

Contact

ERICSSON 

MANAGEMENT

INFORMATION FOR ERICSSON MANAGERS WORLDWIDE

MAY 1988

Special
Strategy
Supplement

Strategy — A Basis for the Future

Rapidly changing markets and technology demand that Ericsson as an organization respond quickly and accurately to deliver high-quality competitive systems and services. To accomplish this, we must all have a clear concept of the organization's goals as a framework in which we plan and operate.

"We have a fantastic platform from which to launch our future. We are much stronger and better equipped for launching our market offensive. In fact, much more so than most people are aware of. We know where we want to go, and the organizational vehicle is in place to take us there.

"Our future opportunities lie with large, sophisticated customers, demanding high quality and price/feature performance in a rapidly changing market."

With this assessment, Chief Executive Officer Björn Svedberg defines his basis for future operations. Elaborating on the brochure "Strategy — April 1988," he says that rapidly changing markets and

Exhorting Ericsson managers to take the initiative by increasing market orientation and defining the requirements for future telecommunications systems, Svedberg homes in on the key to real marketing success — knowing what the customers need before they do.

"Enhancement of management competence is another key for our offensive," he says. "We must become better equipped to extend decision making to lower levels in the organization."

The Strategy document serves as a starting point for operations and planning at all levels in Ericsson. The business concepts, objectives and strategies have been established in cooperation with the seven business areas. Svedberg sees the document as a prime tool in the company's further development.

Strategizing on the theme of strength in unity, Svedberg says: "We must consistently remind ourselves that we are



Björn Svedberg

Effective cooperation between units is imperative for the maximum utilization of resources.

technology demand that Ericsson as an organization respond quickly and accurately to deliver high-quality competitive systems and services. "To accomplish this," he stresses, "we must all have a clear concept of the organization's goals as a framework in which we plan and operate."

ERICSSON BUSINESS CONCEPT

To provide advanced systems, products and services for telecommunication networks, and to provide electronic defense systems.

ERICSSON OBJECTIVES

Ericsson's most important objectives are:

To be the leading international supplier of advanced systems and services for telecommunication networks.

To attain a Return on Equity by generating earnings and cash flow to support a sound financing of growth.

To attain an Earnings per Share, making the Ericsson share a profitable investment for our shareholders.

To be one of the market leaders in terms of quality and price/performance characteristics of systems, products and services.

To protect and develop human resources in a manner compatible with the best interests of Ericsson and its employees.

ERICSSON STRATEGIES

The corporate objectives will be achieved by:

Strengthening our position as world leader in network competence, international experience and customer orientation.

Utilizing the synergy between business areas to achieve greater overall competitiveness and to optimize Ericsson's total business potential.

strongest as a whole. It is extremely important that we are perceived as one organization and that we are all moving in the same direction."

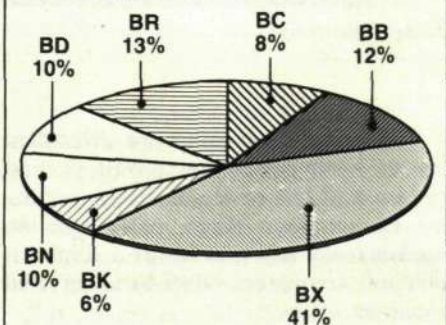
Simultaneous investments in large and important markets naturally impose short-term strains on an organization, and Ericsson is no exception. However, a company may also acquire special strength from being where the competition is toughest and the opportunities greatest. And Ericsson has.

"We must concentrate our manufacturing on products with large volumes and long life cycles," Svedberg emphasizes.

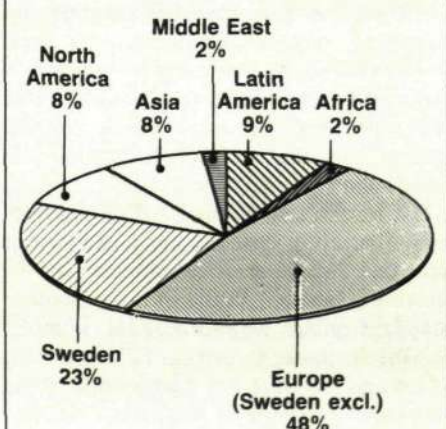
Carrying the strategy theme still further, Svedberg says that it is extremely important to have the most advanced technology, the best products and the most efficient systems. But to him, this does not suffice today. "It is also essential to have a strong position in the most important markets, not only to be able to share the largest volumes of business but also to be able to meet customers' demands," he stresses. "Customer demands in these markets will determine future developments in other parts of the world as well."

And when they do, Svedberg asserts, Ericsson's corporate strategy of today will have laid the groundwork for providing optimum systems and services in telecommunications technology.

Estimated external and internal sales by business area, 1988



Sales by geographic area, 1988



Strength through combined forces

If we combine forces to act as one organization when it comes to the base system development, we will have a strategy that will make us strong.

Executive Vice President Lars Ramqvist, the man behind the Ericsson Strategy document, frequently likens his role to that of a preacher. "I've been delivering the same sermon over and over again," he says. "Now that it's all in black and white, perhaps I can ease up a little."

The difficult years are now history, he says. "I feel it is extremely important now to make clear our direction in the future so everyone knows exactly where we are heading."

"Basically we will now concentrate our efforts on telecommunications, and to that end we have to add the defense business. We're back to basics really, concentrating on our core business, the real core of the company."



Lars Ramqvist

"Was it a mistake that we diversified into the computer business? Well, yes and no. I would like to see us always serving the market needs. Eight years ago, the market really had a need for a combination of computers, data-handling and communications."

"Today, the market has changed and it is very easy for me to say that we do not need to be in the data terminal business."

"Today we can serve the customer by supplying our telecommunications networks and he can easily add any supplier's terminals and computers due to the fact that nowadays it is more or less a 'plug-in' system, thanks to standardization. It wasn't that way eight years ago."

"If we are selling our PABXs and telecommunication systems, the customer can plug in a computer or terminal, whatever make it might be. In the old days, before standardization, we more or less compelled the customer to buy an Ericsson computer and we were not competitive in the fast-moving computer business," Ramqvist notes.

"The main goal is to serve the customer, and to do that we need good price performance and a good product. And to get that we have to act as one organization, cooperating on base systems and basic technologies, cooperating, too, in purchasing, buying as much as possible together and insisting on the same high quality and standards. We should buy only the very best technologies. That's why we signed a deal with Texas Instruments but this will only apply while they are world leaders. We should insist on the very best. We need the best tools for our system design work. And we are not toolmakers."

"When I started to preach my gospel of one core business a year ago, Ericsson was more or less seven different companies, and the results were not encouraging. We were too weak. Now we are trimmed down and fighting fit."

Ramqvist also preaches the need for greater response to market needs. "We will be much more responsive in the future," he said. "You will not only buy systems from Ericsson, you will buy service and back-up. We will help the customer to solve problems that will grow more and more complex as technologies develop. The customer needs a supplier with whom he can discuss problems."

He said Ericsson subsidiaries abroad would also work much more closely with their customers, citing Fatme, an affiliated company in Italy, and Thorn Ericsson in the U.K. as examples. "But wherever we are, we will work on the same principles, using the same base system, serving the customer by drawing on the resources we have built up together."

He said greater demands by customers, on the outside, would help forge internal unity. "For the outside world, we are a relatively small company, even if we employ 60,000 people, and the outside world sees us simply as Ericsson and is not pre-

Basically, we will now concentrate our efforts on telecommunications, and to that, of course, we have to add the defense business. We're back to basics.

TECHNOLOGY, PRODUCTS, PURCHASING AND QUALITY

Strengthening Ericsson's expertise and competitiveness in telecommunications, radio, advanced electronics, computer technology, fiber optics, microelectronics and software.

Conducting a coordinated advanced development program for telecommunication systems between the business areas, with emphasis on a common system architecture.

Developing most of our products and systems in-house, but possibilities for cooperation with other companies will be continuously analyzed and broadened, especially for basic technologies, both in hardware and software.

Actively integrating the purchasing organization in the earliest possible stages of development of technologies, products and systems.

Utilizing state-of-the-art design and manufacturing methodology.

Actively participating in national and international standard setting and to apply industry standards to both hardware and software products.

Manufacturing products in our own plants but using local subcontractors and OEM agreements if we gain profits, time and/or flexibility.

Concentrating Ericsson's manufacturing to the greatest extent possible in order to obtain the benefits of large volume production.

Continuing to upgrade the quality of our products, systems and services through a dedicated quality system.

pared to put up with petty demarcations within the group."

Looking specifically to the future, Ramqvist sees 1991 and the introduction of a Pan-European digital telephone system as providing great opportunities for expansion in the mobile telephone field, visualizing a day when someone might lie on a beach in Spain and communicate via mobile telephone with the office or bank in Sweden, perhaps even eventually also having the possibility of using it as a mini-computer too.

"There are going to be all kinds of exciting developments in the future, and Ericsson will be in there fighting to take advantage of them as one strong organization. That's my sermon," Ramqvist says.

"The change and development in telecommunications has never been so fierce and dramatic as it is today because of the new services and features that are being added. Today, much more than voice communication is being offered to the customer. We want to be in that ball game and we simply can't afford to waste resources on peripheral activities."

With Ericsson now "back to basics," there remains what Ramqvist describes as "turbulence in the core." He hopes the Strategy document will lead this to subside.

"We want people to feel they are part of one organization," he says. "We don't want anyone to feel they are outside the core. When it comes to basic technologies, base systems development, we need to work together. Today, the most important areas when it comes to systems, are AXE, the public switching system; PABXs for the private switch system; and radio, or mobile telephones. It is very important that these three areas work together on basic technologies."

"If we combine forces to act as one organization when it comes to the base system development, we will have a strategy that will make us strong."

We should buy only the best technologies. We need the best tools for our system design work.

"The strategy stands or falls with its being understood by everybody working for Ericsson. All our employees should feel a part of the company and not feel that there are borderlines between different business areas. People must cooperate," Ramqvist says.

"My message to Ericsson's employees is that we are one organization and we are a telecommunications company and to be strong in that, we need to be No. 1 in systems. And systems development must be a combined effort."

Contact ERICSSON

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Box 32073
S-126 11 Stockholm
Sweden

Editor-in-Chief:
A. Michele Schmidt
(Responsible under Swedish law.)

At the financial turning point

We're not completely out of the woods. We have taken a number of measures that have restored the organization to viability. We are now at the turning point.

An outsider meeting Carl Wilhelm Ros, Executive Vice President and Chief Financial Officer, is reminded of British Prime Minister Margaret Thatcher's description of Soviet leader Mikhail Gorbachev as "a man we can do business with."

He is both tough and approachable, qualifications you might expect from a man who previously served with as he puts it "Sweden's three A companies, Astra, Alfa-Laval and Asea."



Carl W. Ros

He moved to Ericsson at the end of 1985 as one of four members of the executive committee, at a time when the company had problems.

We have to follow through. We have been grasping for market shares in a number of countries and we have got those market shares but we haven't got the profits yet.

Today, Ros radiates cautious optimism. "We're not completely out of the woods," he says. "We have taken a number of measures that have restored the organization to viability. We had the technology all the time but we didn't have the financial capacity and we didn't have the structure and the control we needed to be successful."

"That was because we had some heavy investments we had to make in a certain period in the U.S., in the U.K., software development and we were also involved in a number of investments that were not that successful."

"Now we have gone through the process of concentration of the group to our fundamentals, which at the same time have been strengthened, and we have restored our balance sheet. We have got a much leaner and more flexible organization."

"We are now at the turning point where people start to believe that we are on the right track. We have done a lot, but, there is still a lot we have left to do before we are on the profit level at which we should be."

"In 1987 we made a profit before appropriations and taxes of SEK 1.1 billion on a turnover of SEK 32.4 billion. This is a good start, but ultimately I want to see a profit level twice that high."

Ros expects this to take a few years because of tough market conditions.

"A good return on capital employed and on equity is extremely important for us because it allows us to continue payment of dividends, gives adequate financial strength to balance the effects of growth and inflation and permits external financing or the issuing of new shares to finance growth, if and when this is required," he says.

"We have to follow through," Ros stresses. "We have been grasping for market shares in a number of countries and we have got those market shares but we have not got the profits yet."

"In the U.K., we have a good market share. We have increased market shares in Spain and France and we have secured some orders in the U.S. but we are not making any money out of it because we are still at an introductory stage. Actually, in the case of Spain, we are already reaping some of the fruits."

He smiles engagingly then smacks his fist together. "You know, it is a bit like a snowball. You start to roll it down the hill and it gets bigger and bigger. When people in the organization feel that things are going badly, then they simply get worse. But when they feel they are going better, that we are on the right track, they will get motivated and then that snowball rolls faster and faster."

So is the new, optimistic Ericsson snowball now under way? Again the fists come

FINANCIAL PLANNING AND CONTROL, TREASURY

Specifying annually, based on long-term objectives and actual market conditions, financial targets expressed as Operating income, Income after financial net, Return on Capital Employed (ROCE), Capital turnover and Cash flow required from each business area and business unit in order to achieve corporate objectives.

Further developing profit-oriented and business-area-adapted management systems for financial planning and control.

Coordinating tax planning in order to achieve corporate objectives regarding Return on Equity.

Promoting company-wide knowledge and understanding of financial principles.

Meeting financing requirements with a debt portfolio which is balanced regarding maturities and fixed/floating interest rates primarily by longterm borrowing in various markets.

Minimizing currency exposure by concentrating it to few countries through intragroup invoicing and subsidiary financing in local currencies.

Offering customer financing as an active means of supporting sales while political, commercial and currency risk exposure is minimized.

together: "Oh yes, I am convinced of that."

But then a cautious smile: "However, there may be a danger that people within the organization will say, 'Now the crisis is over and we can lean back.' Still, I think we have learned our lesson."

The Ros message is that decentralization requires greater responsibility and control, with firmer control systems.

You have to have figures and budgets so well structured that you have proper indicators.

"We established a new, decentralized organization in 1983 and part of the problem in the years that followed was that we, in effect, leaped from the 1950s, 1940s even, to the 1980s. The control systems that we had were not adapted to the new organization, some divisions went wild, management didn't get the proper information," he says.

"It is more important than ever to set up objectives and follow up those objectives and to have suitable control systems for the group and the different business areas, giving us information on deviations."

"You have to have figures and budgets so well structured that you have proper indicators. That is very important."

"On the financing side, in a flexible organization and in the sort of climate in which we are working today, where things happen much faster than before on different markets, with privatization and dramatic price changes, it is more important

than ever to keep track of what is happening in different parts of the world."

"The treasury side must be stronger than ever, despite the decentralization."

Ros stresses the need, too, for informal contact with Ericsson management: "We want people to call and tell us the sort of things that are difficult to write about. They should just grab the phone and say, 'We need help' or 'Something is wrong'. I'd welcome, in addition to the formal controls, greater informal contact."

Ericsson's international activities bring natural problems, conditions varying widely from country to country. But Ros puts his faith in the company's "well-qualified, well-educated managers."

"They must also be open-minded, though, not lock themselves in until they reach the point of no return," he points out.

"I'm not asking to approve every single thing they are doing. I just want good formal and informal lines of communication."

How does he see the future? Where would Ericsson be in five years time? "I see Ericsson as the leading international telecommunications group in the world, pleasing its shareholders, paying a reasonable dividend and being a fun firm to work for as far as its employees are concerned."

Ros smacks his right fist into the palm of his left hand and smiles. Confidently.

There is a danger that people within the organization will say that the crisis is over and that we can lean back.

The drive into Europe and the U.S.

We are in a situation now where the expansion of telecommunications and the continued growth of the network give us great opportunities that must not be squandered.

Bo Landin is the man spearheading Ericsson's drive in its two key market areas: Europe and North America.

As senior vice president, he is in charge of corporate market coordination on these two continents. Magnus Lemmel does the same job regarding Africa, Asia, Oceania and Latin America.



Bo Landin

"Europe and North America are tremendously important to Ericsson," says Landin. "We are in a situation now where the expansion of telecommunications and the continued growth of the network give us great opportunities that must not be squandered."

"The networks will provide many more services to the customers in future. Previously, we tended to look upon the telecommunications market only in terms of growth in the number of lines, but today we are also looking at growth in these new services and these will expand most rapidly in the industrialized countries. That's why Europe and North America are so important to us."

"The integration of voice and data into the network will be important, along with access to data bases, and we will be able to offer our customers not only information but also enhanced information," Landin says.

Looking to Europe, Landin stresses that Ericsson is already well established, with strong local companies in most countries, having full responsibility for their local market, in development and

CUSTOMERS AND MARKETS

Defining and concentrating our operations on customer sectors and countries in which we can obtain long-term profitability.

Directing sales efforts primarily toward administrations and large and medium sized corporations.

Maintaining long-term customer relationships.

Being customer-oriented in all aspects of our operations from development through to sales, delivery and service.

Further strengthening our position in Western Europe and the United States.

Maintaining our strong supplier position in other countries, concentrating offensive action on growth markets, with our risk exposure under control.

Strengthening our international operations by local technical development programs and production in our major companies outside Sweden, thus being identified as a domestic company in these markets.

Actively pursuing opportunities for strategic cooperation involving both products and distribution.

manufacturing as well as sales. "Through the competence they build they will form an important part of our corporate resources," he says.

Landin says that in addition to the countries where Ericsson is now represented in Europe, the company was also seeking means of conquering new markets, including West Germany.

Landin notes that he is aiming at very autonomous organizations but also ones that will still work within a very clearly defined corporate frame.

America is a huge and extremely diverse market, says Landin. "There are a number of possible customers, the most

important being the RBOCs (Regional Bell Operating Companies). The seven RBOCs rank among the 12 top operating companies in the world in terms of volume. "The U.S. market is the place where new functions and technology will be pioneered. In most cases they will be leading the development of telecommunications. For this reason it is extremely important for us to be in the U.S. to pick up these early warning signals of what is ahead. "We will not only be picking up signals but will also be part of the pioneering process. We think we can certainly generate innovation. We have all the competence necessary for that."

Toward the developing nations

What we are doing is concentrating our resources. Some countries we consider to be better growth markets than others.

While Ericsson intends to strengthen its market position in Europe and the United States, Magnus Lemmel, senior vice presi-

dent in charge of corporate market coordination (outside Europe and North America), stresses that the rest of the world will not be neglected.

"We are growing faster in Europe and the U.S. at present but we have a very strong position in many of the developing countries, as well as in other industrialized countries such as Australia where we totally dominate the market," he says.

"What we are doing in the developing countries is concentrating our resources."

"Expansion will take place in markets with a strong growth potential. However, this doesn't mean that we are going to neglect established customers in other places but it might mean that we will hesitate to go into new markets if they are not considered especially attractive."

"Some we consider to be better growth markets than others, for example China,

Thailand, India, Saudi Arabia and North Africa.

"We also have a very strong position in some markets in Latin America such as Mexico and Brazil, and we see steady growth in Argentina.

"In some other markets, like Indonesia and the Philippines, there is also potential for growth, although we have little activity there so far."

It is extremely important for Ericsson to maintain its position as main supplier to the developing countries, notes Lemmel.

This is the result of many years of effort in building good relations with the telecommunication administrations of the countries concerned.

"We have become more and more a part of the market. There is no other telecommunications company with such a market organization," he says.

"We see a great future for mobile telephones in China," Lemmel says.

Lemmel also sees a great future for MD110 private switching in China for offices, hotels and hospitals.

India will be a major market in the future. "There are areas of both high and low development. It is a complex country with a great need for telecommunications," he says.

Egypt and Algeria are the two biggest markets in North Africa.

Lemmel describes Ericsson's Algerian operation as "a breakthrough," with a rapidly expanding business volume, adding that the company hopes to be on the threshold of a similar development in Egypt.

Mapping strategy for Ericsson in the developing world, Lemmel says:

"One of our major roles is to coordinate the various business areas and find the best possible solutions for the group as a whole."

"We feel now that the atmosphere has changed a great deal with a much greater readiness on the part of the business areas to cooperate and to coordinate their activities on the markets."

"This is necessary if we want to get the best results."

Lemmel sums up: "In concentrating our resources we are not abandoning our customers. Establishing and maintaining long-term relationships continues to be our policy."

"I would also like to emphasize that by focusing on Europe and the U.S., we are not giving up the developing countries; it only means that we will grow faster in these areas."



Magnus Lemmel

The human factor in managing

As a manager, it is your job to set the aims and the goals for the business with which you're concerned.

Communication is important to Britt Reigo.

When she arrived at Ericsson this year to become Senior Vice President in charge of Human Resources and Organization, she was precise in her choice of words for her position.

"It is more alive, somehow," she explains. "It has more flexibility about it, more capacity for change."

"Then, when the strategy document was drawn up, she inserted several key words into the five-paragraph section that covers her province." One was "dynamic."

"You can write all the company brochures you like but they in themselves will not produce change," she says. "If, you're going to change human resource policy, you have to do it and demonstrate it with your own actions."

"I intend to take part in this changing, more visible approach and I hope everyone from the Corporate Executive Committee down will do so too. That's being dynamic." "We have to set an example."

Other words she inserted were "well coordinated" and "adaptable."

"This seems to me to be exactly what the new, trimmed-down Ericsson group

should be. It needs proper coordination rather than direction from above."

"We have to find ways to cooperate with one another. Concerning adaptability, my initial impression of Ericsson is that it has an enormous capacity to be adaptable."

"We're not interested in creating a bureaucracy. We have to be adaptable and market oriented."

Another phrase inserted by Reigo was "result oriented."

"It is obviously tremendously important for management to be result-oriented," she explained. "As a manager, it is your job to set the aims and the goals for the business with which you're concerned. Then you have to communicate them to your staff."

Reigo sees managers playing key roles in creating a feeling in employees that they are working for Ericsson and not just their business area or local company. Understanding the scope and internationality of Ericsson makes for better working relationships and more solid decision making.

"An important job for managers now is to take this Strategy brochure and work with it, make it live for their employees. Help them interpret the often general sta-

HUMAN RESOURCES AND ORGANIZATION

Strengthening Ericsson as an industrial unit by continuing the development and implementation of a dynamic worldwide corporate human resources policy which takes into account national conditions.

Striving to achieve a well coordinated, adaptable market-oriented organization with well defined organizational units through which profitability and other objectives can be measured for each business area and individual business units.

Coordinating the development of technical support for administrative systems to effectively manage information within the organization.

Developing result-oriented management by fostering broad managerial skills within the framework of the corporate values; teamwork, persistence, quality awareness and international understanding.

Increasing employees' competence and motivation through individual recognition, by opportunities for professional development, continuing training and job rotation.

tements here so they take on meaning in the local environment where the work is done," emphasizes Reigo.

"It is important to increase job rotation. That way we will keep good people."

"When you change jobs, you take all the years of experience from your previous work. We should try to keep that within the company. The only way to do that is to create greater opportunities."

Recognition of achievements by individual workers and managers is tremendously important, says Reigo. "And not only in terms of financial reward but in terms of their accomplishments."

"It's good for the employees to hear their company talked about and I think we



Britt Reigo

should be more forceful in this respect," Reigo says.

Putting the message across

We are seeking to maximize motivation and efficiency. Everyone should feel part of the organization and be motivated to give the utmost.

One year ago, Ericsson was perceived not as one company, but as many different units. All that is changing.

Spearheading the change, in his capacity as Senior Vice President in charge of Corporate Relations, Nils Ingvar Lundin has masterminded a strategy for communications that is more in keeping with the company's new streamlined image.

"What we are striving for now is a family feeling," Lundin says, pointing out that in the Ericsson structure of things, the sum of the parts is definitely greater than any of the individual parts.

Internally, this means promoting the idea that an employee is working for Ericsson as a whole as well as for a specific company within a business area. "We are seeking to maximize motivation and efficiency; everyone should feel part of the organization and be motivated to give the utmost," Lundin says.

There is little doubt in Lundin's mind that the communication battle to be fought concerns, first and foremost, identity — redirecting the Ericsson identity that many employees feel for a specific unit but not for the company as a whole.

Lundin sees a two-prong approach to the problem — involvement and responsibility. "The idea is to get across to employees at all levels knowledge of the company's goals and objectives and to encourage an open exchange of ideas among them," he says. "By encouraging involvement and the assumption of responsibility, there will be a greater feeling of unity and understanding."

Elaborating further on the theme of unity, Lundin notes the need for coordinated advertisements, using a common layout and typography that reflects being all part of the same family.

There has to be a strong, specifically

Ericsson feeling, Lundin asserts, adding that in future there will be far greater integration of Kontakten, the company newspaper, with the Ericsson business area publications.

Laying down the ground rules for dealing with the press, international and otherwise, Lundin stresses the need for straightforward honesty. "Externally, we have to inspire trust and confidence so that journalists know that we are not distorting the facts or exaggerating when we have good news," he cautions. "Balanced and accurate coverage will only come from fact, not fabrication," he notes.

Another cornerstone of the new communications strategy is that top managers should be more visible and must be better communicators with their staff.

Indeed, communication is a crucial link that will bind the corporate family.



Nils Ingvar Lundin

As Lundin puts it: "It is all a question of better communication. In all information activities, it is the final result that counts. You have not done your job, until the information is being received."

Keeping ahead of change

Europe, North America, Oceania and other large markets are where the bulk of the business is today, and that's where it is going to be in the future.

The objective of Business Area Public Telecommunications, headed by Jan Stenberg, is to strengthen its position as one of the four largest international suppliers of network systems in today's growing market.

Remarking on the competitive market situation, Stenberg says that there are far too many suppliers right now. He expects there will either be a shakeout or a concentration toward fewer and stronger competitors.

"AT&T is our strongest competitor right now," says Stenberg. "Certainly, we will meet AT&T as the dominant supplier of the U.S. market, but I also see a concerted drive by AT&T to enter markets outside the United States. And I believe they have a fairly good chance of succeeding."

I maintain that we still have a lot to do in order to be in the best shape possible to meet future demands.

Among other competitors, Stenberg cites Alcatel, which he feels has been weakened by efforts to consolidate the old Alcatel and the ITT portion they acquired in 1986, as well as by the drawback of three systems, none of which is fully competitive in the international market. He also believes that Northern Telecom and Siemens are serious contenders in the market place.

In his bid to strengthen Ericsson's position as one of the four leading international suppliers, Stenberg draws heavily on the company's homogeneity. "We are well known worldwide and we have global experience," he says. "We have a very strong product, and we can see that it is fully capable of being further developed and enhanced to meet the requirements of the nineties, possibly better than any of the other systems."

Elaborating on Ericsson's internationalism, Stenberg points out that the AXE system has been adopted in 71 countries. "I don't think we will add a lot more, possibly a few, and then again mostly industrialized countries at that," he says. "We are also international in the sense that in many countries we work with full-fledged organizations representing all the functions required to service local customers in the best way."

Stenberg's marketing thrust is aimed at Europe, North America, Oceania and a few other large markets. He ascribes this strategy to the simple fact that this is where the bulk of the business is today and where it is going to be in the future.

Citing statistical realities behind this reasoning, Stenberg explains further: "The twenty largest national telecommunications markets represent 88 percent of total world market demand. We are already in ten of these twenty markets, but it is very costly adapting our system to new local requirements and it is equally costly supporting a system being introduced in a market. So, simple logic dictates that one should have a large volume of business in a few large markets. We also choose these markets because they are advanced, in the sense that customers demand more properties of the product than simply price. They know how to evaluate the technical advantages that the systems properties of AXE can offer them."

Stenberg notes, that profitability will be the overriding factor concerning countries in other parts of the world. "We have a solid base in other areas of the globe, and we intend to protect any such base that is large enough, and where the prevailing commercial conditions are good enough to allow you a permanent good profitability," he says.



Jan Stenberg

Stenberg speaks of utilizing Ericsson's expertise in providing complete solutions for large telecommunications networks based on the AXE network concept.

"We observe that in the more and more complex networks, the customer is not buying a product to integrate on his own with other products in the network. Rather, he is after a solution whereby he can satisfy the demand for flexibility in the network, where he can cope with the demand for open interfaces in the network,"

BUSINESS CONCEPT

To provide a full range of network systems for the handling of voice, data, text and image in public telecommunications.

OBJECTIVE

To strengthen our leading position as one of the four largest international suppliers of network systems.

STRATEGIES

The objective will be achieved by:

Concentrating on markets in Europe, North America, Oceania and other large markets.

Maintaining and increasing market share in other existing markets, with due attention to profitability and financial risk exposure.

Emphasizing our expertise in providing complete solutions for large telecommunications networks, based on the AXE network concept.

Focusing our development of the AXE system to meet the requirements of the Nineties.

Increasingly seeking alternative sourcing for non-core products.

Stenberg says. "We also see a benefit of that in that the more products you can design based on the same systems know-how, acquired technologies and developments already made, the better use you get from the investment you make in software design."

Stenberg also sees this as the strategy to pursue in developing the next AXE generation, for the nineties.

"We can see integration in the future of what was traditionally clearly separate, namely switching and transmission functions in the network," he says. "In particular, we can see that integration in the subscriber portion of the total network. It is our intention, too, to design such products, which could take the form of concentrators or multiplexors, on the same basis and the same technology as we design the future AXE system."

Naturally, this would mean an even stronger concentration on core systems and core products, raising the question of what will happen with other types of products.

To that, Stenberg says: "Traditionally, we sold and distributed only products that we had developed ourselves. I can clearly see the advantages of doing so, not least of which is that the organization knows profoundly the products being distributed and, as such, can take full responsibility for their excellence. But now I am fully aware that we cannot afford, or even justify, investments in development of, peripheral products where we work together with companies that have expertise in designing them. It is a difficult task, and we have not yet fully learned how to handle foreign products in our product portfolio. But I am sure that at some point we will be able to do that."

Defining the business concept for Ericsson Public Telecommunications, Stenberg notes that the business area's expertise clearly lies in large telecommunications network and systems.

"This is actually what we have been dealing with throughout our history. And that is what we are experts right now," he says. "I can see the scope of operations and the business inherent in it growing further and developing rapidly. It is a

good business to be in, and I see that this goes hand in hand with our expertise. This, then, is the basis on which we shall proceed."

Taking the business concept a step further, Stenberg says that one might possibly see it as not an ambitious enough scope if it only calls for staying within the framework of what is being done today. But at the same time, he says, it is ambitious because the concept includes a tremendous development for the future, noting, moreover, that there is a huge amount of business within the concept.

Faced with the question of whether Ericsson is safe for the future today, Stenberg ponders a while before philosophizing that no one is safe for the future but that everyone is obliged always to prepare for it.

"I think we have a very good basis for the future," he says. "I maintain that we still have a lot to do in order to be in the best shape possible to meet future demands, some of which at this point are still unknown."

That having been said, Stenberg ventures that he is absolutely sure Ericsson will make it, observing that "our progress convinces me that we are on the right track."

We have a very strong product, one that is fully capable of being enhanced to satisfy the requirements of the nineties, possibly better than any other systems.

Cornering the mobile market

The technical basis of our success is the Ericsson AXE system and the company's long tradition of radio communication know-how. We've always been ahead.

Ericsson has a strong lead over its competitors in the mobile telephone field, and Åke Lundqvist says he is determined to keep it that way.

The president of Business Area Radio Communications explains that the company's lead was built up thanks largely to a forward-looking approach by the countries of the Nordic Area at a time when the United States was blighted by bureaucratic wrangling over mobile systems.

It was a highly novel situation. Usually, Americans complain over bureaucracy in Scandinavia rather than vice versa.

Ericsson took advantage of it to develop its mobile systems in cooperation with the various PTTs of the area in the late 1970s. By 1981, it had sold the first cellular mobile system to Saudi Arabia.

"The technical basis of our success is the Ericsson AXE system and the company's long tradition of radio communication know-how. We saw the possibilities of combining these and have always been ahead of the competition," Lundqvist explains.

"We have been very successful. We jumped into the U.S. market in 1982 and found that one-third of the largest RCC

Of course, it is difficult when you have a dominant position, but our goal is to have about 30 percent or more of the systems market.

(Regional Common Carrier) cellular operations had applied in license with Ericsson equipment. We should have been there before!"

However, business with the RCCs has now firmly established Ericsson in America. "They are a basically non-telephone, entrepreneurial company that invested and was in the paging business before."

"This took a lot of people by surprise, including Motorola, our main competitor. They told us, 'You've got no business being here in the U.S., Go home to Sweden!' We didn't listen, of course, and now we are the leading supplier in the world.

"How will we keep this position? The most important thing is that we have invested a lot of money in the development of new technology."

The European Digital Standard network, due to come into effect in 1991, is based very much on Ericsson technology. "Made a good contribution there and have a good future base for activity as a result, Lundqvist says. Then we have made partnership deals to develop new technology with powerful companies such as Siemens in West Germany, Matra in France, Orbitel in the U.K. and the joint venture between Ericsson and Plessey."

"I think we have a firm base but, of course, it is difficult when you have a dominant position. However, our goal is to have about 30 percent or more of the systems market."

On the terminal side, Lundqvist says Ericsson hopes to keep ahead in a fast-developing market that was becoming more and more consumer-oriented. One means of achieving this was the setting up of a new unit at the Ideon "science park" affiliated with Lund University in southern Sweden.

"We have access to new radio people from the university and hope to expand the terminal side of things parallel with the systems business in Stockholm. We have been able to develop some very advanced equipment," he says.

Lundqvist is particularly proud of his success in selling the Ericsson Hotline to Panasonic and hopes to secure deals soon in the U.K. and the U.S.

"There is tremendous growth in this area and we are in a good position; this will be an important product for Ericsson in the 1990s," he notes.

Lundqvist says it is particularly important to supply both systems and terminals in underdeveloped countries, where it was necessary to support the construction of infrastructure.

"More important, in the phone business you will be using some extremely sophisticated circuitry and this will be the same as in the base systems. So if you don't manufacture phones in large quantities, you will be less competitive in the systems business. Therefore, it is important to sell a complete product, otherwise we won't be able to sustain the systems business."

With this in mind, Lundqvist has formed a special "Phone and Base Stations" team.

But if terminals are so important, why doesn't Ericsson supply them for all types of systems? "We are gradually doing that, but in the beginning we didn't have sufficient engineering capacity. However, now we are pushing back at our competitors and we have the advantage of knowing the operators in the U.S., China and other markets," he says.

"Those contacts are extremely impor-

BUSINESS CONCEPT

To supply products, systems and services for mobile communications.

OBJECTIVES

To remain the leading worldwide supplier of mobile telephone systems.

To be a leading supplier of mobile telephone terminals.

To remain a leading supplier of land mobile radio equipment in selected markets and become a leader in systems for mobile data communications.

To maintain our world-leader position for on-site paging systems.

To be a leading supplier of defense communication equipment and systems.

STRATEGIES

The objectives will be achieved by:

Taking a leading role in the development of new technology products and systems and thereby attracting qualified technicians.

Focusing marketing and development of NMT mobile telephones and pocket telephones for other systems.

Cooperation in product development and marketing with other suppliers or distributors for selected systems and markets.

Taking part in the restructuring of the mobile communications industry.

tant. They know you as an important and reliable partner."

The trend in the land mobile radio marketplace is toward data communication, says Lundqvist. "We are gradually going over to mobile data systems," he notes, predicting a day when a customer would be able to take delivery of, say, a supply of heating oil and be given, on the delivery day, an invoice, printed out on the tanker's mobile data system in the driver's cab.

He says the advantage of this market is that it is less competitive and that Ericsson has set up Eritel, a joint venture in this field with Televerket, the Swedish PTT. Eritel employs some 60 people in research and development in Gothenburg, in cooperation with the local Chalmers Technical Institute.

"Everyone will use the same data system. We've developed a highly sophisti-

cated infrastructure to cover the whole of Sweden," Lundqvist says.

He says an abbreviation system on the keyboard would even allow it to be used while a vehicle was being driven. "You save time, and time is money," he explains.

The market for the future is Japan, says Lundqvist. "We are going to push more and more in Japan. We're not there at the moment. We are only buying components from them."

Paging systems have a great future in Japan, he thought. "We have a lot of things we could introduce onto the market in this field," he says.

"Of the European markets, obviously the U.K. is extremely important, not only for cellular but also for mobile data."

Lundqvist sees no problems in recruiting qualified technicians for development efforts, with Ericsson already having close cooperation with universities, and technical schools in Stockholm, Gothenburg, Lund and Linköping, although he hopes also to establish research facilities in the U.S., "although it is much more costly to have people there than in Europe."

Software has to be developed close to the market, and Ericsson has established a facility in Montreal to cover the North American sector, Lundqvist says.

Ericsson's 40-percent share in the world market for local paging systems would be maintained, he notes, and a new production line was built in Holland to cope with demand.

It was planned in future not only to distribute products by Ericsson and the Dutch subsidiary Nira, but also to manufacture for competitors, thus raising volume.

Cooperation has also been started with Seiko, the Japanese watchmaker, a deal that has already produced a paging device the size of a credit card.



Åke Lundqvist

System solutions

We offer a total network, carrying both voice and data, either local or international. Our products offer solutions to the problems of both today and tomorrow.

The business area aims to offer companies and organizations system solutions to communication problems.

"We supply something that becomes part of their very infrastructure," explains Ronny Lejdemalm head of the Business Communications Business Area. "We can offer a total network, carrying both voice and data, either local or international.

"Our products offer solutions to the problems of both today and tomorrow."

"When we say we supply a system, what we do is to give them the switch, the network, the cabling system and access to the information being transmitted."



Ronny Lejdemalm

Lejdemalm emphasizes that customers today are not only large companies. They are also universities, local government organizations and other institutions, like airlines and railway companies with high demand on the information handling process. Through a private network, the customer takes control over the flow of information, allowing him to upgrade with changes in demand in a cost-effective and very efficient way.

"Data handling is becoming more and more essential to our customers," says Lejdemalm, "and through the increased capacity of the systems, we see new opportunities to increase the number of services offered."

"One example is that we will transmit moving images as well as data and voice in the telecom systems."

The MD110 is the core of the Business Communications services offered by Ericsson, which the company describes as "the perfect exchange for most businesses."

This digital system is of modular design and can carry both analog and digital extensions. "What AXE is for the public telecommunications field, MD110 is for business communications," explains Lejdemalm.

The MD110 is an exchange for big and medium-size systems. For the smaller systems we have other exchanges.

"We also have data networks with excellent design for data handling, high-speed modems equipped for data transmission and telephone instruments for analog and digital signalling," says Lejdemalm.

"Software is usually part of the total package. To some extent it may be standardized, to some extent application-oriented."

Ericsson's market share for large PABXs is more than 5 percent.

"We are the leading supplier in Europe and we expect healthy growth in the United States, which is the largest market in the world. We are also working very hard with other major markets."

"We are concentrating on the main markets, which are the U.S. and Europe, and some selected markets in the rest of the world. We are in 35 countries, but 10 markets really dominate our total sales."

Ericsson intends to become a leading supplier of business communication systems

We are in competition with many players. We stress Ericsson's good reputation and established name in showing that we can fulfill customer needs.

tems and networks by making use of "the best exchange in the world."

"We are going to develop this further to meet customer needs, to develop standards in an international environment, and in addition we have products that enable us to offer the customer a total solution," notes Lejdemalm.

"We describe our system as open-

BUSINESS CONCEPT

To provide systems, products and services for business communications.

OBJECTIVE

To be one of the leading suppliers of business communication systems and networks.

STRATEGIES

The objective will be achieved by:

Concentrating on the following customers:

- Telecom administrations and operating companies as end-users and distributors.
- Large and medium-sized companies and organizations

Concentrating on business communications, based on:

- PABXs
- Telephone terminals
- Data networks

Emphasizing activities in Europe and other selected markets.

ended, which means that the customer can apply it to peripherals that he chooses. He can use equipment from several suppliers."

"I think that being part of Ericsson gives us a fantastic advantage with our possibilities for both internal and external cooperation."

"Working with the AXE people gives us access to the public networks, for example, and cooperation with the Radio business area gives us access to mobile communication."

"Thanks to this cooperation between the business areas, we can offer broad solutions in telecommunications that nobody else can come up with."

His business area also draws on Ericsson's vast fund of international experience, built up over many years.

"We are in a market with a growth rate of up to 5 percent. We are in competition with many players and they all have different approaches to the marketplace," he says.

"So we stress our competence and Ericsson's good reputation and established name in showing that we can fulfill customer needs."

Lejdemalm says the MD110 has unique features, especially in allowing for the use of the total system in different locations. "It allows us to grow with changes in the marketplace, without having to build a new system. All we do is upgrade the present system."

It also allows the customer to make savings when it comes to being equipped for data handling.

The digital exchange MD110 has possibilities of simultaneous voice and data traffic and a potential of 40 to more than 10,000 extensions.

"The unique features of the system explain why we secured orders like the re-

cent one from Lufthansa," says Lejdemalm.

For Ericsson, knowledge and participation in the evolution of private switching is important. "In many respects, professional customers in this field will lead the way into the future Lejdemalm says." Business Communications in Ericsson has a strong market position and product development programs that will profitably meet new challenges."

"I am convinced that we will not only grow with the market but also strengthen our position as a leading world supplier in business communications."

Data handling is becoming more and more essential to our customers, and through the increased capacities of the systems, we see new opportunities to increase the number of services offered.

Networks for the world

There is far greater economic stability in the industrialized world. If we have a good stable base activity there then we will be better able to cope with the highly fluctuating project market in developing countries.

Björn Linton, head of Ericsson Business Area Network Engineering and Construction, takes the world in his stride, doing business with a wide range of countries.

These include such volatile nations as Libya and Iraq though future activities are likely to be centered on the industrialized countries.

"There are two main reasons for this," says Linton. "The first is that the rapid growth of data, fiber optic and broadband networks will take place mainly in these countries and we want to get a piece of that action.

"The second is that there is far greater economic stability in the industrialized world. If we have a good stable base activity there then we will be better able to cope with the highly fluctuating project market in the developing countries."

Only companies with substantial market access and a wide range of operations will survive. And they will have to keep abreast of technological developments.

Ericsson will remain strong in the developing countries, however. Linton says: "We have made quite substantial breakthroughs in the past four or five years in Southeast Asia where we have got big projects in Malaysia and Thailand.

"We've also done well in a more minor way in Brunei and we're on the verge of securing projects in the Philippines."

Brunei, the world's richest country in terms of GNP per capita, poses no problems when it comes to payment. Otherwise, Linton says: "We try to have a positive cash flow so that we won't get caught with a lot of bad debts, so we can withdraw if necessary before it is too late."

Data networks are the fastest growing segment of the business area in percentage terms, industrial telecom in absolute cash terms.

"Networks solely for data communication, with high capacity and speed are a rapidly growing area but industrial telecommunication or 'dedicated' networks, supplying telecommunication networks to private customers are also very important to us.

"We have two big projects under way, one in Nigeria, building a telecommunication network along an oil pipeline for the National Petroleum Company. It's worth about SEK 250 million and is a highly advanced fiber optic network, including PABX, mobile telephones, radio links and transmission. And we've landed a similar project in Saudi Arabia.

"The reason such people want their own network is that very often there is no public network. They are in remote areas. And they have security requirements which can't be met by the public system."

There is also an overlap of data with industrial telecom. For example, the pipeline network can also transmit data from automatic instruments measuring the flow of oil and raise an alarm should the pipeline be breached.

Ericsson has not been active in this sector before, and Linton has high hopes for more such orders now that the company has references.

He also sees a great future for telecommunications systems for factories, providing tele signalling that includes voice communication, security and time-checking networks.

Railway signalling and traffic lights are another important part of his area's business, comprising 25 percent of total, restricted mainly to the Nordic Area.



Björn Linton

BUSINESS CONCEPT

To plan, supply and install public, private and industrial telecommunication networks and provide services for operation and management.

To provide products and services for cabling systems.

To provide systems and services for rail and road traffic control and safety.

OBJECTIVES

To improve our position as:

- a supplier of constructions for optical networks
- the most versatile and complete supplier of private and industrial communications networks including monitoring of decentralized systems

To increase:

- our market share for network engineering and construction in industrialized and newly industrialized countries
- sales of products for outside plant and indoor cabling systems

To remain a leading supplier of:

- traditional cable network construction
- advanced signaling systems for railway traffic safety, control and operations management
- advanced systems for road traffic control, safety and information

STRATEGIES

The objectives will be achieved by:

Concentrating efforts on public network customers in our main market regions: Sweden, Italy, the Far East, the Middle East and North Africa.

Increasing our presence in the developing European markets for data communication networks while maintaining Sweden and Italy as key markets.

Developing structured and flexible systems and products for voice and data network applications.

Focusing marketing efforts for industrial networks on special customer categories such as pipeline operators, defense authorities, construction companies, railway and subway companies and large corporations.

Increasing the customer base for railway signaling systems by seeking partners or licensing agreements.

Concentrating sales of road traffic control systems on the Northern Europe markets.

Continuing development of sophisticated project management control.

"We are, in terms of technology, in the forefront of this field and we see a good future" he says.

Last year, Ericsson bought up its main competitor in road traffic signalling, a division of the Finnish company Fiskars.

The business area has its own products in the signal system sector.

"We have a large range of sophisticated electronic systems as well as fairly simple wayside equipment," Linton says.

"Within the network sector we can offer equipment and components that include a fiber optic cable fusion machine and everything from fairly simple network material to a main distribution frame, a connecting device between inside and outside plant."

His business area has a good record of profitability in general, he notes. "We see no reason why we should be less successful in the future. Ericsson, as a major supplier of telecommunications systems, needs to be in the network engineering and construction sector too.

In road traffic systems, Ericsson has achieved total domination of the Nordic Area both in volume and technique, and Linton sees the creation of a single market in the European Community in 1992 as a hopeful sign.

"Then local markets will no longer be as protected as they are today," he says.

In the developing world, there will be competition with the big international network suppliers and with local low-cost companies.

Cashing in on cables

It's a good, steady business. Our first objective is to produce a good cash flow, with maximum return on the capital employed.

As you might expect from someone in command of Ericsson's Cables business area, Lars Berg has a down-to-earth attitude to life.

"I suppose you could describe it as one of the group's least glamorous products, although we think our fiber optic cables are reasonably exotic," he says, with a grin. "But you know we generate an awful lot of money."

"It is a good, steady business. Our first objective is to produce a good cash flow, with maximum return on the capital employed."

"Economy is a point of honor in this business area. We keep our administration as small and as inexpensive as possible so that we are not a burden to our operating companies. We on the business area staff try to keep a low profile."

The cable area comprises three distinct product areas: telecom cables, power cables and special cables.

We are looking for customers who have unique feature requirements. We try to create relationships where we supply a unique product to the customers' own specifications.

Telecom cables remains the mainstay from the old, unwieldy coaxial cables with a diameter of eight centimeters to the new fiber optics, where the diameter may be measured in millimeters and which have an enormously enhanced capacity and efficiency.

"When Ericsson states that it is a full-fledged builder of telephone systems, that is where we fit into the picture. We provide one of the major parts of practically any telecom network. If you look at Ericsson's normal turnkey projects, you will find that the cable content is many times as big as the switching equipment, and fiber optic cables are now seen as a major compliment to Ericsson's marketing of transmission products," says Berg.

"It is certainly a great advantage for Ericsson to have a cable supplier within the group."

"However, power cable is a very natural diversification. It is a very profitable product and there is a lot of synergy between the two product areas."

"Most of our factories are now active in both fields. Some people say power cables are not really part of the Ericsson concept and should be eliminated. But for us power cables are important."

"Without power cables we would be fighting against the competitor with one hand tied behind our back," he says.

You will find Ericsson cables all over the world: The United States, Europe, Latin America, the Arab countries, Africa and the Far East. But in the Middle East, it is a victim of circumstance.

"Iran was a good market in its better times; so too was Iraq," Berg points out.

As part of a drive to eliminate loss-making operations, the bulk of Ericsson's cable-manufacturing in the U.S. was sold in the beginning of 1988.

Cables, however, has laid the groundwork for the establishment of Ericsson's name in the U.S. telecommunications field, says Berg.

The fiber optics sector of the market is growing but at differing speeds. "It took a leap in the U.S. from the middle of 1984 to 1986. This was due to competition between the different long-distance operating companies. Suddenly, everybody wanted to build their own network as soon as possible," Berg explains.

"Then the market declined, and we don't expect it to revive until they start using fiber optics in the local networks."

"In Europe, there are different degrees of progress in fiber optics. Sweden is very advanced, so is Denmark. The U.K. is also very advanced, with three strong local producers."

"This means that the energy companies, the distributors and also the producers are having to go very slowly," he notes.

However, Berg describes the growth in the developing countries where Ericsson is active, Argentina, Mexico, Brazil, Colombia as "exceptionally lively."

"In a developing country, you need electricity as a base for the infrastructure, so power cable is very strong. If you visit our cable company in Brazil, you will find that two-thirds of their production is power cables. In Mexico, it is 60 percent," Berg explains.

In Sweden, too, the power cables division in Falun is just as big as the telecom cables division in Hudiksvall.

The telecom and power cable market depend on different cycles, says Berg. "That's one of the advantages of being in both areas; they help us to balance out. They are influenced by different factors."

"Then we also have special cables,

BUSINESS CONCEPT

To provide cables and related products for telecommunication networks and power distribution.

OBJECTIVES

To increase market participation especially in fast growing sectors of the market.

To complement Ericsson's product line for telecommunication networks.

STRATEGIES

The objectives will be achieved by:

Manufacturing both telecommunications and power cables in order to achieve benefits inherent in a greater distribution of cost and risk.

Developing highly advanced products for fast-growing areas and for customers requiring unique features.

Maintaining a decentralized organization with business-oriented managers, where compensation programs are such that our personnel benefit from the improved results of their unit.

made for industry. We produce cables for Volvo's cars, for example. We also make practically all the cable for Electrolux household appliances.

"This gives us an industrial cycle to follow. When Volvo is producing a lot of cars, Ericsson is producing a lot of cable to go into them."

Sweden remains the most important market for cable, and the Swedish factories are the most important source for the export markets.

"Germany and France have very protected markets. Germany is backward in fiber optics, France is more advanced but with a very protected market."

"Fiber optics give you an enormous capacity. The cable we are supplying to the Swedish telecom administration has 12 fibers, allowing for 11,000 calls at one time."

"The old-style cables contain a lot of copper so they are expensive and they require 10 times as much labor. Copper cables' heavy weight also means more costly transportation."

"The advantages are enormous. However, it is not yet cost effective to bring fiber optic cable into the home. But for major companies it is possible and we are expanding into business communication."

"What we have been competing against with fiber optic cable, in the long-distance networks, are radio links. Cable has proved to be more economical and more secure."

"This trend will continue because radio frequencies are a limited resource."

"To transmit television signals through the air will become old hat, and soon we will all be connected to cable television. We are already installing a lot of cable for television in Sweden."

Another area that is growing rapidly is that for electronic cables, used to transmit information data. A lot of local networks for data communication are being built.

The Cables organization is extremely decentralized and very successful as a result, says Berg. "The cable business is a local business and you must be decentralized. Our affiliated companies are independent, buying their own material, producing and selling in their own markets," he says.

In Sweden, the operation was drastically cut back in the early 1980s. Two plants providing jobs for 180 people were eliminated and decentralized organizations were set up for the three remaining plants.

"Managers today are given the freedom to operate independently within the framework of approved strategies, provided they show the required return on the capital employed," Berg says.



Lars Berg

Other markets are supplied from local factories. "If you want to sell cables to Brazil, for example, you must be there. The same applies to a lot of other countries," Berg says.

Ericsson sees a future, too, in the custom-made cables market. "We are looking for customers who have unique feature requirements. We try to create relationships where we supply a unique product to the customer's own specifications," Berg says.

Process and design leadership

We use state-of-the-art technology and sell to a professional, quality-conscious market. Then we try to make products with a wider application.

Bert Jeppsson sees bigger and bigger opportunities for the future as the physical world of electronics becomes smaller and smaller in the 1990s.

As head of Business Area Components, he deals with two product areas, electronic components and power-supply equipment and power systems, pursuing basically the same objectives and strategies for both.

"The products in both groups are developed for a specific customer need, very often in close cooperation with the customer," Jeppsson says.

"We use state-of-the-art technology and sell to a professional, quality-conscious market. Then, from basic development for a specific application, we also make products for a wider market."

To stay in front in this business, you need high R & D investments. We're commercially sound. Profits are getting better and better.

Components is the smallest of the Ericsson business areas, with around six percent of group sales. A large percentage of its sales is internal and it has a high Research and Development budget.

Defining this position, Jeppsson says: "To stay in front in this business, you need high R & D investments. Anyway, we're commercially sound. Profits are getting better and better."

"We want to be the major source of application-specific micro circuits and power systems for Ericsson and also the leading supplier to other segments of the market."

"The large investments we made from 1983 to 1985 are now starting to pay off, initially in deliveries within the group, but we will soon also see increased supply to the external market."

He aims to reach an external market outside telecommunications with such applications as interface circuits where Ericsson high-voltage technology is very advanced and can for instance be used in industry for the creation of so-called "smart power" circuits. Also, our know-how in power applications is opening new segments for us.

Was he worried about competition? "Of course I'm worried, but I am not prepared to surrender," he says. "I definitely think that if we do it right and are determined, there is no reason why we shouldn't be extremely competitive, even against the Japanese."

"We've got everything we require to be efficient in the market. The market and the way of doing business is changing and what we need now are the right attitudes. This is what has to be changed, and we don't have five years to do it."

"But I would hope that within a year, possibly 18 months, we will be in a very good position. Again, this is why the Strategy brochure is so important. We've really got to get everyone to identify with the company and understand what we are trying to do."

"We've got to take the time to analyze the situation and in a realistic way to formulate what we stand for. We must have realistic objectives that are possible to reach and we must attract the right people to work for us. We need quality and competence."

"I cannot think of many companies that have such a stimulating, challenging atmosphere as Ericsson."



Bert Jeppsson

"You need to be successful to get the right people, and if you get the right people you will be successful — it's as simple and as difficult as that!"

Jeppsson's agency, Standard Components Division, is the largest electronic component distributor in Sweden. This and some of his international sales companies sell the products of other companies in addition to those of Ericsson.

"We do this so we can offer our smaller and medium-sized customers a wide range

BUSINESS CONCEPT

To provide electronic components and power supply equipment for professional industrial systems emphasizing applications in telecommunications.

OBJECTIVES

To be the major source of application-specific microcircuits and power systems for Ericsson.

To be a leading supplier of application-specific microcircuits and power supply equipment for telecommunications in selected product areas.

To be an important supplier of components and power supply equipment for a wide range of applications in the electronics industry.

STRATEGIES

The objectives will be achieved by:

Developing a high competence in technologies of strategic importance for telecommunication applications.

Developing microcircuits primarily for Ericsson's telecommunication applications.

Enhancing our competence through strategic cooperation in technology, production and design knowhow with the world's leading microelectronics companies.

Offering central power systems and standard and customized power units for telecommunications applications.

Maximizing the use of our expertise by expanding our applications for external markets.

Completing our own product program by being a representative for other component manufacturers.

Reinforcing our marketing channels through subsidiaries and distributors in the most important geographical markets and in cooperation with selected leading electronics companies.

of components as a complement to our own specialized circuits," he says. "And furthermore, there is a profit to be made out of it."

It also makes it easier to have a well-managed sales network covering the important areas of the world, he notes.

Concerning R & D, Jeppsson sees his location for parts of his business in the Stockholm suburb of Kista as a great advantage. He is in the heart of the area now known as Sweden's Silicon Valley.

"In certain areas, both in micro electronics and power-supply equipment, we have more knowledge than anybody else in the world," he says.

"But we cannot, on our own, develop all the technologies needed for the applications we have to cover. Therefore, we have established a policy of cooperation for basic technologies. Our recent agreement with Texas Instruments, one of the leading semiconductor companies in the world, is an example of that. With this, we get access to very advanced processes and design tools for technologies that we cannot develop on our own."

Jeppsson also aims at cooperation with other business areas, research institutes in Sweden and elsewhere in Europe and the U.S., and with leading companies in the U.S. and Japan to gain access to new technology.

Right up until March 1, 1988, the business area was RIFA, a company originally founded in 1942 to supply the Swedish radio industry with components.

In 1947, it became a fully owned subsidiary of Ericsson but retained the name RIFA. Jeppsson joined the firm in 1984 and took over as head of the business area on April 1, 1988, just one month after the name change.

"The change brought all sorts of speculation among employees, so the Strategy brochure is tremendously important for us in defining our objectives and in giving people a clear idea of where we are heading," Jeppsson says.

"Today, we feel very much a specific part of Ericsson."

You need to be successful to get the right people, and if you get the right people you will be successful — it's as simple and as difficult as that.

Fighting for defense

The home market is our base and the framework for activities. Then we adapt these products for the international market. There are almost no exceptions to this rule.

Ulf H. Johansson makes absolutely no bones about it: the inflamed debate in Sweden on arms exports has not made his job as head of the Defense Systems business area any easier.

The country's role as a neutral nation with a strong commitment to peace and disarmament means that arms sales are banned to "areas of conflict."

Johansson picked up a toy truck from which a Giraffe radar antenna protruded. "It's not war materiel today," he says, "But, who knows, it might be tomorrow."



Ulf H. Johansson

Ericsson differs from other suppliers of defense electronics by its concentration, particularly on radar and radar applications. Other companies in other countries have a much wider field of operations, says Johansson.

"We concentrate on airborne, seaborne and ground-based pulsedoppler radar applications mainly for air and coastal defense; anti-aircraft applications and airborne electronics."

"Our home market is Sweden and there is no market here for long-range radar systems. We rely primarily on our home market. This gives us an important reference when we then sell on the world market."

"The home market is our base and the framework for our activities. In Italy, we have the Fiar company and we concentrate on developing products in cooperation with the Swedish and Italian defense forces.

"Then we adapt these products for the

international market. There are almost no exceptions to this rule."

The acquisition of Fiar in 1981 has given Ericsson a strong foothold in Italy, which today is seen as a key market.

Fiar's forte is airborne radar.

"We had been selling in the Nordic countries, the U.K. and Spain and we wanted to expand into Italy. The only way to do that was to buy an Italian company," Johansson says.

The move also gives Ericsson a valuable foothold within the North Atlantic Treaty Organization (NATO).

There is a regular technology exchange between Fiar in Milan and Ericsson in Sweden, Johansson notes.

"Fiar is not so broadly developed on the engineering side, for example. They benefit from Ericsson's years of experience with doppler radar and infrared technique."

"We are trying to develop and extend the Italian market. Fiar has been growing steadily since we took it over, and it will continue to do so."

The trend is for "a slight increase" in exports. This is important because the Swedish market is restricted.

Specialists should be busy all the time. If the gaps between defense projects are too long, you will lose them and their experience and skill. The export business fills those gaps.

Exports are necessary for the business area's expansion, to develop larger serious production and to give economic contribution and continuity to the know-how that has been accumulated, says Johansson.

Specialists should be busy all the time. If the gaps between defense projects are too long, you will lose them and their experience and skill. The export business fills those gaps.

"The objective is to increase exports to more than 50 percent of total volume," he says.

It is important to have civilian applica-

BUSINESS CONCEPT

To provide advanced electronic defense systems.

OBJECTIVES

To reinforce our position as the leading supplier of defense electronics in Sweden.

To remain a major supplier of avionics in Italy (FIAR).

To maximize use of our microwave expertise for civilian applications.

To increase export sales to more than 50 % of the total volume.

STRATEGIES

The objectives will be achieved by:

Focusing on the following product areas:

- Ground based and seaborne pulse doppler radar applications mainly for air and coastal defense
- Aircraft and missile electronics mainly pulse doppler radar, display systems and Electronic Counter Measures
- Command, control and information systems
- Space technology and microwave communications

Developing products for and with the Swedish and Italian defense forces.

Adapting these products for the international market and concentrate marketing of them on a limited number of key markets.

tions. The development of defense systems often generates ideas that can be exploited in other fields.

Microwave radio link and weather radar information are two examples of civilian applications of Ericsson defense systems.

Recruitment of staff is also made easier if it can be shown that they would also be working for the civilian market. "Staff is stimulated by the exchange of ideas between defense and non-defense projects," Johansson says. "There are also people who would not want to work only with defense systems as such."

"Then we have our space activities, which are completely civilian."

"It is rewarding to have an exchange of technology between space products and defense products."

The space products are based mainly on microwave technology. They include antennas, high-frequency generators, and subsystems to communications satellites.

Marketing has to be limited to certain key areas. "You need a lot of patience. It takes a long time to become known, and then from the time when the order is placed until delivery may be anything from five to ten years."

"Customers must have faith in you, and in order to build up this confidence you must put in quite a considerable amount of effort."

Fittingly, Johansson uses a radar metaphor to describe his market strategy. "We have a broad scanning process but then we home in on a concentrated number of markets," he says.

The Swedish defense debate is extremely important in its effect on activities, he points out.

Referring again to the contentious issue of what might be classified as "war materiel" in the future, he again picks up the toy truck and says sadly, "I would never refer to the Giraffe radar as 'war materiel.' As far as I am concerned, it is a lifesaver.

"However, if it is officially classified as 'war materiel' in the future, that would completely change our marketing."

As a small neutral country, Sweden has a vital need for its own, independent defense industry and this can not survive without exports, Johansson feels.

There is also a need for cooperation with other countries to share development costs as systems become more and more expensive.

"That means that we have to have exports in order to get in contact with other companies. We can't develop everything ourselves, he says.

"We need to exchange technologies, and in order to get hold of another country's technology, you have to have something yourself to offer."

I would never refer to the Giraffe radar as war materiel. As far as I am concerned it is a lifesaver. If it was officially classified as war materiel, that would completely change our marketing.