

NCAB GROUP

# Sustainability Report 2017



In brief

## Sustainability highlights 2017

Our vision is to be “The number 1 PCB producer wherever we are”. We continue our exciting and important sustainability journey together with our customers, factories and employees. Here are some examples of our actions and achievements in 2017.

83

Customer Satisfaction Index

11

factory sustainability  
audits

87

Employee Engagement Index

Global conference for

Team  
building

Competence development focus on

Leadership and  
Sales

35

new colleagues

**ISO  
26000**  
verification audit



**90**  
score for sustainability in  
customer satisfaction survey

**Continued  
growth**  
with profit



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Qianying Ding, QC Inspector, NCAB Group China, on site at the Suntak factory, Jiangmen.

## Our business

# Printed circuit boards for demanding customers

NCAB Group is a leading global producer of printed circuit boards, PCBs. Our mission is to produce PCBs for demanding customers on time with zero defects and at the lowest total cost.

### INTEGRATED PCB PRODUCTION

We call our production method integrated PCB production, which in practice means that we work closely with 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. We create optimum production conditions through our strong purchasing power and expertise in PCB production.

### GLOBAL AND GROWING ORGANIZATION

The NCAB Group is a truly global organization, with offices all over the world. Our headquarters are located in Bromma, Stockholm, Sweden. Growth is crucial for us; we want to grow with our customers and we are entering new markets. In 2017 we entered the Italian market. Growing with profit is part of our sustainable business, to secure and develop our long-term business.

### IN THE FRONT LINE OF TECHNOLOGY

The PCB, normally at the heart of all electronic equipment, can be a complex product, and must be adapted for any extreme situation. We seek to be at the front line of PCB technology development. We believe that the best PCB solutions can only be developed through dialogue with our customers and their customers and we actively seek cooperation already at the design phase.

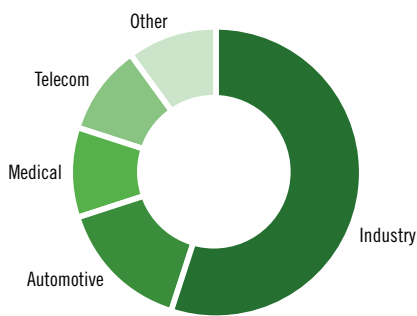
### OUR VALUES

We work in accordance with our company values:

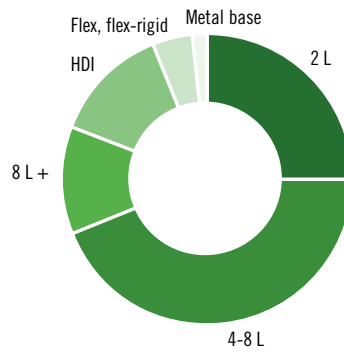
- › Quality First
- › Strong Relationships
- › Full Responsibility



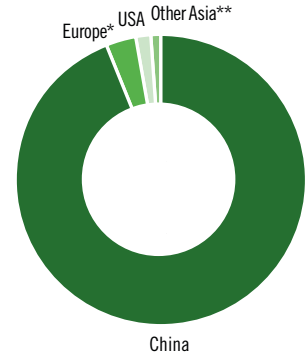
### SALES SHARE PER INDUSTRY SECTOR



### SALES SHARE PER PCB TECHNOLOGY



### SHARE OF PRODUCTION



TOTAL  
55%

MD  
100%

MGMT TEAM  
63%

BOARD  
71%



45%  
0%  
37%  
29%

	AGE <30	30-50	>50
TOTAL	58	216	71
MD	0	8	7
MGMT TEAM	0	5	3
BOARD	0	2	5

113  
MILLION PCBS  
DELIVERED

19  
FACTORIES

63  
FACTORY  
MANAGEMENT\*\*\*

### EMPLOYEES / COUNTRY

Men Women NCAB Group office



### REVENUE

145 000 000  
EURO

### KEY PERFORMANCE INDICATORS

94.6%  
DELIVERY PRECISION  
(Measured per order line)

99.1%  
QUALITY PERFORMANCE  
(Measured per order line)

\*Europe - UK, Macedonia, Belgium, Sweden, Germany, Italy.

\*\*Other Asia - Israel, Taiwan.

\*\*\*Factory Management - our extensive team of 63 people who interact daily and directly with our factories.

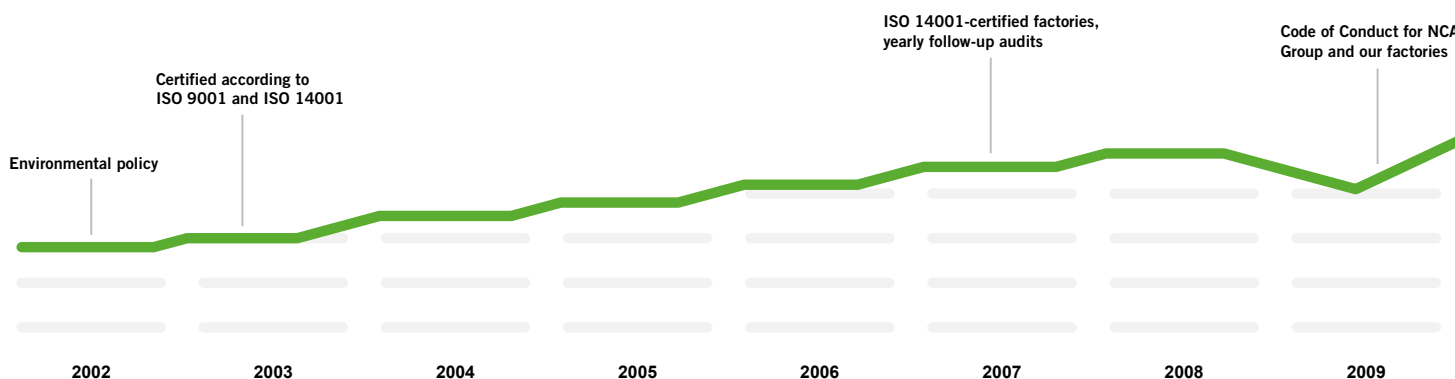


Hans Ståhl, CEO, NCAB Group and Anna Lothsson, Strategic Purchasing Manager, NCAB Group, talking about the commitment of the NCAB employees.

## CEO's statement

# Sustainable business is key to our long-term success

This has been a fantastic year. We continued growing, attracted many new employees, and we have also expanded our business to Italy. I believe our approach to sustainability has greatly contributed to our success. Sustainability for us is about the long-term survival of our business. It comes down to ensuring sound values steer our everyday decisions.





During 2017 we took a further step in our sustainability efforts and allocated more staff to work full time with sustainability issues, and we now have one full time Sustainability Manager in China. This gives us the possibility to work more closely in dialogue with our local factories on many important sustainability issues, and it also helps us to improve our internal communication on sustainability. We want to make sure that all our employees know what we are doing in terms of sustainability, the enormous value it brings to our business, so that they can also explain our approach to customers. At the end of the day, having business partners who work for sustainable development minimizes risks and increases business value. We are happy that more and more of our customers perceive us as a company that works with environmental and social issues, as confirmed by our customer satisfaction survey this year.

Our committed employees are the key to our success and I am proud to be part of this journey with all our fantastic colleagues. Last year we started measuring employee engagement, with great results. We wondered if we could improve our score further. And this year's measurements showed that we could. The result improved even further, confirming the strength of our engagement, leadership and team work at NCAB Group. The survey has also helped us to work with specific issues with our local companies, resulting in improved survey results, and enabling us to reach our goal.

NCAB is a global organization with companies in 14 countries. Business ethics are core to us and we address these issues repeatedly to make sure that everyone is aware of and complies with our Code of Conduct. During 2018 we will be taking our work to the next level and develop more guidance on potentially tricky situations that our employees may come across in their everyday work. We have also decided to include business ethics on the agenda at every meeting of our Managing Directors.

We have done a lot in terms of sustainability and it is really core to what makes NCAB Group the company we are. But we always strive to raise our ambitions further. I believe we can do more when it comes to reducing our impact on the environment. This must be made more concrete in our sustainability strategy updates, in dialogue with our stakeholders, which is part of our plan

for 2018. I greatly welcome your ideas for sustainable cooperation and feedback on our sustainability report.



**Hans Ståhl**

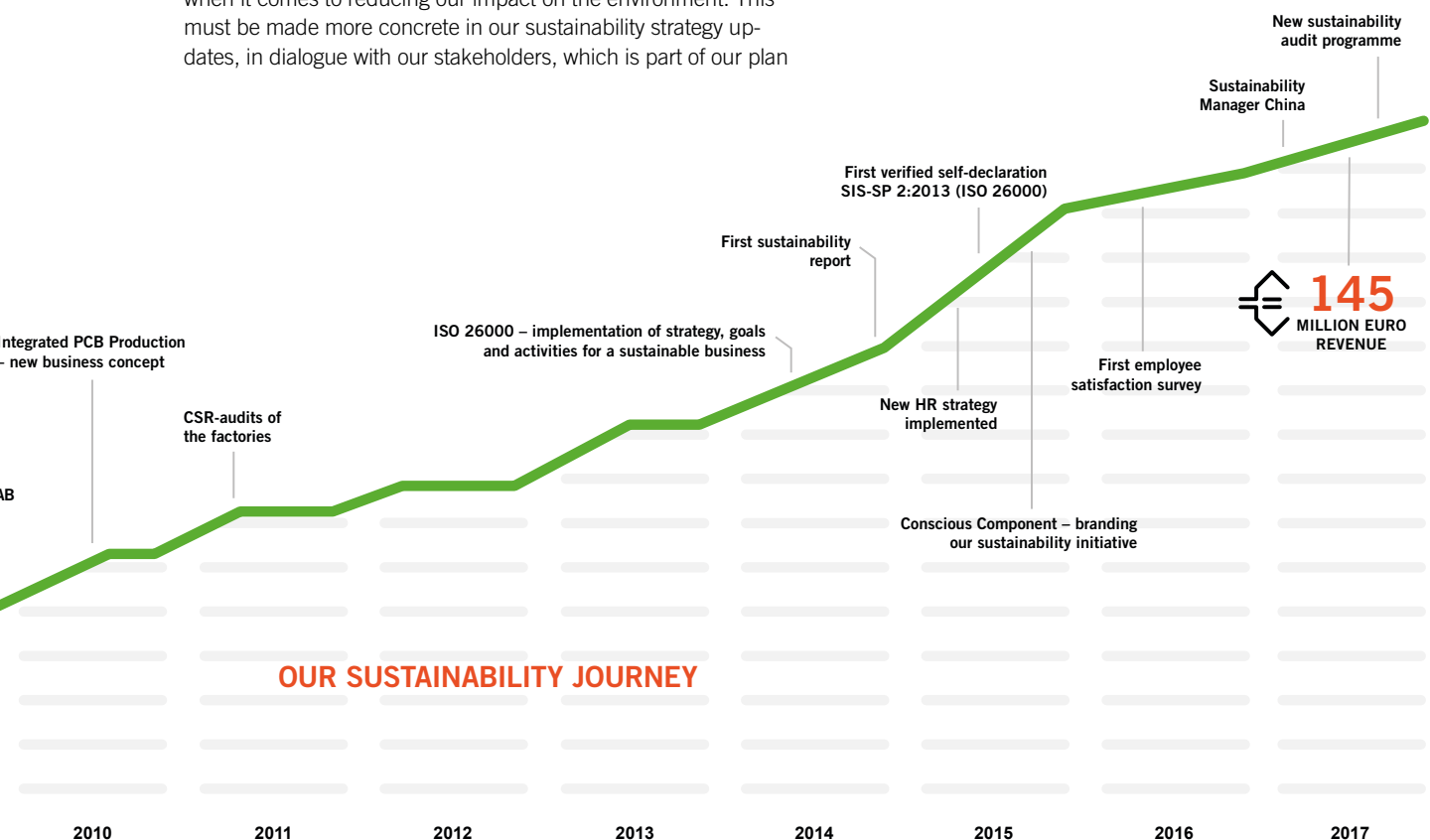
## Sustainability means working hard and doing the right thing



**Christian Salamon**, Chairman of the board since 2007

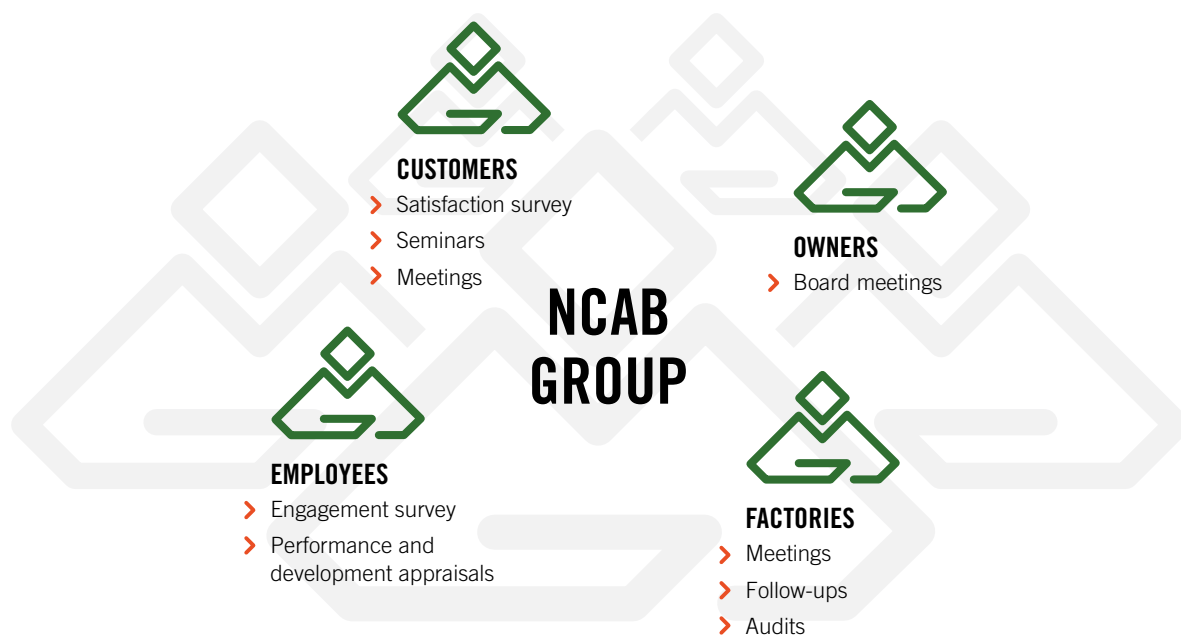
Sustainability is not a separate area to NCAB, it's key to the way we do business. Sustainability is about hard and relentless work to keep pushing the limits forward, adjusting processes and routines along the way. In addition to good business, the sense of doing the right thing is important for us, and the great results from our employee and customer surveys prove we are on the right track.

We always want to be one step ahead. When you set the bar high, you also run the risk of failure, that you won't clear that bar. But that's a risk we are ready to take.



# Strategy and stakeholder dialogue

Our commitment to take full responsibility is important when developing our business. Listening to our stakeholders is crucial and their views are important when identifying the focus areas in our sustainability strategy.



Our regular channels for main stakeholder dialogue are summarized in this illustration, and the results from this year's dialogues are described later in this report.

## **"A CREDIBLE SUSTAINABILITY REPORT"**

We want our sustainability report to provide our stakeholders with the information they need about how we conduct our business. To further improve our sustainability communication, we carried out a follow-up survey of last year's sustainability report with some colleagues internally and with some of our customers. Overall, the feedback was very positive. The report is perceived as credible and with a good level of detail. An area

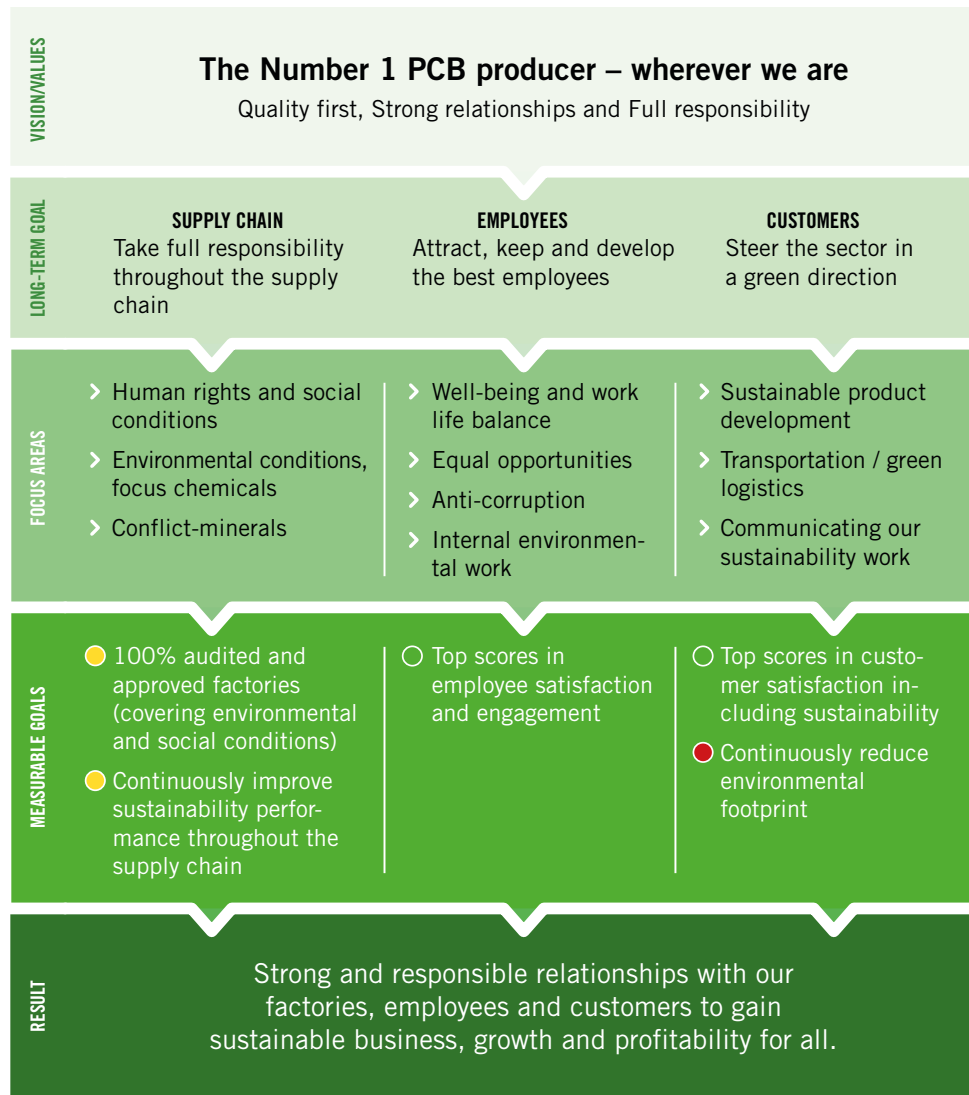
for improvement was to further highlight the business case and added value of our sustainability work to our customers. More easily accessible information was also requested, as well as more focus on our audits. We have improved the 2017 report in line with the feedback. We warmly welcome further comments on the report and our sustainability work. Please contact NCAB Group's Strategic Purchasing Manager, Anna Lothsson: [anna.lothsson@ncabgroup.com](mailto:anna.lothsson@ncabgroup.com)

**“ NCAB Group has a unique global common culture, and sustainability is an important part of this. They have a systematic approach to their sustainability work and follow-up. This helps them constantly raise their ambitions and make sure they keep their position in the forefront in terms of sustainability.”**

**Bengt Jonsson**, Auditor, RISE Certification



## NCAB GROUP SUSTAINABILITY STRATEGY



Status December 2017 ● = not started/far from reached ● = on track ● = completed/reached

### OUR SUSTAINABILITY STRATEGY

We have divided the sustainability focus areas in relation to our prioritized stakeholder groups; customers, employees and factories. It illustrates how our sustainability work strengthens and adds value to these relationships. Our sustainability strategy specifies long-term goals, measurable goals and focus areas. We have been working according to the strategy since 2014. The insights from this work and our stakeholders' perspectives will be used when updating our strategy and goals in 2018.

### CONSTANTLY RAISING OUR AMBITIONS

Working in a responsible and sustainable way is the responsibility of all our employees. However, the sustainability strategy is governed by the NCAB Group Function team, and there is a clear division of responsibilities between the differ-

ent focus areas. We monitor our sustainability performance monthly at our management meetings and it is also a permanent subject for discussion at every board meeting. This year we have strengthened our resources for sustainability work, both concerning our employees and our factories.

### ISO 26000 FOR A BROADER APPROACH

We used ISO 26000 - Guidance on Social Responsibility as a basis when developing our sustainability strategy. It is an international standard that provides guidance on how businesses can operate in a sustainable way. Read more: [www.iso.org](http://www.iso.org).

To demonstrate that we respect and comply with the standard ISO 26000, we complete a yearly social responsibility SIS-SP 2:2015 self-declaration. ISO 26000 is also part of our internal and external ISO audits.



Jenny Zhang, Sustainability Manager, NCAB Group China, checking chemical storage in the GCI factory, Zhuhai.

## Supply chain

# Close cooperation for continuous improvement

We do not own any factories, but we carefully choose our long-term partners and work closely with them to maintain and develop sustainable business.

### LONG TERM GOAL

- Take full responsibility throughout the supply chain.

### MEASURABLE GOAL

- 100 % sustainability-audited and approved factories.
- Continuously improve sustainability performance throughout the supply chain.

### OUR STRENGTHS

- Clear demands, strong relationships, close dialogue and cooperation, detailed sustainability audits.

### GREATEST RISKS

- Toxic chemicals, health and safety risks and overtime work.



## OUR SUPPLY CHAIN IN BRIEF

The factories which we cooperate with are listed in our Preferred Supplier List (PSL). We divide them into Main, Spot and Special Project factories. 79% of our total spend is on the 19 main factories located in China (14), in Europe (3), and in the USA (2).

The 19 main factories (production partners) include 26 NCAB approved manufacturing sites. Our sustainability work is focused on the main factories in China where we have the highest risks, but also greatest impact.

## SOURCING THE BEST FACTORIES

We work with our factories in long-term partnerships and we place high demands on them. As part of NCAB Group's sourcing process, potential factories are audited on site for quality and sustainability performance. This year one potential factory was stopped in the sourcing process due to not complying with the law; regarding paying medical and social insurances.

### HIGH DEMANDS ON OUR FACTORIES

Our main factories must:

- Pass our quality and sustainability audit
- Be ISO 9001 certified (quality management system)
- Be ISO 14001 certified (environmental management system)
- Report on conflict minerals according to the framework provided by the Responsible Minerals Initiative (RMI) and follow the Responsible Minerals Assurance Process (RMAP)
- Follow EU legislation regarding raw material content (RoHS and REACH)
- Comply with local regulations regarding water quality and emissions to water
- Sign and comply with our Code of Conduct

## 14 OUT OF 21 MANUFACTURING SITES AUDITED

Apart from the audits in the sourcing process we conduct sustainability audits to continuously improve our partners environmental, social and ethical performance. We focus our sustainability audits in our main factories in China. End of 2017 we have 14 main factories (production partners) in China which includes 21 manufacturing sites. So far we have audited 14 of the manufacturing sites (67%). Our goal is 100% audited manufacturing sites by the end of 2018.

## AMBITIOUS AUDIT PLAN AHEAD

For the first time, 2017 saw one colleague in China dedicating 100 percent of her time to sustainability work. The work includes sustainability auditing and improvements. This enables us to work on sustainability issues more proactively and in close dialogue with our factories. Our plan is to conduct a full sustainability audit of all of our main factories every second year, and in-between, make follow-up audits that focus on the specific improvement areas identified. In 2017 we conducted 11 audits in total (whereof 6 in potential factories) and 7 follow-up audits.

## WE GO INTO DETAIL

We make a point of having the audits conducted by local employees. It helps us to get the true picture since they can

read original documents and talk with factory employees in their language. In our sustainability audit we work according to an audit template with detailed questions within the areas of Management Systems, Human Rights, Labour and Working conditions, Health and Safety, Environment, and Business Ethics. Interviews with people at different levels in the organization, document checks and visits to both factory and dormitory are important parts of the audit. We summarize our findings in a report, agree with factories on corrective actions, and follow up within six months to verify that the required improvements have been implemented.

## OVERTIME WORK STILL A BIG CHALLENGE

The fact that there are a lot of different local regulations in China pose a challenge to those conducting the audits. We need to make sure that we are updated on these regulations to ask the right questions. Another challenge is overtime work, an area where most factories still lack solutions. However, we always check that workers get paid for their overtime, that pensions and social insurances also take in overtime, and that workers get one day off every seven days.

## RISK CHEMICALS IN PRODUCTION

We have mapped and identified which chemicals in our production processes are most hazardous for health and the environment. They are legal to use and it is often difficult to find alternatives. In our sustainability audits, we look closely at how chemicals are used and handled in production. Common improvement areas that we address concern personal protection equipment and training for emergency leakage.

## CONFLICT-FREE MINERALS SUPPLY CHAIN

Certain minerals (tin, tantalum, tungsten and gold) that are used in electronics have been linked to systematic violence and human rights abuses in certain conflict areas. Tin and gold are metals used in the production of PCBs. We direct our factories to only work with smelters that are compliant with the Responsible Minerals Initiative (RMI) and work together with our factories, training them on how to use the RMI audit scheme to control their supply chain. NCAB Group is keeping a close eye on EU legislation concerning conflict minerals, to ensure that our approach covers both US and EU regulations.



Control of fire-fighting equipment status and maintenance plan is part of the sustainability audit.

## Supply chain

# Key findings and improvements 2017

Auditing is a well-established work method for both NCAB and the factories. Here we have listed some examples of what improvements our audit findings have contributed to in our factories during 2017:

### MANAGEMENT SYSTEMS

- The introduction of a comprehensive management system for sustainability, risk analysis and focused training in the area.
- Appointed management representative for labour and working conditions, health and safety conditions.
- Training programs to include all employees, not only focus on newcomers.
- Implementation of systems where employees can raise their ideas and concerns.
- Improved law compliance process.
- Implementation of systems and sustainability requirements to suppliers and sub-suppliers.

### HUMAN RIGHTS

- Improved systematic follow-up of conflict free minerals in supply chain.
- Human treatment – added zero-tolerance on any kind of discrimination in hiring rules and management rules.

### LABOUR AND WORKING CONDITION

- Hiring procedure now clearly stipulates that employees shall not have to pay a deposit when hired.
- Amended employment contract to secure employees are free to quit their job and leave upon reasonable notice without penalty, and that medical insurance and pensions are paid as required by law and from start of their employment.
- The provision of all the insurance policies required by law to employees.
- No cases of child labour have been found, but factories have had to introduce action plans to handle it if such a situation should occur, as well as provide training for all employees.
- Defined and controlled working conditions for young workers (working hours and no night shift).

### HEALTH AND SAFETY

- Process and records in place for reporting and handling of accidents, incidents, and illnesses.
- First aid kits in each production area/floor, and first aid trained personnel in each shift.
- Personal Protective Equipment (PPE) - correct signs and PPE list for each process, and improved supervision of PPE usage.
- Updated hazardous waste material list, and implemented regular checks.



Jenny Zhang, Sustainability Manager, NCAB Group China, checking the emergency lights in the GCI factory, Zhuhai.

- Temperature control in production areas implemented.
- Light level - increased test frequency in production and office areas.
- Emergency training material and handling plans now also include earthquakes and typhoon situations.
- Implemented training program for canteen employees covering communicable disease transmission.
- Improved the maintenance of fire protection systems and better control of the equipment and emergency exits.
- The provision of training in handling and storage of chemicals as well as ensuring chemicals are correctly handled. Also now ensuring that workers are licensed to handle chemicals.
- The introduction of a comprehensive maintenance plan for all safety equipment.

### ENVIRONMENT

- Implemented process to identify and keep up to date with all relevant environmental permits, approvals, licenses and registrations that the factory needs.
- Acid chemicals and alkaline chemicals kept separately.
- Color code label system to classify different chemicals introduced.
- Training in the sorting of waste.

### BUSINESS ETHICS

- Implementation of Code of Business Ethics.
- Improved business ethics training material and training frequency, now for all factory employees.
- Implemented procedure for addressing employees or agents suspected of making or accepting improper offers of payments or gifts.



Supply chain **A voice from one of our factories**

## Working together for sustainable business development

Shenzhen Jove Enterprise Co, Ltd is a PCB manufacturer with 2000 employees and 3 manufacturing sites, located in Guangdong province, China. Mrs Wang Lu, Marketing Director, tells us about the journey together with NCAB Group.

### LONG-TERM PARTNERSHIP

We started working with NCAB in 2005 and have collaborated very closely with them ever since. Without NCAB as a customer we would not have grown as fast. We have received a lot of support from them, for example concerning quality management.



Mrs Wang Lu, Marketing Director,  
Shenzhen Jove Enterprise Co, Ltd

### WE APPRECIATE THE SUSTAINABILITY AUDITS

NCAB has visited us for sustainability audits twice, the first time in 2011 and then in 2017. We welcome these audits since they help us to improve our routines and awareness of these issues. As we improve the conditions for our workers, this leads to increased employee engagement, which ultimately strengthens our business.

### IMPROVED SUSTAINABILITY TRAINING AFTER THIS YEAR'S AUDIT

We are certified according to OHSAS 18001, ISO 9001 and 14001, which means we have systems in place for

health and safety, quality and environmental governance.

One finding from this year's audit brought up the need for increased sustainability training to raise awareness on rights and obligations within our organization. As a result, we now keep records to ensure that all our employees are trained in safety matters for different processes and machines. We have also made the instructions easily available on the employees' mobile phones. Another improvement as a result of this year's audit is that we have made sure that the different sustainability perspectives are represented at top management level, for example health, safety and environment.

### ENVIRONMENTAL PROTECTION AND AUTOMATIZATION IN FOCUS

During the last two years we have focused a lot on environmental protection and invested in better waste water treatment facilities. In December we installed solar panels, which we use to power our HeShan factory. In the coming year, we will focus more on limiting the number of processes that are tough and demanding for our workers, through more automatization, for example in the plating of PCB:s. We are proud of our sustainability work, but there is always more to do, especially with the help of new technology.





Federica Oddi, NCAB Group Italy, attending the Global Introduction together with new colleagues from around the world.

## Employees

# Our employees – our success

Our workforce has grown from 310 to 345 in one year, and our engaged employees are our success factor. Our employee turnover rate is low, an indication that our people like what we offer - a unique culture and a stimulating global environment, as well as considerable possibilities for continuous learning.

### LONG TERM GOAL

- Attract, keep and develop the best people.

### MEASURABLE GOAL

- Top scores in employee satisfaction and engagement.

### OUR STRENGTHS

- Our culture, global working environment, continuous competence development.

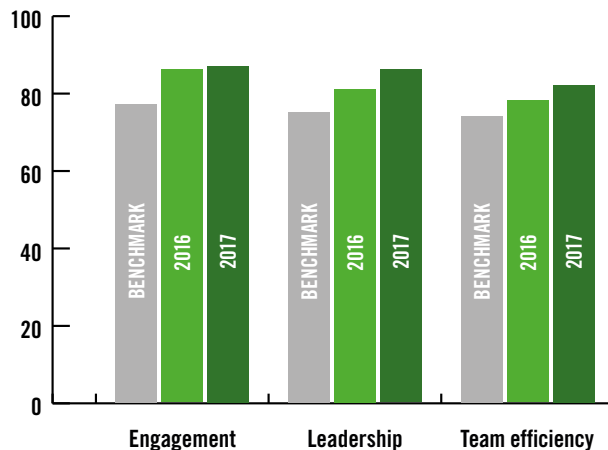
### GREATEST RISKS

- Failure to attract and recruit the right people and technical competence in a competitive market.



## INCREASED SCORES ON EMPLOYEE ENGAGEMENT SURVEY

In 2017 we conducted an employee engagement survey for the second time, which returned excellent scores. Indexes for engagement, leadership and team efficiency all increased in 2017 (see table), and NCAB Group stands out high above benchmark. Also we are proud to see that the response frequency rose from 91 to 97 %, another sign of our employee's engagement. Our results show that our goals, culture and values are instilled in our everyday work. Our goal going forward is to keep up the high scores.



The result of our annual employee engagement survey. The benchmark is based on 200 international companies using the same survey.

## WE BELIEVE IN COOPERATION AND EMPOWERMENT

The employee engagement survey revealed the following main strengths; clear goals for our work, encouraged to test new ideas, well-functioning cooperation with working group, work towards goals, ability to influence work, and empowered to take own decisions. Areas to develop were mostly on a country basis, and will be further in focus at each local company.

## HIRE FOR ATTITUDE AND TRAIN FOR SKILLS

One general area for improvement in the employee engagement survey is the technical competence among our employees. We work hard to recruit people with high technical skills, but it is a challenge, and if we do not manage to find the right people it could mean a risk in the long run. To get the right people and competence in a competitive market our approach is increasingly to hire people with the right attitude, meaning people who fit into the NCAB Way - our values, culture and leadership style - and then train them to obtain the right skills. This approach needs to be further developed, for example through more structured individual competence plans and a greater number of career steps. During 2017 we launched a new career step: Global Account Manager.

## INDIVIDUAL FOLLOW UP AND PLANNING

Every manager holds yearly Performance Development Appraisal (PDA) meetings with his/her employees, to discuss goals, motivation, work-life balance, development and our company values etc. Our new HR-system provides support for the preparation, structure and follow up of the meetings. One outcome of the PDA is an individual development plan,

that sets out the competence development path for the coming year. This year we saw that 88 % of all employees partook in a PDA meeting. We want to further improve this figure and our new HR-system helps us to ensure that everyone is included.

## GLOBAL COMPETENCE PLAN

Apart from for all the knowledge sharing among colleagues and the individual competence plans, we have an ambitious three-year plan for the whole company's competence development. Last year the Global competence plan focused on technical competence, this year the focus was on sales and in 2018 it will be on customer support. As we are conducting the training ourselves it is tailored, in the true sense of the word, for NCAB Group, in the NCAB Way.

## LEADERSHIP RECIPE

During 2017 we developed a two-day program for leadership. The program follows our "leadership recipe", based on our values, and was rolled out in China in 2017, with 21 participants. It is scheduled to be held in Europe and USA in 2018. Our leaders are evaluated according to the recipe in dialogue with their employees.



NCAB Group's sales training program in action, here at a KAM School session in Portsmouth, NH, USA.

## CATALOGUE FOR TRAININGS

In 2017 we compiled a catalogue containing all of our training programs for an easy overview. Moreover, all the training material is now available to everyone internally, for easy access and use. One theme that we need to highlight more in our trainings is sustainability, to empower our employees to act as ambassadors for our sustainability work.

## SHARING OUR VALUES AND ETHICS

NCAB Group is located in 14 countries and for us it is crucial that everyone is guided by the same values and goals. Our new employees participate in the NCAB Group Global Introduction, where the main focus is on team building, our values and company culture. Business ethics and anti-corruption are other important topics with discussions there led by our CEO. As a global operator, we have to be aware of the cultural diversity within the company, but always stand by our Code of Conduct. This Code is our guiding document, wherever we may come from, or wherever we do business. We have also opted to include business ethics on the agenda at every meeting of our Managing Directors.

## ONBOARDING

To further make sure all new employees get a good start at NCAB Group and a good platform for the job we have an onboarding program that includes all the steps that you need to go through - from signing papers and reading policies to training and education, both general and job specific. This program was implemented in our new HR-system during 2017. It allows all employees to easily follow what steps they have completed, and make sure they get all information needed.

## GLOBAL CONFERENCE – INSTILLING OUR VALUES

Each year, we gather the whole company - all our 14 local businesses - for the annual NCAB Group Global Conference. This year, the event took place at Karlovy Vary, Czech Republic, and the theme of the team building events and workshops was “Interacting”. The Global Conference is a great investment in relationship building, inspiration and reaffirming our company culture and values. It provides a massive motivational boost, and unites us as a global, but at the same time family-like, company.

## INCLUSIVE CULTURE

Having employees from all over the world is a great asset. Our Code of Conduct provides guidance on how we should act

in relation to our colleagues and business partners, zero tolerance towards harassment and non-discrimination included. In the employee engagement survey, 96 % responded that they feel respected by their colleagues, which is higher than the benchmark 86 %. However, we want to improve this figure further, through better internal communication.

We encourage our employees to change positions within NCAB Group cross-border as one way of broadening cultural and intellectual exchange. In this respect we are happy to see an increased movement of personnel between our local companies in 2017.

## SMALL STEPS TOWARDS MORE GENDER BALANCE

The tech industry in general faces challenges in attracting and promoting women – and while the gender balance at NCAB Group is fairly equal, there is a distinct imbalance when it comes to Key Account Managers, Managing Directors and on our board. During 2017 we increased the number of female Key Account Managers by 6, to 19 (34%) in total, and the company saw its first two women elected to the board. It is crucial to make women in these positions visible to serve as a source of inspiration for other women. Statistics showing our gender and age balance can be found on page 5.

## What were your impressions of the NCAB Group internal training?



**NCAB GROUP ITALY**  
**FEDERICA ODDI**

Customer Support

“The onboarding program has been very useful and already my first day everything was arranged for me with all the documentation, expectations and trainings gathered for an easy overview and access. I was very impressed by this way of introducing new employees and I am proud to be part of the NCAB Group. Everyone has a great attitude and are team players.”



**NCAB GROUP GERMANY**  
**HÜSEYİN ANAC**

Technical Support Manager

“The NCAB Group Technical School covered many topics that will help me clarify technical details to the factories. With the new knowledge I will also be able to better explain technical aspects and our added value to our customers. It was also a great opportunity to share knowledge and strengthen the relationship with my technical colleagues from around the world.”

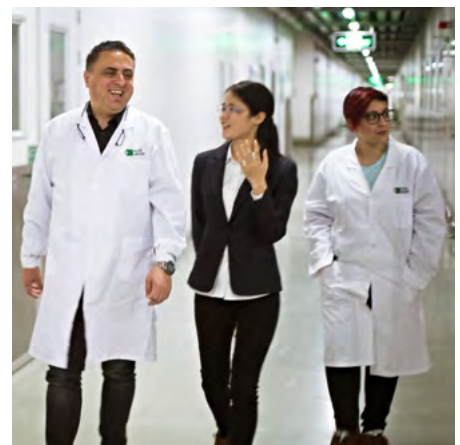
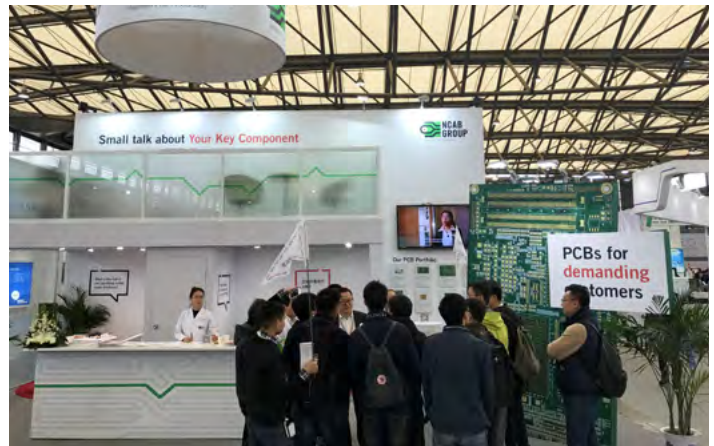


**NCAB GROUP USA**  
**TIFFANIE CROCKER**

Key Account Manager

“The NCAB Group KAM School provided valuable training to our team. The most important thing I learned is to structure my meetings better to ensure each meeting brings more value to the customer.”









During 2017 more than 160 customers visited our factories and our Factory Management operations in China.

## Customers

# Sustainable products through close cooperation

Quality first is one of our company values and it guides our everyday decisions. Working together with both customers and factories, we make high quality PCBs in a sustainable way, by selecting the right factory for each project and constantly keeping an eye on the processes. For a more sustainable design we look to engage with our customers in the product development phase.

### LONG TERM GOAL

- Steer the sector in a green direction.

### MEASURABLE GOAL

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

### OUR STRENGTHS

- Systematic work with sustainability and quality issues, close relationships and dialogue with customers and factories, PCB technology and manufacturing knowledge and experience.

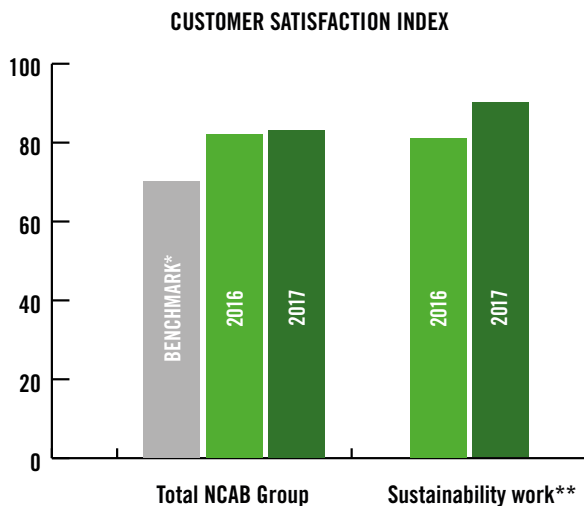
### GREATEST RISKS

- Environmental impact through transportation.



## A CHALLENGING AND SUCCESSFUL YEAR

2017 has been both a demanding and a successful year. We have seen our business grow whilst having to handle trends which are seeing customers demand shorter lead times on more complex products. At the same time, factories have focused more on improving efficiency through achieving greater output without the same linear increase in head count. Despite the challenges, our result from this years' customer satisfaction survey improved further, both with regard to customer satisfaction in general, but also how customers rate our focus on sustainable business. We are happy to see that our sustainability work has become much more broadly recognized by many of our customers.



## HIGH SERVICE LEVEL AND EASE OF DOING BUSINESS

Our customer survey has shown that our greatest strengths are the ease of doing business with us, our service and our communication. These are important assets that we continue to nurture. Some areas where our customers gave lower scores are related to price and prototype offer. We will not cut corners or reduce our service offering in order to compete for price, instead we focus on the lowest total cost, with high quality and reliability included. We will continue to further develop our prototype offering in 2018.

## DESIGN SUPPORT FOR SUSTAINABLE PRODUCT DEVELOPMENT

A sustainable approach to product development starts with the design of the PCB. Our design guidelines make it easier for our customers to design products based upon manufacturing capabilities, with our technical experts also at hand to discuss such issues. Designing within factories' capability boundaries enables us to reduce the risk of processing errors and thus quality problems. That in turn saves time and reduces scrap and hence lowers our environmental footprint. The guidelines are appreciated by our customers and during 2017 we developed design guidelines for some of our advanced technologies. We will continue developing more design guidelines for specific technologies, and we need to raise more awareness of our design support, especially among end customers who own the design decisions. We highlight this in our customer seminars.

## CHOOSING THE RIGHT MANUFACTURING PARTNERS

NCAB Group always works directly with the factories that produce our PCBs and we see them as long-term partners.

\*Average among other companies using the survey.

\*\*No benchmark for Sustainability work, as this is a specific NCAB question.



Customer seminar in Gjøvik, hosted by NCAB Group Norway. On the agenda were Sustainability, factory management, and customer presentations.

We have a well-defined process for sourcing, evaluating and selecting potential factories (read more on page 11). Once approved, the factory is included within our Preferred Supplier List. We evaluate every factory's capability and use our own judgment of what we see as the right capability level, as a basis on which to select the factory best suited to the requirements of each specific customer product.

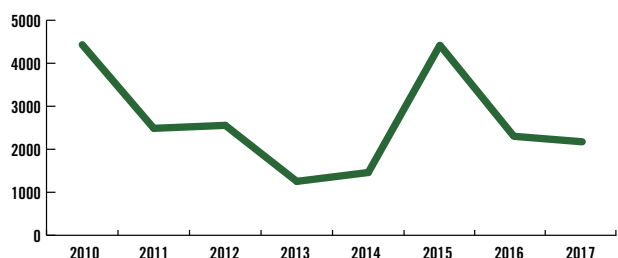
## CLOSE DIALOGUE AND CONSTANT IMPROVEMENT

We continuously work to improve our processes and enhance on site factory management and production control. All our main factories are evaluated on a regular basis through:

- Daily: Analysis of KPI data, daily follow-ups relating to any live issues and constant engineering activity and progressing of order books.
- Monthly: Performance review meetings and reporting figures for quality performance, delivery performance, service level feedback, factory development and improvement areas, focused process audits.
- Annually: Quality audit, capability evaluation, factory positioning review.
- Bi-annually: Sustainability audit

The vast majority of our factories are located within a reasonable commute to our China office, which helps to facilitate communication and rapid reaction to any issues that arise. Every local company also has personnel responsible for technical and quality issues, thus enabling us to maintain both the needs and voice of the customer when dealing with such issues.

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



Our figure for defective parts per million produced PCBs decreased slightly in 2017 through continued proactive and reactive quality work.

## OUR CO<sub>2</sub>e EMISSIONS

EMISSION	2016		2017	
	t* CO <sub>2</sub> e	kg CO <sub>2</sub> e/kg GOODS	t* CO <sub>2</sub> e	kg CO <sub>2</sub> e/kg GOODS
Air	8 500	5.84	11 535	5.90
Sea	72	0.18	264	0.48**
Train	60	0.83	113	0.88
Total	8 632	4.48	11 913	4.52

Emissions from our transportation activities from Hong Kong to our warehouses in Europe and the USA. \*t - tonne. \*\*Uncertain result due to uncertainties in the emission data. Further analysis of the data will be conducted in 2018.

### DEMAND FOR SHORT LEAD TIMES – A CHALLENGE FOR THE CLIMATE

The major part of our CO<sub>2</sub> emissions from our transportation activities comes from the transport of our products from Hong Kong to our warehouses in Europe and the USA. The partners we have for transportation have ambitious targets

to reduce their CO<sub>2</sub> emissions. However 80-85 percent of our shipments from Hong Kong are by air. Sea and rail transport are both cheaper and result in lower emissions, but due to our customers' demands for short lead times, they mainly choose the air alternative. What we can do is to further improve communicating the environmental impacts of the different alternatives to enable them to make informed choices. In 2017, we saw an increase of goods transported by sea and rail.

### USING METALS IN A RESPONSIBLE WAY

A rapid increase in consumption of electronics has led to a scarcity of certain metals and causing a global rise in their value. In order to avoid using more metals than necessary, NCAB Group produces high quality PCBs with a very long life cycle and also strives to reduce scrap throughout the production process. We also take care of electronic waste, according to the local waste laws where we operate, so that it may be recycled. Some of our companies and factories may even be able to sell the cleaner waste from which the metals can be retrieved.

## Customers Voices from customers

# Factory visit for reality check

We encourage our customers and employees to visit our factories to experience conditions on the site. Transparency is important to gain understanding of both PCB production and the sustainability aspect of it. This can inspire dialogue about ways of creating a sustainable business together. During 2017 we had visits from 169 customers from 74 different companies.



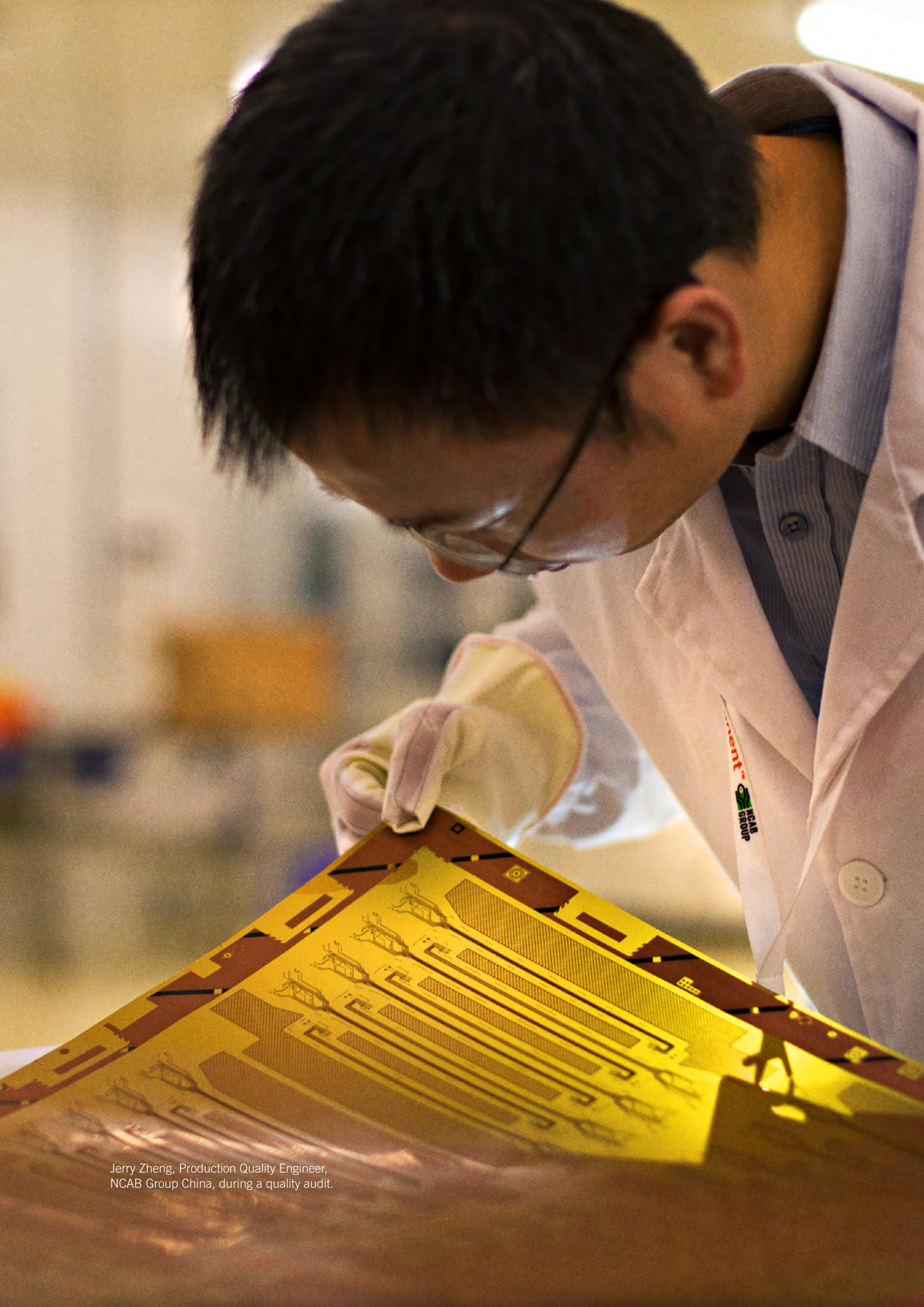
“It was very valuable to see how the PCB factories in China have developed over the past ten years. I was also impressed by the size and structure of NCAB Group's organization in China.”

Krister Parck, Electronics Designer,  
Acetronics AB

“It was a very informative and eye-opening trip. I did not know anything about PCB manufacturing before and seeing the entire manufacturing process gave me brand new perspectives. It was also interesting to see the factories work with sustainability issues and how they develop in dialogue with NCAB Group.”

Jessica Hammerin, NPI Sourcing Specialist,  
Trimble AB





Jerry Zheng, Production Quality Engineer,  
NCAB Group China, during a quality audit.



# GRI content index

Since 2014 we annually publish a sustainability report. This is our sustainability report for 2017 and it covers our entire global business. Our last report was published in March 2017. This report has been prepared in accordance with the GRI Standards: Core option (you will find more information about GRI on [www.globalreporting.org](http://www.globalreporting.org)). The GRI content index below will help you navigate through the report.

GENERAL DISCLOSURES		
DISCLOSURE	DESCRIPTION	PAGE/COMMENT
<b>ORGANIZATIONAL PROFILE</b>		
102-1	Name of the organization	Front page. Registered company name NCAB Holding AB.
102-2	Activities, brands, products, and services	4-5
102-3	Location of headquarters	4, Back page
102-4	Location of operations	4-5
102-5	Ownership and legal form	*See bottom of page
102-6	Markets served	4-5
102-7	Scale of the organization	4-5
102-8	Information on employees and other workers	Normally offer permanent employment contracts. 96.5 % of employees working full time.
102-9	Supply chain	11
102-10	Significant changes to the organization and its supply chain	No significant changes
102-11	Precautionary Principle or approach	11
102-12	External initiatives	9, 11, 22
102-13	Memberships of associations	IPC, local trade organizations
<b>STRATEGY</b>		
102-14	Statement from senior decision-maker	6-7
<b>ETHICS AND INTEGRITY</b>		
102-16	Values, principles, standards and norms of behaviour	4, 15, 16
<b>GOVERNANCE</b>		
102-18	Governance structure	5, 7, 9
<b>STAKEHOLDER ENGAGEMENT</b>		
102-40	List of stakeholder groups	8
102-41	Collective bargaining agreements	0 % among employees
102-42	Identifying and selecting stakeholders	8-9
102-43	Approach to stakeholder engagement	8
102-44	Key topics and concerns raised	11-13, 15-16, 19-20

\* NCAB Group (NCAB Holding AB) is a Swedish company. 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 NCAB employees.



DISCLOSURE	DESCRIPTION	PAGE/COMMENT
<b>REPORTING PRACTICE</b>		
102-45	Entities included in the consolidated financial statements	NCAB Group included both in financial statements and Sustainability report
102-46	Defining report content and topic boundaries	8-9
102-47	List of material topics	9, 23
102-48	Restatements of information	No restatements
102-49	Changes in reporting	No changes
102-50	Reporting period	22
102-51	Date of most recent report	22
102-52	Reporting cycle	22
102-53	Contact point for questions regarding the report	8
102-54	Claims of reporting in accordance with the GRI standards	22
102-55	GRI content index	22-23
102-56	External assurance	Not externally assured.
<b>TOPIC-SPECIFIC DISCLOSURES</b>		
<b>205</b> <b>103-1, 2, 3</b>	<b>ANTI-CORRUPTION</b>	<b>9, 15</b>
205-2	Communication and training in anti-corruption policies and procedures	15
205-3	Confirmed incidents of corruption and actions taken	No confirmed incidents
<b>305</b> <b>103-1, 2, 3</b>	<b>EMISSIONS TO AIR</b>	<b>9, 20</b>
305-3	Other indirect greenhouse gas (GHG) emissions (Scope 3)	20
305-4	Greenhouse gas (GHG) emissions intensity	20
<b>308</b> <b>103-1, 2, 3</b>	<b>SUPPLIER ENVIRONMENTAL ASSESSMENT</b>	<b>9-11</b>
308-1	Percentage of new suppliers that were screened using environmental criteria	11
<b>404</b> <b>103-1, 2, 3</b>	<b>TRAINING AND EDUCATION</b>	<b>9, 15-16</b>
404-3	Percentage of employees receiving regular performance and career development reviews	15-16
<b>405</b> <b>103-1, 2, 3</b>	<b>DIVERSITY AND EQUAL OPPORTUNITY</b>	<b>9, 16</b>
405-1	Diversity of governance bodies and employees	5
<b>414</b> <b>103-1, 2, 3</b>	<b>SUPPLIER SOCIAL ASSESSMENT</b>	<b>9-11</b>
414-1	Percentage of new suppliers that were screened using social criteria	11
<b>103-1, 2, 3</b>	<b>QUALITY</b>	<b>9, 18-20</b>
NCAB Group disclosure	Sustainable product development and quality assurance	18-20
<b>103-1, 2, 3</b>	<b>CONFLICT MINERALS</b>	<b>9, 11</b>
NCAB Group disclosure	Work for conflict mineral-free supply chain	11





As part of the sustainability audit, NCAB Group checks the factories' wastewater treatment processes and data. Here Jenny Zhang, Sustainability Manager, NCAB Group China, is taking part in a water sample test to measure the copper content at this stage of the cleaning process. This manual test is just one of the methods used at this factory, Suntak, Jiangmen, where automated tests and live data measurements are applied at other stages of the water treatment process.

## **NCAB GROUP**

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