NETWORK INTEGRATION AT COMPUNET[1]

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ABSTRACT

The case describes the strategic challenges faced by CompuNet in 1995. After a breathtaking expansion from a small IBM reseller to one of the largest and most successful German multivendor systems integrators, the annual report for 1994/95 showed a dramatic decrease in profits.

Following a company overview, which includes a look at CompuNet's remarkable and expansion-favoring structure, main internal and external factors for the company's success are analyzed. Individual success drivers such as prestigious projects, a remarkable public relations campaign, the ability to adapt to rapidly changing requirements of customers, or the competence in dealing with increasing complexity are discussed in more detail.

Next, the case focuses on some main risks and dangers threatening contributing to the new situation. A list of critical open questions is proposed that are of vital strategic importance and may determine the future of CompuNet.

INTRODUCTION: A DECADE OF SUCCESS

Jost Stollmann, chairman of the executive board of CompuNet Computer AG headquartered in Kerpen near Cologne, Germany, founded the company in 1984. Since then, CompuNet grew into Germany's largest multivendor systems integrator, increasingly assuming responsibility for entire client/server infrastructures. The systematic development of customised IT services - from strategic consulting, network design and implementation to user-support and service level agreements - largely contributed to this growth.

Since its beginning, CompuNet prospered and profits expanded at an incredible rate. The business year ending June 30, 1994, was the best year in corporate history with DM 32.5 million profit after tax, an increase of 132% in comparison to the preceding year.

[1] A Teaching Note is available upon request for instructors only.

Table 1. CompuNet Products and Services *(Source: CompuNet)*

Guarantee Management Solutions	Range of guarantee products that have standardized customer claims for the whole life cycle of the hardware (Life Cycle Guarantee; Support Guarantee).
Plug and Play Solutions	Assembly and configuration of products carried out centrally at the assembly and technology center near Kerpen before distribution to customers to allow plug and play.
Software Integration Products	Integration of standard software products and tailor-made applications to supply cost-efficient and company-specific solutions.
All Area Networks	Linkage of different corporate data interchange and telecommunication networks, integration of LANs and WANs combined into All Area Networks (AANs).
Managed Services	Operation of and responsibility for information systems in business critical areas.
Technology Management	Total-cost-of-ownership-concepts for the operation of PCs, workstations, and servers for all services that are necessary for the implementation and operation of systems and networks.
Enterprise Management	Solutions such as help desk, remote administration, monitoring, checking, tuning, and software upgrading of systems as well as network management offered centrally via data links.
Virtual Help Desk	Professional support mainly for client/server environments. Using decentralized information and telephone technology allows for cooperation between customers, vendors and CompuNet professionals, regardless of their specific locations. All regional CompuNet Call Centers are logically connected in a virtual organization.
Maintenance Services	Standardized contract administration, a nationwide reporting system and a centralized Call Control Center.
Consulting	Consulting on strategic IT-planning, procurement, design, development as well as implementation, continuous development of applications in service and office management to support the process-oriented restructuring.

COMPANY OVERVIEW

CompuNet was regarded as the leader in reselling, maintaining and supporting personal computers, and integrating networks in Germany. The company also offered a full spectrum of products and services developed around 'the networked PC' (see Table 1).

Excellent logistics capabilities combined with competent project management and nationwide systems support under one roof had led to CompuNet's unique market position. Said Jost Stollmann, "CompuNet increasingly assumed total responsibility for customers' entire client/server infrastructures. This required the integration of multi-vendor IT products with services which are more and more extensive and complex."

In 1990, CompuNet became a multi-vendor systems integrator, expanding its original line of IBM products to include such brands as Compaq, Hewlett Packard, Siemens Nixdorf (SNI), and Toshiba [see also Loebbecke and Jelassi 1994]. In 1994, the company had cooperative ventures with SAP, Compaq and Microsoft in the SAP R/3 environment, with Cisco and Bay Networks in the field of swiched internetworking, with SUN for the Internet as well as with Hewlett-Packard and IBM in the area of network and system management.

Financial Results

For the financial year 1993/94, CompuNet achieved impressive results (see Table 2). Its turnover amounted to DM 924.6 million, up from DM 684.1 million in the previous year. Trading revenue increased by almost 32% to DM 766.8 million in 1994. Concurrently, service revenues increased within one year by 55% to DM 157.8 Million in 1994. Billings for services represented 17% of CompuNet's total group revenue in 1994, compared to 14.8% in 1993 and 10.8% in 1992.

The company partly attributed these impressive figures to the resurgence of demand in the market for brand-name vendors such as Compaq and IBM. In 1993/94 CompuNet installed 84,100 PCs and workstations. The price charged per computer configuration dropped 4.6% during the fiscal year. This price reduction, which was relatively low for the industry, reflected the increased share of UNIX and Microsoft NT based high-performance servers [Source: CompuNet Annual Report 1995]. Pressures on margins were compensated by increased separate billings for services and by reduced costs.

All branches and service areas were able to increase their contributions to earnings. CompuNet was the third largest services provider, after SNI and Hewlett Packard, in Germany [CompuNet Annual Report 1994].

Tabel 2. CompuNet Figures 1988-1994 (Source: CompuNet)

	1993/94	1992/93	1991/92	1990/91	1989/90	1988/89
Sales	924.6	684.1	678.3	625.7	340.4	175.9
Operating profit (EBIT)*	64.3	40.2	37.6	17.1	19.9	6.5
in % of sales	7.0 %	5.9 %	5.5 %	2.7 %	5.8 %	3.7 %
Income from normal operating activities	41.7	22.8	21.6	2.3	11.3	2.8
in % of sales	4.5 %	3.3 %	3.2 %	0.4 %	3.3 %	1.6 %
Consolidated earnings	32.5	14.0	13.7	-11,7 **	3.0	0.6
(loss) in % of sales	3.5 %	2.0 %	2.0 %	-1.9 %	0.9 %	0.3 %
Employees	1,256	1,097	1,195	1,128	489	307
Personnel expense*	105.8	93.6	95.6	83.2	34.7	18.0
Internal financing***	110.9	86.5	95.6	106.4	44.2	17.9
Internal financing in % of total liabilities	31.8 %	26.2 %	37.4 %	36.9 %	31.4 %	17.7 %
Dividend per Share (DM) ****	90.77	62.67	66.39	25.50	35.60	9.80

All amounts in DM million except number of employees and dividend value
* without bonuses
** not comparable to 1991/1992 since losses could not be offset against profits
*** including equity, silent partnership investment and subordinated shareholder loans
**** not including corporation tax refund

Corporate structure and culture

CompuNet's holding structure (see Figure 1) was transparent and "the interests of management corresponded to those of the owners" (Hans-Dieter Koch, CompuNet Chief Financial Officer). Each branch was a profit center. The legal form of CompuNet's group structure was fulfilling the requirements of capital markets while giving its management the opportunity to benefit from entrepreneurial rewards.

CompuNet's organizational structure allowed its managing shareholders (partners) to participate in CompuNet Computer AG's earnings through their shareholdings in that company, whilst also sharing in the results of their operating units through ownership of a civil law company. Each of the partners put up an individual investment which was usually financed by personal loans. Every partner was liable for that sum towards his financing institution. That meant high individual risk, which consequently insured a big personal commitment of the partners.

It was CompuNet's aggressive policy to geographically expand fast in order to address the needs of large corporations. Furthermore, the company pursued a policy of buying competitors who complemented CompuNet's product and services offerings. For instance, in 1991, Data Services was taken over. The company was fully integrated into CompuNet, and its carryover losses were used to decrease the absolute amount of profit, thus lowering CompuNet's tax burden. In September 1993, CompuNet acquired E'ZWO Computervertriebs AG, Munich (formerly 'Electronic 2000 Vertriebs AG', Munich). E'ZWO was in extreme financial difficulty. For CompuNet, the significant loss carryover and the strong business in Sun and Digital Equipment workstations was of high interest. However, the take-over did not open the new planned tax-saving possibilities, as three shareholders of E'ZWO pursued legal action against CompuNet's integration plan.

CompuNet's corporate culture was transparent and direct. Its philosophy of constant learning and reengineering (says Guenther Lamperstorfer, CompuNet, Member of Executive Board, "Companies which treat change positively and include change management as part of their philosophy are learning organizations. In competitive markets, these organizations are the winners as they are able to constantly adapt and improve.") was supported by its organizational structure that relied on a state-of-the-art information technology (IT) backbone.

Information technology backbone

Since February 1993, the company had been using Lotus Notes to support its business processes across Germany allowing for rapid data and information exchange between individuals and groups irrespective of their location. All internal business processes were handled centrally using SAP. A mainframe, internal networks (LANs) and numerous servers created an effective and reliable data processing backbone. More than 30 specialists guaranteed quick support for system users. Ninty percent of all suppliers and serveral clients exchanged contract and order data with CompuNet via Electronic Data Interchange (EDI). Nearly all business partners were connected to the company through e-mail.

With CompuNet's Call Administration System (CallAS), a customer call could be answered by any of eight regional CompuNet Help Desks. IT support specialists diagnosed the problems and attempted to solve them, either through their access to databases of known cases or through their excellent contact with the manufacturers. If necessary, manufacturers' experts were brought in. If resolution of the problem required spare parts, they were ordered via a workflow-SAP program interface and dispatched overnight. For critical systems, spare parts were delivered within hours from local depots. A central Call Control Center ensured that contractually-agreed service levels were being met.

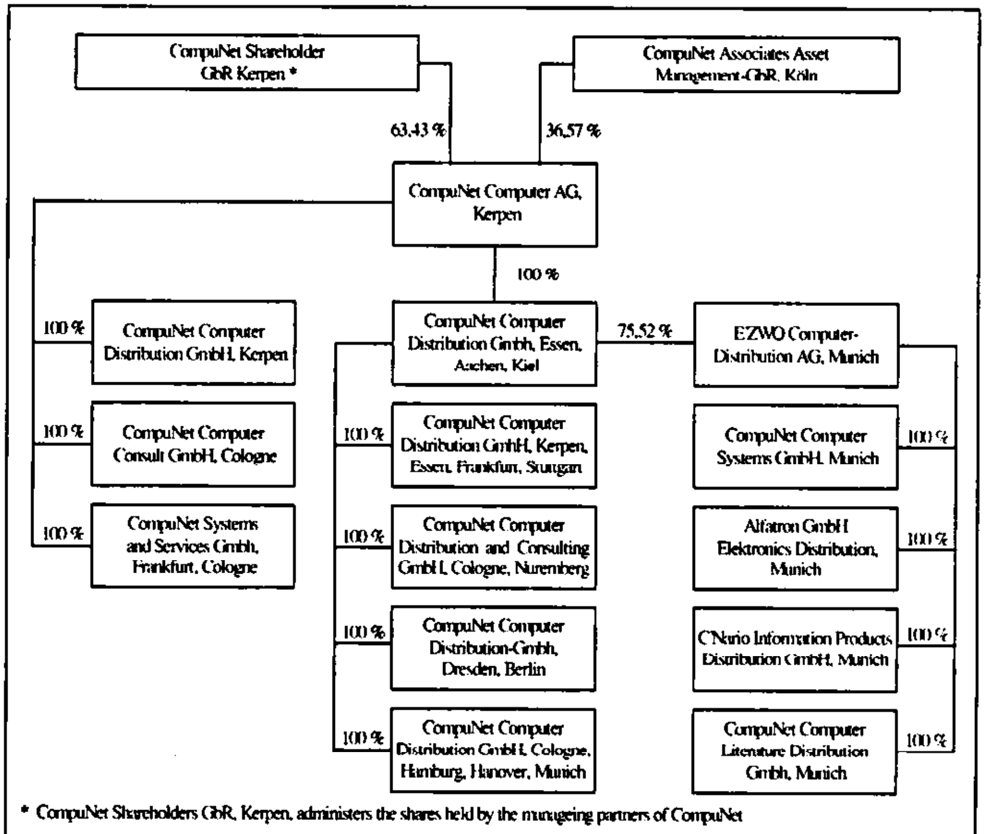

Figure 1. CompuNet AG Holding Structure, as of June 1995 (Source: CompuNet)

TURNING OPPORTUNITIES INTO SUCCESS

Internal Factors Fostering CompuNet's Outstanding Performance

In the *low-end service area* (reactive operations), CompuNet's most profitable product was the 'Life-Cycle Guarantee' for new IT equipment which runs for 48 months corresponding to the expected life cycle of the hardware. Since October 1992, all CompuNet products have been delivered with the 'Life-Cycle Guarantee' It covers repair, travel expenses for technicians, spare parts and all other costs related to equipment damages. Every customer only has one contact person within CompuNet. CompuNet became the contractor for all guarantee-related problems. The Life-Cycle Guarantee consolidated the different manufacturer guarantees for the end customer. This reduced time and effort for administrating guarantee matters for large corporations while at the same time decreased risk by allowing them more planning security - thus adding value for them. For CompuNet, the reengineering effort significantly simplified its core activities. Various guarantee-related transactions within the company, as well as with suppliers and customers, were eliminated, thereby reducing CompuNet's maintenance costs by 66%-75%. Moreover, the time required to process guarantee cases sharply decreased [see also Loebbecke and Jelassi 1998].

CompuNet generated additional income by the support-guarantee, introduced in April 1994, which aims at eliminating all administrative processes from support management. It reduces support efforts at CompuNet and at the customer site to 'one bill, one site, and one phone number'. Comparable to the 'Life Cycle Guarantee' concept, CompuNet ensured reducing system downtimes - depending on the contract type - to one day, eight hours, or four hours. Paying an all-inclusive guarantee premium, the customer can call the same CompuNet phone number whenever and wherever a problem occurs [see also Loebbecke and Jelassi 1998] To limit its risk, CompuNet in turn reinsured itself with a large insurance company.

Also very profitable were *high-end services*, i.e. systems engineering, integrating for example Windows NT, SAP and Lotus Notes. CompuNet's clients can choose from up to 75 standard applications to be included in software installation. Upon request, CompuNet's specialists integrate the clients' own customized software into their system and provide comprehensive safety measures, such as quality control and virus scans. CompuNet belonged to the market leaders in supplying solutions in this business segment.

Furthermore, CompuNet was able to acquire some *large-scale projects*, such as (1) reengineering business processes at Deutsche Babcock AG, (2) integrating SAP R/3 into an existing data center at Ford Werke AG, or (3) setting up one of the most modern trading floors in Europe at ABM AMRO Bank (see Appendix).

Last, but not least CompuNet started a very provocative *public relations campaign* in favor of Germany as an economic site which led to a tremendous increase in its countrywide visibility and improved entrepreneurial reputation. Large ads in major newspapers and several presentations by Jost Stollmann during follow-up TV invitations stated CompuNet's dedication to entrepreneurship and the industry location Germany. During three months in 1995, CompuNet spent two-thirds of its yearly advertising budget of DM 1.5 million on the campaign. "There's no doubt that Germany is a high-wage country. We can't change that, if we like it or not. What we can influence is the individual wage and performance scheme. It is necessary to distinguish between the things that can be changed and the things that can't. Wasting your valuable time on unchangeable facts is foolish," stated Jost Stollman. CompuNet's profiles before and after the campaign clearly indicate the tremendous success of the PR initiative [Loebbecke and Szyperski 1997].

External factors: Major developments in the business environment

A rising number of government organizations and large corporations, particularly banks, insurance companies, and other service industries, were turning to PC- and workstation-based client/server infrastructures to run their critical business applications. Customers were demanding dramatic improvements in the availability of these applications and in the life cycle costs of such systems. Decentralized IT infrastructures increased the need for servicing Wide Area Networks and delivering quick-response maintenance both on-site and from remote locations. Particular attention was focused on the router and hub business, as well as on the extremely short reaction times these technologies demand on a nationwide basis. Also, customers were increasingly opting for products from different manufacturers with varying warranties and spare parts supply policies, thus making the system landscape more and more heterogeneous and complex.

Furthermore business process orientation gained ground. Increasing competition had compelled large corporations to undertake radical restructuring. Driven by process-oriented information technologies, traditional and obsolete ways of working were giving way to a new paradigm. Companies increasingly saw their overall business as an integrated chain of processes and adapted them accordingly. A focus on process was replacing isolated thinking confined to the narrow considerations of a specific department or business unit. Optimization of processes established the basis for greater flexibility and provided the potential for cost savings. Accompanying decentralized IT infrastructures required companies to develop new concepts to cover wide-area installations, networking, systems maintenance and end-user support.

For CompuNet, those changes in its business environment entailed a tremendously increasing complexity of projects. Manufacturers were revamping their product lines at an average rate of twice a year. Powerful PCs were taking over complex tasks, office work was becoming more mobile, sales forces and customer service personnel were increasingly being equipped with laptops, and PC servers were replacing mid-sized and mainframe computers. At the same time, hard- and software prices were dropping, thus opening up whole new fields of application.

CompuNet had to develop standard services for increasingly heterogeneous IT infrastructures. It had not been so long ago that tasks such as testing, assembling, configuring, or installing networks were cost-intensive undertakings that varied on a case-to-case basis. Meanwhile CompuNet completed them centrally and according to industrial standards.

New individual services for managing 'All Area Networks' and PC Data Centers had to be developed. The supervision and maintenance of systems and networks from remote sites began to make significant contributions to more efficient user support. Yesterday's challenges had been standardization, automation and industrial configuration. The successful management of the entire complex cycle of services required by the distributed computing environment had become CompuNet's market edge and its future.

NOVEMBER 1995: A DRAMATICALLY NEW SITUATION

In November 1995, facing increasing risks and enormously growing market demands, the annual report for the business year 1994/95 (see Table 3) showed a decrease in consolidated earnings by roughly 50%, even though overall turnover was still increasing. It was the first crisis that hit CompuNet. In spite of the outstanding market success, the situation was serious: not only was there a profit crash, also the unexpected provisions decimated dividend payments.

The operating income of the branch offices improved, however branch income was reduced by the negative extraordinary result. This caused the profit-related bonuses, which were paid to the managing shareholders, to fall from DM 10.6 million to DM 8.8 million.

Jost Stollmann realized that only a rapidly convened shareholder meeting would keep the tension within limits, a tension that - supported by CompuNet's open communication infrastructure - could constantly be felt throughout the group. However, what should he 'bring' to the meeting? What had gone wrong all of a sudden? And more importantly, could he calm down his partners by pointing to singular events, or were there some built-in dangers that he had neglected over the last twelve months? A concept paper had to be written identifying the main issues:

(i) What were the reasons for the drastic reductions in profits and dividends?

(ii) What were the main risks for the negative trend to continue?

(iii) And, once identified, how were the risks to be managed? Were even changes in the organizational and financing structures going to be necessary to account for those risks?

Table 3. CompuNet Results 1993-1995 (*Source: CompuNet*)

	1994/95	1993/94
Sales	1161.2	924.6
Operating profit (EBIT)*	79.1	64.3
in % of sales	6.8 %	7.0 %
Income from normal operating activities	59.4	41.7
in % of sales	5.1 %	4.5 %
Consolidated earnings	18.0	32.5
(loss) in % of sales	1.6%	3.5 %
Employees	1,557	1,256
Personnel expense*	127.5	105.8
Internal financing***	105.6	110.9
Internal financing in % of total liabilities	26.0 %	31.8 %
Dividend per Share (DM) ****	45.24	90.77

All amounts in DM million except number of employees and dividend value
* without bonuses
** not comparable to 1991/1992 since losses could not be offset against profits
*** including equity, silent partnership investment and subordinated shareholder loans
**** not including corporation tax refund

In a first brainstorming session the following potential reasons for the unpleasant figures were 'put on the table': The net earnings for the year were impacted by negative extraordinary results of DM 26.7 million. This amount included precautionary measures to the amount of DM 27.9 million in connection with a legal conflict with the reinsurer. After an unexpectedly high damage claim, the reinsurer had contested the warranty service insurance and pursued cancellation of the policy before term. At the same time, the reinsurer discontinued regulation in the first quarter of the fiscal year. A second reason was the increased tax burden of DM 5.5 million. All carryover losses of Data Services had been used up. As a consequence, profits could not be reduced by losses, and full taxation applied.

Resumed Jost Stollmann, "Well, I guess there wasn't that much that we could have done about these things, but are we sure that next year will be better? What has changed? What did we overlook?" On a piece of scratch paper, he scribbled down his ideas on changes and risks which later were put together in an overview table (see Table 4).

Table 4. Changes and according risks in CompuNet's business situation

What had changed	Resulting risk for CompuNet
Globalization leading to customers operating more internationally	Could CompuNet, at its current size, provide competent service on an international basis?
Growth of telematics underlying the overall push towards the Information Society	Had CompuNet the capacity to be an integrated service provider for an enlarging variety of technologies (hardware and software)? Would CompuNet's economies of scale be sufficient for justifying necessary investments in equipment and training for all those new developments?
Acquisition of several large-scale projects leading to increasing complexity that went beyond CompuNet's traditional scope	Could a company of CompuNet's size and solvency responsibly handle the accompanying risks? Would it be taken as reliable on the stage of international service business?
New dimensions in reinsuring the 'life-cycle guarantee'	Would CompuNet loose on disagreements with the reinsurer? Would there still be a profitable way to reinsure risks incurred by the 'life-cycle guarantee' in an era of steadily growing claims?

SHAREHOLDER MEETING IN NOVEMBER 1995: ANALYSING THE SITUATION AND PROPOSING OPTIONS

All 42 partners were present at the meeting in November 1995, some of them anxious for the future. In his opening presentation, Jost Stollmann provided reasons for the difficult situation. Urging all partners to get involved in the decisions to be made in the following hours, he raised the following questions:

Given CompuNet's size and history ...

(1) would the increasing globalization of customer activities require too strong capabilities for international services?

Large companies were increasingly using client/server architectures to manage their global operations and asked for according solutions. This demanded an international service network which seemed to be virtually impossible to maintain.

(2) was the concept of always offering a comprehensive solution still feasible in times of dramatic technological developments?

In comparison to its competitors, a medium-sized company like CompuNet was not going to be able to be among the market leaders in all its products and services, as the neglecting of the developments in the telematics market had vividly demonstrated.

(3) was the company going to be able to manage the new size of project risks under the premises of its solvency?

CompuNet's competitors were companies like SNI, IBM or Debis, and not dealers or small systems and service providers. In addition, CompuNet's new competitors were also its suppliers.

(4) would the risk position and the disagreements with the reinsurer force CompuNet to act?

CompuNet had already been forced to make high provisions for open risk positions incurred by its 'life-cycle guarantee'.

In summary, had there been a shift in the critical issues for the company due to its rapid growth and new size? If yes, how to manage those issues? And finally, would changes in CompuNet's organizational and financial structure be necessary?

Three solutions were possible:

Proposal 1 Try to obtain venture capital which would imply giving up part of corporate control and possibly a share of the company.

Proposal 2 Keep cool and take the company public (Initial Public Offering, IPO).

Proposal 3 Look for a strong business partner who wanted to enter the 'Information Technology' market. This could be in telecommunications if the telematics market was expected to boom, or alternatively one of the manufacturers or competitors, if the client/server market seemed to have more potential growth.

Suddenly, things got into perspective for the partners. At that moment, Jost Stollmann was sure of the best solution. Now all he had to do was to convince the others. He reminded his colleagues of the strong message CompuNet's public relations campaign had carried, and just before breaking for lunch he proclaimed:

"The market will continue to require an array of services offered by a single vendor-independent provider like CompuNet. All of our business units are in a period of transition to match those demands. The variety of new issues and challenges confronting us demands clear and cogent corporate strategy. I am convinced that leadership will continue to make the difference between a consistent focus on the crucial goals and indecisiveness."

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APPENDIX

Examples of large-scale CompuNet projects

(1) Reengineering business processes at Deutsche Babcock AG, Oberhausen

(2) Integrating SAP R/3 into an existing data center at Ford Werke AG, Cologne

(3) Setting up one of the most modern trading floors in Europe at ABN AMRO Bank

Reengineering business processes
at
Deutsche Babcock AG, Oberhausen

At the beginning of the 1990s, Babcock began to adjust its IT environment to what had become a strongly decentralized corporate structure. Flexible and affordable client/server systems had increasingly assumed important tasks in information processing.

In 1990, CompuNet began setting up a complete network, including the purchase of 50 servers and additional peripherals. By 1995, CompuNet had procured and configured 1,600 PCs for the company. All systems were covered by CompuNet's four-year 'Life Cycle Guarantee', which was also extended to the previously installed servers and critical components. Also, based on a recommendation from CompuNet, Babcock decided on Lotus Notes for their electronic communications standard. Soon it linked 3,000 workstations worldwide, a number that should grow to 16,000 by 1998.

Finally in 1995, Babcock invited CompuNet to participate in the optimization of its business processes. The primary target was to accelerate the processing of purchase orders and improve office communications, while at the same time opening up extensive design and communication possibilities for the technical departments. Using Lotus Notes as a file processing software platform, the new desktop system simplified and automated business processes at Babcock.

In close cooperation with Babcock's own specialists, CompuNet employees worked on-site to ensure the smooth functioning of the IT systems and to provide user support. They, in turn, relied on the spare parts delivery, technical field service and telephone consulting of the entire CompuNet Group. Regular reports documented the quality of the services rendered. Said Dr. Peter Friedrich, Director of Information Management and Corporate Organization at Deutsche Babcock AG, "CompuNet has provided us with excellent support in our transition from centralized to decentralized data processing."

Integrating SAP R/3 into an existing data center
at
Ford Werke AG, Cologne

Operational innovations in asset accounting prompted the Ford Werke AG in Cologne to integrate an SAP application based upon a modern client/server platform into its existing data center. "We needed to both cut costs and at the same time become more flexible. So it made sense for us to combine the structures of the existing data center with the advantages of a UNIX platform," recalled Karl-Heiz Thum, Network and Software Manager of the Ford-Werke AG.

When the decision was made to install an SAP R/3-supported client/server architecture, Ford emphasized continuity. The company wanted to keep on benefiting from the investments made over the years in the central data center and minimize organizational changes. Furthermore, Ford wanted its system administrators to be able to run the new UNIX system without having to learn new tools or redefine structures.

Drawing on its extensive experience with UNIX and SAP R/3 projects, CompuNet developed a strategy together with Ford. The project was carried out between August and October 1994. Dr. Werner Schuette, Ford-Werke AG, said: "CompuNet's planning and services contributed greatly to the smooth introduction of SAP R/3 in our company. Operational costs are minimal. CompuNet has broken ground for future UNIX installations in the data center".

Setting up one of the most modern trading floors in Europe
at
ABN AMRO BANK

'Aiming for the top in value-added banking - locally and globally' was the defined goal of the ABN AMRO Group. The private and commerical Dutch banking group, successful in 67 countries, had decided to promote its trading activities in Germany, emphasizing the fields of stocks, fixed interest securities and options, especially in online exchange transactions. The bank wanted to speed up its trading business by increased use of information and communication technology.
CompuNet installed and operated a technically optimal trading floor with SUN Microsystems servers and workstations. The inclusion of telecommunications equipment in the data processing environment accelerated the information flow to the traders and improved information processing through optimal telephone consulting.
Approximately 60 workstations were connected to application servers and a data server where all the relevant trading information was bundled and made available to the users. A keyboard which allowed the parallel use of the telephone and the computer was developed by Bosch especially for this application.
Using an extensive network management system, the application offered strong support during the trading hours. Workstations with jump-start automatic and high availability servers guarantee almost 100% system availability. As part of a multi-leveled security concept, every access was protocoled and data abuse thus avoided.

"The state-of the art trading floor, established and operated in cooperation with CompuNet, has given ABN AMRO a decisive competitive advantage," analyzed Rainer Merkhofer, Account Manager at CompuNet Frankfurt.