

Report

The State of Socially Responsible Manufacturing in the IT Industry

Analysis of compliance with criteria for socially responsible manufacturing among 17 brands with TCO Certified products.

TCO Development, Stockholm, Sweden, August, 2014

Brands with TCO Certified products included in this report:



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Executive Summary

Increasingly, IT-using organizations are looking for computer products that are environmentally preferable and made under socially responsible conditions. Yet shorter product cycles and growing demand for new technologies puts increasing pressure on industry and its complex supply chain to deliver new devices faster and at a lower cost. The result is often inadequate working conditions in manufacturing facilities, including long working hours, low wages and a lack of health and safety measures. The problem is widespread and well publicized through media and NGO monitoring.

In an effort to provide a solution for buyers looking for sustainably made products and a structure for industry to pursue more responsible manufacturing processes, TCO Development introduced initial criteria for socially responsible manufacturing in the TCO Certified sustainability certification for IT products in 2009. This was followed by expanded criteria and verification routines in 2012. The purpose was to set in place a structure and create a more transparent dialog with industry that TCO Development believes is necessary for real improvement and greater brand engagement to take place.

TCO Development has compiled findings from the first 17 brands that certified products according to the new criteria during the first year of validity – September 2012 - September, 2013. This report includes key findings and data from this first compliance period.

Criteria and value-based goals

The expanded criteria introduced in 2012 center upon brand adherence to the eight ILO Core Conventions, the UN Convention on the Rights of the Child and labor and social protection laws in the country of manufacture.

TCO Development has set three value-based goals with the new criteria:

1. **Responsibility** – increased brand responsibility for implementing safe and ethical working conditions in manufacturing facilities
2. **Structure** – an equal-access, objective platform for gradual improvements, including defined controls and benchmarks
3. **Transparency** – improved and open dialog about social issues between brands, manufacturers and other stakeholders

These goals allow for quantifiable measurement of progress towards sustainable development in the manufacturing phase of the IT product life cycle.

Verification tools

Verification of compliance is key to determining progress in the three goals of responsibility, structure and transparency. TCO Development has implemented three verification tools for assessing compliance with the criteria:

1. Code of conduct – either through EICC process, SA8000 or “Own Work” option
2. Third party factory audits – from Tier 1 (final assembly) facilities
3. Corrective action plan (CAP) – for addressing identified non-conformities

Verification is carried out by accredited third party expert organizations. Factories and products are also subject to follow up spot checks and audits.

Findings

The findings of the first year show that some progress has been made among several brands in the three value-based goals of responsibility, structure and transparency.

TCO Development has observed some brands taking a greater responsibility for working conditions in manufacturing facilities by engaging in the TCO Certified process and raising social responsibility issues to the senior management level. Several brands have also increased training in socially responsible manufacturing for their suppliers.

TCO Certified has provided brands with an equal-access platform and structure for improving their performance and measuring progress over time. For some brands this was their first time working with social responsibility in a structured way.

Through open and ongoing dialog during the TCO Certified process, we believe that transparency between brands, manufacturers and third parties has improved in several cases. In some cases it was the first time a third party was granted access to the manufacturing facility.

While there is evidence of progress, the analysis shows that priority and major violations persist, especially in the areas of poor working conditions, overtime hours and compensation, insufficient health and safety routines, labor law violations and restrictions on the right of workers to organize.

Moving forward we believe there is a need for structured implementation and follow-up of corrective actions if we are to see more widespread and continued improvement. The data in this report point to a need for more structure and routines for following up and implementing the code of conduct. There is a need for greater brand engagement in this area.

The TCO Certified program includes follow up spot checks of products and manufacturing facilities to evaluate continued compliance. This process will be used as a follow up method as TCO Development continues to monitor progress. Our ongoing collaboration with stakeholders from industry, research and user communities will help us continue our work to influence IT in a more sustainable direction in all phases of the product life cycle.

Introduction

Sustainability is an increasingly important aspect of society today. Businesses and organizations, both public and private, are under growing pressure from their stakeholders – customers, shareholders and the public, to act environmentally, socially and economically responsibly in all areas of their business. The IT hardware manufacturing industry is no exception. Organizations selecting computers and other electronics for employee use are increasingly looking to sustainability and social responsibility factors when choosing a brand, vendor or specific products.

While hardware brands have made progress in some “green” areas of their products – such as energy efficiency and lower levels of hazardous materials - concerns about the conditions faced by workers in production facilities are growing. On a daily basis, workers manufacturing and assembling computers, displays and mobile devices are subject to health-and safety risks, inadequate compensation and a lack of worker rights and protections.

This lack of socially responsible manufacturing in the IT segment is widespread and well documented. The problem continues to plague the industry.

In 2009, in an effort to provide industry and buyers alike with a solution to more sustainably designed and made electronic devices, TCO Certified, the international third party sustainability certification for IT products, introduced initial criteria for socially responsible manufacturing. The

criteria were added to existing sustainability requirements and applied to manufacturers and brands wishing to certify their product models. These first criteria required brands to declare a commitment to improving worker conditions in their factories where TCO Certified products are made. Certification also required that applying manufacturers also met the existing environmental, health- and safety as well as ergonomic criteria included in TCO Certified.

One result of these early criteria was that for some brands, this was the first time they had worked with socially responsible manufacturing in a structured way. For other brands, TCO Certified provided them with a structured, third party platform for further progress.

In 2012, the socially responsible manufacturing criteria were expanded in order to set in place the verification, structure and transparent dialog with industry that TCO Development believes is necessary for real improvement to take place. The new criteria require a strict code of conduct, annual third party verified factory social audits and a corrective action plan (CAP). The updated criteria are based on brand adherence to the eight ILO Core Conventions, the UN Convention on the Rights of the Child as well as labor and social protection laws in the country of manufacture.

In 2013 TCO Development conducted a review of findings and outcomes as seen among the first 17 brands that certified products according to the new criteria during the first year of validity – September, 2012 - September, 2013. This report provides an overview of these findings.

Combined, the 17 brands evaluated have certified close to 1,500 IT product models in total according to TCO Certified. The brands included in this report are Acer, AOC, ASUS, BenQ, Dell, Eizo, Fujitsu, HannsG, HP, Iiyama, Lenovo, LG, NEC, Philips, Samsung, Terra, and Viewsonic. Data and findings included in this report are aggregated and anonymous. Specific non-conformities with the criteria are handled individually with each brand involved. Compliance and corrective action plans are verified by an accredited third party reviewer specialized in social responsibility – a CSR reviewer - and appointed by TCO Development. All brands submitting products for TCO certification are also subject to follow up spot checks of products and audits of manufacturing facilities.

The findings focus on the state of socially responsible manufacturing at designated manufacturing plants carrying out final assembly of products intended for TCO certification. TCO Certified is a product certification and does not apply to a brand or manufacturer as a whole. Data in this report relate specifically to those products intended for TCO certification and the tier one (final assembly) facilities where they are manufactured.

During the analysis period some progress has been made among several brands. These improvements are characterized by greater transparency between brand, manufacturer and third parties, increased awareness of the issues at hand among brands as well as important concrete steps taken towards a more socially responsible manufacturing environment with ethical treatment of workers.

The improvements can be divided into three main value-based goals where TCO Development aims to have a positive effect:

1. **Responsibility** – increased brand responsibility for implementing safe and ethical working conditions in manufacturing facilities
2. **Structure** – establishing an equal-access, objective platform for gradual improvements, including defined controls and benchmarks
3. **Transparency** – improved and open dialog about social issues between brands, manufacturers and other stakeholders

While we do see evidence of progress, we also recognize persistent problems, including violations of labor laws and risks to worker health- and safety. One important conclusion by TCO Development is that there is a critical need for structured routines and follow up of implementation if more progress is to be made. As an international third party program, TCO Certified has been able to gain some insights into current progress and needs through the compilation of this analysis.

TCO Certified provides a framework to help brands systemize their work toward socially responsible manufacturing in the final assembly process of certified products. For all brands working to improve social responsibility in their operations, the program offers a structured way of meeting the increasing societal demands for environmentally and socially responsible IT devices.

With the breadth of sustainability issues facing the IT hardware segment, the scope of TCO Certified is not intended to address them all. TCO Certified does include a wide range of environmental, ergonomic, and health- and safety criteria, as well as socially responsible manufacturing requirements beginning in 2009. TCO Development will continue to monitor progress and drive our on-going work with stakeholders from industry, research and user communities to further develop criteria that can help move IT in a more sustainable direction in all phases of the product life cycle.

We believe that all brands who participate in our certification process share our common mission; to take an active part in building a sustainable, responsible IT environment.

Sören Enholm
CEO
TCO Development

Niclas Rydell
Director, TCO Certified
TCO Development

The problem – Social challenges in electronics manufacturing

The lack of social responsibility in electronics manufacturing is widespread and well documented. NGO and media reports of worker deaths, poor conditions, long work hours and instances of child labor are seen around the world. Manufacturers and brands are increasingly under fire for neglecting international labor conventions and worker rights. Like the textiles and furniture industries, much of the manufacturing of electronics and IT products is carried out in low-wage countries, where workers are often less protected, employment less regulated and wage costs are low.

Main areas of concern

There are several major areas of concern where social issues are most commonly observed;

- Violations of local/national labor laws – excessive working hours, lack of time off, underage workers, high proportion of migrant workers, wage deductions for disciplinary reasons
- Lack of worker health- and safety provisions, including:
 - inadequate and inaccessible emergency exits,
 - inadequate industrial hygiene,
 - inadequate protection against hazardous materials,
 - lack of necessary permits,
 - inadequate evacuation and other safety measures in place
- Forced Labor – lack of procedures to protect against human trafficking, involuntary labor
- Freedom of Association – restrictions on employees to organize freely and negotiate with management.

Contributing factors to the social crisis

There are several factors contributing to these areas of concern. TCO Development believes that part of the problem lies with the changes in demand and usage patterns for electronic devices in recent years.

Among these contributing factors are:

1. A complex, global supply chain

A major issue is the complexity of the IT product supply chain. An average smartphone for example may consist of components and assemblies from as many as 60 different processes and suppliers. Monitoring and streamlining information and processes throughout this complex chain is difficult. Add to this the growing cost- and time to market pressures and workers are typically paying a human price for faster, higher performing devices.

2. Increased access to technology

The enormous amount of IT products entering the market at an accelerating rate every year creates significant sustainability challenges. The number of smartphones shipped per year is set to almost double by 2017¹. Increasing demand in growth markets such as China, India and Brazil is also driving this trend as early adopter markets become more saturated.

¹ Green Tablet and Handset Report, 2012, Juniper Research

3. Constant demand for the latest technology – a rapid upgrade trend

Current figures show that users are switching up their mobile devices at record rates.

- In the UK, the average smartphone lifetime is around 29 months. In the US, that figure is only about 18 months
- The recycling rate for mobile products is the lowest of all major electronics categories, as people either store or simply throw away their used devices².

From a sustainability perspective, shorter product cycles and a growing amount of discarded devices make a sustainable, responsible product choice more difficult. This trend adds to the time and cost pressures in manufacturing as well as the growing worldwide e-waste burden.

4. Time between new product rollouts is shrinking

Feeding the upgrade trend is the fact that new product releases are more frequent than ever.

For example, in 2013 Citi Research Analyst Glen Yeung pointed out that the frequency of new product rollouts for some major brands had increased by up to as much as 66 percent during the previous five years⁴.

All these factors point to growing demand for manufacturers to increase production capacity and speed-to market and lower costs as competition do increases among brands. Worker treatment and factory conditions often fall victim to this pressure.

TCO Development believes that faster replacement cycles and intense cost pressure in manufacturing all make IT products a challenging category for buyers wanting to make a socially and environmentally responsible choice. The risk for poor working conditions in the factories is greater along with the risk of mounting e-waste as the number of devices entering the waste stream rises. Complicating the social challenge in the production phase is the fact that large amounts of e-waste are exported to developing countries, where end of life handling is largely uncontrolled, exposing local communities to environmental, health and safety risks.

² US EPA, Management of Used and End of Life Electronics.

<http://www.epa.gov/osw/conservation/materials/recycling/manage.htm>

⁴ Wall Street Journal – Market Watch, <http://blogs.marketwatch.com/thetell/2013/08/20/iphones-and-other-portables-suffering-from-device-exhaustion-analyst-says/>

About TCO Certified

TCO Certified is an international sustainability certification for IT products. Founded in 1992, TCO Certified has grown to include a wide range of criteria aimed at ensuring the manufacturing, use and recycling of IT products is carried out with regard to environmental and social responsibility. The goal of the program is to advance sustainable IT, by providing buyers with a way to identify sustainably designed and manufactured products and providing industry with a way to advance more sustainable products and practices, while meeting market sustainability demands.

History of TCO Certified

The background to TCO Certified began in the 1980's, as computers were gradually introduced into office workspaces. As people began to work more with computers, health and safety concerns emerged. Poor ergonomic design and high levels of electro-magnetic emissions were problematic, along with high energy consumption. At that time TCO began working with users and industry to develop mutually beneficial solutions.

Since its founding TCO certification has evolved and expanded to include a broader set of criteria and wider product scope.

Below is a brief timeline of TCO certification since it began in 1992:

1992 – the first TCO certification – TCO'92 - is introduced, focusing on low emissions and reduced energy consumption in displays.

1995 – introduction of criteria to reduce hazardous material content – chemicals, flame retardants and heavy metals – TCO'95

1999 – ISO 14001 required, tighter criteria for display image quality and visual ergonomics, TCO'99

2000 -2009 – stricter environmental criteria in line with technology developments, increasing demands from professional purchasers.

2009 – first requirements for socially responsible manufacturing introduced, stricter take-back and end-of-life criteria, new brand name - TCO Certified.

2012 – launch of new generation TCO Certified – including tightened criteria for socially responsible manufacturing.

TCO Development is owned by TCO, a non-profit trade union organization based in Stockholm, Sweden.

Criteria

Brands submitting products for TCO Certified must ensure the product model and its manufacturing meet criteria in these main areas:

- Socially responsible manufacturing
- Environmental management system
- Reduction of hazardous substances in product and packaging
- Climate, energy efficiency
- Ergonomic design and visual quality
- Health, safety and emissions
- Product lifetime, take back

Product categories

TCO Certified is available in eight product categories: displays, notebooks, tablets, smartphones, desktops, all-in-one PCs, projectors and headsets. While several criteria are similar for all product categories, some requirements are specific to the unique features of a product group.

Third party verification

TCO Certified is a Type 1 Environmental Label, according to the International Standards Organization and is based on the principles in the ISO 14024 standard. Programs included in the ISO 14024 definition must include third party verification and multiple attributes in several areas:

- The product should be environmentally preferable and the criteria should be based on indicators arising from life cycle considerations
- Transparency in all stages of criteria development and involvement of multiple stakeholders.
- Compliance with criteria is tested by an independent third party
- Criteria selection and development are based on scientific principles
- Verification is also followed up with regular after-market spot checks of products and manufacturing facilities.

Compliance with TCO Certified is tested and verified by independent test and verification partners that are accredited according to ISO/IEC 17025 and approved by TCO Development. The diverse set of criteria in TCO Certified demands a variety of expertise from a test organization. Therefore TCO Development has selected a number of verification partners based on expertise in specific criteria areas, including socially responsible manufacturing, environmental factors in the product life cycle, ergonomic design and user health and safety.

Global Ecolabelling Network

TCO Development is a member of the Global Ecolabelling Network – GEN- a voluntary association of third party certification programs. Founded in 1994, GEN's mission is to promote and further develop the environmental certification of products and services around the world.

Criteria Development

Every two or three years the TCO Certified criteria are opened for review. The process leading to a new generation criteria set is based on an ongoing dialog between TCO Development and a broad international group of stakeholders, as well as analysis of the current state of technology, legislation and other factors in the sustainable IT landscape. The stakeholder group is made up of representatives from several segments, including professional purchasers, industry, independent subject matter experts and computer users. Our dialog with stakeholders is a critical element in ensuring that the criteria in TCO Certified reflect current needs, are in line with new technologies and contribute to sustainable development in the IT space. The dialog contributes directly to the final published criteria, which are determined by TCO Development.

Certification process

When a brand wishes to apply for TCO Certified product certification, the following process is followed;

1. Brand submits a product sample, environmental and social reports for testing and verification at accredited third party facility
2. Brand receives test and verification results. If pass, brand applies for TCO Certified.
3. TCO Development issues certificate with 2 years validity.

As an additional step of quality assurance, TCO Development also carries out regular aftermarket spot checks together with independent verification partners to ensure that products and manufacturing facilities continue to comply with all criteria.

Social responsibility in production - requirements in TCO Certified

A) Description of criteria and verification process

The social responsibility - or CSR - component of TCO Certified focuses on working conditions in the manufacturing of TCO Certified products.

TCO Development primarily verifies the brand owner's procedures for promoting legal and humane labor standards in the supply chain as specified in the mandate but reserves the right to conduct supplier audits at production facilities. Also, the brand owner should demonstrate a commitment to socially responsible manufacturing practices.

The social commitment by the brand owner in TCO Certified

In TCO Certified a minimum level of social responsibility commitment is defined. This is presented in the mandate that all brands have to sign and commit to in the license agreement with TCO Development.

Commitment as specified in the TCO Certified criteria document:

Mandate A.7.1:

The Brand owner shall demonstrate the TCO Certified product is manufactured under working practices that promote good labor relations and working conditions by proving accordance with the following:

- ILO:s eight core conventions 29, 87, 98, 100, 105, 111, 138 and 182.
- UN Convention on the Rights of the Child, Article 32.
- the health and safety legislation in force in the country of manufacture, and
- the labor law, including rules on minimum wage and the social security protection in the manufacturing country.

In situations where the right to freedom of association and collective bargaining are restricted under law, workers shall be permitted to freely elect their own representatives. Reasonable effort shall be made to ensure that the requirements of this standard are being met by suppliers and subcontractors throughout the supply chain. The brand owner accepts that TCO Development may conduct/commission on-site inspections and receive full audit reports as part of the application to verify that the Brand owner is fulfilling its obligations according to this Mandate. For the social audit reports and on-site-inspections, the requirement is limited to the 1st tier production facility.

How brands comply with the criteria for socially responsible manufacturing

Brands can choose one of three methods to comply with the social criteria:

- a) The brand owner is a member of EICC and provides documented proof of third party audits conducted at production facilities of TCO certified products.
- b) The brand owner is SA8000 certified or carrying out production at SA8000 certified facilities and provides documented proof of third party audits conducted at production facilities of TCO Certified products.

- c) The brand owner completes a self-documentation, “Own Work” option, consisting of a questionnaire provided by TCO Development. Also required is documented proof of third party audits conducted at production facilities of TCO certified products.

If compliance with any of options a) through c) is not possible at the time of application, brands can choose a fourth option – d) – which is a 12 month grace period to show compliance;

The brand owner applies for a 12 month grace period by submitting a signed declaration stating which option above (a, b or c) shall be implemented by them and an estimation of when all the necessary documentation will be available.

The brand is required to submit a declaration of compliance, signed by a senior management representative, along with a third party social audit report and corrective action plan (covering any non-conformity in the social audit report) to an accredited third party social verification organization, also known as CSR reviewer. The verification process is explained further in the next section.

Overview of the verification process

In the process of working toward greater responsibility, structure and transparency, TCO Certified includes a number of steps to verify manufacturer compliance with the socially responsible manufacturing criteria.

Regardless of which compliance option a brand chooses, the verification process is the same. Below is an overview of the verification process. As a sustainability certification, TCO Certified also includes criteria for environmental, ergonomics and health and safety aspects, which are reviewed in a similar process, including testing of products at accredited third party laboratories.

Verification of TCO Certified criteria for socially responsible manufacturing consists of three main tools

1. Code of conduct

The first step taken by the brand is to ensure that a strict code of conduct is in place and to communicate this code through the supply chain.

The brand owner submits written proof that their code of conduct includes the socially responsible manufacturing criteria specified in TCO Certified. The brand then sends the relevant documents to a third party reviewer, an accredited third party designated by TCO Development as qualified to provide verification of brand compliance in the area of social responsibility.

2. Third party factory audits

The second step is to measure the implementation of the code of conduct in the final assembly factories. This is done through third party factory audits.

- a) To demonstrate that the brand has routines in place for third party social audits, TCO Certified also requires the brand owner to list first tier final assembly factories manufacturing TCO certified products and declare their social audit status.

- b) To demonstrate that the code of conduct and working routines are implemented at the factory level, the brand submits one third-party social audit report from one of these factories to the third party CSR reviewer. As some manufacturing facilities represent more than one brand, a single audit report is in some cases representative of several brands.

3. Corrective action plan

The third step is to handle non-conformities to the code of conduct through effective corrective action plans (CAP).

All non-conformities identified during the factory audit need to be addressed in a CAP, which is then submitted to the CSR reviewer for verification.

The reviewer verifies that all the documents from the brand to prove their code of conduct and the social audit from the factory along with the CAP are authentic and complete. A report is sent to TCO Development. Assuming these and all other criteria in TCO Certified are passed, a certificate is issued by TCO Development. Manufacturing facilities are also subject to follow up spot-checks, both announced and unannounced.

As with any certification it is not possible to test every sample that leaves the factory or to have auditors present the factories on a daily basis. Instead certifications, including TCO Certified, work with a written commitment followed by spot-checks of samples and factories to verify compliance.

Based on this methodology, TCO Development cannot guarantee an IT production facility is completely free from problems in the area of socially responsible manufacturing. However, all instances of non-compliance that we discover are addressed in a systematic way. The certification is a long-term commitment to implement codes of conduct and to identify violations of working conditions, enabling brands and their suppliers to work toward improvements and prevent future violations.

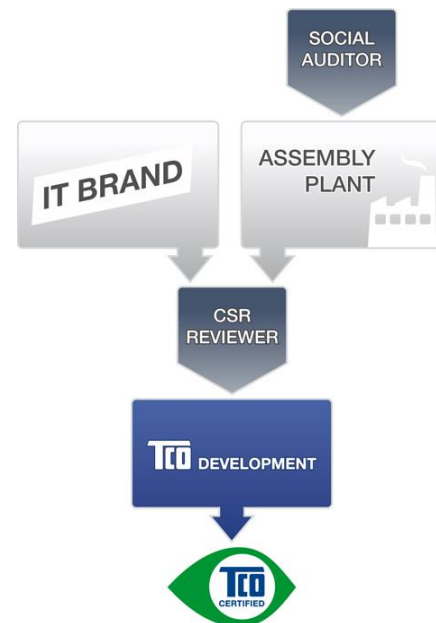


Figure 1 – Verification of socially responsible manufacturing at brand and assembly plant according to TCO Certified program

B) Goals of the social criteria and verification process in TCO Certified

For more than fifteen years there has been a drive in the industry to work with “green” aspects of products and their manufacture; for example, energy efficiency, environmental management systems and the reduction in hazardous material content. As brands are already engaged in these efforts, TCO Development has been able to have a constructive and open dialog with industry about environmental attributes and challenges – and how to improve criteria and product features to make progress in this area.

However, the challenge of socially responsible manufacturing is a more recent topic that has been discussed more intensively in the last five years. In this area it is more difficult to have a constructive dialogue with industry as the situation is often unacceptable and many brands have been portrayed in the media for the unethical treatment of workers at their supplier factories. Through their monitoring efforts, international NGOs have successfully raised awareness for these issues among industry and society at large. It is necessary to have organizations such as NGOs acting as watchdogs to make both society and industry more aware of these situations. TCO Development strongly believes it is also necessary to offer constructive solutions to address the problems that are brought to light.

One purpose of TCO Certified is to present methods to address violations that have been reported and to create an incentive for the industry to work proactively to correct these as well as prevent future violations.

TCO Certified also provides a way for the industry to be transparent without having individual incidents highlighted in the media or other public settings. Information and data from the certification process is continuously collected by TCO Development and published in an aggregated, anonymous format. This gives industry an opportunity to act cooperatively to work towards improvements.

TCO Development believes that TCO Certified can help achieve three core value-based goals; responsibility, structure and transparency.

1) Responsibility

We believe that a critical first step is to define who is ultimately responsible for the social conditions in the manufacturing of IT products.

Conditions of TCO Certified clearly state that the brand owner is responsible for social conditions in the manufacturing of their certified products. Responsibilities are further described in the strict code of conduct that is required of each brand who wishes to apply for product certification.

2) Structure

Structure is necessary for progressive improvement, benchmarking progress and equal opportunity between brands.

TCO Certified describes a methodology of gradual improvements, by first defining a minimum level of socially responsible manufacturing. It is a system for continuous controls of working routines and third party audits of production facilities where TCO Certified products are made. Importantly TCO Certified includes a way to review and share the effectiveness of corrective action plans which are intended to address non-conformities.

3) Transparency

Transparency in communications is central for improved relations and mutual understanding between brands, manufacturers and third parties, such as TCO Development and the verification bodies working with TCO Certified. We believe that there is some improved transparency between IT brands and their manufacturing partners thanks to TCO Certified.

By collecting and analyzing data from factory audits, codes of conduct and corrective action plans TCO Development is able to measure progress and share this information with stakeholders, including industry.

Figure 2 – Verification tools in TCO Certified are aimed at achieving progress in three value-based goals: responsibility, structure and transparency.



Figure 2

Findings from the first certification period with expanded social criteria

Based on the first year validity period of the updated criteria for socially responsible manufacturing, (September, 2012 - September, 2013) TCO Development has analyzed the outcome of brand compliance efforts.

Findings in this analysis are based on certifications from 17 brands and include the following five product categories of TCO Certified product models: computer displays, notebook and desktop computers, tablets, smartphones and all-in-one PCs.

In analyzing the outcomes of the first year, TCO Development concludes that there are indications of progress in each of the core goals of responsibility, structure and transparency.

Through the TCO Certified process, we have begun to see greater signs of brands taking responsibility for ensuring socially responsible practices are implemented at the factory level. The process has also offered a structure for working with social issues, verifying improvements and measuring progress. Some increase in transparency between brand and manufacturer, as well as with TCO Development has also been observed as manufacturing facilities are opened up to third parties with increasing frequency.

However, problems remain, particularly in the areas of worker health and safety and adherence to labor laws. This analysis does not purport to address these problems for an entire industry, but the observations do provide some insights into hotspots where there is still work to be done.

Products included in the study

The number of certified models and brands meeting the new social criteria are outlined in table 1 below.

Note that some brands are represented in more than one product category.

Table 1. TCO Certified product models included in the analysis, by brand – September 2013

Product Category	Number of Certified Products Models	Number of brands	Brands represented
Displays	1298	17	Acer, AOC, ASUS, BenQ, Dell, Eizo, Fujitsu, HannsG, HP, Iiyama, Lenovo, LG, NEC, Philips, Samsung, Terra, Viewsonic
Notebooks	83	3	ASUS, Lenovo, Samsung
Desktops	16	1	Lenovo
Tablets	17	1	Samsung
Smartphones	10	1	Samsung
All-in-One PCs	36	5	AOC, HP, Lenovo, Philips, Samsung

TCO Certified criteria – Code of conduct

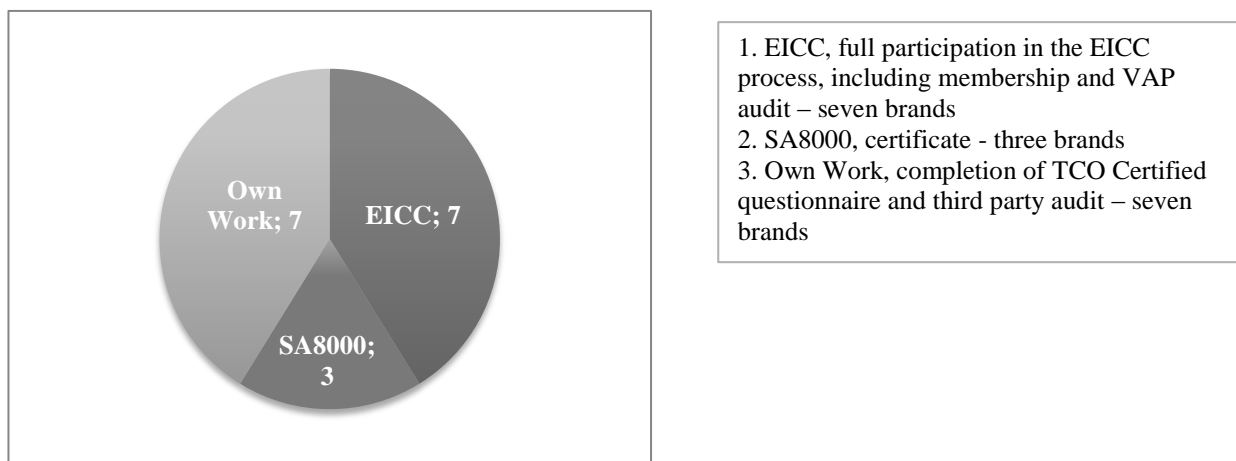
Brands are able to choose between three methods to comply with the Code of Conduct requirement in TCO Certified; full participation in the EICC process, SA8000 certificate or the “Own Work” option. The three options are determined to include the same minimum requirements covering the mandate in TCO Certified.

Findings – Code of Conduct

The EICC and “Own Work” options were each selected by seven brands, while three brands presented an SA8000 certificate (figure 1).

Of the brands choosing the SA8000 option, only one brand chose to apply by using an SA8000 certified factory to prove compliance. The other two brands were certified organizations (HQ) and therefore were requested to also submit a third party factory audit as evidence of code implementation.

Figure 3. Code of Conduct compliance methods selected by brands



TCO Certified criteria – Third party factory audit

As part of the certification process, each brand was required to submit a report from a third party social audit carried out within the past 12 months at a tier one (final assembly) plant manufacturing the product(s) to be TCO certified.

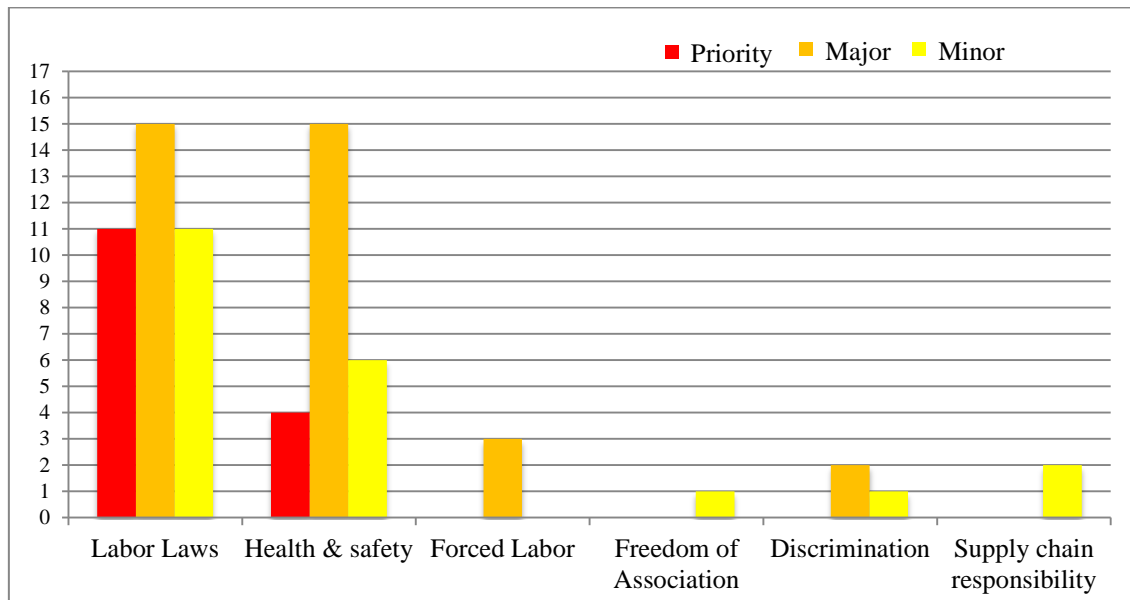
As the criteria for socially responsible manufacturing in TCO Certified were more strict from 2012, all brands included in this study selected the optional 12-month grace period in order to fully comply with one of the three options, which required more detailed and structured steps and verification. Some brands have told us that this is because structured work and verification of social responsibility had not been carried out before. Other brands told us that they were already engaged in social responsibility work, but needed additional time to ensure practices and suitable reporting were in place.

Over one hundred criteria points per inspection were included. The minimum criteria required for each inspection are divided into health and safety, compliance with labor laws, compliance with the UN Convention on the Rights of the Child, freedom of association, discrimination, forced labor and supply chain responsibility. Audit reports classify the severity of each non-conformity as Priority, Major or Minor. This is consistent with EICC Validated Audit Process (VAP) guidelines.

Findings – Third party factory audit

The audit reports submitted by the brands to the third party social reviewers show several code of conduct violations. The majority of brands showed some kind of non-conformity in one or more areas. In some cases an actual violation was observed during the audit, while in others the violation was based more on a lack of available documentation or proof of implementation.

Figure 4. Number of brands with violations per criteria category



The data in the graph is from spot check audits of one final assembly factory from every brand who certifies products. This is just a small sample of the total amount of factories producing these products.

The compilation of non-conformance data shows two clear hotspots; labor laws and worker health and safety, where violations are most widespread and show the highest number of violations in the “priority” or “major” categories (figure 2).

These observed results are in line with hotspots identified in other social life cycle assessments developed for notebook computers⁵.

Labor law and worker health and safety

Specifically, the most common violations concerned working hours, payment of overtime wages and working conditions. There were also many instances where workers were not granted a weekly day off. Violations connected to child labor, if not in direct violation of the UN Rights of the Child or ILO child labor conventions, were categorized as labor law violations, which included the short term employment of workers under 18 with lower pay, or school-age “interns” who are denied adequate worker rights.

An additional problem is freedom of association for workers, especially in China. Although Chinese labor law does allow workers to elect their own representatives, studies have shown there is a lack of engagement with management⁶. This is supported in the analysis by the fact that employee health and safety and working conditions still show a high degree of non-compliance.

⁵ <http://www.diva-portal.org/smash/get/diva2:680005/FULLTEXT01.pdf>

⁶ Students and Scholars Against Corporate Misbehavior, SACOM, www.sacom.hk

Table 2. Examples of non-compliance by criteria category

Category	Non-compliance	Brands with priority or major non-conformities
Labor laws	Employee’s working hours per week above legal limits	13
	Employees received no day off for every seven days	12
	Wages are deducted or reduced for disciplinary reasons	8
	Workers under the age of 18 are allowed to perform work that is likely to jeopardize the health or safety of these young workers	10
Worker health-and safety	Not all Personal Protective Equipment (PPE) to control safety hazards and worker exposure are adequate	7
	Not all emergency exits, aisles and stairways are adequate in number and location, accessible and maintained	8
	Not all required permits, licenses and testing reports for industrial hygiene are in place and a process is not implemented to ensure permits and licenses are up to date at all times	3
	Non appropriate controls for worker exposures to chemical, biological and physical agents	7
	Non-adequate and effective fire and other emergency evacuation and response drills are conducted with all employees, and records are maintained.	6
	Not all required permits, licenses and testing reports for ergonomics are in place and a process is implemented to ensure permits and licenses are up to date at all times	5
Forced Labor	No adequate and effective policy and procedures are established against slavery and human trafficking ensuring that any form of forced, bonded or involuntary prison labor is not used.	4

Source: TCO Development

TCO Certified criteria – Corrective action plans (CAP)

In the area of implementation of corrective action plans (CAPs), TCO Development’s work with the brands has resulted in some progress.

When submitting the audit report for review, each brand also has to submit a CAP, outlining a plan for rectifying all non-conformities. An accredited third party reviewer assesses the audit report and CAP. The reviewer then issues an Audit Report Verification, which includes details of the audit and a recommendation, indicating whether compliance with the social criteria in TCO Certified. The Audit Report Verification also includes details on non-compliance findings, underlying causes and corrective actions. The reviewer also adds comments about the effectiveness of each corrective action to remedy the identified non-compliance.

Through discussions with several brands TCO Development has learned that a common opinion in the industry is that the manufacturer (OEM) alone should handle factory audits and CAPs. Often the brand doesn’t get involved in this process.

One purpose of TCO Certified is to bring about greater brand involvement, as they are responsible for submitting the audit report and CAP from the factory to TCO Development in order to certify a product.

In this way the brand can become more involved in the situation, by examining the audit report and CAP review of the factory. The brand will see the audit findings and effectiveness of the corrective action plan the factory management has chosen to apply. Based on this information the brand may initiate its own follow up of the factory or even change supplier.

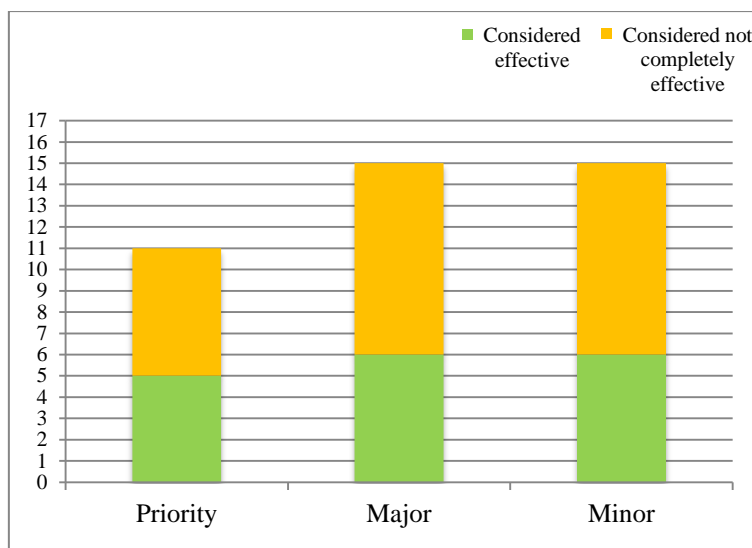
There are three main methods TCO Development and its accredited reviewers use to assess and ensure the effectiveness of the CAP:

1. Third party review of the CAP’s remedial effectiveness in advance of corrective steps being taken.
2. Sharing the reviewer’s comments on the effectiveness of each CAP with the brand owner who is responsible for the implementation of the code of conduct.
3. Follow up spot check audits

Findings – Corrective Action Plans (CAPs)

Not all CAPs included in this study were considered completely effective by the reviewers. The reason for this judgment was sometimes a lack of supporting documentation for the CAP, which made a complete assessment impossible. Of the audits reviewed for inclusion in this report, less than half of the CAPs were labeled “effective”.

Figure 5. Number of brands with a CAP considered effective, by criteria category



The data in the graph is from spot check audits of one final assembly factory from every brand included in this analysis. . This is just a small sample of the total amount of factories producing these products.

Where there is a high risk associated with non-conformities, a follow up audit of the same facility will likely be required and those sites will also be strong candidates for spot checks. These spot checks and follow up audits will begin taking place during 2014 together with third party experts. From the data gathered from CAP reviews, TCO Development is planning to advise brands on remedial actions that are more likely to be successful.

Achievements and challenges

During the analysis period TCO Development observed some improvements in the three core goals: responsibility, structure and transparency. Improvements were observed within the identified group of 17 brands and the scope of our observations is limited to activities among these brands in applying for TCO Certified for specific products.

Many of the following achievements are based on feedback from the “Own Work” questionnaire⁷ selected by some brands not using IECC or SA800 as proof of compliance with the code of conduct. More information is available in the document “Assessment Guidelines⁸”, available on the TCO Development website.

For some of the achievements, we include data only from some of the 17 brands, where we are certain that improvement was made as a result of efforts to comply with TCO Certified. For other brands it is unclear whether they had already met the requirement before deciding to use TCO Certified or if they also made improvements in order to comply. These instances are clarified below by using the phrase “*at least (number) brands have improved...*”

Responsibility

For effective improvements to take place, TCO Development believes that brand responsibility for implementing ethical working conditions in manufacturing plants is essential.

TCO Development’s conclusions - improvements in industry responsibility

- TCO Certified defines a chain of responsibility where the brand is ultimately responsible for preventing and addressing social problems in facilities where certified products are manufactured.
- Brands that use TCO Certified for their products show greater commitment and work more proactively with socially responsible manufacturing in their supply chain than previously.

Some facts from the analysis period – responsibility.

TCO Development has arrived at these conclusion based on the following findings;

- At least two brands have raised the issue of socially responsible manufacturing to the senior management level by revising their code of conduct to include ILO’s eight Core Conventions, UN Convention on the Rights of the Child, health and safety legislation and labor law including rules on minimum wage and social security protection in the country of manufacture. This change has been adopted by the board and addressed by the management.
- At least two brands have improved the communication of their code of conduct to those affected by its requirements; for example translating the code of conduct into the local language and conducting training sessions at the supplier level.
- At least two brands have now identified their second tier suppliers.
- At least one brand has analyzed its role as a purchaser, deciding to refrain from placing late orders. This has enabled suppliers to meet the criteria for socially responsible manufacturing without falling victim to excessive cost pressure.
- At least one brand has established a contact list to identify trade union representatives at their first tier manufacturing partner sites.

⁷ <http://tcodevelopment.com/files/2013/02/TCO-Certified-CSR-Questionnaire.pdf>

⁸ <http://tcodevelopment.com/files/2013/02/TCO-Certified-CSR-Assessment-Guidelines.pdf>

- At least two brands have improved efforts to counter union discrimination at production facilities through activities such as training of all their leading management to respect trade union rights or by inviting trade union representatives to meet workers in order to demonstrate that trade unions are accepted.
- At least two brands, in regions where free trade unions are restricted, have improved their support of a labor-management dialogue.

Structure

TCO Development believes that structure is necessary for progressive improvement, tracking progress and equal opportunity among brands.

TCO Development's conclusions - improvements in structure

- TCO Certified has created a structured way to continuously conduct third party audits at final assembly plants.
- TCO Certified has created a structured way to follow up on all non-conformities from third party factory audits.
- TCO Certified has created a structured way to handle grievances in the supply chain where relevant to the manufacture of TCO Certified products.
- TCO Certified has created a network of senior management representatives from each of the 17 brands, who are designated responsible for socially responsible manufacturing. This group now engages in dialog with TCO Development about finding solutions to common problems.

Some facts from the analysis period - structure

TCO Development has arrived at these conclusions based on the following findings in the analysis:

- At least two brands developed a system for third party auditing of final assembly factories.
- At least seven brands introduced or partially increased the frequency of third party factory inspections to conduct.
- At least two brands improved their handling of corrective actions in order to comply with their code of conduct.
- One grievance report was conducted during the period.
- All 17 brands appointed a senior management representative for dialog with TCO Development about socially responsible manufacturing.

Transparency

TCO Development believes that transparency is a pre-condition for communication, which is central for improved relations and mutual understanding between brands, their suppliers and third party providers.

TCO Development's conclusions - improvements in industry transparency

- **Manufacturers** have entered into a more transparent dialog with the brands around socially responsible manufacturing through the TCO Certified requirement to open up operations to third party social audits and making the audit reports and corrective action plans available to the brands.
- **Brands** are more transparent towards a third party by complying with the requirement to share the third party social audit report with TCO Development.
- **The IT hardware industry** is showing some examples of becoming more transparent as several brands join TCO Certified and send codes of conduct, audit reports and corrective action plans to TCO Development, who collates and publishes findings in an aggregated, anonymized format.

Some facts from the analysis period - transparency

The conclusions above are based on the following findings in the analysis:

- Seventeen brands have improved their transparency by sending a list of production facilities manufacturing TCO Certified products and a third party social audit report from at least one of the final assembly plants to TCO Development. This is an annual requirement for brands applying for TCO Certified.
- TCO Development has published this report with compiled data from the brands and their product certifications that are included in this analysis.

Limitations and remaining challenges

While some progress in core target areas has been achieved in the first certification period, there are some areas where TCO Certified has not yet had the desired effect. This can be due to a number of reasons, including limitations on program scope and penetration, industry size and complexity, along with the fact that social change is, by nature, an effort that requires a long term, progressive approach to gradual improvement.

Adding criteria for socially responsible manufacturing to the already comprehensive sustainability requirements in TCO Certified has presented a challenge to industry. Further progress will require a sustained commitment to the principles of responsibility, structure and transparency between manufacturers, brands and third parties.

Some limitations and remaining challenges based on the analysis are further outlined below.

Limitations of third party audits

A third party factory audit is generally considered to be more credible in the effort to improve working conditions than a first or second party audit (where a manufacturer or brand audits its own factory). This is the reason TCO Development included the requirement in TCO Certified.

However, there are also limitations in using third party audits and management systems as a tool to drive socially responsible manufacturing in the IT industry.

- Third party audits only provide accurate social and environmental information about the situation at a factory at the time of the audit. Even though historical documentation is reviewed to verify past actions and working routines are controlled to ensure future compliance, these documents can only give an indication of how the situation is at the time when the auditors have left the factory.
- Third party audits conducted at first tier production factories give no assurances about the social conditions throughout the rest of the product supply chain, other than the fact that the audited factory shall demonstrate structured routines for communicating the code of conduct to next tier suppliers.
- Management systems have a tendency to work in a top down direction to involve the management but have the reputation of rarely treating employees as a coequal part.

For TCO Development, access to third party audit reports has been a valuable way of understanding where progress has been made and which problem areas require further attention. The intention is to continually assess the effectiveness of third party audits as a tool to improve working conditions. Based on collected data it will be possible to identify specific social impact points and to develop new criteria aimed at resolving the challenges that remain.

Freedom of association and discrimination

We are aware that tools such as a code of conduct and third party factory audits are limited in their ability to identify violations in the areas of freedom of association and discrimination. Based on the statistical data from the first year of third party factory audits we can also confirm that the few violations found in these areas do not match the problematic picture of the industry described by many international NGOs such as trade unions and other interest organizations.

The challenge may be that these particular areas are investigated mostly through worker interviews. As long as the workers answer that they know that they are allowed to join a trade union and that they do not feel discriminated against at work, the audit does not recommend any corrective action.

Need for more co-operation directly with workers

Despite some positive steps toward greater manufacturer responsibility, ongoing research⁹ shows that external criteria, such as those in TCO Certified are only a partial solution. For sustained and meaningful change to take place, brands and manufacturers need to further develop and implement their *internal* social policies and form closer collaboration around social issues with workers on the factory floor¹⁰. This we also see with brands that establish their own level of social commitment. For too long, some brands have considered working conditions an issue that manufacturers should solve themselves.

Advancing internal engagement within the brands and manufacturers will play an important role in advancing social progress.

⁹http://www.hur.nu/forskning/distribution_logistik_och_partihandel/avslutade_dlp/tracing_sustainable_supply_chains/hal_lbara-leverantorsled,
<http://philpapers.org/rec/EGESCW>,<http://www.jstor.org/discover/10.2307/25123974?uid=3738984&uid=2&uid=4&sid=21103437866917>

¹⁰ Students and Scholars Against Corporate Misbehaviour (SACOM)
<http://sacom.hk/wp-content/uploads/2009/09/chiconyau2009.pdf>

Next Steps

While TCO Certified has led to some progress in socially responsible manufacturing among IT brands, there are also some clearly identified problems that remain. As the process toward a more environmentally and socially responsible IT industry is long-term, solving these challenges will take a sustained effort by brands, manufacturers and third parties over time.

The criteria set in TCO Certified is constantly evolving; as some sustainability issues are solved by a combination of tough criteria and technological innovation, others emerge and become the next goal in the advancement of sustainable IT. Criteria in TCO Certified are reviewed approximately every three years, and revisions are published accordingly. Criteria for socially responsible manufacturing will also be reviewed and evaluated moving forward. Based on these and other findings, those criteria may also be expanded in a next generation of TCO Certified.

Based on the findings in this report, some areas that may come under future evaluation by TCO Development include:

- **Implementation of corrective action plans.**
While CAPs present specific steps that can be taken to rectify non-conformities resulting from a third party audit, there needs to be mechanisms in place to follow up and verify that the brand and manufacturer has implemented these steps on top of the already ongoing spot checks.
- **Communication in the supply chain.**
While the criteria state that it is the responsibility of the audited manufacturer to communicate the social responsibility criteria to the next supply tier, this needs to extend further up the chain. The supply chain for a typical IT product involves many steps and vendors. Findings ways of having socially responsible manufacturing reach further into the supply chain is necessary for the industry to become more sustainable.
- **Closer collaboration between workers and management.**
We have seen in this study that several challenges remain in the area of allowing freedom for workers to associate. Furthermore, translating that permission into real engagement and meaningful dialog between workers and management will be key. To our knowledge there are no alternative methods scientifically proven to have better effect in measuring and handling these particular areas. However, TCO Development is currently investigating if it is possible to further address this issue as part of TCO Certified.
- **TCO Development values the monitoring efforts of NGOs and interest organizations around the world.** Many of these organizations have been able to spotlight social and environmental issues in IT manufacturing, providing valuable input to the TCO Certified stakeholder dialog. While TCO Development focuses on providing solutions to many of these problems, a continued constructive dialog with external organizations engaged in the problem will be important to future progress.

Accurate communication of the TCO Certified scope is important. TCO Development will continue to work among its target groups and with the brands on accurate communication about the certification. It is important to be clear that TCO Certified is a product certification and does not apply to an entire brand or organization. Nor is TCO Certified proof or a guarantee that a brand's manufacturing practices are free from sustainability and social challenges.

Conclusions

TCO Development has collected and analyzed results from the first twelve-month validity period for expanded criteria concerning socially responsible manufacturing between September 2012 and September 2013. This report covers compliance efforts from 17 major IT brands and offers insights into how the industry is working with social responsibility in the manufacturing of IT products. The findings in this report are based on the results of social audits from final assembly factories manufacturing TCO Certified products.

TCO Development concludes that some progress has been made, both since the initial criteria were introduced in 2009, and also as seen and measured in the first year after implementation of the expanded criteria. We have seen that several brands began to act when the requirement for social responsibility in production was placed on them. They began to take concrete action in the form of more structured work with routines, surveillance and corrective actions. Overall a more transparent dialogue with industry was taking place and many brands are now beginning to show greater understanding of their responsibility for providing fair working conditions.

For some brands, certification systems like TCO Certified have been useful as a starting point for working with social issues. Some had not worked with social responsibility in a structured way before the first TCO Certified social requirements were introduced in 2009.

While there is evidence of progress the analysis reveals priority and major violations, with evidence of poor working conditions, insufficient health- and safety routines, labor laws violations and restrictions on the right for workers to organize.

Increased transparency between brands and manufacturers

Through a more open, transparent dialog between TCO Development, manufacturers and brands, TCO Development has observed a greater engagement in socially responsible manufacturing. By establishing a relationship based on dialog and information exchange, TCO Development grew a new network of senior management representatives for social responsibility within each of the 17 brands. TCO Development believes that building on these relationships will be important to drive sustainable development of IT forward.

Increased brand responsibility for socially responsible manufacturing

We can conclude from the findings in this report that brands improved compliance with their codes of conduct, including training and workshops with manufacturers as well as knowledge of their supply chain in order to meet the criteria in TCO Certified. Particularly for some brands choosing the “Own Work” option, working with the criteria in TCO Certified was the first time they had implemented programs to ensure worker protections and fair treatment. Brands also lifted the issue of social responsibility to the senior management level and improved communication of the codes of conducts to those affected by the demands.

One challenge is how brands adapt their business to enable suppliers to improve working conditions. This is especially relevant for production facilities that are not owned by the brand (external supplier), since suppliers have expressed difficulty investing in meeting buyer social responsibility requirements whilst also meeting buyer production cost targets.

As part of the compliance process, brands have started to identify their second tier suppliers, and some brands have completed this task.

Violations of labor laws and worker health and safety

Third party audits show that social problems persist in IT manufacturing. Labor laws and health and safety are identified as hotspots. Problem areas at the first tier in the supply chain remain particularly in working hours, overtime compensation, and worker health and safety. Issues connected to the rights of workers to organize are also still problematic. A possible solution to this problem is ensuring that management has a greater engagement with labor and elected worker representation.

Need for structured routines and follow up

TCO Development concludes that codes of conduct and corrective action plans are a good start, but that implementation and third party verification of corrective actions are key to further progress. According to the audits that are the basis for this report, there is a lack of structure and routines where brands have neglected to follow up and implement their code of conduct. This is possibly a sign of low support from the brands for helping manufacturers live up to social requirements. More than half of the brands have corrective actions plans considered by the third party verifier as not completely effective toward correcting findings.

By establishing a common and verifiable platform on which brands can work with social issues, TCO Development is now able to measure progress and work more directly with the brands to advise them on solutions that are likely to be successful. Solutions are found in the system of policies, routines and activities such as trainings, workshops on how to understand codes of conduct, how to work with a corrective action plan etc.

The TCO Certified program includes aftermarket spot checks and these are valuable as a follow up method. Information gathered during the audit processes are also used to guide further dialog with the industry. Of particular interest is information on identified repeating violations, how manufacturers work differently on corrective actions and which of those are considered to be an effective action.