## NCAB GROUP Sustainability Report 2015

### **TABLE OF CONTENT**

About this report	2
CEO statement	3
Our business	4
Sustainability strategy	6
Stakeholder dialogue	8
Supply chain	10
Employees	14
Customers	18
GRI content index	22

### **ABOUT THIS REPORT**

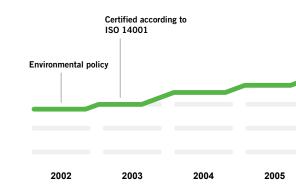
This is NCAB Group's second sustainability report and it covers our entire global business. The purpose of this report is to encourage you to learn more about our achievements, challenges and opportunities in being a responsible and sustainable organization. The focus is mainly on our progress and challenges during 2015, but we have also included a general overview, an historic background as well as an eye to the future. We provide information about our sustainability progress annually; the last years' report was published in March 2015.

### VERIFIED SELF-DECLARATION ON SOCIAL RESPONSIBILITY

Our work with sustainability is based on the international standard ISO 26000 – Guidance on Social Responsibility. To demonstrate that we respect and comply with the standard, we completed a self-declaration concerning social responsibility SIS-SP 2:2013 in 2015. The credibility of the self-declaration, including how well we comply with real conditions, was verified in June 2015 by the auditor SP (SP Technical Research Institute of Sweden). We are very proud of receiving the verification which covers the whole NCAB Group and underlines our ambition to be in the frontline. It illustrates the high expectations we have of our future work. And we're up to the challenge!

### FEEDBACK WANTED

The main target groups for this report are our customers, factories and employees, but we also hope that it will be read by a wider audience. We warmly welcome feedback from all our stakeholders. Together we can achieve sustainable progress. If you have any questions or comments on the report, please contact Marketing Manager Sanna Magnusson: sanna.magnusson@ncabgroup.com.





PRINTING: TMG STHLM 2016 PAPER: SCANDIA 2000 DESIGN: TILLS.SE PHOTO: JESPER FERMGÅRD & NCAB GROUP

### **CEO** statement

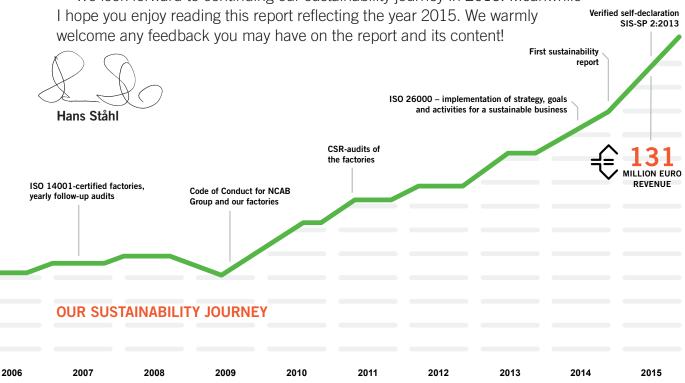
### Sustainability and quality welded together



One year after the publication of NCAB's first sustainability report, we can clearly see the value of it. It has made our sustainability work more understandable and visible and further highlights the potential for continuous improvement within our organization. We are noticing that customers in particular are interested in sustainability and that we have started to win bids because of our sustainability performance. The report is an excellent tool to communicate what we do, not only to customers but also to other stakeholders like employees and owners.

Our vision to be "The number 1 PCB producer wherever we are" means that we shall have a responsible approach in everything we do; socially, environmentally and ethically. It is clear to us that quality and sustainability can and should be welded together by a systematic and strategic approach. Therefore, in 2014, we developed a sustainability strategy which we continued to implement during 2015. Overall, I think we are on track but there are some areas where important activities still remain. One of our major challenges is reducing air emissions from transportation. We can promote the environmental benefits with sea transports, but at the end of the day it is our customers' choice whether the products are sent by sea or air. Air freight enables short lead times which are often prioritized.

Looking back at 2015, I am especially proud of the third party verification of our SIS-SP 2:2013 self-declaration, which is based on ISO 26000. It gives our sustainability work credibility and shows that NCAB Group is leading the industry on this matter. I also value that we have, with input from all local companies, developed our work on business ethics, establishing ethical guidelines for all employees.



We look forward to continuing our sustainability journey in 2016. Meanwhile

### **Our business**

## What makes us the number 1 PCB producer

NCAB Group is a leading global producer of printed circuit boards, PCBs. Growth is crucial for us; we want to grow with our customers and we are therefore constantly expanding to new markets. In 2015 we added three new divisions to the company in the USA.

Our mission is to produce PCBs for demanding customers on time with zero defects and at the lowest total cost. The PCB, normally at the heart of all electronic equipment, can be a complex product. We create optimum production conditions through our strong purchasing power and expertise in PCB production.

### INTEGRATED PCB PRODUCTION

The challenging factor for our sustainability work is being able to take full responsibility for the entire production process, while not having ownership of all its parts. We call our production method integrated PCB production, which in practice means that we are located close to both our customers and our factories. We do not own our factories, but we "own" what is most important: the relationship and process with both customer and factory.

### IN THE FRONTLINE OF TECHNOLOGY

Rapidly changing technologies and market needs propose both challenges and opportunities. As an organization, we seek to be agile and at the frontline of PCB technology development. Attracting more people with the right technical expertise is essential to achieve this flexibility and innovativeness.

To continue our successful journey, we actively seek involvement with our customers at the design phase. We believe that the best PCB solutions can only be developed through dialogue with our customers and their customers.

The NCAB Group is a truly international and global organization, with divisions all over the world. We believe that the only way to interact efficiently is to have clear and anchored organizational values. For NCAB, these are:

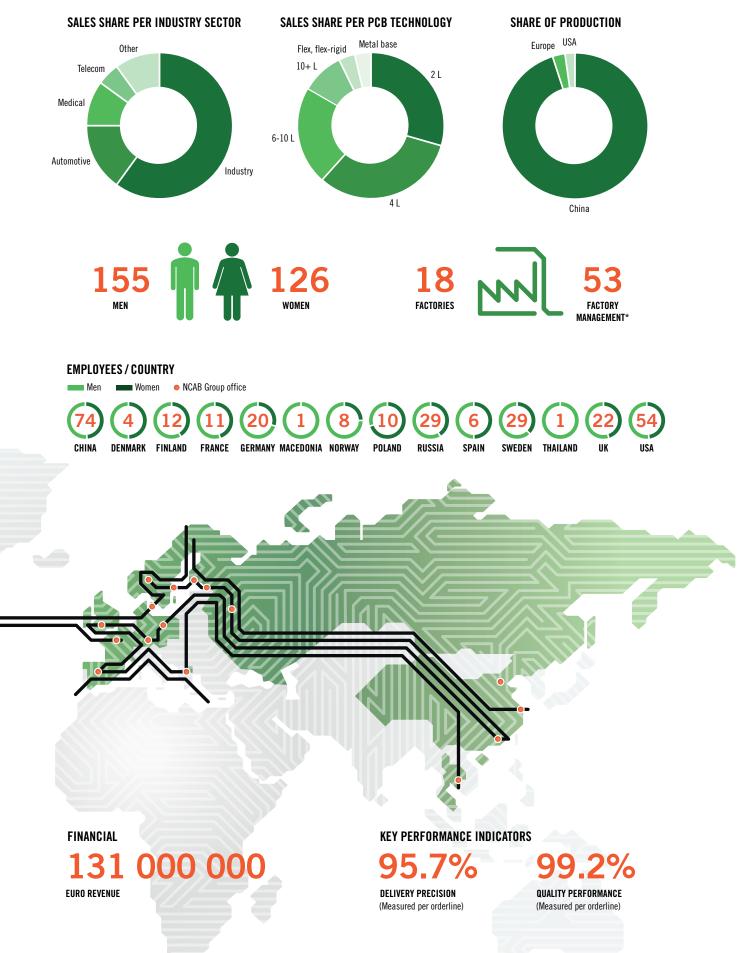
### > QUALITY FIRST

- > STRONG RELATIONSHIPS
- > FULL RESPONSIBILITY

### **OWNERSHIP**

NCAB Group is of Swedish origin, with the parent company founded in 1993. The principal owners of the NCAB Group are R12 Kapital Fund with a total holding of 65%. The remaining shares are owned by management and key employees of NCAB. Our headquarter is located in Bromma, Sweden.

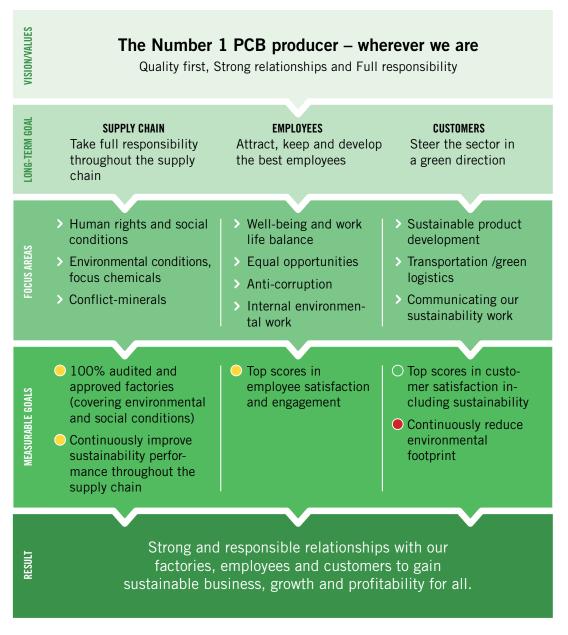




\*Factory Management - our extensive team of 53 people who interact daily and directly with our factories.

## Strategic approach to sustainability

NCAB group is committed to take Full Responsibility when doing business, which includes making decisions, operating and acting with sustainability in focus. We are convinced that a responsible business is a profitable one and we want to continue on that path. In 2014 we developed a sustainability strategy based on ISO 26000, an international standard for social responsibility. The strategy is covering ethical, social and environmental dimensions, with clear priorities for a sustainable business.



In NCAB is one of three Swedish companies with a verified SIS-SP 2:2013 self-declaration, which is based on ISO 26000. As far as I know, no peer in the industry has such verification. I really think this puts NCAB in the forefront and shows that they have a serious approach to working with sustainability"

**Ulrika Jupiter,** Auditor, SP Technical Research Institute of Sweden

We used the standard ISO 26000 to identify our most important sustainably issues, based on our impact, stakeholder expectations and the improvements we can achieve. Furthermore, our sustainability strategy is built on these issues. We have divided the sustainability focus areas in relation to our prioritized stakeholder groups; customers, employees and factories. It serves as a way of illustrating how our sustainability work strengthens these relationships. Our strategy specifies long-term goals, measurable goals, focus areas and concrete actions. The focus areas in the strategy are also the main focus of this report.

### IMPLEMENTING THE SUSTAINABILITY STRATEGY

During 2015 we have been implementing a number of activities in our strategy action plan, which is further described throughout the report. Among the focus areas are chemicals used in production, anti-corruption and business ethics, employee well-being and communication of our sustainability work. Although we have made good progress in several areas there is still more to be done, for example, concerning sustainable product development and reducing environmental impact from transportation of goods. The strategy action plan does not have a strict deadline but we aim at completing all activities by the end of 2018.

### SUSTAINABILITY GOVERNANCE

The sustainability strategy is governed by the NCAB Group Function team, and there is a clear division of responsibilities between the different focus areas. We follow up on our sustainability performance monthly in our management meetings and it is also a permanent topic at every board meeting. During 2015 we have not committed additional resources for our sustainability work. However, during 2016 we plan to expand the factory management team in China to increase the number of CSR audits conducted yearly. In 2016, we also need to further develop our decision making processes so that sustainability aspects are considered not only in the selection of factories, but also in other corporate decisions such as procurement of goods and services. In addition, we will look into how we can start adapting and updating our environmental management system according to the requirements in the new ISO 14001 standard, published in 2015.

### CONTINGENCY PLAN

During 2015, we rolled out a new contingency plan to enable business as usual in the event of an unexpected disruption, such as the loss of key personnel within NCAB Group, factory shutdown after a natural disaster or bankruptcy of a customer. The contingency plan is based on supply chain risk analysis conducted by each of the local companies.

### BUSINESS CASE New deal thanks to our sustainability work

During 2015, NCAB Group procured a deal because of our reported sustainability performance. The customer, a company in the electronics manufacturing services, delivers components to a wind power company, who required suppliers to provide sustainability information. None of our competitors have taken a similar approach to sustainability and we were able to land the deal.

NCAB's customer has informed us that they are now working towards including sustainability requirements in procurement processes. We are also happy to hear that they are using NCAB as a reference point for this process!

It seems sustainability is now sailing up alongside quality, price and reliability as an important requirement in the PCB industry. We are proud to also see our efforts in this area pay off.

### ISO 26000

ISO 26000, launched in 2010, is an international standard for social responsibility which includes ethical, social and environmental dimensions. Representatives from government, NGOs, industry, consumer groups and labour organizations around the world were involved in its development.

The standard provides guidance on how businesses can operate in a socially responsible way. This means acting in an ethical and transparent way that contributes to the health and welfare of society. The standard covers the following areas:

- > Organizational governance
- > Human rights
- > Labour practices
- > The environment
- > Business ethics
- Customer and/or consumer issues
- Community involvement and development

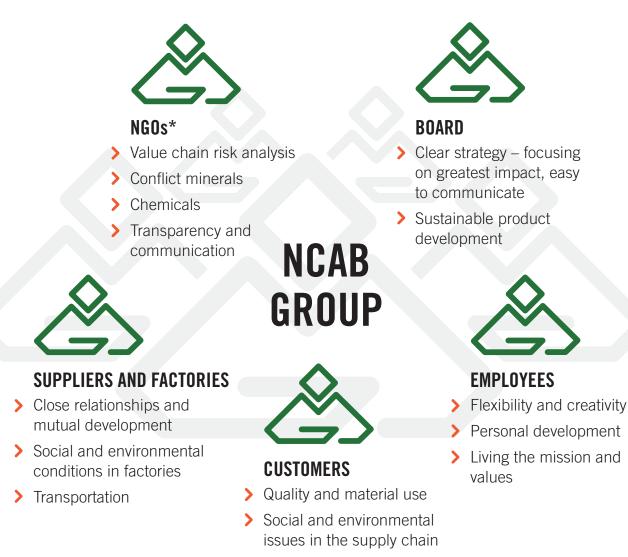
Read more: http://www.iso.org/iso/home/standards/iso26000.htm.

### Stakeholder dialogue

# Communication – a way to continuously improve

NCAB Group knows that our customers, employees, factories and other stakeholders have great expectations on us when it comes to being a responsible company in a broad perspective. Listening to stakeholders is therefore crucial to our business.

The illustration below highlights the priorities of our most important stakeholders, identified in 2014 through the interviews conducted in our sustainability strategy process. Our regular channels for stakeholder communication: performance and development appraisal, customer satisfaction surveys, customer seminars, factory meetings, follow-ups and advertisement are all described later in this report.



> Corruption

\*Non-Governmental Organization

### FEEDBACK TO DEVELOP OUR REPORT

To make NCAB Group's sustainability report as useful as possible for our stakeholders, we carried out a follow-up survey with our local company Managing directors and the Group Function team. Overall, the feedback was positive and some conclusions were that the report:

- Gives a professional impression and sets NCAB at the forefront of sustainability in its industry.
- > Is widely used in meetings with customers.
- > Helps materialize the company identity and makes employees proud to be part of NCAB.

The response also indicated that there are improvement areas. For example, a shorter conclusion of our most important activities and even clearer communication on our progress on goals were requested. We have tried to capture this feedback in the 2015 report.

## **44** A reminder of who we are, what we are, how we are doing and why."

Employee, NCAB Group from NCAB Business Ethics Survey

**Conscious Component** 

## Branding our sustainability initiative

In order to make the NCAB sustainability work more present and visible, the branding concept "Conscious Component" was developed during 2015. It incorporates the vital dimensions of ISO 26000, Environmental, Ethical and Social, which illustrates that we take full responsibility in everything we do.

The idea behind the concept is to communicate multiple messages at once: being a vital component of the end product but at same time being an aware part of something bigger, the world around us. It is also connected to our corporate language: Your Key Component.

Incorporating sustainability in our communication will make our offer more valuable. In 2015 we launched an advertising campaign about the NCAB Group focus on sustainability work, which ran in the UK and Russia. The concept will also be applied in numerous communication channels, like for instance on product packaging, in company presentations and on our website.





### Supply chain

# Relationship-oriented supply chain engagement

Together with our factories we aim at continuously improving quality as well as environmental and social conditions in the production. Key instruments to achieve this are the CSR audits that we conduct. Hence, further development of our audit process has been prioritized during 2015. Another focus area has been to gain better knowledge about hazardous chemicals in the PCB production. In 2016 we will apply this knowledge to further improve conditions in the supply chain.

### LONG TERM GOAL

> Full responsibility throughout the supply chain.

### **MEASURABLE GOALS**

- 100% audited and approved factories (covering environmental and social conditions).
   ACTIONS 2015 Improved our CSR audit tool and used it in audits of 3 factories (17%). 44% have been audited since 2011.
   GOING FORWARD Develop a plan for the remaining CSR audits.
- Continuously improve sustainability performance throughout the supply chain.
   ACTION 2015 Performed a risk analysis of the chemicals used in PCB production.
   GOING FORWARD Use the knowledge to identify possibilities for substitution of the most hazardous chemicals.

\*Status December 2015 = not started/far from reached = on track = completed/reached

### **BEST IN CLASS FACTORIES ONLY**

To find suitable factories for PCB production, NCAB has developed a sourcing process where a potential factory is assessed from a quality and environmental perspective.

In addition to this, the factory has to be certified to ISO 9001 (quality management system) and ISO 14001 (environmental management system), provide documentation regarding conflict minerals according to American legislation (Dodd-Frank Act), follow EU legislation regarding raw material content (RoHS and REACH) and comply with Chinese regulations regarding water quality and emissions to water. Factories also have to sign our Code of Conduct. We always welcome and encourage our customers to visit our factories, during 2015 we had visits from 150 people from 87 different companies.

### **REVISED CODE OF CONDUCT**

During 2015 we reviewed and updated our Code of Conduct. The requirements in the code are mainly based on relevant international standards and guidelines, such as the UN's Universal Declaration of Human Rights, ISO 26000 and UN Global Compact and cover:

- > Management systems
- > Human rights
- > Labour and working conditions
- > Health and Safety
- > Environment
- > Ethics

Our Code of Conduct forms part of the contracts we have with each of our factories and all of them have signed the new version. This is also true for all our employees. NCAB expects each and every one, factory as well as employee, to follow our code.

### CSR AUDITS - TO IMPROVE PERFORMANCE IN OUR SUPPLY CHAIN

Conducting CSR audits is a crucial element of our work to continuously improve the environmental, social and ethical performance in our supply chain. So far, we have audited 44 percent of our main factories; five in 2011-2012 and three in 2015 (read more on page 12). In general our audit process looks like this.



From the follow-ups we have done so far we have seen that the factories have made progress in most improvement areas identified during the audits. For example, the systematic health and safety work has been improved as well as the handling of hazardous substances, waste water and solid waste. Excessive overtime working hours in peak seasons is however still a dilemma that most factories have no solution to yet.

Our goal is to have assessed all factories by the end of 2018. To achieve this, additional resources will be dedicated to the factory management team in China during 2016.

Prior to conducting our three most recent audits, we revised our CSR audit tool. This was done in order to better align the audit format with the requirements in our updated Code of Conduct, the SA8000 standard on social accountability as well as the UN Global Compact's the ten principles. The next step is to fine-tune the applicability of the audit tool, using the experience and results from the three audits we conducted in 2015. This will be done in 2016 when we will also start mapping out our raw material suppliers to be able to assess the risks of human rights violations, poor working conditions, health and safety shortcomings further on in the supply chain.

### HAZARDOUS CHEMICALS IN PCB PRODUCTION

Several chemicals in the PCB production process might cause negative impacts on human health and to the environment. For example, some of the chemicals have potential risk to damage fertility, cause allergies, asthma and skin reaction or have long lasting toxic effects on aquatic life. During 2015, we mapped and assessed the chemicals used in three of our factories from an environmental as well as health and safety perspective. Identifying the most hazardous chemicals was an important first step to be able to have an impact on the use of chemicals in the production. During the CSR audits, we check that handling and storage of hazardous chemicals are done in a safe way by employees with relevant competence and training.

Another way to use the result from the analysis is in the product development process or meetings and seminars with customers. Together with them we can further investigate the possibility to replace some of the most dangerous chemicals.

### GOLD AND TIN IN PCB'S - POTENTIAL CONFLICT MINERALS

In some areas in Eastern Congo rebels and other armed groups have profited from mineral trade for several years. Hence, sourcing minerals extracted from there may contribute to conflict, human rights violations and environmental abuse.

NCAB Group has a comprehensive conflict mineral policy that has been established to communicate our position on a conflict mineral free supply chain. This policy sets the expectation for NCAB Group and our supply chain with regards to accountability in the specific area of conflict minerals.

All our main factories must provide similarly a policy that ensures the company does not source gold and tin extracted from conflict areas in Eastern Congo in any PCB production processes.

To control this we require signed assurance from our factories that no conflict minerals are being used in the production of the PCBs. In addition, declarations of the smelters used within the supply chain also have to be submitted to us. We direct our factories to only work with smelters that are compliant with the Conflict-Free Sourcing Initiative (CFSI) supported by the Electronic Industry Citizenship Coalition and the Global e-Sustainability Initiative.

During 2015 we have increased our due diligence on all documentation regarding traceability of conflict minerals submitted by our factories. We review the overall process involved in collecting information on the smelters and work with each factory and upstream chemical and raw material suppliers to confirm that compliant CFSI smelters are being used. Through education and support, we are improving accountability and reducing risk.

### OUR SUPPLY CHAIN

- > 15 main factories audited for quality and environmental factors in 2015.
- 3 CSR audits, covering in greater depth environmental and social conditions, conducted in 2015 (5 CSR audits in 2011-2012).
- > 87 customers visited our factories in 2015.

### Supply chain SUPPLIER CASE

### Learning by doing – CSR audits

During the last year, NCAB Group has continued to audit our factories for performance on CSR issues. Beyond determining whether the factories comply with NCAB's demands on sustainability, the audits help us to start a dialogue with the companies on how they can improve on critical areas. We talked to Mr William Zheng, Marketing Manager at Shenzhen TTE Circuit Limited Company, where NCAB has done a CSR audit in 2015.

### - What do you think about the CSR audits that NCAB is conducting?

The audit was a good opportunity for us to learn how to improve our performance on CSR issues. CSR is about our responsibility to our staff and to the society as a whole. The audit has helped us to see our company from a different angle and take on these issues at a higher level. For instance, we have learned a lot about business ethics and how we can develop a more systematic approach to these issues.

### - What kind of improvements have you made as a result of the audit?

Firstly, it helped us identify some challenges, such as how we work with the storage of the less hazardous chemicals, like cleaning chemicals in our production. We already have strict control routines for handling hazardous chemicals in place. We now need to go further to define clearer routines for the less hazardous ones. Secondly, the audit also brought to our attention some issues relating to fire safety. For example, we need to reconstruct a wall in our warehouse in order to comply with national building regulations. Besides these improvements, we will also look over our processes concerning order forecasts to be able to reduce the amount of overtime working hours.

### - What are the main challenges and opportunities of a CSR audit?

While we are used to inspections in other areas, we don't have much previous experience of CSR-oriented audits. We have had a CSR audit from another customer, but the NCAB auditor stayed twice as long and did a more thorough review.

As NCAB's CSR audits are quite detailed, it is important for us to keep up with their demands to stay at the forefront. An opportunity arising from the audits is of course the improvements that we make. NCAB is a good partner in this as they are always looking to help us identifying ways we can improve.

### - What will the next step be?

Within one month from the audit we will submit a corrective action plan to NCAB where we describe how we will handle the nonconformities identified during the audit. Thereafter, we will start implementing the actions and verify our progress against the plan.



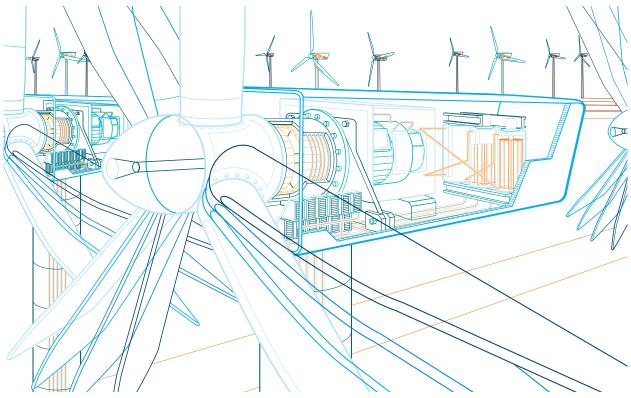
Mr William Zheng, Marketing Manager, ShenZhen TTE Circuit Limited Company.

### FACTORY FACTS

- > Location: Shenzhen, China
- > Number of employees: 350
- > Years supplying to NCAB: 5 years for NCAB group
- > Number of quality audits: 2 full audits

### Supply chain END CUSTOMER CASE

## What we, in ABB Group, require from ourselves, we require from the whole supply chain



Windmill

ABB is a truly global company, working in 100 different countries, employing 140 000 people and having approximately 80 000 direct material suppliers all over the world. We talked to Hannu Rintala, Head of Occupational Health at ABB Group and HSE and Security Manager at the local Finnish company, about why and how ABB works with supply chain management in regards to social and environmental issues.

ABB Group considers sustainability an integrated part of our business strategy. It's an important success factor; responsible behaviour is simply our license to operate. We work in a structured way with environmental and health and safety management systems. In addition, we have a comprehensive sustainability program with nine overall objectives, where Responsible sourcing, is one key area. This commits us to understand and manage well the social and environmental risks and impacts of sourcing practices.

We have the same requirements for our suppliers as for our own organization and we do a lot to ensure sustainability throughout the different layers of our supply chain.

Our sustainability and integrity standards are defined in the ABB Supplier Code of Conduct, which is always included in our contracts. Since 2010 we have a Supplier Sustainability Development Program, to support continual improvement in the sustainability performance of our suppliers. The program is a combination of training for both suppliers and ABB employees, on-site assessments and monitoring of performance improvement plans. We prioritize suppliers to participate in the program according to a risk matrix. Since the start we have trained more than 2500 suppliers and conducted 598 in-depth supply chain sustainability assessments. We always seek to primarily enter into dialogue with suppliers where there is any non-compliance. Through collaboration with our business partners, we aim to enhance supplier relationships, ensure the highest quality standards and create a sustainable supply chain.

Taking responsibility for a large and complex supply chain is a challenging commitment but it is crucial to business success.



### Employees

## NCAB – a people business

NCAB Group wants to attract, keep and develop the best employees. To be an appealing employer, maintaining an open dialogue, focusing on personal development, well-being and diversity are crucial. It is also important that we follow our core business values and integrate them into our everyday operations. In 2015 we prepared to start measuring employee satisfaction and engagement. It will be conducted during 2016 and our goal will be nothing less than top scores.

### LONG TERM GOAL

> Attract, keep and develop the best people.

### **MEASURABLE GOALS**

Top scores in employee satisfaction and engagement.
 ACTION 2015 Chose a supplier of the service.
 GOING FORWARD Start to measure and use the result in 2016.

\*Status December 2015 😑 = not started/far from reached 😑 = on track 🔵 = completed/reached

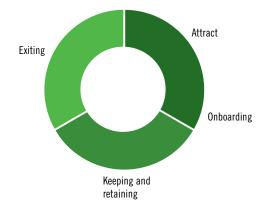
### LIVING OUR VALUES

Our values are the framework that gives us direction and helps us to keep on the right path towards achieving our objectives and vision. Being a global company, with a global workforce, presents a challenge when we align and instil our values across the organization. Therefore, in 2015 we started to focus more on communicating what it means on an individual level to live our values and how everyone can contribute to a prestigeless culture with a sense of ownership and responsibility. For instance we have incorporated the values in our recruitment guidelines and we have concretized them with real life situations in the introduction of new employees.

### NEW HUMAN RESOURCE STRATEGY

NCAB Group is a people business and a rapidly growing organization. While we are continuously recruiting, we have a low employee turnover, which implies that employees enjoy working at NCAB. Our employees are our most valuable asset. In 2015, to ensure sustainable long-term management of human resources, we hired a Human Resources Manager and developed a human resource strategy and process based on our mission, vision, values and goals. This will give us a structured and uniform approach to how we should attract, keep and retain employees. It will also help us to maintain good relations with employees that for any reason quit working for NCAB.

### EMPLOYEE LIFE CYCLE (EMPLOYER BRANDING)



The human resource strategy includes three overall goals that are broken down into individual performance targets for each employee. The overall goals include that NCAB shall:

- > Be recognized as a top quality company within the PCB industry.
- > Generate profit, allowing recruitment of the best people.
- Offer a stimulating and challenging work environment, respecting and including every individual.

Goals and targets are followed-up and evaluated on a regular basis, for example in the yearly Performance and Development Appraisal (PDA).

### SATISFIED EMPLOYEES - KEY TO SUCCESS

We firmly believe that a good balance between private and working lives brings out the best in people. Unfortunately, the flexible schedules within NCAB, combined with rapid growth, have led to considerable overtime being worked. This area has been in focus during 2015. For instance, we have further developed the Performance and Development Appraisal (PDA) with clear meeting routines and a questionnaire template. Work-life balance, among other topics such as personal development and individual goals and performance, are discussed during the PDA. This enables us to take action if an employee has an unmanageable workload. The PDA should be conducted once a year and have at least one follow-up within six months.

During the beginning of 2016 we will conduct our first employee satisfaction survey, to gain a clear picture of employee well-being within NCAB Group. The survey will be carried out by an external part and in each local company language. Our goal will of course be to receive high scores in respect of employee satisfaction. However, the survey will be an important instrument to find and improve areas with unsatisfactory result.

### TRAINING AND COMPETENCE DEVELOPMENT

To provide our employees with competence and career development opportunities we have established a three year competence development plan (2015-2018), including everyone throughout the organization. The majority of our employees work in Sales, Engineering and Customer service where technical and sales skills are of great importance.

In 2015 we initiated a competence program for our Technicians. It started with a one week study trip to our factories in China to learn more about the quality work and the PCB production processes. The study trip was followed by Sales training, with half of the Technicians receiving such training in 2015 and the other half will be given this training in 2016.

Improved sales and customer support skills among Managing Directors and Sales persons have been a focus area during 2015. We developed a train the trainer course which was given to all Managing Directors. In 2016 they will introduce it to Sales personnel and Key Account Managers within each local company.

### OPERATING IN A MALE-DOMINATED INDUSTRY

Having equal opportunities regardless of age, gender, sexual orientation, background or spiritual beliefs is a baseline requirement for our organization. For example, in our recruitment processes, having or planning to have a family is never an obstacle to NCAB, irrespective of your gender. As we operate in many different countries, with different cultures, we need to continuously apply ourselves to incorporate this mind-set everywhere.

Diversity is an improvement area for NCAB and the industry as a whole. Although we have 40 percent women within the group, the board as well as the management is male-dominated. We need to increase our efforts to find more women with the right competence to complement us. Setting out a strategy for this, by for example learning from other successful industries, will be our focus in 2016.

### INTERNAL ENVIRONMENTAL WORK

All of our local companies, with the exception of five divisions in the USA company, are certified to ISO 14001. In 2016 we will start adapting our management system to the new version of ISO 14001 (published 2015). Last year, NCAB Sweden has made some environmental improvements that we, in 2016 will conceptualize and communicate to all local companies to serve as inspiration.

	NUMBER OF EMPLOYEES	GENDER DIVISION		AGE		
		WOMEN	MEN	UNDER 30	30-50	OVER 50
Management	8	3	5	0	5	3
MD	14	0	14	0	8	6
All employees	281	126	155	45	178	58
Board	5	0	5	0	2	3

It's the frame for all business decisions, and sits above all interests of the company. Even from a business point of view it is the right thing to do, as in the long term our stakeholders will only make business with those that they can trust."

> Employee, NCAB Group from NCAB Business Ethics Survey

### Employees CASE NCAB Group conducts ethical business



We operate in countries where international indices on corruption indicate a high risk. According to our stakeholders, anti-corruption is one of our most important sustainability issues and business ethics is a focus area in our sustainability strategy.

Our Code of Conduct lays out the overall ethical approach for us and our suppliers. For example, we reject all kinds of corruption; we protect customer data and privacy, as well as conduct business in fair competition. In general, it is all about making decisions that will foster long-term relations, rather than choosing short-term which might seem to be the most beneficial. To ensure that the values of the Code of Conduct are implemented it is crucial that we have a common understanding of what is considered an ethically appropriate way to act.

However, this is somewhat a challenge as we are a global company with traditional and legal differences between the various countries in which we operate. Also, individual variance in the "moral compass" might have an impact on the decisions made within NCAB Group.

Therefore, in 2015, we developed ethical guidelines to illustrate what we mean with doing business the responsible "NCAB way". We put together a survey with various dilemma situations that might arise or have aroused within the company and sent it out to the local company Managing Directors and the Group Function team. Some of the dilemmas were about:

- > What receiving or giving a bribe is.
- > How disloyalty towards previous employers among NCAB Group employees should be handled.
- What an appropriate gift to a customer is. Alcohol or non-alcohol? Money to charity?

The result from the survey was presented in Helsinki at one of our biannual meetings with managing directors and the Group Function team. Although we shared the same view on most dilemma situations, it was interesting to see that the views on some of them differed a great deal. After discussing each situation we agreed upon how to act and the conclusions were summarized and included in our Code of Conduct. The guidelines should navigate us in our daily operations when we are facing a difficult ethical situation. They are valid for all employees and reflect not only the values of our Code of Conduct but also international standards on business ethics and legislation. During 2016 we will implement them throughout the organization, and they have been incorporated in the introduction of new employees.



### Customers

# Steering the sector in a green direction

Our aim is to steer the sector in a green direction while producing PCBs for highly demanding customers, on time, with zero defects and at lowest possible total cost. We have come a long way in gaining satisfied customers and during 2015 we focused on spreading the word about our work with sustainability. There is still much we can do better within green product development and transport services. These are difficult areas that will be prioritized going forward.

### LONG TERM GOAL

> To steer the sector in a green direction.

### **MEASURABLE GOALS**



\*Status December 2015 🔴 = not started/far from reached 🥚 = on track 🌑 = completed/reached

### INVITING CUSTOMERS FOR A SUSTAINABLE PRODUCT DEVELOPMENT

A sustainable product development starts with the design of the PCB including the understanding of the customer's specific demands and needs. By keeping local offices in all our markets, we are able to have a close contact with our customers. Such close collaboration makes it possible for our many technical experts to be on hand to offer design support to improve manufacturability. By assisting our customers in optimizing the product design to suit volume manufacturing, we can minimize the many potential quality issues and reduce scrap. This, in turn, has an influence on total cost, for the customer, NCAB Group and the factory. At the same time the environmental footprint is reduced, as we know that improved product quality means less scrap, less wasted material, less energy and smaller volumes of chemicals are used in the supply chain.

We work in different ways to increase our support service at the design phase, for example, we raise awareness of this through our customer seminars. During 2015 we conducted 52 seminars in all our markets globally, all of which have been well attended with very positive feedback. Sometimes we also participate in our customers' seminars.

A challenge in working with sustainable product development is that our customers are typically not the end customers and therefore do not own the design decisions, which in turn gives us limited ability to influence change. We address this by inviting end customers to our seminars and discuss various topics with them. During 2016 we will focus on the result from the chemical analysis we did in 2015 (read more on page 11) and share the knowledge we have gained from this study at customer seminars and in meetings.

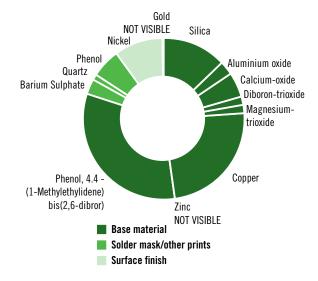
### **BROADENING OUR IPC ENGAGEMENT**

In 2016 NCAB has been invited to attend the advisory board of the electronics industry association, European IPC council. This is a forum where we, among other industry related issues, are able to raise and discuss sustainability aspects.

### MATERIALS USED IN PCBS

A rapid increase in consumption within the electronic industry globally, makes raw materials – especially metals - becoming more and more scarce and valuable. This is a major challenge for the whole industry. NCAB Group produces PCBs that can have very long life cycle and seeks to reducing scarp throughout the production process. This reduces materials used and electronic waste generated further in the value chain.

The content of a standard PCB, where a nickel-gold finish has been applied, is illustrated below.



We test our products to verify that they meet our demands as defined in our product specification. Our specification is derived from a base line of the IPC series of standards, but we have built on this to the extent that we now actually exceed the standard IPC demands in certain areas, for example when it comes to copper thickness demands.

### CORRECT HANDLING OF ELECTRONIC WASTE

NCAB takes care of electronic waste, according to the waste laws, in each local company. Some of our companies and factories may be able to sell the cleaner waste from which metals can be reclaimed, quite different to years past where waste disposal was always a cost.

Sustainable management of electronic waste has proven to be a challenging topic for societies. Even though the European Union has put in place legislation to tackle this, large volumes of electronic waste are still ending up in low-income countries, where this waste is handled manually and negatively affecting people's health. NCAB currently has no way of monitoring to what extent our PCB's are handled correctly in different waste management systems.

### QUALITY MONITORING TOGETHER WITH OUR FACTORIES

NCAB always works directly with the factories that produce our PCBs. We have a well-defined, proven process for sourcing and selecting our factories (read more on page 11) so that we select the best partners. Once approved, the factory is included within our "preferred supplier list" where their capability is documented for all personnel within NCAB to see and follow. When evaluating the demands of each specific customer product, we are able to accurately select the best factory, based on their technical ability. The preferred supplier list has been built up over the years and is currently covering our needs. One factory, based in the UK, was added to the list in 2015.



Wendy Liu, Quality Manager, NCAB Factory Management, during a process audit.

All of our factories are monitored on a regular basis. In addition to annual quality audits, we measure quality performance, delivery performance, service levels and follow-ups on selected improvement areas every month. In 2015, as part of our constant strive for perfection; we implemented a new factory management structure where the division of responsibility and ownership has been made clearer. We also introduced a new quality audit template and developed a KPI based on audit results. This will enable us to more closely monitor the production process quality. The KPI will be implemented in 2016 and will be an important instrument in improving the production process at an early stage.

Every local company has personnel responsible for technical and quality issues. Our Group Function, in Europe and China, provides support in many areas. These include, but are not limited to, the development of new and existing factories, developing the PCB technology levels and managing the resolution and closure of any product or factory related quality issues.

### EFFICIENT COMPLAINT PROCESS

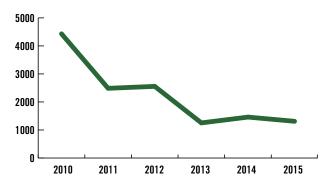
Our combination of proactive and reactive quality work has resulted in a reduction of rejected PCBs. This means less actual scrap PCBs, less remakes, less waste and thus reduced cost and environmental impact.



The vast majority of our factories are located near to our China office, which helps to facilitate clear and fast communication. It enables us to quickly be on site, at the factory, if required. Our proactive quality focus, associated with our rapid reaction to issues that arise, has resulted in a very positive downward trend since 2010 when considering quality in terms of defective parts per million (PPM).

Occurrence of defective PPM fell from 4431 in 2010 to 1370 in 2015, and our target is reflected in our mission statement objective to strive towards zero defects. Our work in this area includes both improving the physical product and minimizing the time it takes for us to respond to any customer complaint. Improving our quality KPI's is an important part of our continuous improvement work.

### QUALITY STATISTICS - DEFECTIVE PARTS PER MILLION (PPM) PRODUCED



Whilst the ppm for 2015 is not as high as 2014, the target was to achieve a result lower than 2013. However from understanding the root causes of these hard hitting concerns we have put in place corrective actions which will form the basis of some of our factory facing activities for next year as we look to take these actions and implement factory wide.

### WE ARE PROUD OF OUR SERVICE, QUALITY AND TECHNICAL KNOWLEDGE

One of the explanations to NCAB's business success is our ability to keep customer satisfaction at high levels. We measure customer satisfaction annually in every local language through our survey, Possibility Detection Study (PDS). The response frequency is 18% and compared to organizations using similar survey tools, we achieve over average scores.

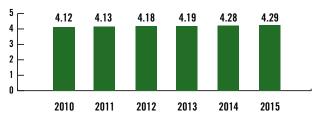


Kenneth Jonsson, Technical Manager, NCAB Group Sweden.

Our strengths are service oriented staff, high quality performance, technical knowledge and the high level of confidence customers have in us. Areas where we can improve are delivery time for prototypes and to enhance the recognition of NCAB Group being perceived as the market leader in the PCB industry. Another area where we aim to improve is that of the quality, variety and preparation for customer meetings to create higher "value add" when meeting with customers. Since customers are always seeking lower pricing, it is not surprising that pricing is also a subject area where we see lower scores in the PDS. However, we do not specifically compete on price. Instead, our strengths are quality competence and service, which result longer term, in lower total acquisition costs.

In the PDS, we also ask our customers if they consider us to be a company that works actively with environmental and social issues. In 2015 we received 3.83 out of 5 which is a small improvement over the score of 3.80 received in 2014. Our goal is to further improve this score. In order to succeed we need to further develop our communication regarding our approach to being a responsible business partner from a broader perspective.

### CUSTOMER SATISFACTION



Our annual Possibility Detection Study (PDS) shows a positive trend concerning general customer satisfaction.

### **Customers TRANSPORTATION**

## Product transportation and greenhouse gas emissions

With PCB production mainly located in south China and our customers spread across 46 countries, greenhouse gas emissions from product transportation makes up one of the most significant environmental impacts in the PCB's value chain.



### **TRANSPORT EMISSONS - A CHALLANGE**

One of NCAB's long term strategic goals is to steer our sector in a green direction. One way to decrease the environmental impact from our products is to reduce the carbon footprint from the various transport routes. However, the transport issue is a challenging as many of the transportation routes lay outside the scope of our influence.

With the help from our supplier of transport services we measure the impact from the transportation, by air and sea, of PCBs from Hong Kong to warehouses in Europe and the USA, as illustrated above. Every month, about 100 flights and three boat departures carry our products to customers around the world. We consider these transports a significant part of our carbon footprint.

The emission data is, however, an estimate based on average transport. Although we take measures to reduce our environmental impact, such as improving volume efficiency, this will not be displayed in the statistics. As we are not able to get more accurate emission data, we will together with our transport service suppliers, in 2016 define other ways to measure positive impact, like the percentage of direct flights with no layovers. NCAB Group is mainly using DHL Global Forwarding and UPS for our overseas freight. Both companies have extensive targets to reduce their CO, emissions.

### SHORT LEAD TIMES AND LONG DISTANCE AIR FREIGHTS

Some of our work on decreasing the environmental impact from our transports is to communicate the different environmental impacts of chosen transportation alternatives to enable our customers to make an

### OUR CO, e EMISSIONS:

	2014		2015		
EMISSIONS	t* CO <sub>2</sub> e	kg/kg GOODS	t* CO <sub>2</sub> e	kg CO <sub>2</sub> e/kg GOODS	
Air	5 200	5.17	6 700	5.28	
Sea	29	0.10	38	0.13	
Train	N/A	N/A	48	0.83	

Additional destinations are included in the scope of calculations 2015 compared with 2014, why the total CO2e emissions has increased. In addition, less transports by sea have been conducted resulting in a larger number of air freights. Our freight has a high density factor (350 kg/m<sup>3</sup>), which means it is efficient compared to average goods (200 kg/m<sup>3</sup>).

informed choice. However, the lead time, requested by the customer, influences whether the products are sent by sea or air. Air freight lead times are typically one week compared to five weeks for sea freight. The price of our products often includes the transport costs from Hong Kong to our warehouses, but even though sea transport is less expensive than air, short lead times are typically prioritised by our customers. As a result, 85-90% of the shipments made from Hong Kong are by air. However, some of our offices do ship a higher proportion of their consignments by sea. In 2015, we started to offer a new transport route, by train, from Hong Kong to Russia. This will be evaluated in 2016.

### **OUR FOUR TRANSPORTATION ROUTES:**

TRANSPORT ROUTE	MAIN TYPE OF TRANSPORT	DISTANCE AND LEVEL OF NEGATIVE IMPACT	INFLUENCE ON THE TYPE OF TRANSPORT
1) Material to the PCB factories from suppliers in China	Road	Unknown distance and impact	Supplier of input materials
2) PCBs to Hong Kong from factories	Road	Short distance (around 300 km) unknown impact	Factories
<b>3)</b> PCBs to warehouses around the world, or straight to customers, mainly from Hong Kong	Air, sea and train	Long distance (7000-12500 km), probably greatest impact.	NCAB or customers
4) PCBs to customers from warehouses, customers collect their goods or get it delivered through our transport supplier	Road and air (air mainly in the USA)	Short-medium distance (40 –3000 km) unknown impact	NCAB or customers

## **GRI** content index

Our sustainability report is in accordance with GRI's (Global Reporting Initiative's) guidelines for sustainability reporting, fourth generation (G4), option Core. Below you find the GRI content index that helps you navigate in the report. The report is not externally assured by third party. You find more information about GRI on www.globalreporting.org.

INDICATOR	DESCRIPTION	PAGE/COMMENT
STRATEGY AI	ND ANALYSIS	
G4-1	Provide a statement from the most senior decision-maker of the organization	3
ORGANIZATIO	DNAL PROFILE	
G4-3	Name of the organization	Front page
G4-4	Primary brands, products, and services	4-5
G4-5	Location of the organization's headquarters	4
G4-6	Number and name of countries where the organization has significant operations	5
G4-7	Ownership and legal form	4
G4-8	Markets served	5
G4-9	The scale of the organization	4-5
G4-10	Employees by employment contract and gender	15, Normally offer permaner employment contracts
G4-11	Employees covered by collective bargaining agreements	0 %
G4-12	The organization's supply chain	10-12
G4-13	Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	No major changes
G4-14	Report whether and how the precautionary approach or principle is addressed by the organization	11
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	2, 6-7, 11, 22
G4-16	Memberships of associations	IPC, local trade organization
IDENTIFIED I	MATERIAL ASPECTS AND BOUNDARIES	
G4-17	Entities included in the organization's consolidated financial statements and whether any of these are not included this sustainability report.	2
G4-18	Process for defining the report content and the Aspect Boundaries	6-7
G4-19	The material Aspects identified in the process for defining report content	6-8, 22-23
G4-20	The Aspect Boundary within the organization	6, see reference page for each aspect
G4-21	The Aspect Boundary outside the organization	6, see reference page for each aspect
G4-22	The effect of any restatements of information provided in previous reports, and the reasons for such restatements	No restatements
G4-23	Significant changes from previous reporting periods	No major changes
STAKEHOLDE	ER ENGAGEMENT	
G4-24	Stakeholder groups engaged by the organization	8-9
G4-25	The basis for identification and selection of stakeholders	8
G4-26	The organization's approach to stakeholder engagement	8-9
G4-27	Key topics and concerns that have been raised through stakeholder engagement	8-9, 12-13, 15, 20-21

INDICATOR	DESCRIPTION	PAGE/COMMENT	
REPORT PRO	FILE		
G4-28	Reporting period	2	
G4-29	Date of most recent previous report	2	
G4-30	Reporting cycle	2	
G4-31	Contact point	2	
G4-32	The 'in accordance' option the organization has chosen	22	
G4-33	The organization's policy and current practice with regard to seeking external assurance for the report	22	
GOVERNANC	E		
G4-34	The governance structure of the organization	4-5	
ETHICS AND	INTEGRITY		
G4-56	The organization's values, principles, standards and norms	4, 11	
ENVIRONME	NTAL		
Materials		DMA: 7, 19	
EN1	Materials used by weight or volume	19	
Emissions to a		DMA 21	
EN17 EN18	Other indirect greenhouse gas (GHG) emissions (Scope 3) Greenhouse gas (GHG) emissions intensity	21	
Products and	services	DMA: 7, 10-12, 18-21	
EN27	Extent of impact mitigation of environmental impacts of products and services	10-12, 18-21	
Transport		DMA: 7, 21	
EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	21	
Supplier envir	onmental assessment	DMA: 7, 10-12	
EN32	Percentage of new suppliers that were screened using environmental criteria	10-11	
EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	11-12, 19	
LABOR PRAC	TICES AND DECENT WORK		
Training and e	ducation	DMA: 7, 15	
LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	15	
LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	15 100%	
Diversity and	equal opportunity	DMA 15	
LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	15	
Supplier asses	ssment for labor practices	DMA: 7, 10-12	
LA14	Percentage of new suppliers that were screened using labor practices criteria	10-11	
LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	11-12	
HUMAN RIGH	ITS		
Supplier hum	an rights assessment	DMA: 7, 10-12	
HR10	Percentage of new suppliers that were screened using human rights criteria	10-11	
HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	11-12	
SOCIETY			
Anti-corruptio	n	DMA: 7, 17	
SO4 SO5	Communication and training on anti-corruption policies and procedures Confirmed incidents of corruption and actions taken	17 No incidents	
PRODUCT RESPONSIBILITY			
Product and s	ervice labeling	DMA: 7, 20	
PR5	Results of surveys measuring customer satisfaction	20	



## Sustainability in short

Our vision to be "The number 1 PCB producer wherever we are" means that we shall have a responsible approach in everything we do; socially, environmentally and ethically. In 2015 we:

- > Externally verified our self-declaration on social responsibility (based on ISO 26000).
- > Conducted CSR audits on three of our factories. 44% audited since 2011 (goal 100% by 2018).
- > Conducted a risk analysis of the chemicals used in PCB production.
- > Developed a comprehensive human resource strategy.
- > Updated our Code of Conduct and developed ethical guidelines for our employees.
- > Landed a deal based on our sustainability performance.
- > Selected a service supplier to start measuring employee satisfaction in 2016.
- Received 3.83 out of 5 (goal 3.8) on sustainability in our PDS survey and 4.29 on general customer satisfaction.
- Increased our transport CO<sub>2</sub> emissions, as a result of e.g. a larger number of air freights, from 5200 in 2014 to 6800 tonnes.
- > Branded our sustainability work as "Conscious Component".

### NCAB GROUP +46 8 584 908 00, Mariehällsvägen 37 A, 168 65 Bromma, Sweden, www.ncabgroup.com

## NCAB GROUP Sustainability Report 2015