fast.

Fast response time the few times it has been needed.

Has had very few problems.

Response to calls has been good.

SWITZERLAND

Needs an answer within half an hour by phone.

There are time problems and problems with different products - they have a 'ping pong' effect.

UNITED KINGDOM

Not aware of procedures, no problems.



- Austria suggests a high number of alternatives, apparently related to working days encompassing three shift systems (from the operating point of view).
- Likewise, Israel has an apparent multi-shift system, but on a five and a half day week.
- In the view of INPUT, to obtain better customer satisfaction it will be necessary to have contracts with the customer which cover his working week—but at a cost.
- If, when discussing future contracts for maintenance with the customer, a price list for variable cover is already prepared, then meaningful and acceptable discussions and negotiations can take place at the most propitious time.
- Some of the points to be raised will be:
 - The acceptability of a reduced service for the extra hours.
 - The possibility of covering the CPU only for extra hours.
 - Premium rates.
- For a detailed breakdown of the 'happiness' factor, see Exhibit IV-7.
- With reference to Exhibit IV-8 it can be seen that the largest tranche of users (39%) require from 144 to 168 hours per week of coverage; another 35% are satisfied with from 40 to 55 hours.
- With reference to Exhibit IV-9, it can also be seen that the majority of users are working on a five or five and one-half day week—albeit that some of them are working two- or three-shift systems.



EXHIBIT IV-7

WORKING HOURS - SATISFACTION LEVELS

COUNTRY	EXISTING HOURS	OTHER HOURS	PERCENT SATISFIED
Austria	11	13	42
Belgium	2	1	67
Denmark	4	2	57
Holland	6	3	63
Israel	14	6	67
Sweden	10	5	67
France	10	1	90
Germany	29	3	90
United Kingdom	11	3	75
Italy	20	3	83
Switzerland	3	2	50
Total	120	42	71

Question asked: 'What coverage do you need in terms of working hours for hardware support?'

Note: Responses in 'Existing Hours' downrated where 'Other Hours' also completed.



EXHIBIT IV-8

HOURS PER DAY PER WEEK

COUNTRY	COVERAGE REQUIRED				
	24 x 7	24 x 6	11 x 5	8 x 5	OTHER
Austria	3	2	6	-	13
Belgium	1	-	1	-	1
Denmark	-	-	3	1	2
Holland	3	1	2	-	3
Israel	9	5	-	-	6
Sweden	3	2	5	-	5
France	4	2	3	1	1
Germany	5	9	15	-	3
United Kingdom	4	3	4	-	3
Italy	-	7	7	6	3
Switzerland	-	-	1	2	2
Total	32	31	47	10	42
Percent	20	19	29	6	26

Satisfied with current hours: 71%

Alternatives suggested: 26%



EXHIBIT IV-9

SUPPORT COVER

SUPPORT COVER	NUMBER OF RESPONDENTS	PERCENT
5 or 5.5 Day Week Required	89	56
6 Day Week Required	38	24
7 Day Week Required	32	20
Total	159	100



- On the basis of this analysis, it is suggested that, in any new survey, a question be inserted deliberately phrased to elicit the likely customer response to an enhanced service (at an enhanced price).
- With reference to Exhibit IV-10, the suggested hours are mainly geared to a five-day week, but part-time working for the Saturday is an evident 'must' in 12 cases.
- Customer satisfaction responses are given in Exhibit IV-11, while Exhibit IV-12 shows direct customer comment; again very little overt criticism is registered.

D. RESPONSE TIMES

- Exhibit IV-13 depicts the response times favoured by the respondents and indicates that 97% require a service within two hours.
- Exhibits IV-14 and IV-15 show the relationships between response time and customers with large machines, and it can be seen that these are weighted towards two hours for the 90XX and towards an on-site engineer for the XL.
- Similarly, Exhibit IV-16 and IV-17 show that a slightly better response time is required for the 7900 as against the 7380 peripheral.
- However, 81 of the 151 respondents agreed that the required response varies within the DP cycle.
- The comments on this are shown in Exhibit IV-18, where it can be seen that practically every company has a requirement for a fast response, but thankfully, at different times of the day.



- However, Swedish respondents in particular mention 'on-line' (presumably real time applications) as being critical. Evidence from the market as a whole suggests that customers are demanding an immediate response in real time applications such as banking and distribution and that such customers will demand a contract term giving such support or go elsewhere.
- In this context as well, it should be noted that fully integrated factory systems demand an extremely fast response or the material can be moved neither from or to the production line nor out of the factory.
- As the main business sectors represented in this survey are business and manufacturing, it is recommended that close scrutiny be kept over the customers applications and that the customer is positively advised as to the type of maintenance necessary to keep an efficient, and profitable, business. In this context, it may be necessary to negotiate at a higher level in a company where there is adequate visibility of the key factors.



EXHIBIT IV-10

ALTERNATIVE COVER SUGGESTED

AUSTRIA	24 x 5	6 x 14
	24 x 5	16 x 5 + 7 (Saturday)
	12 x 5	12 x 5
	16 x 5	16 x 5
	9 x 5	16 x 5
	16 x 5	24 x 5
	16 x 5	
BELGIUM	9 X 6	
DENMARK	18-20 Week/10-12 Saturday	
	Saturday 12:00 - Sunday 24:00	
HOLLAND	18 x 5	
	16 x 5	
	24 x 5, 18 x 6	
ISRAEL	18 x 5.5	15 x 5.5
	13 x 5.5	11 x 5.5
	11 x 5.5, 8 x 5.5	15 x 5.5
SWEDEN	18 x 6	24 x 5
	25 x 5	18 x 5
	18 x 5	
FRANCE	24 X 5	
GERMANY	10 x 5	
	18 x 5	
	17 x 5	
UNITED KINGDOM	24 x 5, 12 Saturday, 12 Sunday	
	18 x 5	
ITALY	12 x 5 + 6 on Saturday	
	16 x 6	
	16 x 5	
SWITZERLAND	18 x 5	
	16 x 5	



EXHIBIT IV-11

SATISFACTION WITH WORKING (COVER) HOURS

COUNTRY	SATISFIED (Percent)	NOT SATISFIED (Percent)	SAMPLE
Austria	69	12	26
Belgium	67	33	3
Denmark	-	29	7
Holland	50	13	8
Israel	76	10	21
Sweden	60	33	15
France	50	40	10
Germany	94	6	31
United Kingdom	75	25	12
Italy	67	29	24
Switzerland	50	50	4

Question asked: Are you happy with these (standard) hours or do you want more flexibility?



COMMENTS ON STANDARD COVER HOURS

AUSTRIA

More flexibility.

BELGIUM

12 - 14 hours.

17 - 24 hours.

DENMARK

Service cover from 18.00 - 20.00 on workdays, and Saturdays between 10 - 12, would be a good time to cover for deferred maintenance and p.m. in the time.

Fast response time.

I would like to have a service from Saturday 12.00 to Sunday 24.00, alternative covering six days a week, 11 hours.

FRANCE

Will pay for service outside the contracted hours.

GERMANY

No, because the workload of each machine differs during the whole day.

HOLLAND

Coverage is only needed after prime shift.

17.00 until 24.00 hours, during prime shift best effort is enough.

ITALY

Possibility to have assistance during holidays on request.

The coverage should meet customers' hours.

In some period an extension would be well accepted.

SWEDEN

Planned maintenance outside on-line hours (07.00 - 20.00).

Different coverage for different parts of the hardware configuration, i.e., 29/5 coverage for on-line configuration.

11/5 coverage for other units.

Lower maintenance percent for 24/7 could be of interest.

SWITZERLAND

Scheduling PM once/month actually 16.00 - 18.00.

Needs 18.00 - 20.00 for same price.

UNITED KINGDOM

11-hour shift to start at time other than beginning of prime shift.

Ability to call engineer outside of contracted hours.

EXHIBIT IV-13

REQUIRED RESPONSE TIMES

COUNTRY	ON-SITE	1 HOUR	2 HOUR	4 HOUR
Austria	1	17	6	-
Belgium	1	1	1	-
Denmark	4	4	-	-
Holland	2	5	3	1
Israel	-	15	5	-
Sweden	3	10	5	-
France	1	6	5	1
Germany	2	15	12	-
United Kingdom	-	3	9	1
Italy	2	10	10	2
Switzerland	-	4	-	1
Totals	16	90	56	6
Percent	10	54	33	3

- Multiple responses
- No one accepted 8 hours or next day.
- If 'other' needs are included, 87% of users require a response within 2 hours.
- Response time variation required with relation to DP cycle gave almost equal response (81y 74n).



EXHIBIT IV-14

REQUIRED RESPONSE BY LARGE CPU TYPE
90XX

COUNTRY	ON-SITE	1 HOUR	2 HOUR	4 HOUR
Austria	-	-	2	-
France	1	2	2	1
Germany	1	1	3	-
Holland	-	1	1	-
Italy	1	2	1	-
Sweden	1	1	1	-
United Kingdom	-	2	5	1
Total	4	9	15	2

Note: 93% 2 hours or under.



EXHIBIT IV-15

REQUIRED RESPONSE BY LARGE CPU TYPE
XL

COUNTRY	ON-SITE	1 HOUR	2 HOUR
Austria	-	-	1
Denmark	1	-	-
Germany	-	2	-
Italy	1	-	-
Sweden	1	-	1
Total	3	2	2

Note: 100% 2 hours or under.



EXHIBIT IV-16

**REQUIRED RESPONSE BY PERIPHERAL TYPE
7380**

COUNTRY	ON-SITE	1 HOUR	2 HOUR	4 HOUR
Austria	-	13	3	-
Belgium	1	1	1	-
Denmark	4	4	-	-
France	1	3	3	1
Germany	2	9	9	-
Holland	2	4	3	1
Israel	-	11	5	-
Italy	2	8	3	1
Sweden	3	8	5	-
Switzerland	-	3	-	1
United Kingdom	-	-	-	-
Total	15	64	32	4

Note: 97% 2 hours or under.



EXHIBIT IV-17

**REQUIRED RESPONSE BY PERIPHERAL TYPE
7900**

COUNTRY	ON-SITE	1 HOUR	2 HOUR	4 HOUR
Austria	-	-	1	-
Belgium	1	-	1	-
Denmark	3	2	-	-
France	-	-	-	-
Germany	-	3	1	-
Holland	-	-	-	-
Israel	-	3	-	-
Italy	2	-	1	-
Sweden	1	3	1	-
Switzerland	-	1	-	-
United Kingdom	-	1	1	-
Total	7	13	6	-

Note: 100% 2 hours or under.



COMMENT ON RESPONSE TIME VERSUS DP CYCLE

AUSTRIA

06.00 - 18.00 hours half STD.

On-line 8.00 - 13.00

On-line time 07.30 - 18.30 especially critical, batch until 22.00 hours critical as well.

When used as backup datacenter.

From 07.00 - 17.00

BELGIUM

From 07.00 - 24.00.

12.00 - 14.00 hours.

12.00 - 14.00 hours.

DENMARK

'What kind of job do you see for an engineer to fulfill his working day - as an on-site engineer?'

End of year is extremely critical for Andelsbanken.

Last week in each month is extremely sensitive to interruptions.

On-line engineer appreciated but only if he can do other tasks at account such as total technical responsibility or technical coordinator.

In emergency calls would be nice to have problem debugged over phone while another person is travelling down.

So, in the on-line time it will be one hour response time or less for system down situation. Outside, the on-line time two hours is sufficient.

FRANCE

One hour for prime shift from Monday to Friday (08:00 to 18:00).

Most critical during weekend.

Customer service only 2 in 5 day (06:00 to 20:00) from Monday to Friday (excluding the weekend).

In certain cases, one hour.

GERMANY

One hour during daytime (07.00 - 17.00), rest 24 - no night shift.

HOLLAND

Between 8.00 and 17.00 response time - one hour.

Other hours: one - two hours response time important during prime shift.

Salary run every week of the month, on-line during prime shift. The whole month January from 08.00 until 18.00 hour every day - one hour response time at a maximum. The months of January and February response time less than one hour. During daytime 07.00 until 16.00 on-line situation.

18.00 - 23.00 most important.

07.00 - 19.00.

Continued



COMMENT ON RESPONSE TIME VERSUS DP CYCLE

ISRAEL

During prime shift less than one hour.
After 2100 reduce to two hours.
After prime shift two hours.
Outside prime shift four hours.
One hour in prime shift.
Two hours overnight.
Out of prime shift two hours (three times).
Depends on equipment type.
Out of prime shift one hour.
Constant one hour.
After 1600 - two hours response time.
Weekends - four hours.
After 1500 hours - two to three hours.

ITALY

Second and third week of the month are the most critical.
Year-end period is critical
Heavy in January.
Indicated response time is very critical for on-line applications.
From November through to January: one hour.
From 20.12 to 10.1: on-site.
Second week of the month.
Increasing on end-year period.
First week of the month.

SWEDEN

08.00 - 18.00 (on-line hours) critical.
25th - 27th every month, year end.
Prime shift response time extremely important.

SWITZERLAND

During the night and weekends on problem (batch).

UNITED KINGDOM

During the day on-line systems require very fast response.
Worldwide application requires fast response.
Usually able to reconfigure to overcome I/D problems
Weekends.
Surprisingly relaxed view of response time - daytime critical - other could be greater than two hours.
Evenings can go to two hours.
During prime shift - almost immediate response would be preferred.
Only during 00.01 and 06.00 can accept longer response.
Processor needs quicker response time than disk units, e.g., two hours is maximum for CPU but disks are not so critical.



V POTENTIAL NEW SERVICES

V POTENTIAL NEW SERVICES

A. CUSTOMER SUGGESTIONS

- With reference to requirements for other services, as shown in Exhibit V-1, it can be seen that only the U.K. falls below the 70% figure, i.e., 10 out of 11 countries registered a wish for enhanced services. Whether their strength rating would have been significantly affected by correlation with increased cost will need further investigation.
- Within the countries 70% of all items mentioned were above the 70% significance level and should therefore be seriously considered.
- Ranging over the requirements, as shown in Exhibit V-2, Germany will need more investigation to be able to obtain an exact definition under 'hardware and software'.
- One of the items is consultancy, but this is spread over a number of areas and it might be difficult to provide this economically over the four interested countries and the breadth of detail.
- But to maximise on the effectiveness of any new service the combination of strongest response with largest sample lies with the Austria/Germany grouping, which has highlighted networks and communications as an area to be addressed.



EXHIBIT V-1

REQUIREMENT FOR OTHER SERVICES

COUNTRY	STRENGTH OF RESPONSE			
	1	2	3	4
Austria	6.6	7.5	-	-
Belgium	10.0	9.5	-	-
Denmark	8.0	3.0	6.0	8.0
Holland	8.3	-	-	-
Israel	8.0	-	-	-
Sweden	6.8	6.0	2.0	-
France	8.3	9.5	-	-
Germany	7.2	6.0	-	-
United Kingdom	5.0	-	-	-
Italy	7.8	7.5	-	-
Switzerland	9.0	-	-	-

- Number of Items at 7.0 or more: 44 (70%)
- Total Number of Responses: 63

Question asked: Are there any additional services that you would like NAS to provide, and what is your level of interest in NAS providing them?



EXHIBIT V-2

**MOST FREQUENT REQUIREMENTS
THAT THE CUSTOMER WOULD LIKE NAS TO PROVIDE**

COUNTRY	REQUIREMENT	NUMBER	STRENGTH
Austria	System Training	2	8.0
	Software Support	2	7.5
France	Consultancy	4	7.8
Germany	Hardware	7	6.4
	Software	3	8.7
Holland	Software Support	3	8.3



-	Capacity Planning	Holland	8.0
		Sweden	9.0
-	Consultancy	Denmark	8.0
		Sweden	8.0
-	Network/Communications Installation	Austria	10.0
		Belgium	10.0
		Germany	8.0

B. NAS-SUGGESTED NEW SERVICES

- Exhibit V-3 gives the ranking, in number of mentions, of the combined response on the sixteen questions, together with the appropriate strength of interest factor, and finally, with a weighted interest factor to reflect both the numbers interested and their strength of interest.
- This latter ranking is then transferred over to Exhibit V-4: education is 11% ahead but, of course, has a wide range of subjects within it.
- It is interesting to note that the customers do not rate disaster recovery higher in the overall list, but here it is necessary to ensure that we were asking the key person who sees all the business needs. However, on the detailed country listings disaster recovery does come top in most countries (as an average).
- It should be noted that, within the detailed analysis by country shown in Exhibits V-5 and V-6, many of the services came out above the 70% figure and Holland, Italy, and France would appear to be the most demanding, or conversely, to offer the most opportunity.



EXHIBIT V-3

REQUIREMENTS FOR NEW SERVICES

RANK	SERVICES	(a) YES (Percent)	(b) STRENGTH OF INTEREST	(a x b) WI
1	Education	66	6.7	4.4
2	Configuration Planning	63	6.0	3.8
3	Capacity Planning	58	6.6	3.8
4	Extended Hardware Agreement	57	6.4	3.6
5	Environmental Planning	57	5.7	3.2
6	Software Problem Solving	57	6.8	3.9
7	Disaster Recovery	55	6.8	3.7
8	Software Evaluation	44	5.7	2.5
9	Consultancy	41	5.9	2.4
10	Problems Management	39	6.2	2.4
11	Network Planning	36	6.3	2.2
12	Software Installation	35	5.6	2.0
13	Software Implementation	29	5.5	1.6
14	Technical Support 'Hotline'	23	6.8	1.6
15	Network Management	20	6.6	1.3
16	Facilities Management	14	5.5	0.8



EXHIBIT V-4

RANKING FOR NEW SERVICES SUGGESTED BY NAS

RANK(1)	SERVICES	RELATIVE IMPORTANCE(2)
1	Education	100
2	Software Problem Solving	89
3	Configuration Planning	86
4	Capacity Planning	86
5	Disaster Recovery	84
6	Extended Hardware Agreement	82

Note: 1: Ranking taken from Exhibit V-3.

2: 4.4 normalised to 100%



EXHIBIT V-5

**AVERAGE STRENGTH OF INTEREST BY COUNTRY
(SIGNIFICANT FIGURES ONLY)**

COUNTRY	QUESTION									
	1	3	7	8	9	11	12	13	15	16
Belgium	-	-	-	-	-	-	-	-	8	-
Denmark	-	-	-	-	9	-	-	9	-	-
France	8	-	-	-	-	-	-	9	8	8
Holland	-	8	8	8	-	-	-	8	-	-
Italy	8	-	-	8	8	8	8	8	8	9
Sweden	-	8	-	-	-	-	-	-	-	-
Switzerland	-	-	-	8	-	-	-	-	-	-
Incidence	2	2	1	3	2	1	1	4	3	2

- 1 = Extended Hardware Agreement
- 3 = Capacity Planning
- 7 = Software Implementation
- 8 = Software Problem Determination
- 9 = Education
- 11 = Network Planning
- 12 = Network Management
- 13 = Disaster Recovery
- 15 = Problems Management
- 16 = Technical Support 'Hotline'

Note: Rating out of 10.



EXHIBIT V-6

STRENGTH OF RESPONSE IN NAS AREA COUNTRIES

	COUNTRY					
	Austria	Belgium	Denmark	Holland	Israel	Sweden
1. Extended Hardware Service Agreement (Integrated Service)	6.3	6.0	5.0	4.6	5.8	5.4
2. Configuration Planning	6.5	-	[7.0]	6.5	3.7	5.5
3. Capacity Planning	6.7	6.5	6.8	[7.9]	5.9	7.6
4. Environmental Planning (Including Cabling)	5.5	[8.0]	6.8	[7.1]	4.0	4.3
5. Software Evaluation	[7.2]	6.7	3.8	5.3	3.9	5.0
6. Software Installation	6.3	5.0	3.3	[7.0]	3.9	5.5
7. Software Implementation	[7.0]	-	3.0	[7.7]	2.8	4.0
8. Software Problem Determination	[7.8]	6.0	4.4	[7.7]	4.9	6.5
9. Education	6.4	5.3	[8.8]	[7.2]	6.1	5.6
10. Consultancy	5.2	[7.0]	4.8	[7.0]	4.9	5.0
11. Network Planning	6.4	6.0	5.8	-	5.6	4.5
12. Network Management	4.0	-	[7.0]	-	6.0	-
13. Disaster Recovery	6.7	6.0	[9.2]	[7.5]	6.2	4.7
14. Facilities Management	4.0	-	-	4.5	5.0	-
15. Problems Management	6.0	[7.5]	4.0	[7.2]	5.4	6.3
16. Technical Support (Hotline)	5.0	[7.0]	[10.0]	[7.3]	5.2	-



- Exhibit V-7 breaks down the response by NAS region.
- Exhibit V-8 is a condensed list of customers comments, but an analysis of the complete data shows that operating systems and software are the top requirement for training, with some 24 mentions; operator training of whatever kind shows some 14 mentions (out of a total of 46 mentions).
- In these NAS regions the highest overall levels of interest are shown by France and Italy, but the standard deviation figures would suggest that there is little discrimination between what is really needed and what would be 'nice'.
- In this context it is strongly recommended that only one or two services are piloted in either country, to determine the rate of take up, before committing to major 'across the board' projects.
- It is interesting to note that Germany, which suggested hardware and software extensions to support (see Exhibit V-2), gave low ratings to these aspects, as depicted in Exhibit V-7.



EXHIBIT V-7

STRENGTH OF RESPONSE IN OTHER NAS REGIONS

	COUNTRY					
	Austria	France	Germany	United Kingdom	Italy	Switzerland
1. Extended Hardware Service Agreement	6.3	[7.8]	4.9	6.4	[7.9]	6.0
2. Configuration Planning	6.5	[7.4]	5.7	6.5	[7.2]	3.0
3. Capacity Planning	6.7	6.7	5.7	6.0	6.8	4.0
4. Environmental Planning	5.5	[7.1]	5.5	6.0	6.5	4.5
5. Software Evaluation	[7.2]	6.6	4.2	4.0	6.5	6.5
6. Software Installation	6.3	6.7	3.8	-	6.8	3.5
7. Software Implementation	[7.0]	6.0	3.6	-	6.3	3.5
8. Software Problem Determination	[7.8]	[7.5]	-	6.0	[7.6]	[7.7]
9. Education	6.4	[7.3]	6.0	6.5	[7.8]	3.0
10. Consultancy	5.2	6.5	4.6	6.0	[7.1]	6.0
11. Network Planning	6.4	6.9	4.3	[7.3]	[8.1]	4.7
12. Network Management	4.0	6.7	3.7	[8.0]	[8.0]	4.0
13. Disaster Recovery	6.7	[8.9]	5.0	5.8	[8.0]	4.7
14. Facilities Management	4.0	6.5	3.5	-	6.3	1.0
15. Problems Management	6.0	[7.5]	5.2	-	[7.8]	1.0
16. Technical Support (Hotline)	5.0	[7.8]	-	[7.3]	[8.5]	4.5
Mean	6.1	[7.1]	4.1	4.7	[7.3]	4.2
SD	1.0	0.7	1.7	2.8	0.7	1.8



EXHIBIT V-8

TYPES OF EDUCATION REQUESTED

AUSTRIA

System software, i.e. CICS.

BELGIUM

Yes, if in Belgium.

DENMARK

Hardware operator technical.

High-level system program training.

EDP training.

FRANCE

User friendly software.

Structure of optimum software.

GERMANY

Systems/programmers train video self-study.

Operator training. (three times)

HOLLAND

Software. (twice)

VM - MVS.

ISRAEL

CICS, SXS, operators between software/hardware.

Internal operators systems programming education.

Problem determination everything but Hebrew.

TP management, systems program system Internals.

Internals

Operating system Internal.

Continued



EXHIBIT V-8 (Cont.)

TYPES OF EDUCATION REQUESTED

ITALY

XA training.

Operating systems CICS-MVS, etc.

PP network stand software.

Standard software. (three times)

DBMS.

Hardware/software - operating LVL.

VM-VSE-SP.

Base OS languages DB.

MVS-VTAM.

MVS/XA and DB2.

SWEDEN

Operator training. (six times)

Tallor made projects. (twice)

Automated operation.

UNITED KINGDOM

Operators training. (twice)



VI BUNDLING AND EXTENDED SERVICE CONTRACT

VI BUNDLING AND EXTENDED SERVICE CONTRACT

A. BUNDLING

- One of the highest response levels came to this question. The majority of customers would like debundling (77%) (see Exhibit VI-1 and the figures below):
 - Individual prices 77%
 - Bundled 14%
 - Don't know or don't care 9%
- However, some 9% did not know (or did not care?), which might indicate:
 - They are not the budget holders.
 - Cost is not a criteria to them.
 - The customer is not properly trained.
 - An opportunity exists for extra sales.

EXHIBIT VI-1

CUSTOMER COMMENTS ON BUNDLING

AUSTRIA

Not for 'Important' products (discs), could be interesting for new IBM displays, modems.

DENMARK

The contract should be common with a different appendix for each product.
I would like to see individually priced however I can live on with the bundled price for Amdahl, but I think if we force Amdahl we can get a software contract and hardware contract.

FRANCE

One interface (coordinator).
Open contract with homogeneous content.
Need user training and (good) documentation giving full possible uses.
(bundling) for the software.

GERMANY

Would depend on price and other vendors (IBM) warranty.

HOLLAND

Customer likes the idea of integrated maintenance.
All equipment is leased and therefore hard to change maintenance to another vendor.
First individually priced during contract negotiation then bundled.
Customer thinks about integrated maintenance, important for them is what the advantage will be.
Dependent of price.

ISRAEL

Ready to give us to maintain printer and diskette reader.
Extended service for Memorex equipment.
The extended service includes one printer.

ITALY

Depends on the product type.
Could be interesting.
It depends on economic and financial conditions at the moment. (three times)

Continued



EXHIBIT VI-1 (Cont.)

CUSTOMER COMMENTS ON BUNDLING

SWEDEN

Would be evaluated if offered.

If it saves money for Astra.

If it means good business for Spadab.

If it means a better deal for S-E-Banken.

If Primdata saves money.

If extended service agreement is good for PK-Banken (cheaper) they are interested.

Wants to keep flexibility.

If it serves a good deal for Datarutln.

If it means good business for LD.

If the price is right.

If it is good business for H & M.

SWITZERLAND

Only NAS.

UNITED KINGDOM

Cost reduction could be interesting.

Presently serviced by DPC: would be interested in our offerings - but not this year.

Disaster recovery.

If it offers a discount.



B. EXTENDED SERVICE CONTRACT

- On the question of an extended service agreement the response was 19% less, possibly indicating that the customer is worried by the increased price of service connotations. This is confirmed by some of the comments in Exhibit VI-2.
- Again, some 14% of the respondents did not know an answer, and this is extended to 30% if the 'don't cares' are included (those giving no answer at all).



EXHIBIT VI-2

REQUIREMENTS FOR EXTENDED SERVICE

COUNTRY	YES	NO	DON'T KNOW	SAMPLE
Austria	5	13	4	26
Belgium	1	1	-	3
Denmark	1	1	-	7
France	9	1	-	10
Germany	7	1	4	31
Holland	3	2	2	8
Israel	11	10	-	21
Italy	9	8	7	24
Sweden	11	3	1	15
Switzerland	1	3	-	4
United Kingdom	8	3	-	11
Totals	66	46	18	160
Percent of Respondents	41	29	11	*

*81% response.



VII SPECIFIC GERMAN REQUIREMENTS

VII SPECIFIC GERMAN REQUIREMENTS

- An additional set of specific questions was included in the survey for Germany alone. These requirements are listed in Exhibit VII-1, which also gives the response ranking.
- Guarantees on response time and system availability are the most essential features for the customer in Germany, according to the survey results.
- The only other significant aspect is given as systems software support; any other item is of little importance to the surveyed users.



EXHIBIT VII-1

GERMAN REQUIREMENTS

REQUIREMENT	NUMBER OF RESPONDENTS*	PERCENT
Guaranteed Response Time	31	100
Guaranteed System Availability	30	97
Systems Software Support	23	74
Technical Support Hotline	8	26
Remote Diagnostics		
- Hardware	5	16
- Software	5	16
On-Site Engineer	4	13

*31 Respondents.

Note: One site asked for spare machine.



VIII CONTACT PROCEDURES

VIII CONTACT PROCEDURES

A. SATISFACTION RATING WITH ACCOUNT COORDINATOR

- The satisfaction rating given to the account coordinator by the customer is shown by country in Exhibit VIII-1, with a synopsis in Exhibit VIII-2.

B. ADDITIONAL SKILLS

- These were mentioned by 26% of the customers, and a collection of their comments is shown in Exhibit VIII-3.
- The clear message coming from the customer is that the AC needs more software skills. As a corollary to this, there might be an indication that:
 - The customer has not been adequately trained.
 - NAS has not covered this point in the initial sale.
- An additional point called for is that the AC should have a better understanding of the total business environment.



EXHIBIT VIII-1**ACCOUNT COORDINATOR RATING**

COUNTRY	RATING*
Austria	8.68
Belgium	7.67
Denmark	9.00
Holland	8.71
Israel	8.33
Sweden	8.87
France	8.00
Germany	8.50
United Kingdom	8.09
Italy	7.81
Switzerland	7.50
Average	8.40

*Rating on a scale of 1 to 10 where 7 is significant, i.e. all the above answers were.



EXHIBIT VIII-2

ACCOUNT COORDINATOR

Top Rating:	Denmark	9.0
Lowest Rating:	Switzerland	7.5
Average:		8.4

Additional Skills Required:

Software	26 Mentions
Customer Knowledge	7 Mentions
Hardware/Software Combined	6 Mentions



EXHIBIT VIII-3

CUSTOMER COMMENTS ON AC SKILLS

AUSTRIA

Should have better knowledge of new products (hardware).

Software skills. (three times)

Solving of problems in context with a general responsibility, more strategically minded.

BELGIUM

General 'know how' for I/F connection (not only channel).

More software skills and associated practice. (three times)

DENMARK

The Danish business unit is an extremely good idea and he does not feel that our account coordinator in real terms is three persons.

The job for the account coordinator should not be the IBM solution that covers IBM's needs but should cover the customer's needs.

FRANCE

Competent in hardware as well as software originated faults.

More software knowledge.

One coordinator for all aspects (hardware, software, environmental, electrical, implementation).

GERMANY

Software. (four times)

HOLLAND

The account coordinator should be better informed about sales activities.

NAS CE and SSE better than IBM.

More software training in general. (twice)

ISRAEL

Maximum knowledge in software.

ITALY

More software skills. (six times)

More knowledge of internal problem of the customer.

Continued



EXHIBIT VIII-3 (Cont.)

CUSTOMER COMMENTS ON AC SKILLS

SWEDEN

Increased software understanding. (five times)

A better total understanding of Ericssons's data operations from a software and hardware point of view.

Increased understanding of S-E-Bankers hardware/software production environment.

Be capable of full JPL of the system up to the point where production can start.

SWITZERLAND

Software skills.

UNITED KINGDOM

Software skills.

Information and communications skills.

With order of XL, NAS needs to change from being a box supplier to understanding of customers' applications and needs.

Happy with skills demonstrated.



C. INFORMATION FROM THE ACCOUNT COORDINATOR

- Only 16% of the customers responded to this question.
- The consolidated information is given in Exhibit VIII-4 and the customer comments in Exhibit VIII-5, from which it is seen that there are significant country variations.
- Belgium, Germany, and Switzerland are all interested in new hardware products, but the interest declines to under 50% in Austria.
- On environmental information there is a strong interest in Austria, France, Germany, Israel, and Italy.
- In the case of Information the level of 'don't knows' varies from 1%, for hardware and contract information, to 3% for software (see Exhibit VIII-6).

D. CONTACT PROCEDURE

- With reference to Exhibit VIII-7, it can be seen that 90% of all respondents are satisfied with the contact procedures as against only 9% positively not satisfied.
- This time only two countries were 100% satisfied, namely Germany and Italy, and reference should be made to the Exhibit VIII-8 for the pertinent comment.
- Belgium again had a high level of dissatisfaction, at 67%, though, with a small set of sites, this should be easy to put right.



EXHIBIT VIII-4

INFORMATION EXPECTED FROM COORDINATOR

EXPECTED INFORMATION	PERCENT	DON'T KNOW
Environmental Factors	84	1
New Hardware Products	71	1
New Software Products	45	2
New Software Releases	43	3
Contractual Terms	23	1



EXHIBIT VIII-5

**CUSTOMER COMMENTS
OTHER INFORMATION EXPECTED FROM COORDINATOR**

BELGIUM

Information on competition.
More information on competition.
Announcement IBM and other product-support issues.
PCM (Amdahl).

DENMARK

Rumors from the EDP business.
New software releases.
Only some software products.

FRANCE

Nothing.
Other Innovations and possible NAS services.
(On) materials, CPU and peripherals.

GERMANY

Education offers.
More meetings with other customers.

HOLLAND

Configuration - consultancy.
Configuration and capacity planning suggestions.

ITALY

Information.
Technical/operative.

SWEDEN

Engineer should not be the NAS organisation news.
Salesman's prolonged ARM.

SWITZERLAND

Network/PC.



**CUSTOMER COMMENTS
INFORMATION THEY WOULD LIKE FROM COORDINATOR**

AUSTRIA

More international information.

Customer is happy with service provided by NAS account coordinator.

DENMARK

I would like to have my account coordinator to give as much advice as possible.

FRANCE

Comparative hardware study.

Hardware failure statistics.

Continue the personal contact (courtesy visits have psychological effect).

Would like a coordinator, more of a hardware and software generalist, to make up for lack of knowledge of SCP.

Information of user 'tools' (utilities).

GERMANY

Annual accounts, company policy.

More detailed information over new equipment.

HOLLAND

Organisational changes.

The existing weekly visit is appreciated.

Join the sales visits to be informed about sales activities.

ISRAEL

Not to mix sales function with coordination.

The coordinator should not replace salesman.

Not to mix SE, sales, CE.

Not to mix sales functions with technical issues.

Information that IBM does not provide.

Everything that can improve productivity or help development in the future.

ITALY

General information.

Technical information, performances, problems, etc.

Information on customer position in the EDP market (if the products they use are up-to-date, if there are different solutions to their problems, etc.).

Any technical information and details on what our publications say.

Technical information on hardware performance - information on problems occurring on other sites.

SWEDEN

New developments outlined in the IBM world.



EXHIBIT VIII-7

AGREEMENT WITH CONTACT PROCEDURES

COUNTRY	PERCENT	NUMBER OF RESPONDENTS	SAMPLE
Austria	92	24	26
Belgium	33	1	3
Denmark	80	4	7
Holland	88	7	8
Israel	86	18	21
Sweden	73	11	15
France	90	9	10
Germany	100	31	31
United Kingdom	92	11	12
Italy	100	24	24
Switzerland	75	3	4
Total	90	143	161



COMMENTS ON CONTACT PROCEDURE

AUSTRIA

Monthly meeting suggested (including software).

BELGIUM

Would like to hold periodic meeting 2/3 Mth including sales, marketing, CS and S. Plan for quarter meetings if applicable, i.e., if something happened which needs to be discussed or if we have something to communicate.

DENMARK

It is always easy to get in contact with NAS to get answers for any questions. Also, I would like to have a high level of technical seminars. Extremely pleased with the teamwork between NAS and the customer.

FRANCE

Continue the personal service.
Monthly meeting okay.

GERMANY

Better contacts, high management level.

HOLLAND

Weekly visits are appreciated and happy with existing situation. Billable situations should be clearly defined in advance.

ISRAEL

More contact with the SEs.

SWEDEN

Good scheme now with weekly operations meetings and bi-monthly follow up. Sales, SE contacts non-existing. Would prefer regular bi-monthly meetings. Monthly meeting with customer team (sales, SE, CS & E) is good.

SWITZERLAND

CE OK. Software weak.
Sales local problem (no sales in place). Needs to be advised more systematically about problems.

UNITED KINGDOM

Would like to have an updated (continually) family tree. Senior NAS management contact 'more frequent'. Good contact and communications from local management.



E. EQUIPMENT PERFORMANCE REPORTS

- One hundred forty-nine of the 161 sampled gave responses in this section, even though some of them had had little experience of the installed equipment. The responses are recorded in Exhibit VIII-9.
- There is a marked difference between Italy with 100% satisfaction and Belgium (0%), Denmark (14%), and Switzerland (25%). These results should be correlated with the actual fault reports for those customers and either:
 - Equipment investigated if poor performance.
 - Customer counseled if his perception is incorrect.
- As a rule of thumb, any perception level below 70% should give cause for concern and/or remedial action. In this survey, six out of eleven countries had satisfaction levels below this level.
- A selection of the most pertinent comments is given in Exhibit VIII-10. It should be noted that the comment level is comparatively low, which might indicate that the customers do not feel too strongly about the subject but do have a 'gut feeling' that things could be better. If the latter is the case, the customer perception could be relatively easily changed by appropriate counseling by the account coordinator.
- It is very interesting that Italy, with its 100% positive response, also gave very cogent improvement suggestions with the following factors occurring more than once:
 - MTRR/MTBF 3 times
 - More detail in availability reports 6 times



EXHIBIT VIII-9

**SATISFACTION WITH EQUIPMENT PERFORMANCE REPORTS
(PERCENTAGE)**

Italy	100	Acceptable
France	90	
Germany	77	
Israel	76	
Sweden	73	
United Kingdom	58	Marginal
Austria	54	
Holland	38	
Switzerland	25	Needs Investigation
Denmark	14	
Belgium	0	
68% Satisfied on Average		



COMMENTS ON EQUIPMENT PERFORMANCE

AUSTRIA

Automatical report of all on-line fallures desirable.
Message which fallures.

BELGIUM

Would be interested in comparatives reports.

DENMARK

With amount of errors it is difficult to make any statistics of reliability.
A technical status on all of the equipment could be valuable.
It is useful for the decision maker in account to have solid proof that he chose the right equipment when he ordered.
Information on performance by a software tool given or supplied by NAS.
I would like to have access to performance reports on all our equipment on a rolling 6 or 12 month basis.

FRANCE

Better information on innovations and market developments.
Comparative performance with other makers' CPUs and peripherals.
Customer should be given all information concerning machine function.
Better information on system configuration (NAS and others).

HOLLAND

Performance of equipment excellent, no reporting necessary.
Customer has his own reporting matrix, every 15 minutes entry.
Like to have regular input to compare data to other users.
No need for performance reports.
Have available from NAS on monthly status, meeting the availability of past month.

ISRAEL

On-line monitors.
Monthly report on availability.

ITALY

Avallability MTTR - MTBF on worldwide basis. (three times)
More detail in avallability report. (five times)
NAS market, NAS against other vendors.
Survey customer satisfaction.
Interested on RT.

Continued



COMMENTS ON EQUIPMENT PERFORMANCE

SWEDEN

NAS is using Ericsson's Information management system.

Would like a regular feedback, per unit, about hardware performance. (twice)

Expect full report from NAS if problem.

SWITZERLAND

Spec arrangements.

Difficult.

Tapes Improvements.

Not possible - done either by IBM or NAS.

UNITED KINGDOM

Would like to see CPU and peripherals availability reports. (twice)



- Both Denmark (low) and Italy (high) asked for comparative results in the marketplace. It is a useful discipline to ensure that NAS knows its customer satisfaction rating as well as equipment performance in order to ensure that they do not lose out in the marketplace whether or not the customer is aware of the comparative ratings.



IX CONCLUSIONS AND RECOMMENDATIONS

IX CONCLUSIONS AND RECOMMENDATIONS

A. MAIN FINDINGS

- A summary of the main findings is set out in Exhibit IX-1, but the overall recommendations are based also on the information contained in the body of the report.

- In the interpretation of the data, it should be remembered that the sample was from chosen NAS customers, and the following points must be considered:
 - Bias due to customer being favourably disposed to those he has spent his money with.

 - Bias due to the customer service not coming up to expectations.

 - Bias due to the personal relationships between the customer and the NAS representative conducting the survey.

B. THE MARKET BASE

- There is a clear pattern, in addressing the IBM plug compatibles market, reflected in the predominance of NAS peripherals over CPU population from which two recommendations emerge:



EXHIBIT IX-1

SUMMARY OF MAIN FINDINGS

Business Sectors	Manufacturing and Finance
CPU Population	56% NAS, 38% IBM
Peripherals	94% NAS
Operating Systems	96% of Large Systems MVS
Remote Support	Only 8% Want
Call-Out	93% Satisfied
Current Hours	40% Want Long Cover
Response Time	97% Want within Two Hours
New Services	91% Want Enhanced Services
Bundling	77% Want Debundling
Extended Service	Only 41% Would Like
Germany	Guaranteed Response Time and Availability
Account Coordinator	Good Rating at 84%
Contact Procedure	90% Satisfied
Equipment Performance Reports	68% Satisfied



- Continue to gain entry to the market and increase share by using the market in peripherals, and their consequent service, as the springboard for the subsequent sale of NAS CPUs and, in certain circumstances such as corporate strategy, for TPM over IBM and mixed-CPU sites.
- Determine the value of the installed base being serviced split into CPUs as against peripherals, and then the service revenue from each class, in order to decide which aspect generates, or could generate, the optimum profit, also taking into account hardware sales revenue and profit.
- No clear picture emerged on operating system software except that there was a strong correlation between large CPUs and MVS, and in one or two apparent national preferences. The recommendation here would be in the training field, to ensure that the engineers covering particular installation sizes in specific countries specialised in MVS or VM (and derivatives) as appropriate.
- However, in the data collected under training, very strong responses were given, indicating an excellent opportunity for selling education in MVS in four countries and VM in seven countries. These data are shown specifically in Exhibit III-9.
- It is recommended that the economic and government statistics be examined for each of the countries separately so the correct business (growth) sector is chosen in which to concentrate NAS resources. In all of the 'developed' countries it is likely that banking, finance, and service will grow more quickly than manufacturing, government, and education, but this does depend on a complex mixture of culture, current economic base, and correct economic forecasting.



C. SUPPORT ISSUES

- Because of the lack of support among customers for the provision of remote support in addition to the (call-out) engineer, it is recommended that NAS consider the following questions:
 - Will remote support:
 - Speed up diagnosis?
 - Save costs?
 - Enhance NAS reputation?
 - Hence, should NAS 'bundle' any marginal increase in cost into the normal service contract, or not provide the service at all?
- It is the view of INPUT that remote support must exist as a facility just to keep in the technology 'ball-game', but that this could well be evaluated and set up as a cost-effective tool within normal service until such time as the customer and market view of the effectiveness and credibility of such a service allows an extension into a marketable product in its own right.
- There is no specific recommendation on call-out, as there is good support for what NAS is doing at the moment. However, it would be advisable to try to determine from within NAS why Belgium is the single country with a poor view of the current situation.
- It is recommended that NAS prepare a strategy, and a costed plan, for dealing with the totality of the service marketplace, where some customers will want responses within one hour, mostly over a five and one-half day week, but covering one-, two-, and three-shift systems. NAS then to determine what



the charges should be to give a decided profit level, and further, to do a pilot survey among their customers as to the acceptability of those charges against the presumed current disruption levels among the customers.

- In some market areas, e.g., banking, finance, stockbroking, and JIT/CIM manufacturing, the insurance given by a good service contract should give practical benefits which far outweigh any marginal increase in service contract costs, but this will need selling to the customer, particularly in France, where they still prefer the 'call-out on spec' approach.

- Because machine availability is a key issue with users, it is necessary for NAS to ensure that customers have sufficient maintenance and adequate contracts to 'guarantee' that MTBF is high and MTTR is low, and hence that:
 - Contracts are geared to the physical requirement (need) and not to what the customer thinks he wants.

 - Contracts are priced to give the correct profit for the particular market.

- With reference to Exhibit IV-11 which shows the satisfaction levels with the working hours, it is recommended that NAS determine more exact reasons for the relatively high dissatisfaction levels in some countries. This may then show what customer counseling by the account coordinator could ameliorate the situation.

D. NEW SERVICES

- Clearly from Exhibit V-1 which shows the requirement for other (customer-suggested) services, the opportunity exists for the selling of new services; what is not clear is how much the customer is willing to pay for those services, even the ones suggested by the customers themselves.



- It is recommended that NAS set up a pilot study in one of the areas with a high response, to determine what the results would be against the resource to set up and run, say, two of the items with high ratings, such as system training in Austria and (systems) software support in Holland.
- It is not recommended that NAS tries to tackle the whole strata, as listed in Exhibit V-3, at once, but to adopt the approach recommended above.
- From among the NAS suggestions for new services that could be provided, operating systems still come high on the list for training and, for education, it is recommended that this area be the one to be concentrated on.
- With reference to Exhibit V-5 which shows the average strength of interest in NAS-suggested services, and if NAS were proposing a global approach to the provision of services, then disaster recovery and problem management would be the areas to concentrate on; however, this might spread the resource cross too wide a geographical area, and it is recommended that NAS consider pilot provision in a limited number of representative areas first.
- Conversely, NAS should also consider whether or not Italy, with a high overall interest in new services, should not be approached as a market sensor for the provision of a whole range of extended service. In this case, with particular reference to the comment in Chapter V about the evenness of response (small SD against all headings in Italy), it is recommended that NAS put a trial cost against each service and poll their customers in Italy to determine the market elasticity.
- On bundling it is recommended that NAS prepare debundled prices for offer to their customers, but include an amount for increased administrative control of the services actually provided. INPUT believes that an integrated hard and soft contract would produce better revenue and profit to NAS, so the pricing of the 'debundled' service should guide the customer to the integrated contract.



- In this context it is also recommended that the account coordinator be used specifically to 'educate' the customer into a better perception of what his business needs in the way of service, and the cost to the business of poor availability due to cost-cutting on service contracts. It was evident from many responses, that the respondent was not high enough in the business hierarchy to really understand the full impact of downtime.
- The latter comments also apply to the question of extended service contracts, and the same recommendation applies.
- Exhibit VII-1 shows that Germany has a very strong requirement for response time and system availability, and it is recommended that a proper risk analysis on the provision of this guarantee is performed, the prospective contracts priced to generate profit under this analysis, and the package sold to customers as a real response by NAS to customer needs.

E. CONTACT PROCEDURES

- The account coordinator rating is very good overall, but there are still items of information, and new abilities, that the customers expect from him or her.
- It is recommended that NAS prepare a strategy for the duties of the account coordinator as they are seen to be developing to meet the needs of the next five years. In particular, this must include software and business needs.
- This to be followed by a training plan, the sessions of which could also be used to 'fire-up' the enthusiasm of the account coordinators as a whole and perhaps to set target levels for customer satisfaction.



- It is also recommended that NAS determine if enough is being done to ensure that the customer himself is properly trained (is there an opportunity for more sales of training) and if this is sufficiently emphasised during the sales negotiations.
- For contact procedures, and with reference to Exhibit VIII-7, which shows the level of agreement with contact procedures, it is recommended that NAS determine how Germany and Italy achieve the 100% satisfaction levels, then investigate what needs to be done in Belgium to raise their levels.
- With reference to Exhibit VIII-9, which shows the customer satisfaction with equipment performance reports, it is recommended that the six countries (U.K., Austria, Holland, Switzerland, Denmark, Belgium) with the lowest ratings should be investigated to determine what needs to be done to raise the level.
- It is also recommended that NAS highlight the area of equipment performance reports as key to customer satisfaction overall--'Good News means Good Views'--and good news, together with a personable and knowledgeable account coordinator bringing it, should lead to further business.



APPENDIX A: QUESTIONNAIRE

APPENDIX A: QUESTIONNAIRE

NAS

CUSTOMER SERVICE REQUIREMENTS

Customer Name: _____

No: _____

Date: _____

Types of Equipment

Please Tick

NAS CPUs 1 66xx
 2 80xx
 3 90xx
 4 XL
 5 Other _____

OTHER MANUFACTURERS' CPUs
(Please state type and quantity)

Peripherals 1 7380
 2 7900
 3 Other _____

OPERATING SYSTEMS USED
(Please state type)

Industry Sector

Please Tick

Manufacturing
Retail/Distribution
Banking/Finance
Service
Education
Government
Other

SUPPORT ISSUES

- 1a. Do all aspects of the call-out procedures meet with your requirements?

YES

NO

DON'T KNOW

- 1b. Please indicate what changes you would like to see. (PROBE FULLY)

- 2a. Do all other aspects of NAS's contact procedures (e.g., periodic call review meetings) meet with your requirements?

YES

NO

DON'T KNOW

- 2b. Please indicate what further aspects you would like to see. (PROBE FULLY)

- 3a. Do you regard Remote Support as a replacement for the call-out engineer?
(TICK ONE)

YES

NO (as an addition)

DON'T KNOW

DON'T WANT REMOTE SUPPORT

- 3b. (Note to interviewer: Probe for comments)

- 4a. What coverage do you need in terms of working hours for hardware support?

Hours per day/Days per Week

Please tick

24 x 7

24 x 6

11 x 5

8 x 5

Other: (please state)

x

4b. Are you happy with these hours or would you want more flexibility?

YES

NO

4c. If no, then what additional flexibility would you want?

5. What are your needs in terms of response time to fault calls?

Please tick

On-site engineer

1 hour

2 hour

4 hour

8 hour

Next day

Other: (please state)

5b. Does this vary over time within the DP cycle? (PROBE FULLY)

YES

NO

DON'T KNOW

6a. Are you very happy with the reports produced on equipment performance?
(e.g., vendor-specific reporting that would be the basis of the review meeting)

YES

NO

DON'T KNOW

6b. Please indicate any improvements you would like to see. (PROBE FULLY)

7. I am particularly interested in your views on "other" services or modified current service offerings that NAS could provide that would help improve the running of your systems. (The implication is that these services are to be provided at extra cost.)

Firstly, are there any additional services that you would like NAS to provide, and what is your level of interest in NAS providing them on a scale of 1 to 10 (10 = high and 1 = low)?

	Level of Interest 1-10
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

Secondly, which of the following services would you be interested in being provided by NAS, and what is your level of interest on a scale of 1-10?

(NOTE TO INTERVIEWER: It is important that the user realises that you are talking about his interest in NAS providing these services - not a general interest in the service).

	NO	YES	Level of Interest 1-10
1. Extended hardware service agreement: (Integrated/total service)	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Configuration Planning	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Capacity Planning	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Environmental Planning (including cabling)	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Software Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Software Installation	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Software Implementation	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Software problem determination	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Education (specify type)	<input type="checkbox"/>	<input type="checkbox"/>	_____
_____	<input type="checkbox"/>	<input type="checkbox"/>	_____

	NO	YES	Level of Interest 1-10
10. Consultancy	<input type="checkbox"/>	<input type="checkbox"/>	___
11. Network Planning	<input type="checkbox"/>	<input type="checkbox"/>	___
12. Network Management	<input type="checkbox"/>	<input type="checkbox"/>	___
13. Disaster Recovery	<input type="checkbox"/>	<input type="checkbox"/>	___
14. Facilities Management	<input type="checkbox"/>	<input type="checkbox"/>	___
15. Problems Management	<input type="checkbox"/>	<input type="checkbox"/>	___
16. Technical support "hotline"	<input type="checkbox"/>	<input type="checkbox"/>	___

(PROBE FULLY)

CONTRACTUAL TERMS

8. Would you in general prefer each service to be individually priced or would you prefer a totally bundled offering? (Please tick)

INDIVIDUALLY PRICED BUNDLED DON'T KNOW

- 9a. Is an extended service agreement of interest? (Please tick)

YES NO DON'T KNOW

- 9b. Comments:

ACCOUNT CO-ORDINATOR

- 10a. How would you rate your NAS account co-ordinator overall in respect of the skills needed to service your accounts (e.g., software skills, the ability to understand your business problems, etc). Please rate on a scale of 1-10 with 10 being excellent and 1 being poor.

Rating 1-10 _____

- 10b. What are the additional skills you feel your NAS account co-ordinator should have to fully meet your service requirements? (PROBE FULLY)

- 11a. What types of information do you expect your account co-ordinator to provide? (Please tick)

	YES	NO	DON'T KNOW
New hardware products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New software releases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New software products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contractual terms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other: (please state)

- 11b. Is there any other kind of information you would like your account co-ordinator to provide?

E N D

THANK RESPONDENT AND CLOSE INTERVIEW

APPENDIX A: QUESTIONNAIRE

NAS

CUSTOMER SERVICE REQUIREMENTS

Customer Name: _____

No: _____

Date: _____

Types of Equipment

Please Tick

NAS CPUs	1 66xx	<input type="checkbox"/>
	2 80xx	<input type="checkbox"/>
	3 90xx	<input type="checkbox"/>
	4 XL	<input type="checkbox"/>
	5 Other _____	<input type="checkbox"/>

OTHER MANUFACTURERS' CPUs
(Please state type and quantity)

Peripherals	1 7380	<input type="checkbox"/>
	2 7900	<input type="checkbox"/>
	3 Other _____	<input type="checkbox"/>

OPERATING SYSTEMS USED
(Please state type)

Industry Sector

Please Tick

Manufacturing	<input type="checkbox"/>
Retail/Distribution	<input type="checkbox"/>
Banking/Finance	<input type="checkbox"/>
Service	<input type="checkbox"/>
Education	<input type="checkbox"/>
Government	<input type="checkbox"/>
Other	<input type="checkbox"/>



SUPPORT ISSUES

- 1a. Do all aspects of the call-out procedures meet with your requirements?

YES

NO

DON'T KNOW

- 1b. Please indicate what changes you would like to see. (PROBE FULLY)

- 2a. Do all other aspects of NAS's contact procedures (e.g., periodic call review meetings) meet with your requirements?

YES

NO

DON'T KNOW

- 2b. Please indicate what further aspects you would like to see. (PROBE FULLY)

- 3a. Do you regard Remote Support as a replacement for the call-out engineer?
(TICK ONE)

YES

NO (as an addition)

DON'T KNOW

DON'T WANT REMOTE SUPPORT

- 3b. (Note to interviewer: Probe for comments)

- 4a. What coverage do you need in terms of working hours for hardware support?

Hours per day/Days per Week

Please tick

24	x	7	<input type="checkbox"/>
24	x	6	<input type="checkbox"/>
11	x	5	<input type="checkbox"/>
8	x	5	<input type="checkbox"/>

Other: (please state)

x



4b. Are you happy with these hours or would you want more flexibility?

YES

NO

4c. If no, then what additional flexibility would you want?

5. What are your needs in terms of response time to fault calls?

Please tick

On-site engineer

1 hour

2 hour

4 hour

8 hour

Next day

Other: (please state)

5b. Does this vary over time within the DP cycle? (PROBE FULLY)

YES

NO

DON'T KNOW

6a. Are you very happy with the reports produced on equipment performance?
(e.g., vendor-specific reporting that would be the basis of the review meeting)

YES

NO

DON'T KNOW

6b. Please indicate any improvements you would like to see. (PROBE FULLY)



7. I am particularly interested in your views on "other" services or modified current service offerings that NAS could provide that would help improve the running of your systems. (The implication is that these services are to be provided at extra cost.)

Firstly, are there any additional services that you would like NAS to provide, and what is your level of interest in NAS providing them on a scale of 1 to 10 (10 = high and 1 = low)?

	Level of Interest 1-10
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

Secondly, which of the following services would you be interested in being provided by NAS, and what is your level of interest on a scale of 1-10?

(NOTE TO INTERVIEWER: It is important that the user realises that you are talking about his interest in NAS providing these services - not a general interest in the service).

	NO	YES	Level of Interest 1-10
1. Extended hardware service agreement: (Integrated/total service)	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Configuration Planning	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Capacity Planning	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Environmental Planning (including cabling)	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Software Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Software Installation	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Software Implementation	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Software problem determination	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Education (specify type)	<input type="checkbox"/>	<input type="checkbox"/>	_____
_____	<input type="checkbox"/>	<input type="checkbox"/>	_____



	NO	YES	Level of Interest 1-10
10. Consultancy	<input type="checkbox"/>	<input type="checkbox"/>	___
11. Network Planning	<input type="checkbox"/>	<input type="checkbox"/>	___
12. Network Management	<input type="checkbox"/>	<input type="checkbox"/>	___
13. Disaster Recovery	<input type="checkbox"/>	<input type="checkbox"/>	___
14. Facilities Management	<input type="checkbox"/>	<input type="checkbox"/>	___
15. Problems Management	<input type="checkbox"/>	<input type="checkbox"/>	___
16. Technical support "hotline"	<input type="checkbox"/>	<input type="checkbox"/>	___

(PROBE FULLY)



CONTRACTUAL TERMS

8. Would you in general prefer each service to be individually priced or would you prefer a totally bundled offering? (Please tick)

INDIVIDUALLY
PRICED

BUNDLED

DON'T KNOW

- 9a. Is an extended service agreement of interest? (Please tick)

YES

NO

DON'T KNOW

- 9b. Comments:



ACCOUNT CO-ORDINATOR

- 10a. How would you rate your NAS account co-ordinator overall in respect of the skills needed to service your accounts (e.g., software skills, the ability to understand your business problems, etc). Please rate on a scale of 1-10 with 10 being excellent and 1 being poor.

Rating 1-10 _____

- 10b. What are the additional skills you feel your NAS account co-ordinator should have to fully meet your service requirements? (PROBE FULLY)

- 11a. What types of information do you expect your account co-ordinator to provide? (Please tick)

	YES	NO	DON'T KNOW
New hardware products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New software releases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New software products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contractual terms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other: (please state)

- 11b. Is there any other kind of information you would like your account co-ordinator to provide?

E N D

THANK RESPONDENT AND CLOSE INTERVIEW

