

NCAB GROUP

# Sustainability Report 2014



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## ABOUT THIS REPORT

This is NCAB Group's first sustainability report and it covers our entire global business. The aim 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 2014, but we have also included a general overview and historic background. We will continue informing about our sustainability progress yearly and hope that you want to join us on this journey.

### VERIFICATION THAT SHOWS OUR HIGH AMBITIONS

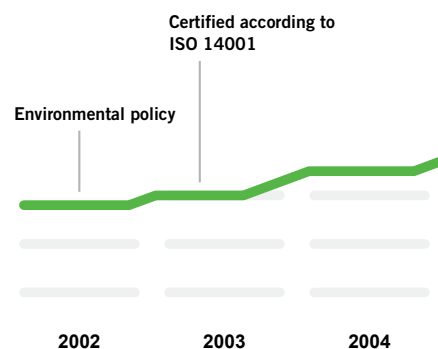
We base our social responsibility on the international standard ISO 26000 – Guidance on Social Responsibility. This report is part of fulfilling the demands of the self-declaration SIS-SP 2:2013, aimed at demonstrating how we comply with the standard. The self-declaration covers all NCAB Group and is verified by the auditor SP (SP Technical Research Institute of Sweden). It is proof of our will to be in the frontline and defines the high expectations we have of our future work. And we're up to the challenge! The report has been prepared in accordance with the new reporting guidelines from Global Reporting Initiative: G4, read more at [www.globalreporting.org](http://www.globalreporting.org).

### YOUR FEEDBACK IS VALUABLE

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 and we welcome feedback from all our stakeholders. Together we can achieve sustainable progress. If you have any questions or comments on the report, please contact Anna Lothsson: [anna.lothsson@ncabgroup.com](mailto:anna.lothsson@ncabgroup.com).



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## CEO statement

# We want to take full responsibility



The first thing that comes to mind when talking about sustainability is the future. Our objective is to be a company that is future-oriented, that develops and that cares. NCAB Group's vision is to be "The number 1 PCB producer wherever we are". That includes a responsible and sustainable approach in everything we do – socially, environmentally and ethically. The global world faces several environmental and social challenges and NCAB wants to be part of the solution.

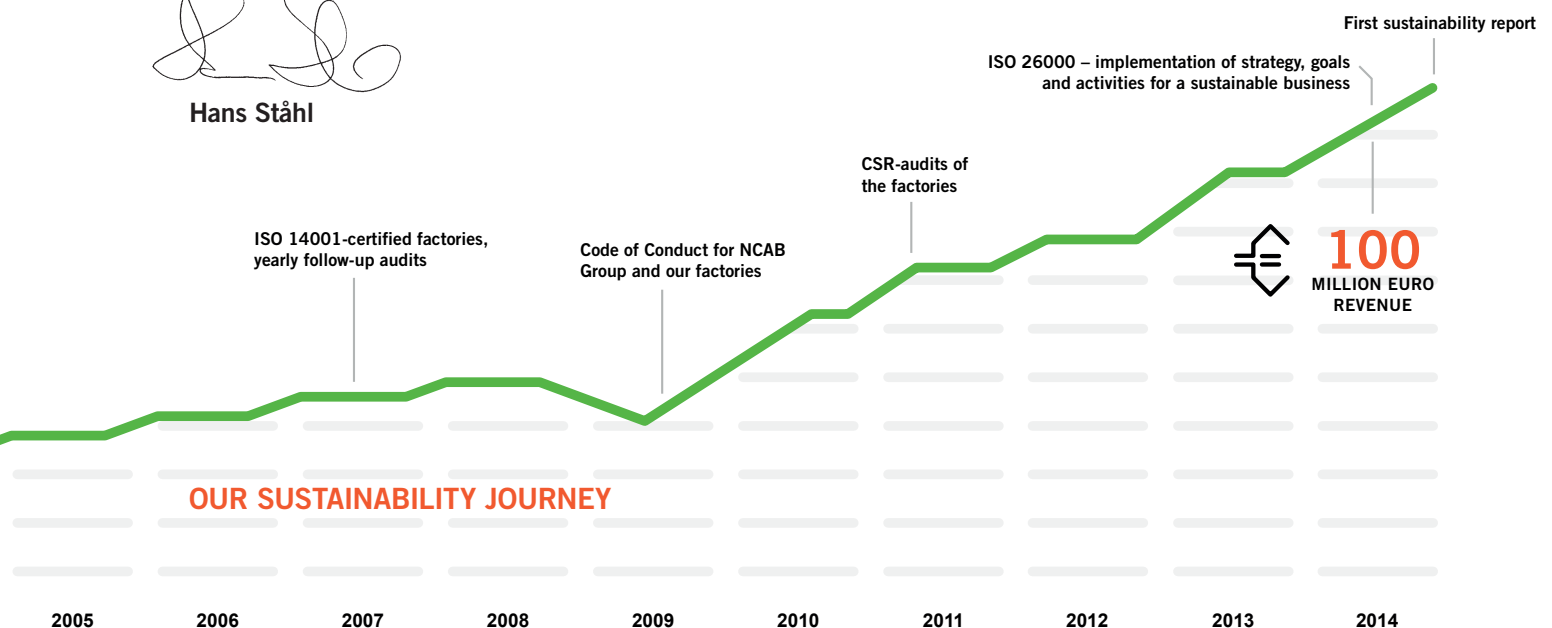
During the last years we have been taking concrete action towards becoming a more sustainable company. 2014 however, was the year we took it one step further and completed a sustainability strategy according to ISO 26000. With our strategy as a guide, we are focusing on the areas where expectations are high from our stakeholders and we have the greatest impact on the environment and people.

Having a long and complex value chain involves obvious risks and we work closely with our factories to make sure that they live up to our standards regarding quality and the environment. But there is always more to be done, especially concerning social issues as well as ensuring traceability of a product's contents. Going forward, we will also look more closely at how we could go about broadening the diversity of our workforce.

I am proud of the strategic work regarding sustainability we have started and I am confident that this will be a part of what makes NCAB successful. We believe that our strong common values and business culture are key to aligning our global business and integrating a sustainable mindset in our every day decisions.

This, our first sustainability report, will be our benchmark in the work ahead. In this way, we avoid empty, symbolic gestures and will hopefully make a real difference. We welcome any type of feedback, your perspective is of great value for us!

Hans Ståhl



## Our business

# Striving to be the number 1 PCB producer

NCAB Group is a leading global PCB producer. Our vision is to be the number 1 PCB producer wherever we are. Growth is crucial for us, we want to grow with our customers and are therefore constantly adding markets. In 2012 and 2014 we added two new business units, both located in the USA.

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

### INTEGRATED PCB PRODUCTION

The critical factor is that we take total responsibility for the entire production process. This is integrated PCB production, which in practice, means 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

Today's fast changing world is both a challenge and an opportunity for us. We need to adapt and be at the frontline of PCB technology development. One important part of this is to attract more people with the right technical expertise.

To continue our successful journey, we seek greater 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. We believe that the only way to interact efficiently is to have clear values. To us these comprise:

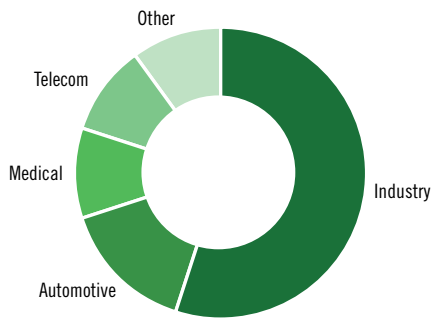
- > **QUALITY FIRST**
- > **STRONG RELATIONSHIPS**
- > **FULL RESPONSIBILITY**

### OWNERSHIP

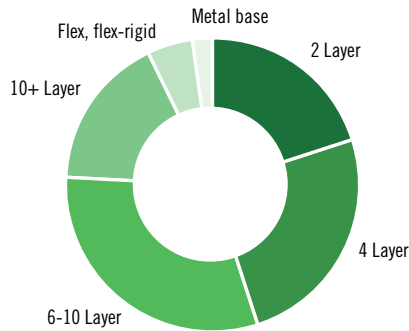
NCAB Group is of Swedish origin, with the parent company founded in 1993. The principal owners of the NCAB Group are R12 Kapital Fund with a total holding of 65%. The remaining shares are owned by management and key employees of NCAB. Our headquarter is located in Bromma, Sweden.



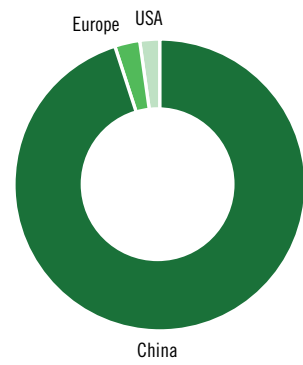
**SALES SHARE PER INDUSTRY SECTOR**



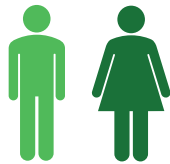
**SALES SHARE PER PCB TECHNOLOGY**



**SHARE OF PRODUCTION**



**142**  
MEN



**114**  
WOMEN

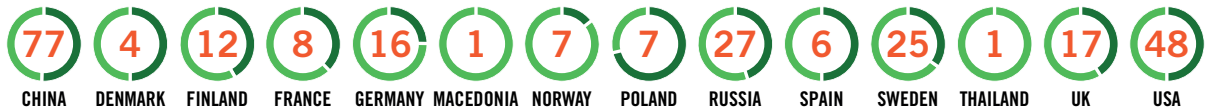
**18**  
FACTORIES



**57**  
FACTORY MANAGEMENT\*

**EMPLOYEES / COUNTRY**

Men Women NCAB Group office



**FINANCIAL**

**100 000 000**  
EURO REVENUE

**KEY PERFORMANCE INDICATORS**

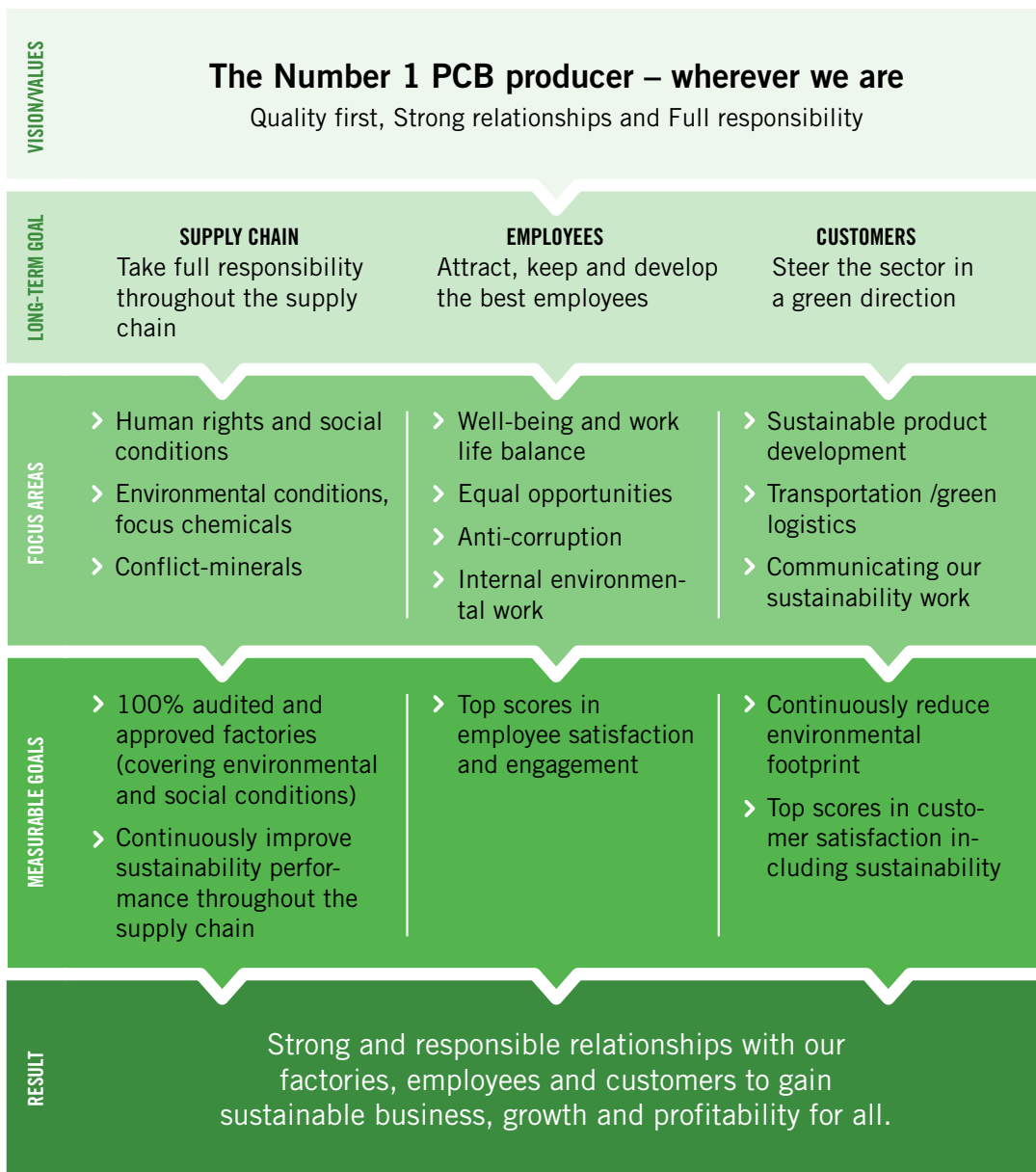
**95.7%**  
DELIVERY PRECISION

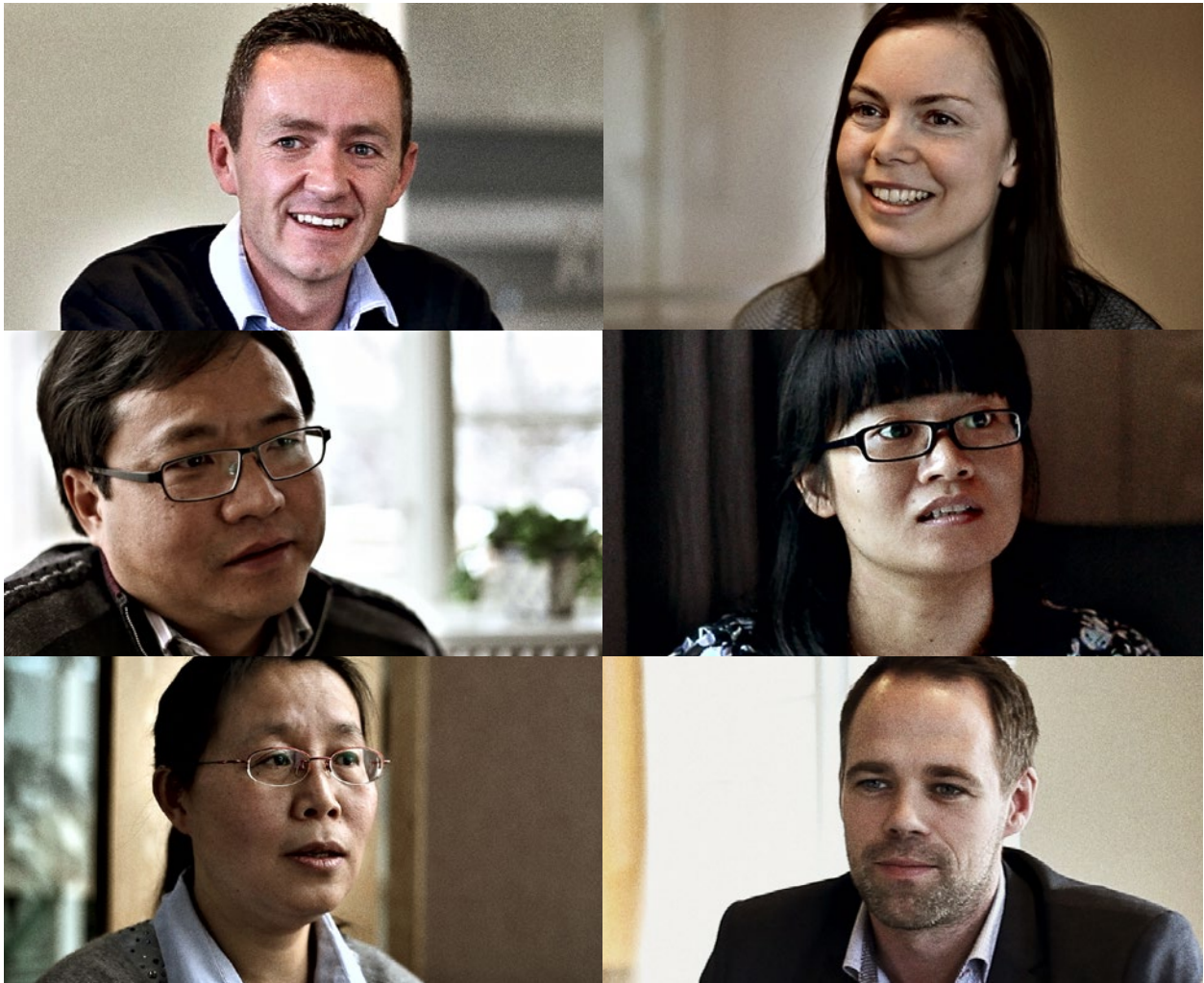
**99.2%**  
QUALITY PERFORMANCE

\*Factory Management - our extensive team of 57 people who interact daily and directly with our factories.

# Our sustainability strategy

Quality and environmental management has been important to the NCAB Group for many years. It is deeply rooted in our mission and our values. We are convinced that a responsible business is a profitable one and we want to continue on that path. Last year we decided to start using ISO 26000, an international standard for social responsibility, to help guide us in our work going forward. The result is a strategy covering ethical, social and environmental dimensions, with clear priorities for a sustainable business.





Clockwise from top left; Chris Nuttall Chief Operations Officer, Anna Lothsson Strategic Purchasing Manager, Cathy Wang QA Engineer, Martin Magnusson VP Sales and Marketing, Wendy Liu QA Manager and Jack Kei Managing Director China.

We have divided the sustainability focus areas in relation to our most important 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. A brief overview of the strategy is illustrated on page 6. The priorities in the strategy are also the main focus of this report.

**PROCESS TO DEVELOP THE SUSTAINABILITY STRATEGY**

The standard ISO 26000, which we have used as a basis for our sustainability strategy covers numerous aspects of sustainability. We have used the standard to identify the issues that are most important to NCAB, based on our impact, stakeholder expectations and the improvements we can achieve.

Every managing director in our 14 companies and other key persons in the organization have been interviewed to give their perspectives on our strengths, weaknesses and what, in their opinion, our top priority sustainability topics should be. Also, ten important external stakeholders were asked to share their views and expectations.

The internal and external perspectives identified which areas to focus our strategy on. All results were discussed within the project steering group and during the Spring of 2014, the strategy was finalized.

**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. In order to maintain our momentum and ambition to improve, we now need to commit additional resources. Sustainability is a constant journey – we will never reach the end.

Another action that will be implemented during 2015 is to incorporate an evaluation of environmental, social and ethical effects, in our decision making processes.

**ISO 26000 FOCUS AREAS**

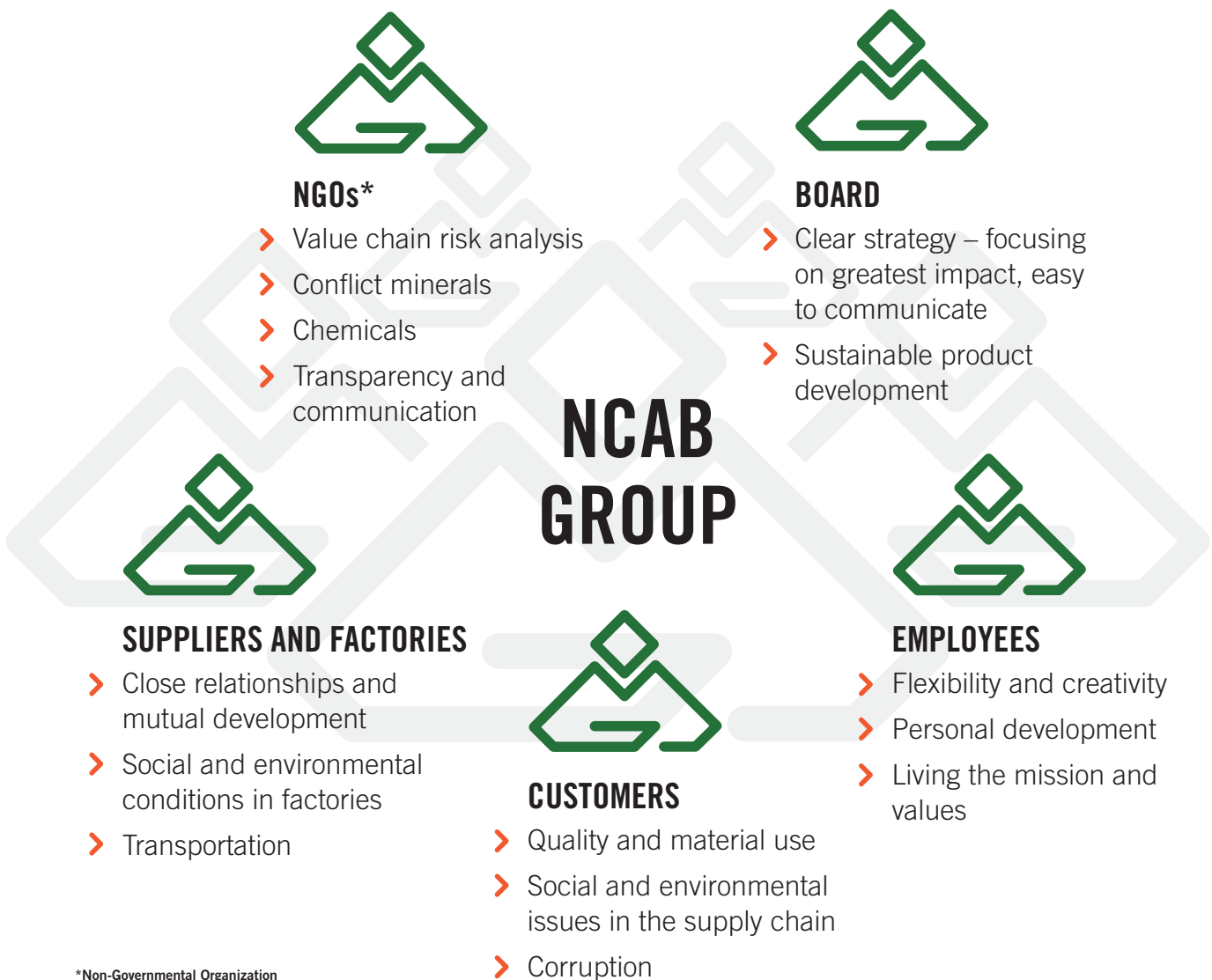
ISO 26000 is an international standard for social responsibility, which includes **ethical, social and environmental dimensions**. The standard covers the following areas:

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

# Communication – the key to knowledge

We want our customers, employees, factories and other stakeholders to perceive NCAB Group as a good and reliable partner from a broad perspective. This will give us, in our opinion, a competitive advantage within the PCB market. Listening to stakeholders is therefore crucial to our business.

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





**“ To have a good business we need to attract and keep the best people. They need to feel motivated and passionate.”**

Jack Kei, Managing Director, NCAB Group China

**“ Working responsibly with the factories in China is top priority.”**

Marianne Frogner,  
VP Procurement, Stoneridge Electronics

**“ Companies should be aware of the impacts and risks they have throughout the whole value chain.”**

Theo Jaekel, Researcher, Swedwatch

**“ We are world leaders when it comes to the products and services we deliver and will also be leaders with regard to sustainability.”**

Christian Salamon, Chairman of the board, NCAB Group





Dana Chen, Factory Supervisor, NCAB Group  
Factory Management, during a factory audit.

## Supply chain

# You can only have control on site

NCAB Group works closely with the factories that produce our PCBs. We believe that working in partnership is crucial to achieve high quality and sustainable production. By working in partnership with our factories, we are continuously improving both our own and their business. However, we do face challenges in the raw material supply chain. For example the risks of human rights abuse related to the use and extraction of conflict minerals.

### LONG TERM GOAL

- › Full responsibility throughout the supply chain.

### MEASURABLE GOALS

- › 100% audited and approved factories (covering environmental and social conditions).
- › Continuously improve sustainability performance throughout the supply chain.

### 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 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. In addition, they have to sign our Code of Conduct.

### FACTORY MONITORING AND FOLLOW-UP

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. Our proactive approach improves product quality and delivery performance, reduces non-conformities, cuts costs, reduces environmental impact, and helps us to continuously improve production. Transparency is important to us, so we always welcome and encourage our customers to visit our factories. During 2014, a total of 178 people from 71 different companies visited our factories. In addition, during 2014, we also hosted 23 customer quality audits at NCAB sites worldwide and thanks to the high demands we place on our own internal quality management systems, we achieved very high pass rates.

### ENVIRONMENTAL, SOCIAL AND ETHICAL DEMANDS

During 2009 we implemented a Code of Conduct which forms part of the contracts we have with each of our factories. The requirements in the code are inspired by the ten principles of the UN Global Compact and cover:

- > Human rights
- > Labour practices
- > Child labour
- > Environmental management
- > Ethics
- > Intellectual property

NCAB expects all of our factories and employees to follow our Code of Conduct.

Our objective is to build a comprehensive picture of conditions within all facilities and identify improvement opportunities. This is



A worker gets his hair cut at one of the factories' hairdressers.

crucial to keep on improving the sustainability performance in our supply chain. In 2011, we started to audit our main factories from an environmental, social and ethical perspective. Five factories have been audited since the start and our goal is to have assessed all factories by the end of 2018. The next step is to analyse the results of the audits already conducted to identify common improvement areas as well as best practice. During 2014, we also started

to review and further develop our audit process to ensure it covers all areas in the Code of Conduct.

We have not as yet, identified the chain of suppliers that our factories use. However, we do know that these supply chains are extensive and that there might be risks within them of human rights violations, poor working conditions or shortcomings concerning employee safety related to the supply of raw materials used in PCB production. Hazardous chemicals and minerals, like gold and tin, are two such examples.

### MAPPING HAZARDOUS CHEMICALS

We strive to be a proactive and responsible company regarding the use of chemicals. During 2014, as part of our sustainability strategy, we started to map and assess the chemicals used in our PCB production processes from an environmental and health perspec-



Water treatment plant at one of the factories.

tive. The aim is to identify any hazardous chemicals that can be either replaced with less dangerous ones or need revised routines in order to be handled in a safer way. The outcome of the analysis will form the basis for our approach to chemicals going forward.

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

All our main factories have to ensure that they do not source gold and tin for use in PCB production, which has been extracted from conflict areas in Eastern Congo. This is trade, which rebels and other armed groups continue to profit from and therefore, it can contribute to violence and exploitation in the region. To control this we demand signed testimonies from our factories stating that no conflict minerals are being used in the production of our PCBs. In addition, declarations of the smelters used within the supply chain also have to be submitted to us. According to the documents received, all of the smelters are compliant with the Conflict-Free Smelter Program initiated by Electronic Industry Citizenship Coalition and the Global e-Sustainability Initiative.

During 2015 we will start to evaluate the documentation regarding traceability of conflict minerals submitted by our factories. We will also review the process involved in collecting the information. We have the same demands for the mineral tungsten which although not part of the PCB, is used in the production process.

### OUR SUPPLY CHAIN

- > 18 main factories audited yearly for quality and environment factors.
- > 5 CSR specific audits conducted during 2011-2012, covering in greater depth, environmental and social conditions.

Qianying Ding, QC Inspector, NCAB Group  
Factory Management Team



## Supply chain CASE

# NCAB Group takes full responsibility

Jenny Zhang is part of NCAB's factory management team in China. She has conducted the social responsibility and environmental audits at five of NCAB's main factories.

### – What are the benefits from conducting these audits?

It has strengthened the relationships with the factories. They want to know where and how to improve and appreciate that we assess them. The factories should feel that we take greater responsibility and that we are no longer just a "trading company". We are a PCB producer and a reliable, long-term relationship partner. The audits contribute to that.

### – How do you conduct an audit?

When I audit a factory, I check the environmental work, health and safety practices, labour and human rights as well as ethics. To understand how they work with these issues, I talk to the management team, interview employees and review documents such as management review protocols, waste water and solid waste handling routines, labour contracts, training records etc. I also check that routines are followed and effective both regarding personal safety and environmental protection.

It is important that management support the environmental and social work at the factory and allocate enough resources to meet the requirements from NCAB, EICC (Electronic Industry Code of Conduct) and the Chinese government.

### – Can you mention something about the audit findings and improvements made as a result of the findings?

The weaknesses do differ a little between the various factories, but excessive overtime work is a common problem in PCB production. This is unfortunately also very difficult to improve due to PCB

### – What happens when you find areas that need improving?

I describe deviations and improvement suggestions in an audit report. The factory provides me with a corrective action plan and I follow-up on the progress that they make.

### – The government in China is paying more attention to environmental protection and has specific environmental requirements regarding this. How does that affect the PCB factories?

Yes, the demands from the government are getting stricter and more detailed. For example there are now requirements regarding the concentration of certain substances (copper, COD and pH value) in waste water discharge. The government installs equipment that measures this in real time. If a factory does not meet the requirements it has to stop the production immediately. The production can only start again if the factory improves and meets the requirements. In addition, the government has guidelines for efficient water and power use that factories are encouraged to follow.



Jenny Zhang, Sourcing Manager, NCAB Group China.

industry practice. The process to make a board requires that many processes and equipment run continuously. This often results in long working shifts.

During my follow-up of the audit findings I have seen improvements in sorting and handling of solid waste, better usage of personal protective equipment and improved routines for chemical handling. Also, some factories that had not identified hazardous substances before the audits now do it as a result of the findings.



Jerry Fu, Factory Supervisor, NCAB Group Factory Management, and Kathy Nargi-Toth, Technical Director, NCAB Group USA, visiting one of our factories.

## Employees

# Our most important asset

In 2005, all of us at NCAB Group started a journey to identify our core business values. A similar venture in 2012 saw us update our values, which we are committed to integrating into our everyday operations. To us, this means maintaining an open dialogue, providing the basis for good rapport between our co-workers, and a workplace where everyone develops, is engaged and takes pride in their work. We also want our values to live in every external contact.

### LONG TERM GOAL

› Attract, keep and develop the best people.

### MEASURABLE GOALS

› Top scores in employee satisfaction and engagement.

## VALUE BASED LEADERSHIP AND INNOVATION

We are a global company, with a global workforce, which presents a challenge when we align and instill our values across the organization. We believe that the key here is to apply value-based leadership to create a working environment that helps to foster a sense of ownership and responsibility. To ensure our workplaces enable creativity is another important aspect, as innovation will help us consolidate our position at the forefront of PCB production.

## RECRUITING AND KEEPING THE BEST EMPLOYEES

NCAB is a people business. Our most valuable asset is our employees and we need to attract and keep the best. We have the ambition to keep our employees long term, and we normally offer permanent employment contracts. Generally, employee turnover within NCAB is low. Our recruitment will continue to grow due to our expansion in new and growth markets.

## EMPLOYEE HEALTH AND SATISFACTION

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, has also led to considerable overtime being worked. This is an area of concern that we will address during the following year with a plan to recruit more people, as well as initiating thorough follow ups during our quarterly employee reviews.

During the quarterly reviews, we discuss in depth, work related topics including job satisfaction, personal development, working hours and the office working environment. We feel that open and personal dialogue is key to creating a work environment where we continually improve and help our employees thrive. To gain a better total overall understanding of employee well-being, we will, during 2015 also conduct an employee satisfaction survey where we will measure exactly how satisfied NCAB employees are. Our goal will of course be to receive high scores in respect of employee satisfaction.

## TRAINING AND COMPETENCE DEVELOPMENT

NCAB is non-hierarchical, our employees make their own decisions, take full responsibility for their work and operate with high levels of respect for all colleagues. Whilst this is one of our strengths it does also present challenges in that there can be limited career path opportunities, ladder to climb.

With this in mind, we are going to put extra focus on competence development and provide a broader range of training opportunities for our employees. To facilitate this, we have engaged external expertise to thoroughly review our training processes.

Our most recent competence development programme (2011-2014) covered sales, as this is an important skillset for many of our employees. We carried out performance assessments through role play and knowledge tests, from which we tailor-made the courses. Our follow-up assessments showed improved sales skills, which generated general positive feedback regarding the programme.

## EQUAL OPPORTUNITIES

Having equal opportunities regardless of age, gender, sexual orientation, background or spiritual beliefs is obvious to us. In our recruitment processes for example, having or planning to have a family should never be an obstacle to NCAB, irrespective of

your gender. We view employment in a broader perspective and feel that having a family can provide our co-workers even greater security in the longer term, when factoring in, extended periods of absence. However, 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. Our board and management mirror the fact that this industry has been male-dominated for so long. We could be more proactive with the issue. The goal and hope is that we will be able to find more women with the right competence to complement us. During 2015 we will be clarifying and promoting diversity in our recruitment guidelines and questionnaires.

## ANTI-CORRUPTION

NCAB operates in countries where international indices on corruption indicate a high risk. It is possible that our employees are faced with proposals that are not in line with fair business practice. We are confident in our common view on the issue; we would rather lose an order than contribute to a culture of corruption. NCAB has turned down a number of such offers. But going forward we need to make it more concrete.

A part of our sustainability strategy is to set out specific guidelines covering corruption and business ethics. Our managing directors together with the Group Function team will be identifying real life situations, where ethical dilemmas are known to occur; they will problematize and discuss different approaches. This will generate firm and concrete guidelines.

## INTERNAL ENVIRONMENTAL WORK

All of our local companies, with the exception of our recently added facilities in North America, are certified to ISO 14001. Also, with some local initiative, and positive steps in the right direction, we have this year taken a number of firm environmental steps at our Stockholm office during the year. This will serve as inspiration for our other offices:

- > Fair trade and organic coffee
- > Organic milk and fruit baskets
- > Eco-labelled paper: e.g. the EU Ecolabel, the Nordic Ecolabel and FSC
- > Electricity from renewable sources (wind, water, sun)
- > Revised vehicle policy, promoting vehicles that are more environmentally appropriate

### Our values

- > Quality First
- > Strong Relationships
- > Full Responsibility

NCAB Group values have been developed jointly by all employees and gives us an efficient way of making decisions and working towards our goals.

	NUMBER OF EMPLOYEES	GENDER DIVISION		AGE		
		WOMEN	MEN	UNDER 30	30-50	OVER 50
Management	7	2	5	0	5	2
MD	14	0	14	0	8	6
All employees	256	114	142	41	172	43
Board	5	0	5	0	2	3

**“ The fact that all the NCAB Group decisions are in line with our values simplifies and speeds up the decision-making process. We always focus on solving the customers problems.”**

Vladimir Makarov, Managing Director, NCAB Group Russia

**“ I think the best part about working at NCAB Group is building relationships.”**

Shawn Rocha, Program Manager, NCAB Group USA

**“ Team spirit is high and everybody is hard working and willing to share their knowledge, which is very stimulating.”**

Cathy Wang, Quality Engineer, NCAB Group China

**“ We all work for the same target, which I think creates a good atmosphere as we all compete for the same goal. We are all colleagues that help each other, not just different people in different countries.”**

Céline Nuttall, Customer Support, NCAB Group France



## Employees CASE

# Dragons' Den

For the NCAB Group, innovation is a critical step in our evolution and success, and we constantly encourage and listen to new ideas from all employees. This year we decided to focus even more on innovative ideas and encouraged employees' contributions. We teamed up with an events bureau to create NCAB's own Dragon's Den.

All NCAB companies globally were given the task to come up with new business ideas and products to present at our yearly conference. We created a Dragon's Den stage and setting, with a jury of experts from within NCAB as well as external. Representatives from each company presented their idea and answered the jury's questions. That same evening we held a gala dinner and prize giving ceremony. The winners received a prize consisting of resources to enable them to implement the idea within their market. The winning idea was to add more value to our customers by offering PCB Layout services. This is now a reality in our Sales company in China, which now has their own design team dedicated to provide this new service.

The event was a complete successful, resourceful, creative and most importantly, enjoyed by all. We will repeat such events and we hope this will further encourage all employees to share more of their ideas.





In 2014 NCAB Group shipped 90 million PCB's.

## Customers

# Long-term relationships – a sustainable approach

Our mission is to produce PCBs for demanding customers, on time with zero defects and at lowest possible total cost. Our approach includes long-term thinking and shows how cost, quality, reduced risk and environmental issues go hand in hand. We have come a long way, but there is still much we can do better. This is in line with our constant drive to improve our business.

### LONG TERM GOAL

- › To steer the sector in a green direction.

### MEASURABLE GOALS

- › Continuously reduce environmental footprint.
- › Top scores in customer satisfaction including sustainability.

## SUSTAINABLE PRODUCT DEVELOPMENT – STARTING WITH THE DESIGN

A long-term approach is at the core of what we do – we produce PCBs with a very long life cycle. This contributes to reducing the environmental impact as well as reducing electronic waste further in the value chain.

We want to be one step ahead of the customer. Since we have local companies close to all of our markets, we are well acquainted with the customers' needs and demands. The earlier we are involved in their design process, the better the end result might be. Our many technical experts are on hand to offer design support to improve manufacturability. This helps to minimize the numerous potential quality issues and reduces scrap – primarily due to our assistance and knowledge in optimizing design to suit volume manufacturing. This, in turn, has an influence on total cost, for the customer, NCAB 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, less chemistry etc. being used at any point in the supply chain. The end result is win-win situations.

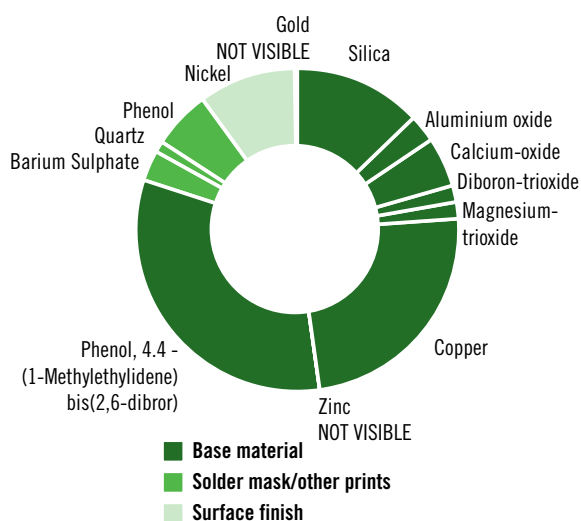
We see potential in increasing our support service at the design phase. Our customer seminars are one way to raise awareness of this potential in the design phase. During 2014 we conducted 53 seminars in all our markets globally, all of which have been well attended with very positive feedback. Sometimes we also participate in our customers' seminars. Going forward, our strategy is to determine how best to strengthen our technical offering - our technical 'solutions', to enable us to provide more seminars and more input to our global customer base.

## MATERIALS AND WASTE – A BIG CHALLENGE FOR THE ELECTRONICS INDUSTRY

We test our products to verify that they meet our demands as defined in the NCAB 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.

Our plan is to review the chemicals used in production to help us decide on our approach to chemicals going forward (read more on page 11).

## BREAKDOWN OF THE KEY MATERIALS WITHIN A STANDARD PCB WHERE A NICKEL-GOLD FINISH HAS BEEN APPLIED



NCAB takes care of electronic waste, according to the waste laws, in each local company. In some countries, we get documented records from our nominated waste handling companies for the waste that they remove and recycle. Some of our companies and facto-

ries 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. This indicates how raw materials – especially metals - are becoming more and more scarce and valuable. This constitutes a major challenge to the electronics industry globally. In addition, it affects all parts of society where any aspect, or piece, of electronic equipment is needed. Aside from the disposal of electronic waste, the actual handling of the material for 'recycling' is also a topical subject as the product may sometimes end up being dumped in low-income countries, where it negatively affects the health of waste pickers and also the immediate environment. The European Union prohibits this kind of export. However, NCAB has not monitored how the waste is treated by our own, or our factories', suppliers of waste services.

NCAB's activities aimed at reducing scrap can also be said to decrease the need for using unnecessary, additional amounts of metals.

## CLOSE DIALOGUE 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 properly judged and well documented for all within NCAB to see and follow. When evaluating the demands of each specific customer product, we are able to accurately select the best factory to support, based upon the right technical ability.

We hold monthly on-site factory meetings where we review deliveries, quality and service for each factory – in detail, specifically when reviewing the root cause of specific issues as well as corrective and preventive actions. This along with maintaining close dialogue with the factories on other issues, creates strong relationships and helps to drive our aim of continuous quality improvement.

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

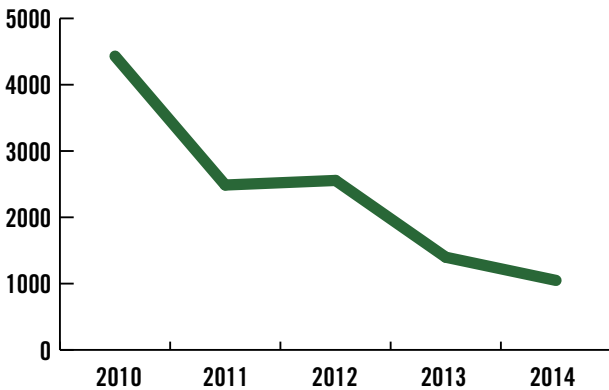
Even though we work proactively with the factories and have a very strong quality management approach, quality problems may still occur. We strive for perfection but when something does go wrong, our approach is to take full responsibility for full resolution. We view the factories as an extension of our business, and on that basis, we believe it is our responsibility to work closely together with them to ensure we know exactly what has caused the issue and to implement rapid corrective and preventative actions.

Every customer complaint we receive is allocated a unique number so that it can be followed within our tracking system. The quality/technical teams within each local company will then work closely with the factory management teams within our China operations to find the real root cause of the issue, and any investigation is only ever closed upon 100% resolution. The vast majority of our factories are located near to our China office, which helps to facilitate clear and quick communication. It also, enables us to quickly be on site, at the factory, within hours, should that be required. A corrective action report is completed for each complaint and the implementation status for the corrective and preventative actions is reviewed and followed up on site. This is to make sure the actions have been robustly implemented and thus provide confidence that the problem will not be repeated.

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).

We have seen PPM fall from 4431 in 2010 to 1398 in 2014, and our aim is reflected within part of our mission statement – that of striving towards zero defects. This also includes not only improving the physical product, but also the time it takes for us to respond to a customer complaint. This is another area to be considered as part of continuous improvement.

**QUALITY STATISTICS - DEFECTIVE PPM**



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.

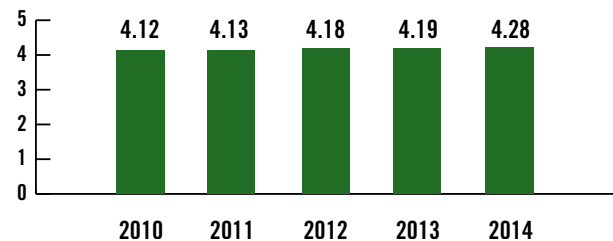
**CUSTOMERS VALUE OUR SERVICE, QUALITY AND TECHNICAL KNOWLEDGE**

One of the reasons for our business success is due to our customers satisfaction. We measure customer satisfaction annually in every local language through our survey, Possibility Detection Study (PDS). The response frequency is 25-30% and compared to other

organizations that use similar survey tools, we achieve higher than average scores. 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 2014 we received 3.80 out of 5 which is an improvement over the score of 3.67 received in 2013. Our goal is to further improve on 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. This sustainability report is part of that.

**CUSTOMER SATISFACTION**



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

**“ For us PCB content regarding chemicals is top priority. Also, during the last years social and ethical aspects have become more important.”**

Marcus Herrnberger, Director Managementsystem  
– Environmental Managment, Zollner

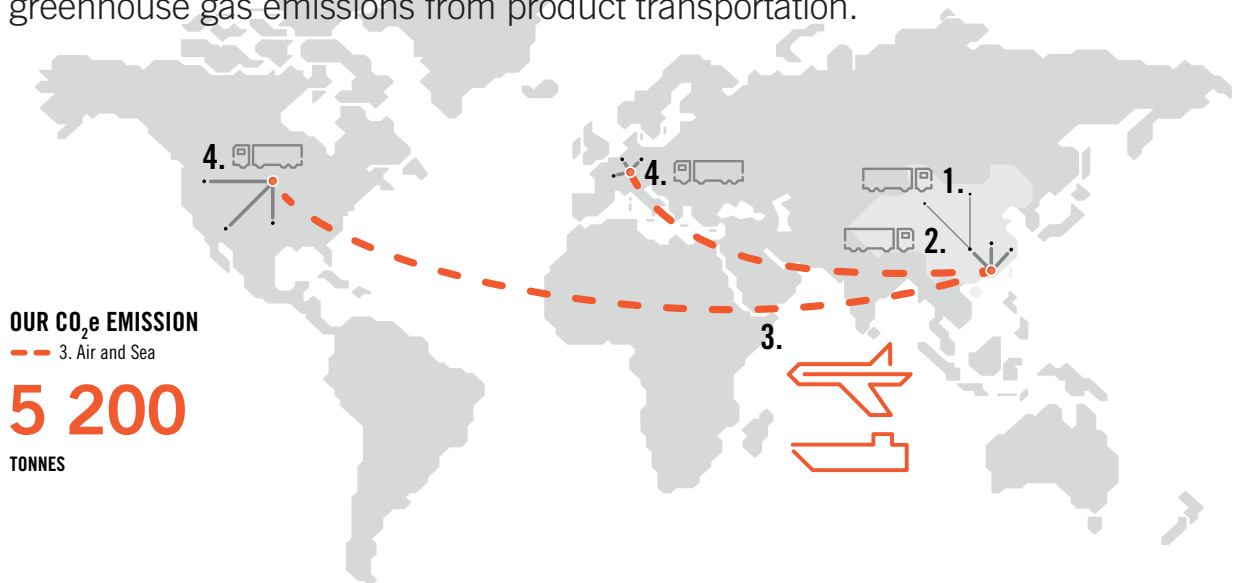
**“ NCAB conducts thorough factory audits regarding quality and environmental performance, and communicates the results openly. This makes them outstanding compared to peers in the industry on this matter and also proves that they take a broad responsibility.”**

Ove Danielsson, Corporate Quality Manager, NOTE

Customers **TRANSPORTATION**

# Product transportation and greenhouse gas emissions

As PCB production is mainly located in the South of China and our customers are spread across 40 countries, one of our greatest environmental impacts is greenhouse gas emissions from product transportation.



**FOUR OF OUR TRANSPORTATION ROUTES:**

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

**MAPPING OUR IMPACT**

One of our long term 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. We have just started this work, which is a major challenge to us, as:

- > Our ability to influence the choice of transport varies between the different routes
- > We have not calculated the actual environmental impact of the different routes

Going forward, we will start mapping the different routes from an environmental perspective, to identify where the impact is most substantial, and to set measurable goals, including action plans to reach them. The one transport route that we have started analyzing is the transportation of PCBs from Hong Kong to our warehouses in Europe and the USA. With around 100 flights and three boat departures every month, we believe that a significant part of our carbon footprint is generated on this route. In 2014, with the help from our

suppliers of transport services, we calculated the greenhouse gas emissions from it. The result is illustrated above.

**SHORT LEAD TIMES AND LONG DISTANCE AIR FREIGHTS**

The price of our products often includes the transport costs from Hong Kong to our warehouses. 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. Even though sea transport is less expensive than air, short lead times are almost always 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. During 2015 we will start to more proactively communicate the environmental and cost benefits with various transport alternatives in our dialogue with customers. Moreover, we intend to further develop our interaction with our transport services suppliers to gain a better grasp of the different transport solutions and to what extent they could reduce our emissions.

# GRI content index

Our sustainability report is in accordance with GRI's (Global Reporting Initiative's) guidelines for sustainability reporting, version 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](http://www.globalreporting.org).

INDICATOR	DESCRIPTION	PAGE/COMMENT
<b>STRATEGY AND ANALYSIS</b>		
G4-1	Provide a statement from the most senior decision-maker of the organization	3
<b>ORGANIZATIONAL PROFILE</b>		
G4-3	Name of the organization	Front cover
G4-4	Primary brands, products, and services	4-5
G4-5	Location of the organization's headquarters	4, Back cover
G4-6	Number and name of countries where the organization has significant operations	4-5
G4-7	Ownership and legal form	4
G4-8	Markets served	4-5
G4-9	The scale of the organization	4-5
G4-10	Employees by employment contract and gender	15
G4-11	Employees covered by collective bargaining agreements	0 %
G4-12	The organization's supply chain	10-13
G4-13	Significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	First sustainability report
G4-14	Report whether and how the precautionary approach or principle is addressed by the organization	11, 13
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	2-3, 6-7, 11, 22
G4-16	Memberships of associations	IPC, local trade organizations
<b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES</b>		
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	6-7, 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	First sustainability report
G4-23	Significant changes from previous reporting periods	First sustainability report
<b>STAKEHOLDER ENGAGEMENT</b>		
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G4-25	The basis for identification and selection of stakeholders	8
G4-26	The organization's approach to stakeholder engagement	6-8
G4-27	Key topics and concerns that have been raised through stakeholder engagement	8-9, 15-16, 20

INDICATOR	DESCRIPTION	PAGE/COMMENT
<b>REPORT PROFILE</b>		
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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
<b>GOVERNANCE</b>		
G4-34	The governance structure of the organization	4, 7
<b>ETHICS AND INTEGRITY</b>		
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<b>ENVIRONMENTAL</b>		
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EN1	Materials used by weight or volume	19
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EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	21
EN18	Greenhouse gas (GHG) emissions intensity	21
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EN27	Extent of impact mitigation of environmental impacts of products and services	10-13, 18-21
<b>Transport</b>		<b>DMA 21</b>
EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	21
<b>Supplier environmental assessment</b>		<b>DMA 10-13</b>
EN32	Percentage of new suppliers that were screened using environmental criteria	11
EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	10-13
<b>LABOR PRACTICES AND DECENT WORK</b>		
<b>Training and education</b>		<b>DMA 15</b>
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
<b>Diversity and equal opportunity</b>		<b>DMA 15</b>
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
<b>Supplier assessment for labor practices</b>		<b>DMA 11,13</b>
LA14	Percentage of new suppliers that were screened using labor practices criteria	11
LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	11, 13
<b>HUMAN RIGHTS</b>		
<b>Supplier human rights assessment</b>		<b>DMA 11</b>
HR10	Percentage of new suppliers that were screened using human rights criteria	11
HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	11
<b>SOCIETY</b>		
<b>Anti-corruption</b>		<b>DMA 15</b>
S04	Communication and training on anti-corruption policies and procedures	15
S05	Confirmed incidents of corruption and actions taken	No incidents
<b>PRODUCT RESPONSIBILITY</b>		
<b>Product and service labeling</b>		<b>DMA 20</b>
PR5	Results of surveys measuring customer satisfaction	20



Integrated PCB Production



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