

A large, stylized graphic element in the top left corner, consisting of three vertical, downward-pointing arrow-like shapes in a light gray color, arranged in a slightly overlapping manner.

#42016

INFOCUS:

A blue-tinted X-ray image of a human hand, showing the bones of the fingers and palm. A small, square, white object is visible on the palm area, possibly a sensor or a small component.

Future strategy

– preparing for the unforeseeable



Rikard Wallin is MD of NCAB Group Sweden and also an International Certified Future Strategist. Here together with Anna Lothsson, Strategic Purchasing Manager and Martin Magnusson, VP Sales and Marketing, NCAB Group

What lies around the corner? It is of course impossible for anyone to know with absolute certainty; however, it's important for businesses to examine their environment in detail in search of likely future developments. To gain inspiration and tips on what can be worth including in such an analysis, we turned to the NCAB Group's certified future strategist.

Rikard Wallin is Managing Director of the NCAB Group in Sweden and has over 20 years' experience in the electronics industry. He is also qualified as International Certified Future Strategist.

"I have been fascinated for a long time by the way companies often apply concepts that have brought success in the past and then do it over and over again, when in fact what they need to do is to look for something new and different. What prompted me to embark on future strategy studies was a keenness to find ways to avoid being lured into such a trap. The course provided useful tools to prepare for change. I have been applying them both in our internal discussions at NCAB and in dialogue with our customers and partners."

What is future strategy all about?

"Successful future strategy is very much about intelligence and analyzing what is happening in the wider world. It is important to picture the world beyond customers, suppliers, the supply chain and other people or areas that you are directly involved with. We need to look at what's happening in the technology sector, in financial and cultural fields, within politics, health, media and so on. What trends may affect not only the company itself but the players within its immediate circle? What affects them will of course ultimately also affect you. What sort of future scenarios emerge from this analysis, and what do you need to do to prepare yourself for them? Should you try something new?"

Why is it important for companies to carry out future analysis?

"You can't, as I say, just carry on as you have always done if you want to continue being successful going forward. We live in a time

"We live in a time of constant change. So you can't just carry on as you have always done if you want to continue being successful going forward."

RIKARD WALLIN, MANAGING DIRECTOR, NCAB GROUP SWEDEN

of constant change. Businesses need to closely examine what they might need to change as a consequence of changes in the world around them and then apply the appropriate measures. Their decisions and actions could make the difference between survival or failure. I usually refer to Kodak as a worst-case scenario. They actually invented the digital camera, but despite this, they failed to foresee the massive changes in their own industry and what these changes would lead to. This giant company that had once been a pioneer in making photography accessible to everyone, did not manage to realign their operations to meet the digital age. They went bankrupt in 2012, only to reappear under a new guise in 2013."

What current trends do you think may significantly impact the electronics industry going forward?

"Looking at the world economy, one major problem is an exaggerated fear of investment. One could assume that the way out of the current slow growth situation should, on the contrary, be to up investments. I would advise companies generally to focus on expansion, new markets, new products and new target groups.

Invest in the skills at your disposal and choose the right suppliers and partners who are experts in their respective fields. In this way, they can help you to improve and to boost your production. As far as electronics manufacturers are concerned, it's vital they have the ability to choose smart materials and the right amount of technology to put into the product.

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“Technology development is obviously important to the electronics industry. We are seeing how electronic content is increasingly being incorporated into all sorts of products. There is, for example, much talk about the Internet, i.e. different types of appliances and other items that are used both in industry and in our everyday lives that are connected to the Internet. It is difficult to know specifically what will make good, but the possibilities are endless and every manufacturer will want to incorporate an electronic function into their products. The electronics industry should therefore have no real problem in remaining viable. What is difficult to ascertain is the level of the electronics in different products, whether it will be basic or more advanced. You have to dare to tread new ground to get things right.

“The growing levels of automation within manufacturing is another trend that could change the playing field in the industry. Together with the increasing labor costs and higher demands, for example the environmental issues faced by industries in Asia, the difference between Asia and Europe could eventually be evened out. That would open up the preconditions for the growth of a strong electron-

ics industry in Europe and North America. In Sweden, for example, there is a widespread misconception that the domestic electronics industry is no more. In fact, electronics companies in Sweden employ some 50,000 people and have a turnover of EUR 150 billion. By applying a high level of automation, concentrating on high-quality and focusing on the right products, the electronics industry is now

TRENDS THAT ARE SIGNIFICANT TO THE ELECTRONICS INDUSTRY

- Considerable investments needed in order to recover from the world economic crisis.
Conclusion: Focus on expansion, invest in equipment and skills.
- A technological era of more electronics in all kinds of products.
Conclusion: Have the courage to test new approaches in order to establish the appropriate level of electronics each product should contain.
- Increased automation within manufacturing.
Conclusion: New potential for competitive electronics manufacturing in high-cost countries.
- Sustainability becomes the focus for companies and individuals.
Conclusion: Sound sustainability work opens doors to more business.



Internet of Things means that different types of appliances and other items used both in industry and in our everyday life that are connected to the Internet. McKinsey Global Institute predicts that the Internet of Things will generate up to 11 billion dollars by 2025.



Timo Ranniko, Technical Manager of NCAB Group Finland, is holding a seminar about PCB technology.

expanding in the West. What you then need are the skills to win over customers. Again, investment is vital, both when it comes to machinery, equipment and competence, as well as in the supply chain.

“Another strong trend that will impact all industries going forward, not least the electronics industry, is the new and broader definition of sustainability. We are seeing a worldwide shift in the values of both individuals and businesses. Products and services will build on sustainability in all its aspects. We will be looking beyond environmental and climatic impact. The focus will also be on economic and social sustainability, for example, on the working and living conditions of the production staff.

“I think we will see some sort of mass production using 3D printing within five years, but it is difficult to predict how long it will take to perfect the technology.”

RIKARD WALLIN, MANAGING DIRECTOR, NCAB GROUP SWEDEN

“In this context, things have changed massively compared to how they were four years ago when NCAB seriously began prioritizing durability. An issue that was initially treated with relative indifference has now become part of everyone’s agenda. Today, the trend in many places - both in Europe, North America and China - towards serious sustainability work opens doors to more business. However, one should not underestimate the complexity of the issue. We need to always dig deeper and try to identify better ways of doing things, in all aspects of one’s operations.”

How does the NCAB Group handle these trends? Starting with the need to invest?

“To begin with, we invest in our human resources. We want to attract and retain the very best. We also invest in production through our

comprehensive approach to factory management in China. We work exclusively with the factories that are developing and progressing both in terms of quality, new technology, working conditions and sustainability in general. Our onsite staff help the factories improve through our audits and expertise. We invest in people, the factories invest in machinery, facilities, personnel and so on, so that our customers can feel comfortable and secure with our choice of partners.

“The transparency that NCAB applies towards its customers is also an investment of sorts; we enable them to engage with the factories, we work through the audits and we produce in the factories. This honesty and transparency helps build confidence among many customers in their business relationship with us.”

And how about technology developments?

“I mentioned that all kinds of products would come to incorporate electronic content making it even more important to achieve the right level of technology and complexity necessary. In this respect, our role will also grow in importance, since we help customers make the right choices and, so to speak, guide them through the PCB jungle. Making things less complicated than necessary helps avoid the risk of disruptions and complaints. So what’s important for us here? Is it to continuously keep updated when it comes to PCB manufacturing so that we can, from case-to-case, help the customer choose the right level of technology, the right materials and the most appropriate circuit board arrangements, etc.?”

“Then there are technical innovations like 3D printing that could radically change production. So far this technology is still only at the testing stage, but it may have a potential to be applied in PCBs. I think we will see some sort of mass production using 3D printing within the next five years, but it is difficult to predict how long it will take to perfect this technology. I don’t think it will play a dominant role within PCB production. Our task is to grow our expertise in these kinds of innovations. Otherwise, our role will not change. We will continue to secure the quality of technology, materials and results in small and large series, therefore customers will continue to need a competent supplier.

“One approach we’ve adopted to test new things has been to offer PCB design as a service in China. We are testing if the market is ready for this and whether it can be of benefit for customers and for NCAB. It is an example of how we are never satisfied with where we are, on the contrary, we are always seeking new opportunities to invest and improve.”

And where is NCAB with regard to the trend towards increased automation?

“We see PCB factories in Asia investing in increasingly sophisticated

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SOME FIGURES ABOUT THE INTERNET OF THINGS AND AUTOMATION

- According to Gartner there were 9 billion connected things at the end of 2015.
- Cisco predicts that by 2020 there will be over 50 billion connected things, for example, 250 million vehicles.
- McKinsey Global Institute predicts that the Internet of Things will generate up to 11 billion dollars by 2025.
- In 2015, sales of industrial robots rose by 15% compared with the previous year.
- In the electronics industry, the figure was 41%.
- With a share of 27%, China was the largest market for industrial robots in 2015. The four other major markets are South Korea, Japan, USA and Germany.

(Source for figures on industrial robots: Executive Summary World Robotics 2016)

equipment, where a process that once required several steps to complete can now be amalgamated, and require fewer manual interventions. However, when it comes to PCBs, I do not believe that we will see any major transfer of production to Europe or North America. If you want to produce electronics in a broader sense in high-cost countries, it would be perfectly feasible if you focus on quality, high-end equipment and competence. NCAB’s strength lies in our ability to persuade product owners that it is perfectly alright to manufacture PCBs in a different time zone. This is at the core of what we do today, and if electronics production is on the rise in the West, that brings only positives for us at NCAB.”

You have already mentioned, NCAB’s focus on sustainability; what is your approach on that issue?

“To move forward on the sustainability front, we need to make it a culture, which permeates in everything we do. It is important to work with these issues all the time, put them at the forefront in our dialogue with employees, customers and suppliers alike. When NCAB talks about Full Responsibility - which is one of our values – it tells that we are taking responsibility for our planet. We apply the



- NCAB Group China has a design team of nine people that offers our customers PCB design as a service, something we haven’t been able to do earlier, says Rikard Wallin.

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ISO 26000 standard as a framework for our work. This means that we take in the bigger picture and work systematically on economic, social and environmental aspects of sustainability.

“The audits NCAB performs in the factories include one where we investigate aspects of sustainability, both in terms of working conditions, respect for human rights, management of chemicals and emissions, as well as verifying that no conflict minerals are used.

“Sustainability is also about product development. The less that needs to be disposed of during the production phase and the more efficient production is, the less resources are used. Keeping our consumption of electricity, raw materials and water to a minimum, makes a difference to the environment. That’s why we try to advise our customers not to over specify and complicate production unnecessarily. The products must also be durable. The worst thing that can happen is the product being rejected, which would mean all the resources put into production have been wasted.



Normally, we consolidate all goods at our export terminal in Hong Kong, from where it is then transported further. Given the fact that in many cases we use air transport, which has a significant climatic impact, this is a great challenge for us.

“With regard to transport, we face challenges given the fact that in many cases we use air transport which has a significant climatic impact. In such cases, we try to find ways of reducing the resulting emissions through, for example, a careful choice of supplier, jet fuel, route, fill rate, and so on. We are in dialogue with our suppliers and leave no stone unturned.”

Questions around the world: What future trends do you think will affect the electronics industry?



USA
TIFFANIE CROCKER

Key Account Manager,
NCAB Group USA

“One thing I see is a general trend amongst players in the industry taking their social responsibility by adopting appropriate programs. Manufacturers are prompted to go through their supply chain to determine if the various operations are conducted in a sustainable manner. This would include issues covering the environment, business ethics and human rights. Our customer’s confidence increases when they see that NCAB has already embraced this mindset, that we comply with ISO 26000 and are audited by an independent party.”



FINLAND
VEERA KÖPSI

Customer Support,
NCAB Group Finland

“Here in Finland, former Nokia employees, among others, have set up a number of interesting new start-up companies that will influence our operations going forward. Thanks to the most advanced technology, especially products that can be worn on the body, there will be more orders for high-tech printed circuit boards, as well as flex-rigid-flex. Furthermore, Finnish medical technology companies are also at the forefront in the industry and require highly advanced technology. New, interesting projects are emerging every month.”



CHINA
ANDY LIU

General Manager,
NCAB Group China

“The dramatic price rises that we have seen hit copper foil laminates will greatly impact the PCB industry in particular, and as a result factories with weaker purchasing power risk being edged out. It will be more difficult for factories to compete on price, and I foresee changes happening similar to those experienced by the semiconductor industry, with mergers and acquisitions. End-customers face a considerable risk of sudden interruptions in the supply chain. So it is vital they work proactively and find the right partners with strong purchasing power and well-established relationships with industry leaders. We can look forward to interesting times.”



What do we know about the future?

HANS STÄHL
CEO NCAB GROUP



In our efforts to ready ourselves for what lies ahead, NCAB held a number of workshops for its staff looking at the future and led by Rikard Wallin, Managing Director at NCAB Group in Sweden. Within the framework of these workshops, we went through a number of likely scenarios that would definitely affect NCAB's future. Obviously, events will happen that we do not have a clue about today, but at the same time, there will be changes that we already know we will most likely have to take into account and strategically adapt NCAB accordingly.

An example of what we have established through Richard's work is that the generation, which is today ten years old, will be influenc-

ing future purchasing behavior. We have also worked on a scenario involving the development of new technologies; technologies that affect the function of the PCBs or, in some cases, even completely replace the current technology.

By examining these factors, we can now prepare the ground for future changes in our strategy and make sure we will be able to continue delivering the latest technology in the future. At the same time we know that new patterns of behavior and innovations will emerge that we can't even hazard any guesses about today. However, by already having a handle on the "more likely" future scenarios, we are improving our ability to deal with the surprises!

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Are we taking up the wrong subjects?

We are always looking for interesting subjects that we could take a more in depth look at. If there is something you would like to learn more about, or perhaps you would like to comment on anything we have written, do get in touch with us and tell us more.

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