JOHN KAO

Oticon (A)

Introduction

Lars Kolind bounds down the broad spiral staircase of the Oticon building in Copenhagen, a wide smile on his face. "Hello, welcome to Oticon," he says. "So pleased to see you here." You are asked to "log in" in the electronic guest book, a PC-based kiosk set up in one corner of the reception area. When you see Kolind's office, you are momentarily nonplused. He works in an open area on a desk identical to that of every one of the 120 employees at Oticon's headquarters. Presently he is clustered with an interdisciplinary group of engineers, a function of Kolind's role as "project owner" of a particular technology based product–in addition to his responsibilities as CEO. But the wheels on his mobile credenza and filing cabinet symbolize his ability to migrate to other working areas in the company. As your visit proceeds, Kolind continues to look in from time to time. "Are you having a good time?" he says. "Are you having fun?"

The Global Hearing Aid Industry

In 1993, the global hearing aid market totaled $1.13 billion, of which 90% consisted of hearing aid sales. Relatively mature, the market was projected to grow about 5% per year through 1998 (see **Exhibit 1**). Although at least 10% of the world's population suffered from some form of hearing impairment, only 5-10% of potential customers actually used them.

Hearing aids were technological solutions to sensorineural hearing impairment that involved malfunctioning of the cochlear nerve and mechanical sound conduction properties of the inner ear. The traditional technology for hearing aids involved a simple microphone, amplifier, and earphone arrangement. In the 1950s, miniaturization technology made possible the placement of hearing aids behind the ear for superior convenience. In the present era, technological innovation was leading to the development of multi-channel hearing aids that would treat sounds of varying frequencies differently using non-linear amplification methods. Digitally programmable hearing aids were also envisioned that would be adjustable to a wide range of hearing loss types.

As of 1993, Siemens Audiologische Technik, a division of Siemens A.G. and Starkey (Minneapolis, USA) were the two leading manufacturers of hearing aids, while Oticon ranked third worldwide. In first position, Starkey was a leader in ITE (in the ear) hearing aids, often considered by customers to be cosmetically superior. While sales of BTE (behind the ear) devices were relatively flat, the ITE

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category was growing. In line with its emphasis on cosmetic benefits, Starkey stressed customer convenience and a 90-day return policy. In second place, Siemens stressed technical solutions in well engineered products. Oticon, in contrast, stressed user benefit and sound quality. Ninety-two percent of its output went to export markets.

Distribution of hearing aid products varied from country to country. In the U.S., for example, the approach was a mixture of traditional hearing aid dispensers and audiologists. Audiologists would diagnose hearing impairment, while the actual hearing aid device would be purchased by a dispenser who could be a physician, a traditional hearing aid dispenser, or a professional audiologist.

Oticon's marketing efforts were increasingly directed towards the dispenser. Its strategy involved wholly owned distributors. The goal was to control knowledge from the company all the way through to the customer, as opposed to working through an agent who might not be responsible for the quantity or quality of knowledge transmitted to the customer.

Oticon was also involved in repositioning the hearing aid category itself, from a prosthetic device for someone handicapped to that of a modern high tech communications device affecting the whole human being. It focused on real user benefits and quality of life issues, vs. the availability of standard features (see **Exhibit 2**).

Oticon History

Oticon was founded in 1904 by Hans Demant as a family business that enjoyed steady success and achieved #1 world market share in the late 1970s. Demant, whose wife was hearing impaired, initially imported hearing aids. Oticon began its own production of hearing aids in the 1940s. Enabled by its prominent position in the technology of miniaturization, Oticon became a highly profitable market leader.

This combination of being market leader and an extremely rich company lead to what Kolind termed "falling asleep." The industry continued to evolve, particularly with the emergence of custom ITE hearing aids, while Oticon continued to rely on standard BTE devices that were less responsive to customer needs. The company lost market share steadily to assume third position. In 1987, the company experienced a financial catastrophe, losing almost half of its equity in one year. It was also hampered by a rigid organization. Functional departments such as marketing, finance, and manufacturing were lead by directors who were also the senior executive group responsible for all strategic decisions. A governing foundation that owned the company was composed of the same people as management. Concerned about the future following the debacle of '87, they looked outside the company for new leadership.

Enter Kolind

Lars Kolind, an activist in the world scouting movement, was trained in organizational behavior, management, and math. His career began with a stint in operations research as part of compulsory military service. He then joined and ultimately, at the age of 27, became general manager of a planning and operations research consulting firm which he built up to third in Denmark after five years. Tiring of management consulting, Kolind then joined the Danish National Science Research Laboratory where, at the age of 33, he "ran the operation" at this 1100-person state facility where they went through, in his words, "a transformation every day." At the same time, he held the rank of associate professor of planning theory at the University of Copenhagen although by his own

admission, he had never studied this field. He remembers the academic environment with nostalgia as the ideal working environment for him with its lack of formality.

Kolind, an outsider to the hearing aid industry, was brought in as somebody who had demonstrated in a similarly difficult business that he could run a profitable organization. He had previously been CEO of Radiometer, a highly profitable Danish company making precision medical diagnostic equipment with world market share of 40%. Kolind was also attractive to Oticon because its board was looking for a business person with people skills who could continue Oticon's familial spirit. For example, it was a company not used to firing people.

Kolind recalls his early days at Oticon in the following terms, "I think I may have disappointed them, because I was extremely tough. In order for the company not to go bankrupt, we had to fire a lot of people and be very traditional in the way it was handled. It was a very turbulent two-year period. But we very quickly regained profitability." In the process, 15% of Oticon's employees lost their jobs.

Thinking the Unthinkable

With the turnaround behind him, Kolind was now free to look ahead to the future. He observed:

Frankly, I was extremely concerned about the future of the company. Everyone else was positive, and so was the cash flow. I was the only one that was concerned. By '87, we were down to a small number three with a 7% market share. And what concerned me most were the big players in this industry, the big electronics companies such as Siemens, Phillips, and Sony. For example, Siemens made no secret of the fact that they were investing around a hundred million Deutschemarks in hearing aid related technology, which was four times our entire company equity.

Also, we were facing a fundamental technological transition from producing analog amplifiers to building a computer where the actual signal processing was digital. And that is as fundamental as the transition from a traditional record player to a CD.

All the experts seemed to agree: the strong players in existing technology were in a bad position to win the next round. I did a thorough analysis of where we could establish competitive advantage. I couldn't find one place. I looked at what our competitors did well. And we couldn't do what they were doing any better. Then I started looking at what our competitors did wrong. And in the early stages of that thinking, it was obvious to me that they had one enormous drawback, all of them. Exactly the ones that were investing so much. They were slow, they were rigid, they were departmentalized, they were uncreative, to a very high degree.

It became clear to me that to make people smile was the business we were in. And to make people with hearing impairment smile requires much more than a good hearing aid. It requires a process of integration, and there was nobody who showed any ability to do that. This ability to integrate expertise, faster, and in a more creative way was what I defined as our competitive advantage.

The $64,000 question became how that vision could actually transform our organization, because very few, if any, people in the company shared my concern. Nobody believed there was any chance that we could use the ability to integrate as a competitive strength.

Certainly, there was ample data on the need for change. For example, I talked to engineers in R&D to find out how much of their time they spent on relevant activities they were trained for, and which added value to customers. My estimate was that they used a maximum of 25% of their time

doing real, genuine R&D work–and 75% on *everything* else. So I was trying to find a way where I could liberate them from all of the rest, to do more.

The second observation was that our R&D new product development was always delayed, almost indefinitely. There were projects that had been underway since '79, and we were now in '90. How come? Although we officially had what's called 'integrated product development,' it was clear to me that it was actually not integrated at all, but rather managed by departments that never did things concurrently. They all waited for and fingerpointed at each other, so that there was no integration whatsoever. The marketing people came in when the product was finished. When it was ready, then you asked marketing, "How do you want to sell this?" And then they started thinking how to sell it, and made brochures.

I felt we had to have departments work in a more integrated fashion. So this brought me around to think that the only thing we could do was to drop a nuclear bomb on this organization, and rebuild it from the ground up.

I took as the starting point that if we thought the unthinkable–that was the actual slogan I began to use–and imagined engineers doing several things, actually doing marketing as well, for example, or a profitability analysis, then they would start thinking differently. So that was the beginning of the concept of multiple functions.

I began to imagine that if you could make a paperless company, then many limitations no longer needed to be accepted. This brought me to say that a multi-job is possible if it's paperless. Because then you can have people move around and do different things.

So I said, "We must recreate an organization that is multi-functional, and where every single person does more than one thing. And hopefully the second and third thing he or she does is something he's not trained for." This was a provocation. I never really believed it would work out 100%. But that really didn't matter. It was the concept and the shock that I was going for. I thought multi-job was the only way that you could kill the existing departments. Because otherwise, the departments, even if we officially killed them, would still be there.

Then the rest was simple. If you want to have people make several things at one time, then the concepts of a department and a department head who organizes, don't make sense. We had promoted our department heads from the best specialists, which was the Oticon tradition for fifty years. Not all were good managers. I wanted to neutralize them. So I said, "If you want to work this way, the concept of a department doesn't make sense. We won't have that. We will work in projects."

Then people said to me that matrix organizations don't work. The literature shows this. And I said, "You're absolutely right. But this is not a matrix organization. It is a *spaghetti* organization. It's a spaghetti organization because it's not structured like a matrix. Imagine you're an engineer. You shouldn't participate in three projects where you do chip design. You should do chip design in one. And then you should do marketing in the second, and profitability analysis in the third. Nobody's ever tried that. So there is no article saying that this is not possible. I'm absolutely sure it can be done."

The reason I chose that metaphor of spaghetti was that I thought our traditional hierarchy was very structured. I wanted some illustration capturing the idea that from any point to any other point, there was a line. I was thinking of the long, thin, traditional Italian spaghetti that represents communication lines between people going up and down and getting completely entangled with each other. It's about connectivity. It's about the points of focus. The direct communication. And lack of structure.

4

The third change was probably the hardest. I said, "If we really mean this, then the concept of having people isolated in offices doesn't make sense." What I wanted was everybody sitting out there in one big kind of chaos. And I hoped they would move every day, from one place to another, because they would then work with different people and do different things.

So my vision was that the company should be like a birch forest and that there should be a thousand indoor birch trees on wheels. They should be movable, and if we wanted to do things a different way, we would simply move the birch trees. I had hoped that birch trees would also dampen sound inside the office, but unfortunately they didn't. So we quit the birch trees.

The fourth point was that I've always been very keen on oral instead of written communication in order to take away as much formality as possible. This organization had been extremely formal. Everything was written down and documented. What we wanted was to shift communication, not from paper based to electronic mail, but from formal to informal. It's fine with me that whatever paper based communication we must have becomes formal, becomes electronic mail. But it is important that we get much less of it and much more informal, oral communication.

So that was the process. It was just common sense.

Then I said, "Why don't we set a goal? We must be able to design solutions, including hardware, software, and packaging that our customers like more than what they get from the competition. Our competitors may have more advanced technological solutions than us. So we must be more creative."

"Second, we must be much faster, to make things happen." In my definition, the combination of creativity and speed is the ability to innovate and to get things done. I didn't just think about the ability to generate ideas, but was much more concerned about our ability to make things happen quickly.

A third issue was productivity. We had reduced costs 10% in '89, and we were within budget for 1990. I said, "Imagine if we could do it for three more years. Why don't we improve the total effectiveness of what we do by another 30% in three years?" Since all our projects had numbers, I called this the project 330. Three years, 30% better. It was a little joke. People looked at our list of projects, and couldn't see why this number 330 fit. I said, it's just to help you remember, because you're numbers people. And 330 did focus the organization much more.

Dealing with Resistance

The management team was tremendously resistant. I didn't present the program officially, but I gave out a paper, "Think the Unthinkable" which I had written January 1, 1990 to describe the changes I envisioned (see **Exhibit 3**). And I would say, "What do you think about this? Wouldn't this be fun to do this? Nobody's ever done it before. Why don't we become the first ones?"

But this was still an aristocratic company that dated back to 1904. So people were extremely negative. The more resistance I got, the more I felt sure this was the right thing to do. So I twisted arms very strongly. I had to twist the arms of quite a few managers, but the further down in the hierarchy they were, the more enthusiastic they were about the change.

The resistance was first of all towards change. And the argument was that we had already changed. They thought we had changed everything. I thought we had really changed nothing. They

said, "We've changed so much, and you are in the process of spoiling this company completely. So we want to preserve the Oticon spirit and our tradition of success."

The second point was that we would completely spoil our professional standards. This had been a highly professional organization. We have some world-class experts here in micro mechanical design, chip design, electroacoustic design, and psychoacoustics. They were extremely concerned, because they thought we would spoil our professional level, and the company would become like a kindergarten.

The third concern was that people thought we wouldn't know where we were. They were afraid we would lose control. For example, we were in the process of preparing for an ISO 9001 certification of our quality assurance system, similar to GMP (Good Manufacturing Practice) in the United States, which required all kinds of organizational charts and documentation.

I think the ultimate concern behind all of this was that the traditional managers feared losing control. And losing privilege, because they had had it nice. Big offices, nice furniture. And their information monopoly. It had been a very closed company. You kept your information with you.

I said, "Information should be available for everybody. Information including salaries, everything. There's nothing I want to hide. Everything should be totally open." Confidentiality was a big issue, especially when it came to your own salary information, for example. This was another point where I compromised. You know, if you win 98%, give in for 2%.

So, there was a lot of resistance. And how did I twist the arms? I was very persistent. I discussed and discussed, mostly one-on-one. Because it was more difficult for me to handle them as a group, I sat down with each individual who once had said they were partly persuaded–but really weren't. Then when I had talked with everyone individually, I brought them together, and some resistance was still there.

Finally I said, "I think this process has demonstrated to me how important change is for us. So I'm prepared to give you all a choice: to join in this process, or not. If some of you won't, you've got about 18 months to find another job. It's as simple as that. I want to do this." I was not afraid of using power.

I'm not saying they were all against it. Because had they all been really against it, they could have gone to the Board and tried to get me fired, but they didn't. I said, "I want you to be neutral to positive. But I don't want you to go out and try to sell something which you really don't believe in. Don't be negative. I can't accept that. Let me do the selling, and if people ask you if you are behind this, then you'd better answer "yes." But you shouldn't be artificial."

Then I called a company meeting at four o'clock in the afternoon, on April 18th, 1990 in the old headquarters. The potential audience was about 150; there were 143 there. There was a lot of noise, because I called it at four in the afternoon, and this company was not used to doing anything after working hours. You had time clocks, you were there at eight, you went home at four, and that was it. People said to me, "This is too bad. I have to pick up my children at the kindergarten." I said, "That's all right. You pick up your children. But then you won't hear what we will be doing. This is your problem, not my problem. So you can hear about it tomorrow, second hand."

To the group I said, "I know what I'll be saying will generate a lot of noise and resistance and uncertainty and problems. But frankly speaking, I am determined to do this. I feel obliged to follow what I think is right. And I have a very strong feeling that what I'm proposing now is right."

6

"I respect that probably somewhere between 15 and 20% of you will say we don't want to be part of this. I fully respect that you will have about 18 months to quit. But I don't want to discuss whether we should do this or not. Because we will do it. I want to discuss whether we can do it in a different way, a better way. And I want you all to join in doing it, because it's a collective project. But I am not willing to compromise on whether we'll do it or not." People were shocked.

I told the story about the birch trees and the four changes: (1) multi-job, (2) the spaghetti organization, (3) oral communication, and (4) the virtually paperless organization. I handed out "Think the Unthinkable," and said, "It's going to be a lot of fun, it's going to be exciting, and we'll be the first ones in the world to do it, and I'll take the risk. If this doesn't work, this will be a big problem for me."

There was an employee named Helle. She was very enthusiastic, and thought it was the best idea anybody had ever thought up. She stood up, just before we finished, and said, "Hey, I want to know how many of you think this is a good idea?" My heart was pounding. I thought it would be 20%. And about 80% raised their hands. Basically anybody but the managers thought it was a great idea. I felt very encouraged.

The day after, I hired Helle to be part of what I called the interior design team, to carry through the whole process of change. I had to call it something non-threatening. Five or six opinion leaders were involved, none of them with any managerial position. They were secretaries or assistants, but opinion leaders. The ones that always organize the Christmas party. The leaders of the unofficial organization. We continuously broadened the number of people involved in this process. We had a team for training everybody to become computer literate. We were very computer illiterate at the time. We had another team selecting the right computer solution. We had all kinds of teams doing different things. How the file system should work, because we had all kinds of manual files. Out of our 150 people, there were about 50 involved in the transition process.

The process became self-generating in one or two months because there were so many involved, and they were enthusiastic about it. We had meetings with local gurus about flexible organizations and knowledge, as well as a two-day conference where we discussed our fundamental human values.

Financing the Plan

We got government support of $400,000 for consultants and experiments. So we created a project, called the Company of the Future. I had a press conference and told our story. The result was we had enormous press coverage, before we'd done anything. So there was pressure put on our people from outside that helped the process tremendously. Everybody was asked by their friends what they were doing. They had to tell the story, and then they became ambassadors of it.

We engineered the process very carefully. I had an acceptance in principle from the Board. They were fairly happy, but also nervous because this was a big change. I thought we had the money to finance the change. But then they said, "We just don't have the money to acquire the new space and build it out. And cash flow, and all of that, would be very negative."

So I went to the bank and said, "If I acquire part of the company, can I borrow 27 million kroner?" Which was what was needed to finance the change process. They said, "Yes." So I came back to the Board and said, "I'll acquire 17% of the company. I've talked to some of my colleagues. They're willing to acquire 3 or 4%. So we can inject 32 million kroner of fresh capital into the company. So, what else?"

They were astonished about that. They had never thought about the idea of having any other ownership than the Foundation, but they accepted!

So I did the transaction. This was a management buyout. Nobody on the Board really understood how I could imagine taking a risk like that personally. Because I would be totally broke, if this didn't succeed. But I was absolutely sure that we could succeed. And the rest of the managers were given an opportunity to buy shares at fair market value.

The first thing we implemented was an employee share scheme. Because I said, "I don't want to buy unless we can create a market for the shares." And the only thing I could imagine was to take the company public in '95. This was in '90. I said, "Let's take the company public in five years time. We'll make all the investments now; we'll show nice growth, and we'll offer the employees shares at a good price. So they get part of the future, too." The program was a tremendous success. About 500 employees bought in. We set a criterion that you had to work more than 20 hours a week and to have been here for one year.

Eight A.M., August 8, 1991

On August 8, 1991, the company moved into a new building at the same time that the organizational changes described in "Think the Unthinkable" were put into effect.

Inge Christophersen, secretary to the executive committee, recalls that it was the best day in Oticon's history. "We went into the cafeteria and Lars made a speech. It was like a party." Recalls another manager, "It was chaos but after 1-2 days, we were 100% operational, and the most important thing was that everybody was equal. It was coming to a totally new company."

When asked to reflect on the biggest changes before and after August 8, Inge responded, "There's now a sense of no limits here. We can take care of our job without interference from above. We have responsibility for our job. We don't serve coffee. We don't write memos. We don't sit down like dragons and guide people through the door. It's not a nursing job. People even handle their own mail. When you sit in an open landscape, you get involved in a lot more things than before. An example includes how I got involved with this interview. It's easier to ask for help. We help each other a lot more now. You discover that you have other qualities besides what you are hired for. You don't have to hide behind a shell. Previously, people were playing roles. I was playing a secretarial role, for instance. When I go to work today, it's as a person, not a secretary. It's me. The result is also a decrease in barriers between functions. You are visible all the time, so you have to be yourself. You might have problems if you are not natural and straightforward. The key element of the change is that people are involved. When we started, nobody knew where we would end up, but we had a common challenge."

Kolind recalls Day One at the new space as follows:

We'd actually staged it. We had television coming, and made an event out of it. I wanted everybody to move the same day. I said, "Everybody must be here at 8:00 on the 8th of August. Then we'll have breakfast in the Cafe, and I'll tell you about what's going to happen."

So everybody came in at eight, and it was like a birthday party, a celebration, an inauguration. I reminded everybody of the 18th of April, 1990, when I had made my last speech. It was on the historical anniversary of the sad day in 1864 when the Germans conquered Denmark and took one-third of the country. Then I said, "Today, the 8th of August, is a day when a new era in Oticon's history starts." I reminded them of the achievements we had made, how negative everybody had

8

been, all the problems we'd overcome. And told them that what we'd created was a knowledge based company; it was our future.

Around 9:30 I said, "Now go and find your place. Because on everybody's desk is a set of business cards with your name on it. You may move later today or tomorrow, so if you don't like your place, just move somewhere else; there are empty desks around. Go and find your place, turn on your computer, and you'll see exactly the software you have on your PC at home. We'll be off and running after lunch." They'd been forced to label most of their stuff for basement storage. Whatever could be contained in one of these mobile caddies they were allowed to put their name on. When they went to their desk, they found their own stuff plus the computer and their business cards, plus a special Oticon towel, which was a gift for them–since they had to work so hard. We felt it might come in handy!

By lunchtime, people were using their computers, starting to send memos to each other. The computer training had worked well, and there was virtually no problem with the computer system. People were getting things done and they were surprised at how everything worked. On the 8th of August in the evening, we had an evening meal, and then a party. That evening, we had national T.V. here, and everybody could watch a very flattering feature report from Oticon.

The Project Organization

Oticon is run by projects and Kolind admits that he doesn't know exactly how many projects there are at any given time. There are an estimated 100 projects, including small one-person as well as large strategic ones. A "typical" manager might be involved in three projects. Employees are free to bid on participating in particular projects. Initially, Oticon listed projects on a computerized job offer board, but after two weeks found that it was faster to rely on communication through the informal organization as the "shopping" mechanism for project participation. The nature of the projects on the list is kept confidential by the company.

Every project has a project manager, and is also owned by somebody on the management team. Ownership is like being chairman of the board, but not actually running the company. At Oticon, the project manager runs the show. The job of project owner is to support, open doors, and make the project successful, not to manage. This system ensures that the project manager always has direct access to somebody in the management team.

Kolind describes the process as follows:

How does an idea progress to become a project? First, there's a period of skunkworks. Projects can be about anything. But most projects become official after they've been done as skunkworks. Then typically they will be presented to somebody in the management team or myself. I might say, "Okay, this is a great idea, or I'm not very happy with it for such-and-such reason." Then it is reviewed by a subgroup of the management team called the project management committee that actually approves all projects. Finally it becomes an official project, and is allocated to a project owner. Typically the people that have actually invented the idea become the project group.

Another dimension of the project organization is professional [also referred to as "specialties"— the vestiges of functional organizations]. Most department heads became professional coordinators. They had great difficulties understanding the difference from their previous role of running a department. For instance, the former department head of mechanical engineering who had ten engineers is now the coordinator, which means that he doesn't have a group that he manages, but rather the overall responsibility for all design rules, for the infrastructure of computer design stations

and mechanical design. There are certain milestone review meetings. He signs off on professional standards and promotes them. Perhaps once a month, he will hold a one-day meeting for everybody interested in mechanical design. Professors or other experts visit and discuss new ways of doing things, what other companies are doing, and their products. So he has a kind of coordinating role, but he doesn't manage anybody.

The third dimension of the project organization is the people dimension. Our original idea was that every employee would have a mentor who wouldn't be a former department head. It would be somebody who would support and help the person, who would make sure that they felt happy and productive. The mistake I made was to accept in the initial phase that the mentor should be the professional coordinator, because the professional coordinator maintained his role as department head. It's a conflict of interest. Now it's up to the individual to decide who should be his mentor.

E36

We've improved markedly in our ability to invent new ideas, concepts, and make use of what we actually have. It takes quite a bit of time to develop a new product. Our positive performance started earlier because we tapped the potential from making better use of what we had.

We had one project that had been underway since 1979 called E36 because it was project number 36. It was a BTE, expensive to produce, and designed in a technology that we were moving away from. So it was a loser. The team suggested that it be abandoned; they said, "We have lost our belief in this. Forget it."

I was desperate, because we were short on new products. We really needed something.

Before accepting the team's conclusion, Kolind talked with Poul Erik Lyregaard, director for research and development. He explained that the technology, developed in Oticon's small research center for psycho-acoustics, eliminated the need for user controls. The hearing aid searched the sound spectrum and automatically adjusted amplification 50 times per second. It was originally designed for just that segment of the hearing impaired population who have very low dynamic range in their hearing and effectively compressed the sounds to a very narrow, comfortable band.[1]

"It's actually," he said, "fascinating, because the field tests have shown that the users never use the volume control. It compresses so well that it's always comfortable." I said, "You know what we have invented? The world's first fully automatic hearing aid." That was the thing that had been sitting around. So I said, "I'm going to show this industry that we can make the biggest innovation ever since hearing aids became electric." I was looking for a project where we could demonstrate that we could work creatively.

This was the first project that our new organization worked on. Engineers, marketing, finance, and production people all worked on this project. We were the first company that dared to physically brand a hearing aid. And since it was not the smallest device, the story was it was designed to be seen, and with pride.

It was named MultiFocus because it focuses itself like an autofocus camera (see **Exhibit 4**). Usually, hearing aids are glossy, like glass. But we had it silk matte, which gives it a totally different, high tech appearance. We wanted to persuade people that it was not really a hearing aid, but a

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[1] Details in this paragraph taken from HBS case Oticon A/S: Project 330, 9-195-141

computer. So we made it a dark gray, computer color. We positioned it as the most advanced hearing aid that's ever been made. And it was, although it had been developed some years ago.

The name of the game at the time was remote controlled hearing aids. We managed to reposition the competition. We said the first generation was the traditional one. The second was the hearing aid that could be adjusted to fit the individual. The third generation was manually remote controlled hearing aids, which you could adjust and use preset programs. The fourth generation hearing aid is fully automatic. So E36 was perceived by the marketplace as being the fourth generation, although it was actually thought out long before the third generation. We were also the first ones to put user instructions on a videotape. It was a very big hearing aid. So in order to make it look small, we made the biggest packaging you've ever seen. It was like a suitcase. We introduced a travel pouch and a battery tester. It was the world's first hearing system. We used five times more money on the launch than we had ever used before–and it became a smash. Not because of aggressive marketing, but because MultiFocus offered a genuine advance to the user with a much more comfortable sound delivered by a fully automatic system.

The entire industry is now following us. We managed to do this several times with other products that we re-engineered. We are just more creative in our approach to marketing, packaging, selling, and presenting the whole thing. We also teamed up with three other manufacturers, and designed a new world standard for the programming of hearing aids via a PC. This was all due to our organization in which people from marketing, engineering, service, sales, finance, and production worked together. So we've been innovating, not only our own company, but also in re-engineering the industry. One manager said that we now are #1 not in terms of unit sales, but rather in terms of intellectual leadership, providing knowledge and products derived from knowledge. We are redefining the rules of competition.

Design

Oticon has given attention to the design of its physical environment. Initially, employees recommended a building replicating existing organizational boundaries. Now, Oticon's headquarters are situated in a former Tuborg beer factory that was located by Kolind while perusing the classified ads.

The physical layout was designed for dialogue. One architecture firm was hired and then fired. A second was brought in, but only after "we basically told them how to do things." The attention to detail was reflected, for example, in the office's central spiral staircase that was designed to be wider than normal to provide informal space for people to talk while others passed by. Each floor also had a coffee bar with tea and coffee. The company didn't want people isolating themselves while using their individual thermos bottles.

Mail flows into a specially designed mail room. A sorting desk is there for convenience in discarding unnecessary paper. Documents to be scanned are processed by a scanning team, and returned to their owner to be verified, before being tossed out. Documents are then shredded and the wastepaper falls down a big, clear glass tube that goes though the employee cafe on its way to the recycling plant.

For people who want periods of privacy from the open-plan office, there are study cells, which contain as little equipment as possible, and no decorations. Says Sten Davidsen, "We don't want people to turn these into offices. We don't want them to linger here."

Organization

Oticon's organizational structure consists of Oticon Holdings at the summit with two executives, two secretaries, and a financial manager involved with implementing Oticon's impending public offering in 1995. Under the holding company is Oticon A/S, responsible for manufacturing and selling Oticon's products, and the sales companies.

Oticon supports distributors in 100 countries. It has sales companies in 14 countries whose task is building relationships with professional hearing aid dealers. The sales companies range from a high of 120 people in the United States, to four in Switzerland. Oticon Export A/S provides the same function through independent distributors in the remaining 84 countries.

Overseeing Oticon A/S is a management committee of ten people, each of whom also has responsibility for supervising projects as an "owner."

Other organizational units include final assembly in Jutland with 300 people, and component manufacturing operation with 200 people. The atmosphere in these other organizational units is also described as changing. Says one manager, "The walls have come down; nobody has their own office. Production is being run by self-generated teams." In headquarters, there are 120 people of whom 40% are development people. Development space occurs throughout the company. Workbenches and precision machining equipment mingles with the more traditional office environment.

Oticon Culture

Regarding company culture, Lars Kolind says:

The only way you can manage a decentralized, creative, spaghetti, chaotic company is to provide values (see **Exhibit 5**). So I've written a paper on Oticon's fundamental human values. In Denmark, in contrast to the United States, you never talk about your beliefs. In the United States, people are into all kinds of things in an open way. Here you're closed. Your beliefs are very personal. The manager who writes a three or four page paper about the fundamental human values on which we run this company–that is totally unheard of. To talk about corporate culture is invasion of your privacy. So the shock was very strong.

I summarize our values as follows: This company employs only one type of people: responsible adults. I don't want to treat you as children. For that reason, we will not accept the concept of time clocks. I'm sure you know when you want to be here and how much you want to do. So forget about time clocks, or better yet, forget about working hours. Make sure you're there when you're needed. If you serve the U.S. market, you don't come here at seven in the morning. You come here late, and you stay late. And it's only your problem. If you deal with Japan, you'd better get in here early. And if you want to work at home now that you have a wonderful computer–work at home. I don't care. If you want to take some extra days off, just make sure somebody looks after what you were supposed to do. Be sure you do that. Don't tell anybody. Just simply do it. If it's nice weather, and you have time, go sailing. I don't care. Just make sure that you do what you think is fair, what you ought to do. And make sure that you produce results that are fair. Think of fundamental fairness as the value on which the whole thing is built. Here's another example. In your private life, you can buy real estate, you can take loans. So if there is something that you need to buy, don't ask for permission unless it is a lot of money. Simply do it and give us the bill and we'll pay it. That's no problem. We had elaborate systems, and I said, "Forget about all of this. Do what you would have done had it been your own money. And if it's fair, there's no problem." So we took all the

regulations away. I said, "I fundamentally trust that if you're treated fairly by Oticon, you will treat Oticon fairly; you will return that fairness to us." That was one set of values.

The other was that for us values are fundamental assumptions about how people are and what they want to do. One of them is that everybody wants to know not only what they're supposed to do, but how it ties in with what we do in the company. I wanted to have the principle of transparency of information, that you can get whatever you need. I had to give in on salary information, and the Board couldn't accept that the board meeting papers were available, but basically everything is now available for everybody.

Then there is the principle of job security. Although the law says that you have to have a couple of months notice before you can be fired, my assumption about job security is that you can go out and find a better job elsewhere. That's true job security. This company will accept no formal schemes for extended notices. But we'll invest in you if you want to develop and grow and learn new things, and qualify yourself. There will be no limits on how much you can do. So, you can create job security for yourself.

Information Technology at Oticon

In December 1990, Oticon offered every employee a PC to have in their homes. The group tasked with analyzing training needs had recommended an average of two or three weeks per person. Kolind calculated the cost, and concluded that the company didn't have the time. Instead, Oticon offered everybody a deal–a 386 computer with mouse, hard disc, Windows, software, a printer–all on extremely favorable terms. Each employee had to pay a small sum to avoid Danish gift taxes. But if they did that and were willing to take care of their own training, they could have the computer for five years, after which they could buy it for a dollar.

There was a turnout of over 90% for this program. The remaining 10% had computers already. The employees took computer literacy very seriously, and arranged training outside of office hours. They also established an employee association, which to this day is called The PC Club.

They received their computers right before Christmas and took them home. One employee said to Kolind afterwards, "I think you're smart, because you know what I've been doing all Christmas? Everybody has come in, and I've been telling the story about this wonderful company that's even given me a computer. I feel that I spent my whole Christmas vacation telling how good Oticon is, and I'm starting to believe it."

The company is now experimenting with various groupware applications. It has a group computing environment with 12 computers that it has used for brainstorming as well as self-assessment sessions. It has also used internal bulletin boards to discuss problem areas such as quality of the working environment or issues pertaining to confidentiality.

How Did It Go?

There was an issue with managers, particularly former department heads, who in Kolind's words hadn't really "gotten the message" and were continuing to manage their people. He observed:

There was a lot of conflict. People came to me and said, "What's this? You know, my department head thinks he can still control everything I'm doing?" I said, "You just simply say, 'Too bad; you're

not a manager anymore.' Just tell him you aren't going to do what he says because the times have changed."

The manager is probably the biggest problem in this kind of change. To succeed in this type of environment takes a manager who has a fundamental belief in his integrity, who can function without status symbols. I don't have a knowledge monopoly. I don't have any of the status symbols I used to have. It takes a lot of guts to basically give away all your privileges. I have the final power, but I'm very hesitant to use it. Instead, I say things like, "I question whether this is a good idea. Think it over once more." The only power base I have is that people trust me and that I can be trusted. And so far, I've maintained that trust, despite this very strong turbulence we've had.

I think we have achieved something that is impossible for companies like Siemans to copy. Absolutely impossible. Their entire corporate culture is a German, very structured hierarchical, power oriented. It's from an industrial age tradition. We would be impossible to copy. I actually invited the former president of Siemens Hearing Aids in a public forum to come visit us.

It's interesting that in this country there are some companies who have tried to copy our approach. There is a company in Jutland, the world's number three pump manufacturer, called Grundfos. It's one of the top Danish companies, a very good company. They have established their new so-called technology center, which is about product development, research, and all kinds of technology. It is about 250 people in a separate complex, much bigger than this. They call it their Oticon building. And from a physical point of view, they've been even more loyal to our principles than we are ourselves.

Financial Performance

In the first three quarters surrounding the Oticon transformation, from the second quarter of 1991 through the first quarter of 1992, the company lost money (see **Exhibit 6**). Profitability was restored in the second quarter of 1992, but the board brought in an executive VP with a strong financial background, Niels Jacobsen, to work side-by-side with Kolind. Regarding this move Kolind observed that Jacobsen modified some of his freedom, because controls were necessary if the company wanted to improve financial performance quickly. Controls on what money could be spent on were reintroduced, and cash flow was organized in a more structured way. These were relaxed during 1993, but not estimated. Observed Kolind, "I think it works very well with this flexible organization. We are in control, and despite that we have a high level of freedom."

14

Exhibit 1   Global Hearing Aid Market

	Total Revenue ($millions)	Revenue Growth Rate %	% Revenue Hearing Aid	% U.S. Market share
1988	893	4.8	89.0	41.8
1989	936	4.8	89.2	41.7
1990	981	4.9	89.4	41.6
1991	1,029	4.9	89.5	41.4
1992	1,080	5.0	89.7	41.3
1993	1,133	5.0	89.8	41.2
1994	1,190	5.0	90.0	41.2
1995	1,250	5.0	90.1	41.2
1996	1,313	5.1	90.2	41.1
1997	1,380	5.1	90.3	41.1
1998	1,451	5.1	90.4	41.1

Source:Market Intelligence, October 30, 1992, "World Audiology Product Market: Market Size/Forecast by Region.

Exhibit 2   Oticon Business Concept

Oticon's objective is to help people with hearing deficiencies to live the life they would like to live, with the hearing they have. Hearing is fundamental to the interplay between people and therefore, to the life of each individual.

Better hearing requires more than just a good hearing aid. It also requires professionalism from those who analyze the hearing deficiency, fit the hearing aid and give advice about its correct use. Oticon focuses the whole processes as this is the path to better hearing.

Psychoacoustic research and communication with the user are the basis on which new products are created. These new products come into existence by means of advanced technology and in interplay of experts including audiologists, engineers and those in the marketing field. This combination of research, high technology and creative problem solving can bring about the breakthroughs which are necessary for a wider use of hearing aids in society.

Oticon's products are distributed through their own companies on the most important markets. Thus Oticon is able to cooperate directly with the dispenser and the distribution chain functions at its optimum.

Exhibit 3   MultiFocus Product Description

The Sense of Multi-Focus–It goes to the heart of what hearing is all about.

Hearing is a magical sense that translates sound waves into the voices and music that enrich our lives.

MultiFocus divides incoming sounds into independent frequency channels. Low frequency sounds are processed by non-linear compression technology to make soft sounds audible–without over-amplifying uncomfortably loud sounds. In the high frequencies, linear amplification ensures that important speech cues are preserved. Above all, MultiFocus adapts to changing sounds at a level best suited to your client–automatically.

MultiFocus was developed to improve the quality of life through better hearing. But innovation doesn't stop with technology. You need innovative solutions to tell people about the remarkable benefits MultiFocus as to offer. Oticon makes that task easier. Here's how.

Client Presentation Aid   MultiFocus is a new technology. This "show and tell" visual aid makes it easy to explain how it works.

In-Office Sound Demonstration   Ever think to yourself that if people could hear how good it sounds, they'd be convinced? Now they can. With the MultiFocus sound demo. We've recorded a variety of soundscapes–in surround sound–so you can demonstrate the virtues of MultiFocus in your own office.

Post-Fit Reassurance   If we can ease the adjustment period for new users, experience shows we increase client acceptance. That's why we produced how to Get Started. It gives users daily tips on how to get the best results from MultiFocus.

MultiFocus Diary   The Diary is one of our most popular tools. Users like it because it provides daily exercises to help them to handle all the new sounds around them (not always an easy task). Dispensers like it because it gives them accurate feedback to fine-tune Multifocus.

Source: "The Sensation of MultiFocus," Oticon Company Brochure.

Exhibit 4 "Thinking the Unthinkable" memo excerpt

? A company where the biggest part of what we are doing is something we are good at and like

? A company organized in such a way that all working there better understand what they are doing

? A company where there are as few limits as possible that stop people from doing a good and effective job

? A company where each one of us has many possible opportunities to develop in the long-term, to change working tasks, to try bigger challenges

Exhibit 5 Statement of Values at Oticon, by Lars Kolind

1. All human beings like to take responsibility if they are given responsibility.

2. The people we are willing to trust will return that trust.

3. People innately wish to develop and make progress. People, then, prefer to be challenged and, while they may be afraid to change, don't like things to be always the same.

4. People want to clear understanding of the structure and overall objectives of their work environment, but also like the freedom to fulfill these objectives. People like to have influence over their daily work situation.

5. People wish to be paid according to their performance and their results in a way that is fair and justified.

6. People prefer to be partners in their companies, in both good and bad times.

7. Job security is best achieve through developing individual competence, so that competitors will compete for your services.

8. Every person should be treated as an individual and assisted in his career development.

9. People are interested in knowing how their work relates to the strategy and goals of the company, and wish to fully understand the company's general situation and development.

Exhibit 6   Financials 1989-1991

	1989	1990	1991
Net turnover (mil. DKr)	449	455	476
Gross profit	212	195	214
R&D	13	15	30
Profit before tax	22	13	5
Profit margins	8.0%	3.7%	1.8%
Net profit	16	10	(1)
Cash flow from operations	(19)	70	(73)
Return on equity	13%	6.7%	(0.2%)
Number of employees	1,087	1,049	1,086