

POWER THROUGH CREATIVITY



Teknikföretagen

We support and strengthen both large and small

Teknikföretagen is an employers' association representing the entire Swedish engineering industry. Our member companies range from small sub-suppliers to large global players, all of whom develop advanced technological services and products.

Explaining in just a few words what Teknikföretagen does is no simple task since we work on many issues in many different areas. On the other hand, it is easy to explain why we do what we do: to strengthen the competitiveness of Swedish engineering companies internationally.

The engineering industry is vital to Sweden's economic well-being. It dominates the country's exports and the money it generates helps maintain Sweden's welfare system and our high standard of living.

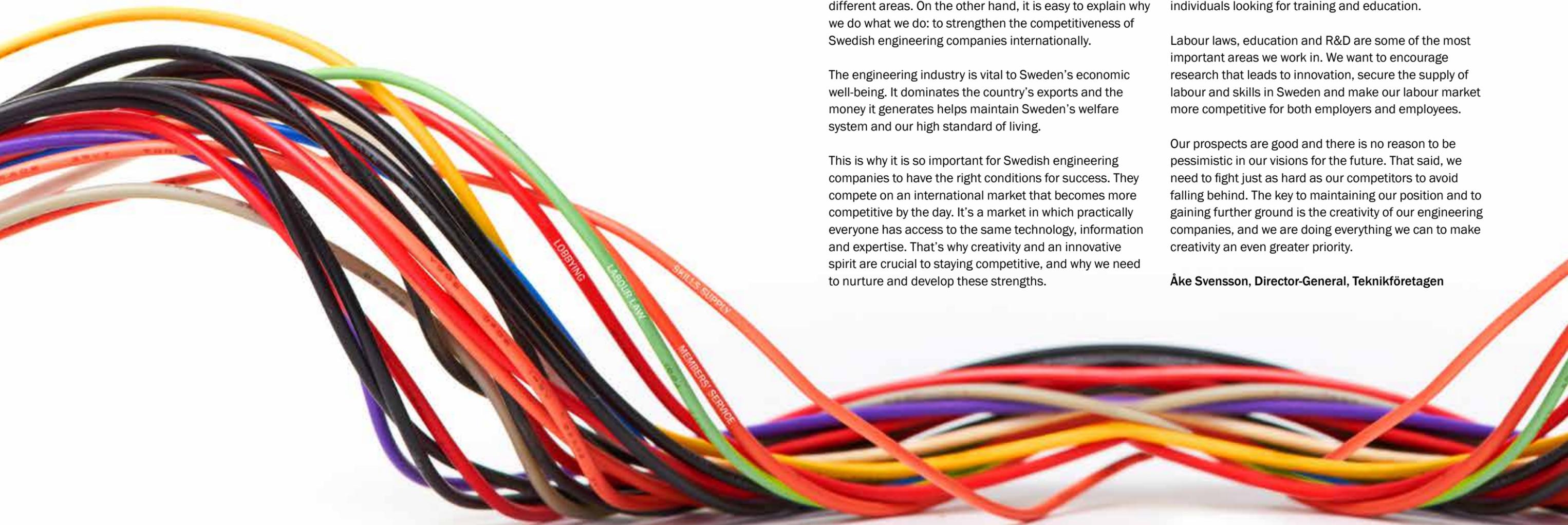
This is why it is so important for Swedish engineering companies to have the right conditions for success. They compete on an international market that becomes more competitive by the day. It's a market in which practically everyone has access to the same technology, information and expertise. That's why creativity and an innovative spirit are crucial to staying competitive, and why we need to nurture and develop these strengths.

Teknikföretagen is active in areas within politics, working life and the education system that are important to our member companies. We work internationally, nationally and regionally to promote and develop Sweden's competitiveness. We work to create a well-functioning and fair playing field that gives Sweden the best possible chance to succeed. We also work to promote increased mobility for goods and services and for workforces and individuals looking for training and education.

Labour laws, education and R&D are some of the most important areas we work in. We want to encourage research that leads to innovation, secure the supply of labour and skills in Sweden and make our labour market more competitive for both employers and employees.

Our prospects are good and there is no reason to be pessimistic in our visions for the future. That said, we need to fight just as hard as our competitors to avoid falling behind. The key to maintaining our position and to gaining further ground is the creativity of our engineering companies, and we are doing everything we can to make creativity an even greater priority.

Åke Svensson, Director-General, Teknikföretagen



OUR INDUSTRY KEEPS SWEDEN IN THE BLACK

Openness and interoperability are part of Swedish culture. They give rise to a creativity and innovative capacity that lay the foundation for world-class engineering companies. This is the same spirit that once gave birth to the engineering industry and that later made Sweden a successful export country. This spirit also makes it possible for Sweden to be the internationally successful welfare state it is today.

Within Swedish engineering companies, creativity is transformed into practical realities. Each day, new ideas are born that are then made concrete and converted into benefits for many. Our prosperity is completely dependent on the export industry and Teknikföretagen's member companies are responsible for more than one-third of all exports of both goods and services. For this reason, Teknikföretagen's members are crucial to Sweden's economic development.

ENGINEERING COMPANIES CAN BE BOTH 'HARD' AND 'SOFT'

Our industry is continually changing and the structures and added-value chains of our companies are constantly developing.

The knowledge possessed by our companies and the services they provide are always expanding, and today, it is just as common to work with manufacturing as it is to work with software or different technical services. The boundaries between manufacturing and services are being erased, and these areas are often fully integrated with one another. The common denominator among today's engineering companies is technology itself, regardless of whether it relates to production, services or software development.

SWEDEN DOES NOT CALL THE SHOTS IN THE GLOBAL MARKET

Today, the industry's conditions are dictated in a global arena where the ability to make rapid adjustments is critical. Billions of new employees have emerged in a competitive environment where the same technology and knowledge are available to everyone, but where the rules of play can differ between different competitors. We live with economic

integration, and capital and human resources flow to wherever the best conditions are found. To maintain our position, we need to invest in a number of areas. For example, Swedish education must be world-class and must supply the right expertise. Also needed are political efforts to modernise and to make labour laws more competitive, so that businesses can be flexible and employees can have better job security.

WE PROVIDE THE POWER TO GROW

As an employers' association, Teknikföretagen works to strengthen the competitiveness its member companies internationally. We want to give creativity maximum leverage as the key to success for Swedish engineering companies in their contest with increasingly well educated rivals, for whom labour costs are often lower than ours and markets closer to hand.

This is why we negotiate competitive wage agreements and work to support a skills and knowledge supply in which schools provide solid education in mathematics and engineering and where more people choose to educate themselves as technicians and engineers. We influence politics in Sweden and the EU so that rules and laws do not disadvantage Swedish companies. We also offer first-class advice concerning employer-employee relations. We do all this to allow our members to focus on developing and producing products and services that they can sell on a free and open world market.

DID WE SAY CHALLENGES? WE MEAN OPPORTUNITIES!

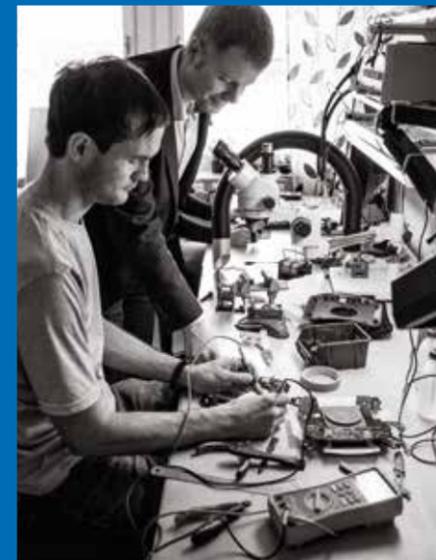
Competition is tough, but we have everything to gain. Our tradition of innovative ability and openness towards the outside world gives us unique and hard-to-beat business conditions. And we don't view globalisation as a threat. We see it as a gateway to opportunity and a broader market for our companies. Global prosperity is increasing rapidly, creating higher demand and better opportunities to export. As long as we give engineering companies opportunities and room to develop, the future looks bright.

ENGINEERING COMPANIES GENERATE SEK

64.8
BILLION
IN TAX REVENUE



OVER 1/3
OF ALL RESEARCH
MONEY COMES FROM
ENGINEERING
COMPANIES



OUR MEMBER COMPANIES
ARE RESPONSIBLE FOR

1/3
OF SWEDEN'S
EXPORTS

SWEDEN
IS NUMBER
IN CREATIVITY* **1**



2,450 OF OUR MEMBER
COMPANIES WORK
WITH MANUFACTURING
1,250 ARE SERVICE
COMPANIES

SWEDEN'S
ENGINEERING COMPANIES
EMPLOY
300,000
IN SWEDEN AND
600,000
ABROAD



AFTER THE OTHER
NORDIC COUNTRIES,
GERMANY
IS THE LARGEST
RECIPIENT OF
SWEDISH
ENGINEERING
EXPORTS

SWEDEN IS
RANKED NO. 2
IN THE WORLD
IN PATENT APPLICATIONS
PER CAPITA

SWEDEN RANKS
AT NO. 2
IN BLOOMBERG'S GLOBAL
INNOVATION INDEX

Jumping in at the deep end – and at the speed of sound

The time when distance posed a serious obstacle to communication between people is long gone. These days, a computer, iPad, conference phone or even a run-of-the-mill mobile phone will do the trick. Not meeting each other face to face is a part of everyday life now.

That said, technical factors still exist that develop from minor irritations into real problems. Like sound quality. It's not uncommon to miss important parts of a conversation because of static, echo and other disruptions. This is where the story of Limes Audio begins.

Actually, that's not quite true. In fact, it begins with seminars and essay drafts at Blekinge Institute of Technology. Fredric Lindström's and Christian Schüldt's research produced the embryo of what is currently Sweden's hottest technology company.

Both hold PhDs in applied signal processing and are full-fledged sound nerds with an unbending desire to improve sound in devices with limited speaker systems. This desire and their technical expertise led them to successfully develop the software TRUE VOICE, which washes sound and improves output signals: a product with the potential to grow far beyond the academic world.

'The entrepreneurial spirit was absolutely what made us see the commercial opportunities involved in our research. And when people within industry and academia whom I viewed as mentors encouraged us, we decided to give it a shot,' explains Lindström, who is currently serving as CEO of Limes Audio, while Schüldt acts as the company's CTO. Limes Audio

Limes Audio

Limes Audio produces sound-improvement solutions based on its patented software. The company is based in Umeå and is listed on 33-listan, a list of Sweden's hottest tech companies.

Founded: 2007 (current business focus began 2010)
No. of employees: 16
Sales: Approx. SEK 10 million

exploded onto the market and is now well established. The company is listed on Sweden's prestigious 33-listan, a list of hot tech companies, and is about to make the leap onto the global market and is growing enormously in every way.

'It's all happened very quickly,' says Lindström. 'One day we're five around the break room table, the next day there are 16 of us.'

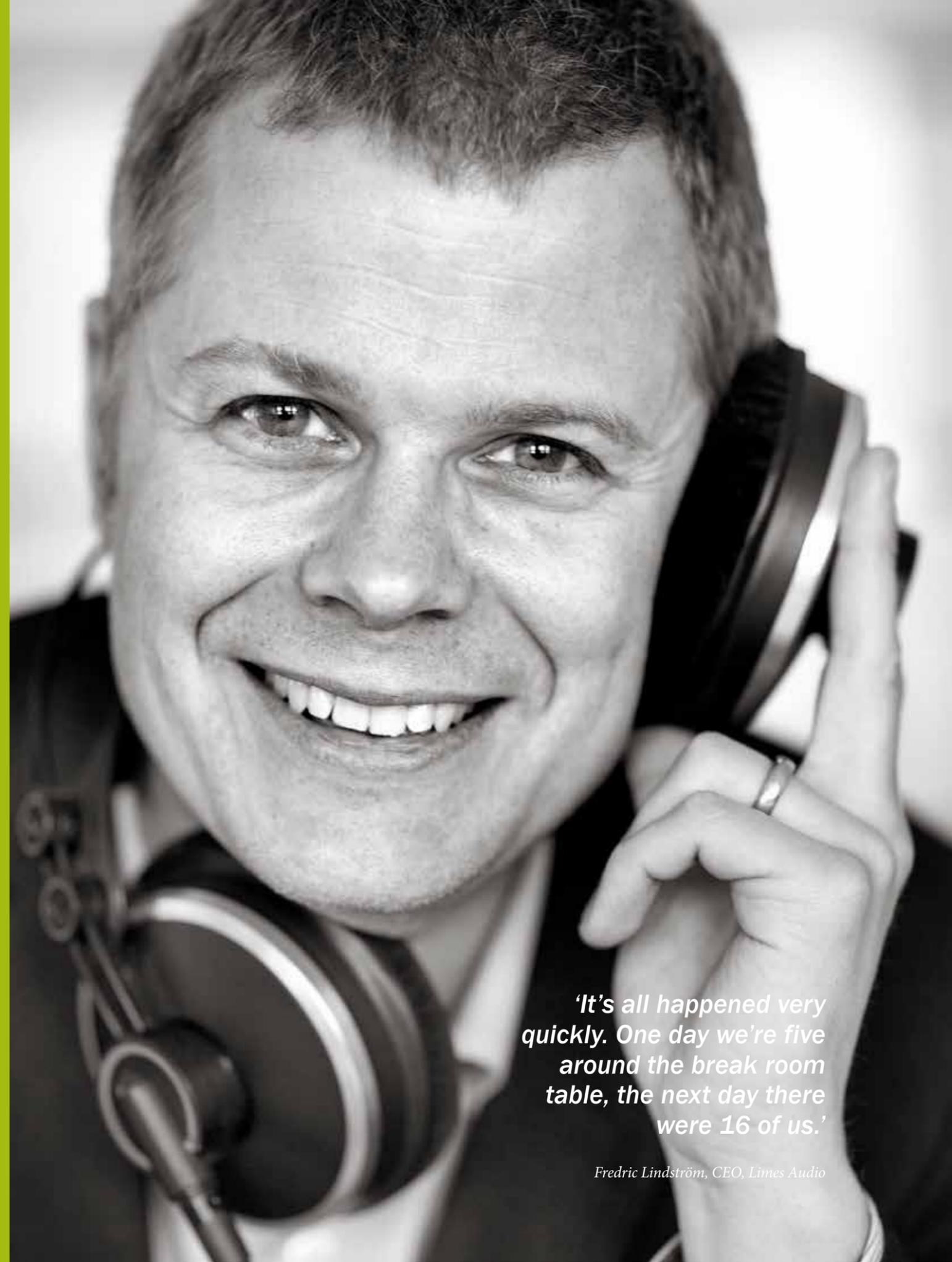
That the decision to venture out into the business world was the right one is clearly evident in every detail. Limes Audio has increased its workforce by almost 60 per cent every year and has attracted more and more customers. At the same time, investors have chosen to put their money behind Limes' operations.

'In the beginning it was hard to make ends meet. We did everything we could to stay in the black. We worked double time to polish the technology and to promote it. We also ran a consultancy operation to finance the company. But things have really started to flow on the customer side now. Before, we had the technology, but not the customers. Now we have more prospects than we can handle,' Lindström explains. Limes Audio's technology is well suited to many fields, which makes its business model scalable. It also opens up opportunities on the international market.

'We've just secured our third US customer,' says Lindström. 'Alongside our first American patent, progress like this is incredibly important for us because it gives us international legitimacy,' he adds, but points out that while all the indicators are positive for Limes just now, new challenges arise daily.

'When we first started, we solved our problems with access to capital by earning money through consulting. So for us, the recruitment issue was and is our greatest challenge. We have the technology, but need the right people to get it sold,' he concludes.

Limes Audio is a good example of how new tech companies emerge when research is commercialised. It is a company that improves our everyday lives by improving communications. At the same time, Limes is also driving technological development forward, creating jobs and generating increased tax revenue. That's why at Teknikföretagen we are doing everything we can to create favourable conditions for new start-ups.



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Fredric Lindström, CEO, Limes Audio

Lobbying gives creativity more room to thrive



The Vaddio conference phone is an example of a product whose sound quality was improved by Limes Audio's True Voice technology.

Sweden needs engineering companies. Those already up and running must be given the right opportunities for growth, but conditions must also be favourable for new start-ups. One way is through the commercialisation of research. This requires well-informed decision-making at the political level to help companies on their way. That's why Teknikföretagen is an active lobbyist, both domestically and internationally.

WE'RE WORKING TO MAKE PUBLIC PROCUREMENT MORE OPEN TO NEW TECHNOLOGY AND SOLUTIONS. THAT'S IMPORTANT IF SWEDEN IS GOING TO KEEP AND DEVELOP ITS ENGINEERING INDUSTRY.

Lobbying is about providing the right people with information on which to base their decisions. In our case, this means keeping politicians and others informed about the industry's circumstances, challenges and opportunities. The information might concern education, energy, exports, product requirements or research. One successful lobbying campaign resulted in the Swedish government allocating more money to strategic innovation areas in its research and innovation bill.

We want newly-established companies to achieve growth and profitability based on their own strength. Sometimes, however, support is needed.

Supplying skills for future success

Creativity is Sweden's strength – and our innovative capacity is world-class. This is because Swedish companies are good at co-operating and because Sweden has a long tradition of openness. These qualities are prerequisites for acquiring knowledge that, in turn, sparks creativity.

Teknikföretagen is active at all levels, from primary and secondary schools to colleges and universities. We also play an active role in politics to influence the content of Swedish education.

The supply of skills and expertise is also an important issue in the local network groups run by Teknikföretagen's business advisors throughout the country. Many of our projects, like Teknikcollege competence centres, are based on local involvement by schools and businesses. Under the Teknikcollege project, local companies and education providers co-operate to create conditions favourable to developing the expertise needed in the future. Another example is the youth project Problemlösarna, in which students aged 14-15 years try their hands at being engineers by taking on real assignments from companies.

Teknikföretagen is active in both local and international politics. We work to adapt education to suit the needs of companies to ensure that our industry has a continual, fresh supply of creativity and competence.



Springs with open ends and winds are an example of EWES' broad range of high-quality springs that help their customers focus on other aspects of their construction work.

THE FOUNDATION FOR CONTINUED SUCCESS BY SWEDISH ENGINEERING COMPANIES IS LAID IN SCHOOLS. THAT'S WHY SCHOOLS ARE ONE OF THE AREAS THAT TEKNIKFÖRETAGEN DEVOTES MOST ENERGY TO.



'The dynamic between the people within an organisation plays an enormous role. A whole lot of creativity is generated when different levels of education and professional expertise are thrown together.'

Anton Svensson, CEO, EWES AB

Creativity is their survival strategy

The soil on Einar W. Svensson's farm in Bredaryd wasn't especially fertile and produced too little for his growing family to be able to make ends meet. The outlook was grim, but Einar had an ace up his sleeve.

Because he had been a metalworker and having a keen eye for business opportunities, he recognised that there was an increasing demand from the engineering industry for various wire components.

In 1935, he built a small factory building on his farmland and began manufacturing steel springs. Ten years later, after the end of World War II, Einar decided to focus solely on his spring business, with his sights fixed firmly on the future.

Today, Einar's company still operates in Bredaryd under the name EWES AB, and is run by his grandsons, Anton Svensson and Anders Cederquist. The company offers its customers production solutions in the form of steel compression, tension and torsion springs and composite products based on springs. It also manufactures products from the cleantech industry, like bag cages, emitting electrodes and conveyor belts. EWES also offers consulting services within engineering and construction.

'Creativity has been in our genes since my grandfather's day. And for me, creativity is the ability to create solutions that lead to progress,' says Anton Svensson.

'The dynamic between the people within an organisation plays an enormous role. A whole lot of creativity is generated when different levels of education and professional expertise are thrown together,' he says and continues: 'What's more, everyone needs to feel secure with management, the operations and the organisation if they're going to dare to express those really crazy ideas. Otherwise, no new solutions will be created. One of our current development projects started out five to six years ago as precisely that – a crazy internal experiment.'

The will to experiment is important for surviving competition, Svensson believes. And EWES AB is a company that is always on the lookout for opportunities to expand its operations and find areas where it can break new ground. 'Our migrations in the added-value chain most often have their origin in the spring and in the realisation that we can also produce products that include springs. This approach has generated a number of solutions, new approaches to business deals and constructions. For example, the step into the cleantech field in 1964 means that we now develop emitting and mast electrodes as well as bag cages together with our customers.'

Finding new ways to develop in a competitive international environment involves both major opportunities and major challenges. And finding creative people to help out is crucial.

'We're not exactly spoiled when it comes to the number of secondary-school courses that focus on our industry, but that's also why we adopt the view that we can find employees almost anywhere. We look for people with the right mindset and skills. Those with broad knowledge, including everything from machine programming to social sciences and language, are of particular interest. Small and medium-sized companies not based in major metropolitan areas also require access to expertise. The need to find solutions at arm's length gives rise to creativity and entrepreneurship, which are what create vital and successful engineering companies.'

EWES AB

EWES AB meets the need for spring-based components and also produces components for particle collection and filtering. EWES is a family-owned company located in Bredaryd, Sweden.

Founded: 1935
No. of employees: 100
Sales: SEK 145 million





Being a responsible international heavyweight

A lot has happened since Ericsson was founded in 1876. Today, the company is a leader in telecom and is one of the world's largest software suppliers, active in 180 countries with over 110,000 employees and SEK 227.4 billion in sales. But despite its impressive size and position, the globalised market is placing new demands on Ericsson.

'We have to keep on our toes at all times. We spend 14 per cent of our turnover on research and development. But the biggest challenge is finding the right people to employ. That's why we're running various projects to encourage more people, particularly women, to enter engineering,' explains Ulf Ewaldsson, Group CTO at Ericsson. 'But to be able to attract the needed expertise, we also need labour to be able to move smoothly across national borders,' says Mats Andersson, Director Industrial and Employee Relations, who has the whole world as his recruiting market.

Despite the challenges it faces, Ericsson is positive about the future – and not just about its own profitability, either – but about creating changes for the better all over the world.

'Our global presence gives us bona fide opportunities to effect change on a broad scale,' says Heather Johnson. 'For example, Ericsson has been a technology partner in the Millennium Villages Project in Africa since 2007, under the leadership of

Jeffrey Sachs from the Earth Institute at Columbia University, USA, where we are working to break the poverty cycle using mobile technology. And one positive aspect of this type of project is that we have been able to apply what we've learnt in other places,' Johnson adds.

'We're not just active in developed countries, like the US, where we are market leaders. We are also well-positioned in developing countries. In these countries, we can contribute to development by giving the poor access to communication, and we're doing so with the help of technology that couldn't be developed on location,' says Ulf Ewaldsson.

Sustainability work also characterises Ericsson's own organisation, all the way up to the executive level. The company has incorporated the UN's Guiding Principles for Business and Human Rights in its corporate governance and also calculates how sustainable its operations are in terms of travel, logistics and factories. Ericsson works proactively and broadly to run a responsible global business based on founder Lars Magnus Ericsson's belief that communication is a basic human need that everyone should have access to. What's more, by 2019, it is estimated that 90 per cent of the world's population will have access to mobile broadband. 'Therein lies a fantastic opportunity to change the world for the better,' Johnson concludes.

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Heather Johnson, Director, Communications and Stakeholder Engagement Sustainability and Corporate Responsibility, Ericsson

Ericsson

Ericsson is a global telecom heavyweight at the very forefront of the ICT industry. The company continues to operate in the spirit of founder Lars Magnus Ericsson's belief that communication is a basic human need.

Founded: 1876
No. of employees: 110,000
Sales: SEK 227.4 billion



Competition, responsibility and labour law in Sweden & the world

OUR MEMBER COMPANIES OPERATE in a highly competitive global marketplace. To ensure that Sweden can offer the very best conditions for supporting its member companies' international competitiveness, Teknikföretagen works on issues related to labour laws, wage structures and regulatory systems.

We are active in both Sweden and the EU, not least of all to ensure that the same rules apply to everyone. Certain rules are necessary, after all. It should not be possible to turn a more lenient environmental code into a competitive advantage, for example. The playing field should be even and well-suited to Swedish companies.

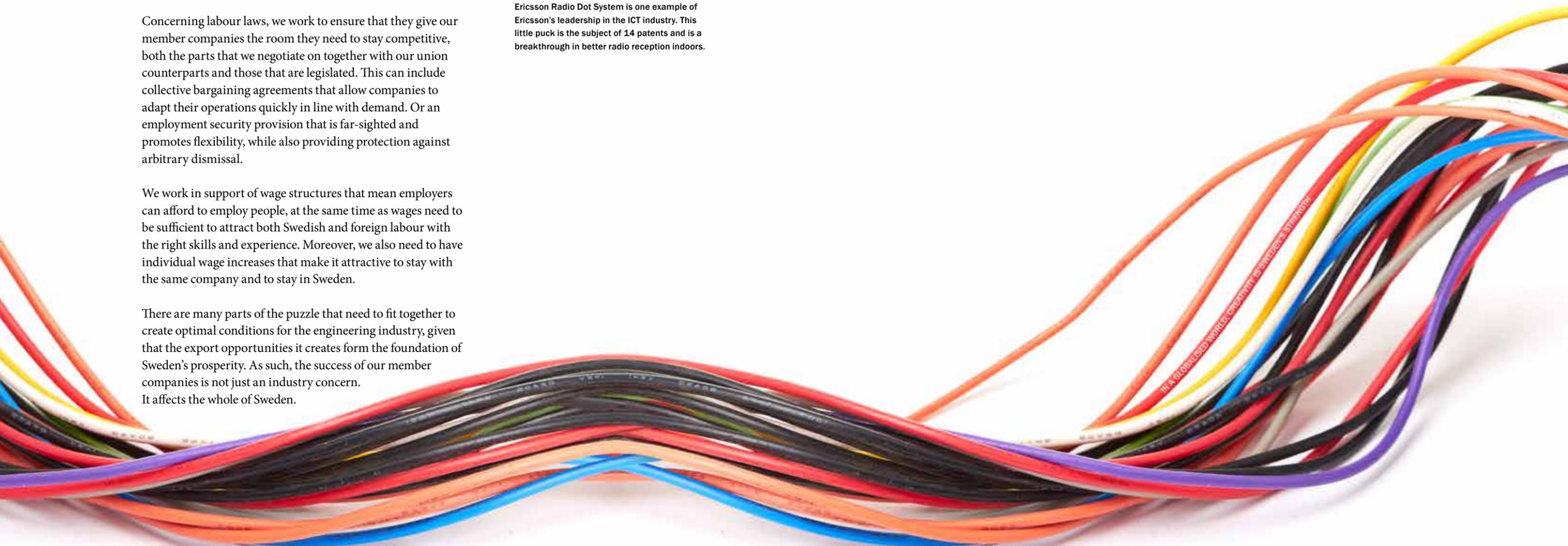
Concerning labour laws, we work to ensure that they give our member companies the room they need to stay competitive, both the parts that we negotiate on together with our union counterparts and those that are legislated. This can include collective bargaining agreements that allow companies to adapt their operations quickly in line with demand. Or an employment security provision that is far-sighted and promotes flexibility, while also providing protection against arbitrary dismissal.

We work in support of wage structures that mean employers can afford to employ people, at the same time as wages need to be sufficient to attract both Swedish and foreign labour with the right skills and experience. Moreover, we also need to have individual wage increases that make it attractive to stay with the same company and to stay in Sweden.

There are many parts of the puzzle that need to fit together to create optimal conditions for the engineering industry, given that the export opportunities it creates form the foundation of Sweden's prosperity. As such, the success of our member companies is not just an industry concern. It affects the whole of Sweden.



Ericsson Radio Dot System is one example of Ericsson's leadership in the ICT industry. This little puck is the subject of 14 patents and is a breakthrough in better radio reception indoors.



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Teknikföretagen