



# Supplier Responsibility

2019 Progress Report

**"We believe that  
business, at its best,  
serves the public good,  
empowers people  
around the world, and  
binds us together as  
never before."**

Tim Cook  
CEO

# People come first. In everything we do.

We care deeply about the people who build our products, and the planet we all share. So we hold ourselves and our suppliers to the highest standards to ensure everyone is treated with dignity and respect. And we share our work openly so others can follow our lead.

We continuously challenge ourselves to expand our education programs and provide skill-building opportunities that meet the needs of those in our supply chain. Since 2008, over 3.6 million supply chain employees have participated in education programming. We've implemented programs that help supplier employees learn new skills, earn degrees, and expand their career options. We also provide health and wellness education to give people the tools to take charge of their well-being.

Every year, we find new ways to partner with our suppliers to protect the planet. In 2018, our suppliers achieved UL Zero Waste certification for all final assembly test and packaging facilities across iPhone, iPad, Mac, Apple Watch, AirPods, and HomePod. Our suppliers conserved 7.6 billion gallons of freshwater, and 100 percent of our final assembly sites adopted safer, greener cleaners in their manufacturing processes.

Driving the highest standards in the world means continuously raising them, and helping our suppliers meet them. In 2018, we completed 770 Apple-managed supplier assessments covering manufacturing facilities, logistics and repair centers, and contact center facilities. In addition, 279 third-party mineral smelter and refiner audits were conducted.

We believe that if we're not finding areas to improve, we're not looking hard enough. If we discover that standards aren't being met, we work side by side with suppliers to help them improve. If a supplier is unwilling or unable to meet our requirements, we end our business relationship with them. Through capability building and partnership, we not only improve our suppliers' performance in our supply chain, but beyond it as well.

Our 2019 Annual Progress Report outlines the results of our efforts in 2018.

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# 2018 Highlights

## People

#1

2018 Stop Slavery Award — issued by Thomson Reuters Foundation

\$30.9M

supplier recruitment fees repaid since 2008, \$616k repaid to 287 supplier employees in 2018

96%

compliance with Apple Working Hours Standards across all work weeks

17.3M+

supplier employees trained on their rights since 2007

## Planet

100%

final assembly sites for iPhone, iPad, Mac, Apple Watch, AirPods, and HomePod UL Zero Waste certified

7.6B

gallons of freshwater saved and 39% supplier water reuse rate

A+ Mind the Store

In 2018, Apple was awarded an A+ rating and ranked first out of 40 retailers by Mind the Store for our actions to eliminate toxic chemicals

#1

ranking, Corporate Information Transparency Index (CITI), 5th year in a row

## Progress

1049

770 Apple-managed supplier assessments + 279 smelter and refiner third-party audits conducted in 45 countries

76%

high-performing supplier facilities, 1% low-performing

100%

participation in third-party audits across identified tin, tantalum, tungsten, gold, and cobalt smelters and refiners

30%

increase in high-performing suppliers year over year

## Our supply chain is global. So is our responsibility.

Apple products are made all over the world. We work with suppliers, from mining to recycling, to verify that our requirements are being met for the people and communities in our supply chain. In 2018, a total of 1049 supplier assessments were conducted in 45 countries.



We enforce our policies by assessing and closely partnering with our suppliers at every point in our supply chain.



Fusion Machine Operator,  
Device Glass Technology, United States

# People

**Empowering people through education, skill building and a safe and respectful workplace**

Over 3.6 million supplier employees have participated in education and skill-building programs to date.

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Engineer,  
iPhone production, China



Robotics instructor with students, Robotics classroom, China

## Building new skills for the future

**Our education programs are designed to provide a path to advancement for the people in our supply chain, from life skills to vocational certifications and college degrees. Here are the stories of a few of those employees who participated in Apple education programs in 2018.**

For the millions of employees who work for Apple's suppliers, advancement often begins with education. That means education of all kinds — vocational education, education in the soft skills that help employees become better managers, and health education that gives them tools to manage their well-being. Apple's education programs are designed to function like a staircase, allowing participants to climb, one step at a time, toward their goals.

You can see that in action at the facilities of Catcher Technology in Suqian, a Chinese city of 5 million, 300 miles northwest of Shanghai. There, Liu Jingbo is leading his students into the future of manufacturing. The students, though, aren't merely students — they are full-time employees at Catcher who are taking advantage of a program created by Apple that provides on-the-job training in the kind of automation technology that is changing the way manufacturing is done. On each side of the students are six industrial robotic arms at rest, the same kind used throughout Catcher's facility, which manufactures precisely molded machine metal casings that form the foundations of iPhone, iPad, and MacBook. "You need to know the basic coding of how to program your robotic arm," Liu tells his students, who sit before operating systems that control the model robot arms. "But you also need critical thinking skills, so you know how to troubleshoot."

At the facilities of the electronics manufacturer Jabil in the central Chinese city of Chengdu, employees were given the opportunity to dedicate time this past fall to learning to code in the Swift language used to create iPhone apps. And that's exactly what they did, building their own original apps over the course of their time in training.

"It really changed my life," says Tao Jiang, a technician who joined Jabil in 2018 and co-created an app that helps employees share technical tips through a workplace social media system. "Now if I face a problem, I can turn it around to look at it in a different way. It's totally changed my mindset at work. Before I was just an operator, but now I want to be a professional in the IT department."

**"Now if I face a problem, I can turn it around to look at it in a different way. It's totally changed my mindset at work."**

Another education program, the Factory Line Leader Program, provides college students from vocational schools in four cities across China with an opportunity to learn to become what are known as line leaders — manufacturing line supervisors, essentially — through a newly created work-study program.

Last year, Lin Weiqiang, along with his classmates in the city of Xiamen in China's southern Fujian province, participated in the Factory Line Leader Program at the Apple supplier TPK. They still take classes, but their schooling under the program is much more interactive than traditional vocational education. The program places students on the production line, with veteran mentors to tutor them. And they also receive lessons in soft skills — how to interact with line employees effectively, how to speak in public, and how to organize your time. They're the sort of skills you need to be a good line leader. "These are the kinds of things you can't learn in school," says Wang Minglong, another participant in the program. "If I hadn't come here, I wouldn't know how to deal with different kinds of people."

**"These are the kinds of things  
you can't learn in school."**

While suppliers will benefit from a well-prepared workforce, it's the students themselves who stand to benefit most. "I would say this program changed my career path and even my life," says 23-year-old Wu Zubin. "Before I joined this program I had no idea what I would do, no idea what kind of job I could get. This has given me a clear path forward."

**"I would say this program changed  
my career path and even my life."**

Providing those paths for advancement is what Apple is aiming to do, by meeting employees where they are and seeking to support their own unique goals.

## Creating paths to advancement

# New skills, degrees, and pathways

Since 2008, we've provided the people in our supply chain with opportunities to take part in education and skill-building programs. We began with classrooms that offered supplier employees access to online learning that spanned life skills to enrichment to college degrees. As our education program grew, we reached more people, in more parts of our supply chain, with more diverse offerings. Today, employees in our manufacturing supply chain, and people deeper in our supply chain have access to skill-building that can help them advance in their jobs, and gain further education.

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### A path to advance — at every skill level

3.6M+

Over 3.6 million participants to date



#### Empowerment and life skills

Health awareness

Mobile learning

Life-skills courses

Personal enrichment courses



#### Vocational skills

Electrician services

Factory Line Leader

Robotics

Swift coding



#### Education and career advancement

Environmental Health and Safety certification

Associate's degree

Bachelor's degree

Vocational certification

## Coding a new career path

68%

of participants had minimal or no coding experience before the program; today, they can develop an app

42

apps developed by participants spanning workplace improvements, gaming, and social networking

In 2017, a program was created to share Apple's Swift coding technology with supply chain employees. Swift was developed by Apple as an intuitive tool that makes learning to code fun and interactive.

Our coding program initially focused on bringing training to supplier employees in several major sites around China, and started with the basics. Once familiar with operating systems and interfaces, students began learning to code. The program offers interactive lessons to teach key coding concepts, and additional challenges and templates encourage students to explore code in engaging new ways.

In 2018, the next phase of Swift content rolled out to participating supplier facilities, an intensive App Development with Swift training program. At the end of the program, many students had the skills to successfully create their own app. The apps cover a wide range of topics, from real-time machine maintenance to employee engagement and community building.

Since graduating from the program, many participants have gained more advanced positions at work in IT-related roles. Whether it's a more advanced job at the factory or an opportunity with Apple, providing opportunities for personal and job advancement after completing the program is a priority.



Student participating in SEED Program class, China

13.5k+

enrolled in degree program since 2008

6k+

enrolled in vocational certification since 2017

## More options, more opportunity

Since 2008, our Supplier Employee Education and Development (SEED) Program has empowered supplier employees through education. In addition to college courses, participants can take courses that range from art to learning a new language to financial planning.

In 2018, over 1500 supplier employees earned a college degree through the SEED Program. Since SEED began, over 13,500 supplier employees have enrolled in a degree program.

In 2017, vocational certifications were added to the SEED curriculum. Today, supply chain employees can obtain certifications in skills such as iPhone repair, Environmental Health and Safety, and electrician services. The certifications give supplier employees an opportunity for immediate job advancement upon completion of training.

In 2018, more than 3000 supplier employees participated in vocational certification training.

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### Vocational certification — a path to advancement



iPhone repair



Environmental Health and Safety



Electrician services

# New skills for the workforce of tomorrow

## Skill building for smart manufacturing

As a part of SEED's expansion into vocational certification, a program was launched to provide robotics training to employees in our supply chain. The program offers on-the-job training to equip supplier employees with skills to work in the new landscape of smart manufacturing while receiving opportunities for job growth and advancement.

744

supplier employees earned a certificate in assembly line robotics in 2018

## Skill building for tomorrow's leaders

In addition to robotics certifications, Apple's Factory Line Leader Program was developed in 2017. Line leaders provide management to an assembly line, a job that requires managerial and soft skills. The Factory Line Leader Program provides vocational training students with the technical and soft skills necessary to become qualified line leaders.

203

participants in the SEED Program now hold advanced robotics positions at supplier facilities

The program partners with leading academics in diverse regions of China to create custom vocational training programs to best prepare the workforce of tomorrow. After completing Factory Line Leader training, students are guaranteed an internship with an Apple supplier and full-time employment opportunities.

Following completion of their internships in 2019, program participants will be eligible for line leader positions at Apple suppliers.

## Skill building, deeper in our supply chain

The risks associated with mineral sourcing are unique from our manufacturing supply chain.

In order to gain a deeper understanding of human rights risks associated with artisanal and small scale mining in the Democratic Republic of the Congo (DRC), we helped fund research by the Center for Effective Global Action (CEGA) at the University of California, Berkeley. The results of the CEGA study informed an expanded partnership with Pact, a nonprofit organization focused on international development in nearly 40 countries. Together with Pact, we launched a targeted vocational education and alternative livelihoods program for at-risk youth living in mining communities in the former Katanga province of the DRC.

The program provides at-risk youth in the DRC with an opportunity to receive vocational education in areas including:

- Auto and Motorcycle Mechanics
- Beauty and Hairstyling
- Welding and Metalwork
- Masonry and Bricklaying
- Information Technology
- Culinary Arts
- Electronics Repair
- Carpentry and Woodworking

Upon completion of the program in 2018, over 90 percent of participants graduated from their selected course.

**“The program has successfully helped at-risk youth in mining communities of the Democratic Republic of the Congo. Participants who were formerly working in mines now have more educational and career possibilities in a safer, more sustainable setting.”**

Karen Hayes  
Pact



Christelle Banza Mujinga,  
Beauty and Hairstyling,  
Democratic Republic of  
the Congo

## Gaining the skills for a new profession

Christelle learned of the Apple-funded vocational education program offered by Pact in 2017. She told her friends who worked with her at a local mine about the program but, ultimately, she was the first of her friends to sign up.

Of the options available, Christelle was most interested in hairstyling, and began her vocational training in October 2017. She spent months taking courses at a hair salon, and spent her free time practicing her new skills on friends and neighbors.

Today, Christelle works in a salon. Her friends have seen Christelle excel in her new work, and four have chosen to follow her lead and are seeking to learn hairstyling through Pact's vocational education program.

**"Thanks to the project, I was able to train in beauty and hairstyling. With the money I earn, I can purchase everything that I need. Now, I can support myself and sometimes, when food is scarce at home, I provide my contribution. I am very proud to be able to help my parents."**

## Health education

# Elevating knowledge

In 2017, our education efforts expanded to health. The Health Program was launched using a peer-to-peer training model at several supplier facilities in China in an effort to empower women in our supply chain with information to maintain their health.

Beyond basic health knowledge, the program provides vital information and training on critical topics such as self-examination for early breast cancer detection, nutrition, personal care, and maternal health.

We set an ambitious goal — to bring health awareness to over one million people in our supply chain by 2020.

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### Women's empowerment through health awareness

17%

increase in overall  
knowledge of women's  
health issues

16%

increase in utilization  
of women's health care

“After giving birth to my baby, I was having symptoms I didn't understand. After attending Apple's health training, I understood the symptoms and proactively went to the hospital for treatment.”

Zhang Yanling  
Apple Health Program participant

In 2018, in China, we expanded the program to include content for mobile platforms, including short videos, articles, and quizzes on key health topics. In addition to new offerings, peer-to-peer training continued, large-scale health fairs were conducted, and access to local clinics for safe, anonymous testing and clinical care was facilitated.

Personal health content was also introduced into the onboarding training for new employees at selected suppliers in China, utilizing both traditional training methods as well as mobile platforms.

We partner with Peking University to continually monitor and measure the impact of our programming.

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### Health awareness for one million supply chain employees by 2020



Peer-to-peer training



Health fairs



Health clinics  
and testing



New hire orientation



Mobile content

# 250k+

As of 2018, over 250,000 supplier employees have participated in health training

As the program expanded to India, we partnered with St. John's Medical College to conduct a needs assessment of the health and well-being of supplier employees. Based on assessment findings, we developed and launched a training curriculum to improve health knowledge in key areas. St. John's also provided nutrition consultation that has led to improvements at several supplier cafeterias.

## Providing new health knowledge in India

### 60%

increase in knowledge in nutrition

### 54%

increase in knowledge in diabetes, hypertension and cholesterol

### 85%

increase in knowledge in early cancer detection

Health Program participants, iPhone production, India



## Supplier workplace rights training

# Respect for human rights throughout our supply chain

17.3M+

supplier employees trained on their workplace rights since 2007

Suppliers are required to ensure that their employees are educated on their workplace rights and that those rights are respected. Supplier employees attend a new hire orientation to receive training on local labor law requirements and the human rights protections outlined in the Supplier Code of Conduct. Topics covered include permissible working hours and overtime policies, proper working and living conditions, and health and safety information.

## Going further in our supply chain for rights awareness

We are committed to help raise awareness of a person's rights at work at every step of our supply chain. This includes communities where minerals in our products may be sourced. In addition to our work to provide vocational education, we have also partnered with Pact to support community leaders, and communities living around mine sites. The program uses an internationally recognized training curriculum developed by the United Nations International Children's Emergency Fund (UNICEF). Since 2016, rights awareness training has been provided to over 7000 people living in mining areas.

44k+

supplier employee  
interviews conducted  
in 2018

## Every employee has a voice

The Code of Conduct requires our suppliers to provide channels that encourage employees to voice concerns. Channels include advertised hotlines for anonymous phone calls and the ability to directly contact Apple's Supplier Responsibility team.

In order to verify the effectiveness of channels, we interview numerous supplier employees during annual assessments in their local language without their managers present.

These interviews seek to ensure that supplier employees have received training and are aware of proper channels to voice concerns.

## Going further to give a voice to mining communities

In 2018, we again supported the Fund for Global Human Rights, an organization that works with local human rights defenders in the DRC. With this support, the Fund is able to partner with grassroots organizations that advance the rights of women and children, advocate for miner health and safety, and defend the economic and social rights of mining communities.

We also help enable people in mining communities to raise issues through whistleblowing mechanisms. In 2018, Apple continued supporting the whistleblowing mechanism of the International Tin Association's International Tin Supply Chain Initiative (ITSCI). The whistleblowing initiative allows people to voice concerns related to extraction, trade, handling, and the export of minerals in their local language, so allegations of misconduct can be surfaced and addressed.

## Getting a job should be free of charge

\$30.9M

recruitment fees repaid to 36,137 supplier employees by suppliers since 2008

\$616k

recruitment fees repaid to 287 supplier employees by suppliers in 2018

Of the millions of people who work at Apple supplier facilities every year, a small percentage are foreign contract workers. A foreign contract worker is a person who seeks employment in a country other than the one of which he or she is a citizen. These individuals can be vulnerable to debt-bonded labor, a form of modern slavery.

Debt-bonded labor occurs when a person is forced to work in exchange for the repayment of a debt or other obligation — sometimes levied as a fee for receiving a job in the first place.

In 2008, we made debt-bonded labor a Core Violation of the Apple Supplier Code of Conduct and limited permissible fees to one month's wages, a standard above legal requirements. In 2015, Apple went even further — leading the way in mandating that zero fees can be charged to foreign contract workers for recruitment opportunities, even if those fees fall within the legal limits of the supplier's operating country and legal limits of the supplier employee's origin country. When our Code is not met, we believe direct remedy is required. This includes a supplier repaying any fees paid by their employees to obtain their jobs.

In 2018, we went further to prevent debt-bonded labor in our supply chain, and steps were taken to limit the amount of subcontracting for custodial staff in our retail stores. We also mapped the primary geographic corridors where foreign contract workers enter our supply chain and where they work. As a result, programs were put in place to strengthen debt-bonded labor prevention in high-risk regions.

In 2018, we also worked closely with suppliers that hire foreign contract workers to implement stricter standards to assess the labor brokers who provide personnel to their facility. These efforts included implementing enhanced training on topics required by our Code, such as conducting worker interviews and self-assessments. This capability building effort enables suppliers to conduct more comprehensive due diligence in their labor supply chain, and to ensure no recruitment fees are charged.

## Prevention through education

### Before contract

Suppliers and labor agents are provided with training and tools to make prospective employees aware of local labor laws, contract terms and conditions, and their rights during the hiring process. Prospective employees are also informed of grievance channels — how and where to raise a concern — and Apple's zero tolerance policy against retaliation.

### Departure from home

Suppliers and labor agents provide new employees with training covering the following topics before they depart from home:

- Contract terms and conditions
- Working and living in the receiving country
- Labor rights and protections during their journey

### Arrival at receiving country

Topics from departure training are repeated with a stronger emphasis on rules and laws in the employee's receiving country. Health and safety topics also expand to include on-the-job training.



2018 Stop Slavery Award  
awarded by the Thomson  
Reuters Foundation

## Working to end modern slavery in our supply chain, and beyond

In 2018, Apple was awarded the Thomson Reuters Foundation's Stop Slavery Award.

The Stop Slavery Award recognizes companies that have taken concrete steps to eradicate forced labor from their supply chains. The aim is to demonstrate that business plays a critical role in putting an end to modern-day slavery worldwide.

## A path to employment

In 2018, we went further in our commitment and partnered with the International Organization for Migration (IOM) to create a path for trafficking survivors to obtain full-time employment with Apple.

Participants receive counseling, vocational support services, and regular medical exams for two years as they adjust to their new employment in an Apple retail store.

**"We are very pleased that Apple has committed to work with us to help former victims of trafficking get jobs. This new initiative demonstrates how the private sector can take accountability one step further, directly supporting former victims and inspiring other companies to do the same."**

Laura Thompson  
Deputy Director General, International Organization for Migration

# Planet

## Greener factories, greener communities

In 2018, 100% of final assembly sites for iPhone, iPad, Mac, Apple Watch, AirPods, and HomePod achieved UL Zero Waste certification.

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River in Kunshan District,  
China



A water community in  
Kunshan District, China

## Greener supply chains reach beyond factory walls

**Our supply chain environmental programs encourage suppliers to consider the impact their operations can make outside their factory walls, to the communities that support the making of an Apple product.**

Kunshan has evolved from an agricultural hub to becoming the home of dozens of electronics manufacturers, including numerous Apple suppliers. That prosperity wouldn't be possible without the water that flows through neighboring canals, rivers and lakes. But it will only be sustainable if that water is conserved and protected.

True water stewardship requires industrial users to go beyond their own facilities, and work with partners in government and civil society to protect water supplies on a basin-wide basis.

Apple and its suppliers have partnered with the Alliance for Water Stewardship (AWS), a collaboration between businesses and nongovernmental organizations (NGOs), in a program to support water management beyond the factory and into the community. “Through participation in this program, Apple’s suppliers will become role models and leaders for others to follow,” says Michael Spencer, the Chair of the International Board at AWS.

“Through participation in this program,  
Apple’s suppliers will become role  
models and leaders for others to follow.”

In addition to water stewardship, Apple has also moved in recent years to reduce waste generated by product manufacturing, advising suppliers on how to cut all levels of industrial waste from their operations. That’s a win-win for the environment and the economy — less waste in the environment means lower costs overall. In 2018, the final assembly facilities for iPhone, iPad, Mac, Apple Watch, AirPods and HomePod became UL Zero Waste certified.

We also consider our supply chain’s impact on climate change. A considerable amount of Apple’s carbon footprint comes from the supply chain, mostly from the energy used while making Apple products. Apple’s Energy Efficiency Program works with high-energy use suppliers to assess and identify areas where energy waste — and the carbon that comes with it — can be reduced, such as lighting, heating, and cooling.

Altogether in 2018 the Energy Efficiency Program has led to the reduction of 466,000 annualized metric tons of greenhouse gas emissions, equivalent to taking 100,000 cars off the road for one year. And while the greenest energy is the energy you never use, Apple has also committed to working with its suppliers to generate and procure more than 4 gigawatts of renewable energy by 2020, around one-third of the energy needed to make Apple products.



#1 ranking,  
Corporate Information  
Transparency Index (CITI),  
5th year in a row

## #1, for the fifth year in a row

For the fifth straight year, we were awarded the #1 ranking in the Corporate Information Transparency Index. The index is a product of the Institute of Public & Environmental Affairs (IPE), a civil society organization with expertise in environmental protection. The Index ranks hundreds of brands on environmental supply chain performance in China.

For more than five years, Apple and IPE have partnered to create meaningful environmental impacts that extend far beyond our own supply chain. This collaboration has proven to provide positive impacts that we hope to continue in the years to come.

“Over the past five years, Apple has continuously extended management to the upstream supply chain in an innovative way, pushing hundreds of suppliers to save energy and reduce emissions, and improving environmental performance... Sometimes work isn’t just within factories — rivers, lakes, and canals have been cleaned up, giving local communities a safer and cleaner environment.”

Ma Jun  
Director, Institute of Public & Environmental Affairs

## Water stewardship

# Leading the way



AWS gold certification awarded to an Apple Supplier, representing the first of its kind in the electronics industry

39%

participating supplier reuse rate

Since 2013, Apple's Clean Water Program has provided support and education that enables suppliers to conserve water, find ways to reuse or recycle water in manufacturing operations, and ensure that the water discharged from our supplier facilities is as clean as possible.

In the last five years the number of participating suppliers has grown from 13 to 116. In 2018, participating suppliers saved 7.6B gallons of freshwater, bringing the total cumulative savings to 21B gallons. As the program has scaled, we've worked with participating suppliers to expand efforts from conservation to water stewardship. Using a standard created by AWS, suppliers have begun to extend their efforts outside of their factories, to the communities they operate in.

In 2018, efforts to expand beyond conservation to stewardship began with suppliers in the Kunshan region of China. Participating suppliers committed to stricter water stewardship efforts, extended water programming beyond their factories, and engaged their surrounding communities. In 2018, two Apple suppliers received AWS certification, including the first gold certification ever to be awarded in the electronics industry.

As the program continues, suppliers committing to extend efforts beyond their factory walls will establish a comprehensive water management plan, have a deeper understanding of internal and external water risks associated with their operations, promote better water management practices and awareness throughout their own supply chains, and ultimately help improve the water resources in their region.

## Safer process chemicals

# Industry-leading standards

Since 2014, we've partnered with suppliers to implement an industry-leading Chemical Management Program to protect the people who help make Apple products, and the environment. The program provides support and education that enables participating suppliers to implement a rigorous chemical management system that includes driving transparency about chemical use, volumes consumed, and strengthening safe-use practices.

We continually strengthen and evaluate our Supplier Code of Conduct, and the Apple Regulated Substances Specification (RSS). We also partner with suppliers to provide support and training to help them meet our high standards. In 2018, 500 suppliers participated in training on the RSS.

Material safety data sheets are commonly used to quickly screen chemicals for compliance with restrictions. We go deeper and require suppliers to provide proof of a test report from a certified lab. We also assess new chemicals when they are introduced, and provide support to ensure safe use.

## Apple Chemical Management Program



### 1. Chemical inventory and selection

We work with suppliers to maintain an inventory of the chemicals used in their production process and include the evaluation of preferable alternatives as part of their new chemical introduction process



### 2. Risk assessment

An evaluation of new or modified production processes is conducted to identify risks of chemical exposures to supply chain employees



### 3. Risk control

Control measures are implemented to eliminate or mitigate employee exposure to chemicals



### 4. Hazard communication training for employees

Supplier employees are trained on the hazards associated with chemical use and the importance of the control measures that are in place to protect them. Training is designed to ensure understanding of material safety data sheets, warning labels, and where to get help with questions



### 5. Management training

We provide tools and programs to help line supervisors and the factory management be aware of their responsibilities to ensure effective implementation of a safe use of chemicals management system



### 6. Medical exams

In order to monitor the health of employees who work with chemicals in their manufacturing process duties, suppliers are required to provide access to medical exams conducted by a qualified clinic



### 7. Personal protective equipment training

Employees are trained on the purpose, correct use, and maintenance of their personal protective equipment



### 8. Emergency response

Suppliers are required to develop robust preparedness and response plans in the event of an emergency to ensure the safety of employees

## Progress toward safer, greener chemicals

100%

supplier final assembly sites adopted safer, greener cleaners and degreasers



In 2018, Apple was awarded an A+ rating and ranked first out of 40 retailers by Mind the Store for our actions to eliminate toxic chemicals

We strengthen our chemical management efforts every year to keep our factories, and the people who work in them, safe. In 2018, process chemicals at our final assembly facilities were verified as 100 percent compliant with Apple's RSS for the fourth year in a row. We continue to enhance the RSS; in 2018, we added n-Propyl Bromide (nPB) to the list of banned chemicals for cleaning and degreasing.

We also encourage safer and greener cleaners and degreasers in our suppliers' operations. Apple provides both training and assessment tools for suppliers to conduct their evaluations of safer alternatives based on the GreenScreen® framework and the U.S. Environmental Protection Agency's Safer Choice Program. In 2018, 36 suppliers achieved the elimination of all GreenScreen Benchmark 1 and Benchmark 2 cleaners and degreasers.

**"Apple has set the standard for safer chemical use and they are sharing their process openly for others to follow. By sharing data and best practices in authentic collaboration with other companies, suppliers, and NGOs, they are making an impact on industry-wide challenges."**

Alisa Gravitz  
CEO, Green America



Line Operator at zero waste iPhone production facility, India

## Eliminating waste

# Products that add up to zero waste

1M

metric tons of waste diverted from landfill to date

100%

final assembly facilities for iPhone, iPad, Mac, Apple Watch, AirPods, and HomePod UL Zero Waste certified

To minimize our impact on the planet, we provide support and education that enables our suppliers to reduce the amount of waste sent to landfill while manufacturing Apple products.

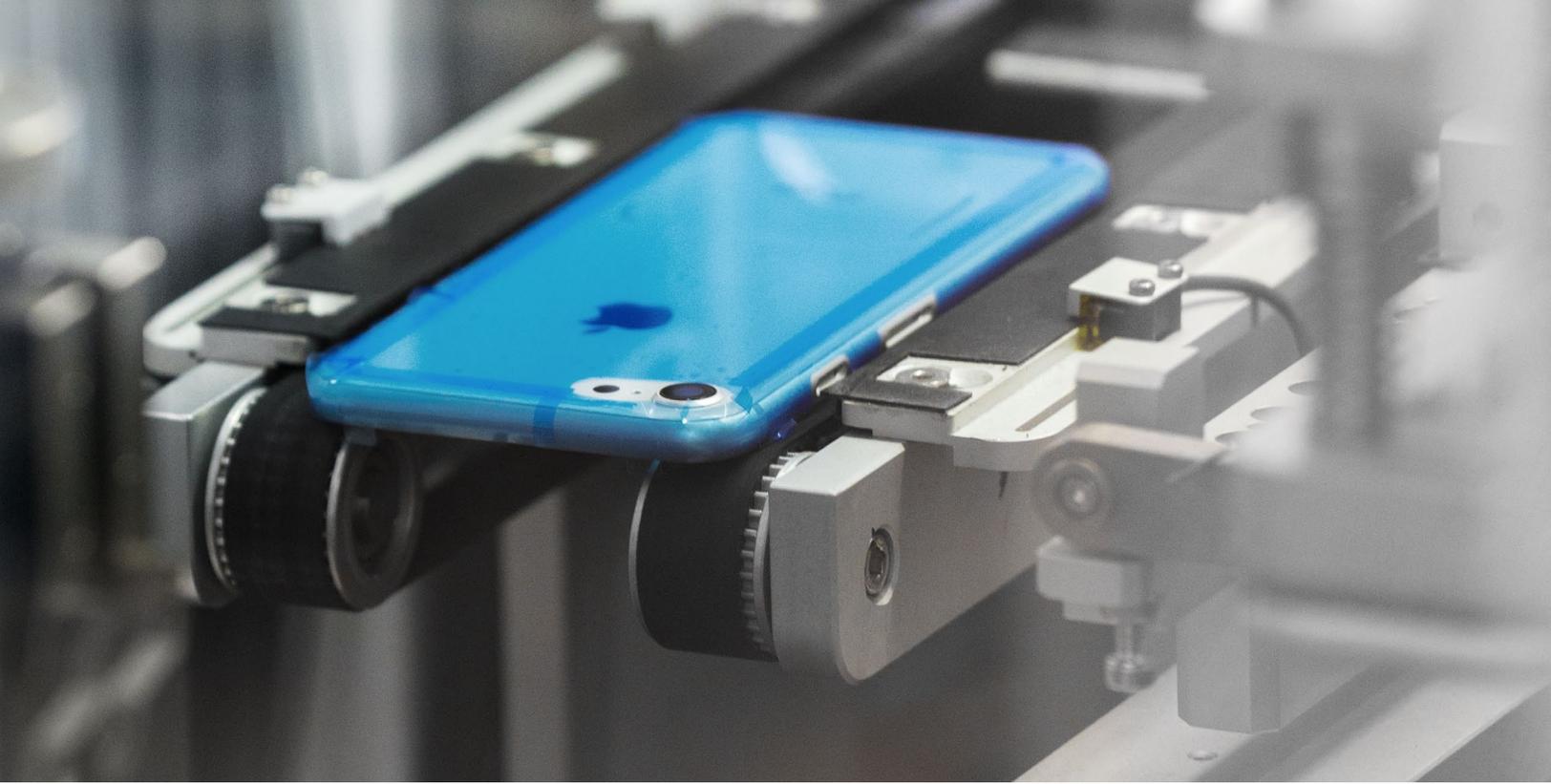
In 2015, the Zero Waste Program was created. Through this program, suppliers must identify waste elimination opportunities. To help our suppliers achieve this objective, we provide tools and guidance, including the services of experts in sustainable waste management solutions. Suppliers dedicate months to identifying ways to reuse or recycle materials and divert waste from landfills. This can result in suppliers not only improving their environmental management systems, but also benefiting from sustained conservation of resources.

Suppliers must demonstrate through a third-party assessment that they meet Zero Waste to Landfill certification through UL (UL 2799 Standard). The UL Standard is a rigorous and comprehensive standard for waste streams from manufacturing environments.

To reach platinum certification, a factory must divert 100 percent of its waste from landfill, with a maximum of 10 percent sent to a waste-to-energy facility. To reach gold certification, a factory must divert 95 percent from landfill. In two cases, Apple suppliers have achieved gold certification because the carbon impacts of shipping recyclable materials long distances outweighed the environmental benefits of landfill diversion.

When the Zero Waste Program began, suppliers with the most significant waste impact were selected: final assembly facilities where components from all over the world come together to be assembled into Apple products. In 2018, our efforts to achieve a zero waste supply chain reached a significant goal. All final assembly facilities for iPhone, iPad, Mac, Apple Watch, AirPods, and HomePod in our supply chain are UL Zero Waste certified.

As our program progresses, we will continue to work with suppliers deeper in our supply chain to implement zero waste practices and eliminate landfill waste.



Film application,  
iPhone production, China

## Environmental innovation in the smallest details

It takes multiple pieces of protective film to cover an Apple product during its journey on the assembly line. Film is placed and removed to help keep products pristine as they come to life. Each piece is small, but it adds up to being a significant portion of the non-recyclable waste generated during assembly.

We set our sights on a solution — finding a new protective film that could be diverted from incineration and, instead, recycled. After conducting research, it became clear that no recyclable protective film was available on the market. This introduced an opportunity for Apple engineering teams to partner closely with a protective film supplier.

The turning point for the project was identifying a combination of adhesive and film that could be recycled together. The result? A cost neutral, recyclable protective film that in its first year of adoption, diverted 895 metric tons of waste from incineration and avoided 1880 metric tons in carbon emissions from Apple manufacturing. Better yet, the film has also been made available by the supplier for other companies to adopt in their manufacturing processes.

12

Apple supplier facilities designated Green Factory by China's "Green by 2025" manufacturing plan in 2018

## Green Factories

In 2018, 12 Apple supplier facilities received the Chinese Government's Green Factory designation, bringing the total number of Apple supplier facilities awarded this designation to 16. Awarded by the Ministry of Information and Industry Technology, the Green Factory designation is part of China's "Green by 2025" manufacturing plan. Launched in 2016, this government initiative has set out to identify 1000 factories by 2020 that represent best practices in green manufacturing. In addition, we are supporting the China Electronic Standardization Institute as part of the drafting committee for the development of green standards for electronics manufacturing in China.

Line Operators at an iPhone production facility awarded the Green Factory designation, China



## Combating climate change

# Doing more with less

# 466k

annualized metric tons of greenhouse gas emissions reduced in 2018 — equal to 100,000 cars removed from the road for one year

Since 2015, we have partnered with suppliers to help improve energy conservation through our Energy Efficiency Program.

The program focuses on facilities with the highest energy use and potential for improvement. In-depth energy assessments are conducted to identify areas for improvement at supplier facilities. Suppliers are encouraged to invest in energy-saving technologies and infrastructure, such as lighting upgrades and motion sensors, processed heating and cooling, and compressed air. The assessments provide suppliers with a cost-benefit analysis of the potential return on their investment for implementing energy efficiency improvements.

In 2015, 13 facilities participated in the program. Today, we've also increased participation to 85 facilities. Participating suppliers implemented energy efficiency improvements resulting in the reduction of 466,000 annualized metric tons of greenhouse gas emissions in 2018.

## Clean, renewable energy

# 4GWs

of renewable energy to be procured by 2020

We're also working with our suppliers to transition to using clean, renewable energy in their operations.

Through our Clean Energy Program, Apple and our suppliers are working to generate and procure more than 4 gigawatts of renewable energy worldwide by 2020 to reduce emissions associated with making Apple products.

# 30

suppliers committed to 100% renewable energy for Apple production

Since implementing the program in 2015, 30 suppliers have made commitments to 100 percent renewable energy for Apple production. Together with Apple investments and other supplier commitments, we have secured 3.9 gigawatts in clean energy commitments.

Ultimately, our combined efforts will help to reduce product-related carbon emissions, create a more resilient supply chain, and contribute to healthier communities — while also paving the way for others to follow.

# Progress

**Partnering with suppliers to drive accountability and continuous improvement**

**30% increase in high-performing supplier facilities year over year.**

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Line Leader and Line Operator,  
iPhone production, China

# Apple-managed assessments

770

Apple-managed assessments completed

In 2018, a total of 770 assessments were completed at facilities including manufacturing facilities, logistics and repair centers, and contact centers that support AppleCare. Apple-managed assessments in 2018 covered 93 percent of Apple's supplier spend. Of these 770 assessments, 17 percent were initial assessments where we visited facilities for the first time.

We assess supplier performance against the standards outlined in our Supplier Code of Conduct. In our efforts for responsible procurement, we also onboard and assess new suppliers before they enter our supply chain.

An assessment typically takes multiple days. Over 500 criteria are evaluated to ensure compliance and identify improvement areas against our Supplier Code of Conduct.

Following an assessment, we partner with a supplier to develop a corrective action plan to make improvements where needed. Ongoing engagements with our suppliers can include months on the ground working with suppliers, providing training, tools, and support to help them meet our standards.

To support capability building, Apple's SupplierCare platform provides information to increase understanding of the Supplier Code of Conduct and educate suppliers on best practices. Tutorials range in topics from safe storage of chemicals to responsibly sourcing minerals. In 2018, SupplierCare expanded to provide online trainings to 219 active supplier facilities.

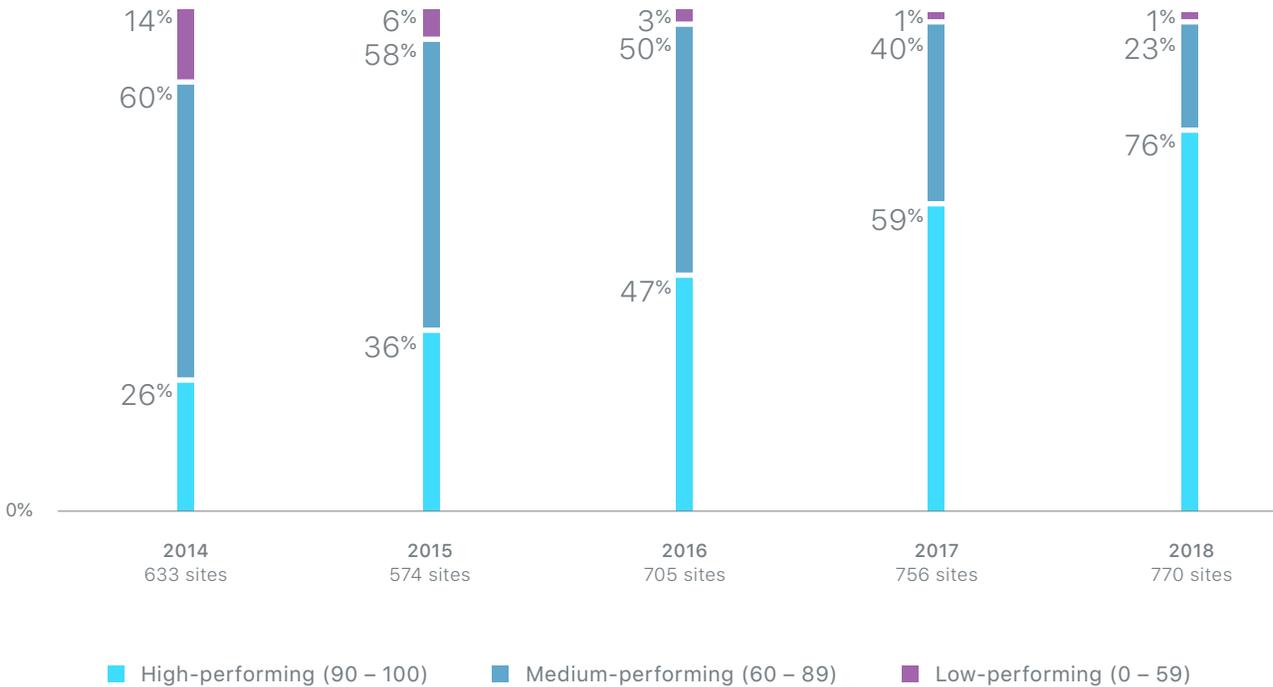
30%

increase in the number of high performers in our supply chain year over year

86%

decrease in the number of low performers in our supply chain year over year

### Year-over-year Supplier Code of Conduct performance



### Our Apple-managed assessment process

The Apple-managed assessment process typically includes a multi-day onsite visit followed by close partnership and capability building to ensure closure of all needed corrective actions. Once all corrections are completed, Apple verifies closure of each action item.



**1. Onsite assessment**  
An onsite assessment is conducted to determine compliance with Apple’s Supplier Code of Conduct



**2. Corrective action plan**  
We partner with the supplier to develop a 30, 60, or 90-day corrective action plan for any issues uncovered during an assessment



**3. Closure of corrective actions**  
If needed, Apple subject matter experts partner with the supplier to implement necessary improvements to meet and close open corrective action plans



**4. Onsite corrective action verification**  
Following completion of the agreed upon corrective action plan, Apple conducts an onsite verification of all improvements



**5. Closure of corrective action assessment**  
Once it is verified that all improvements have been made, the supplier is returned to our regular assessment schedule



Operator,  
Device Glass Technology, United States

# 2018 Assessment results

Our 2018 supplier progress results cover assessments at manufacturing facilities, logistics and repair centers, retail, and contact center facilities. Each assessed facility is ranked on a 100-point scale based on its performance relative to our Supplier Code of Conduct.

Through our assessments, we measure the performance of suppliers' operations against our Code and drive improvements in the areas of Labor and Human Rights, Health and Safety, and Environment.

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## Average 100-point scale score across Apple-managed assessments



## Progress in our mineral supply chain

We're proud to be recognized as a worldwide leader in the responsible sourcing of minerals in our products.

Few companies map the path of materials in their products. Apple maps many materials, including tin, tantalum, tungsten and gold — back to the smelter or refiner and goes even further — tracking some, like cobalt and certain other minerals, all the way back to the source.



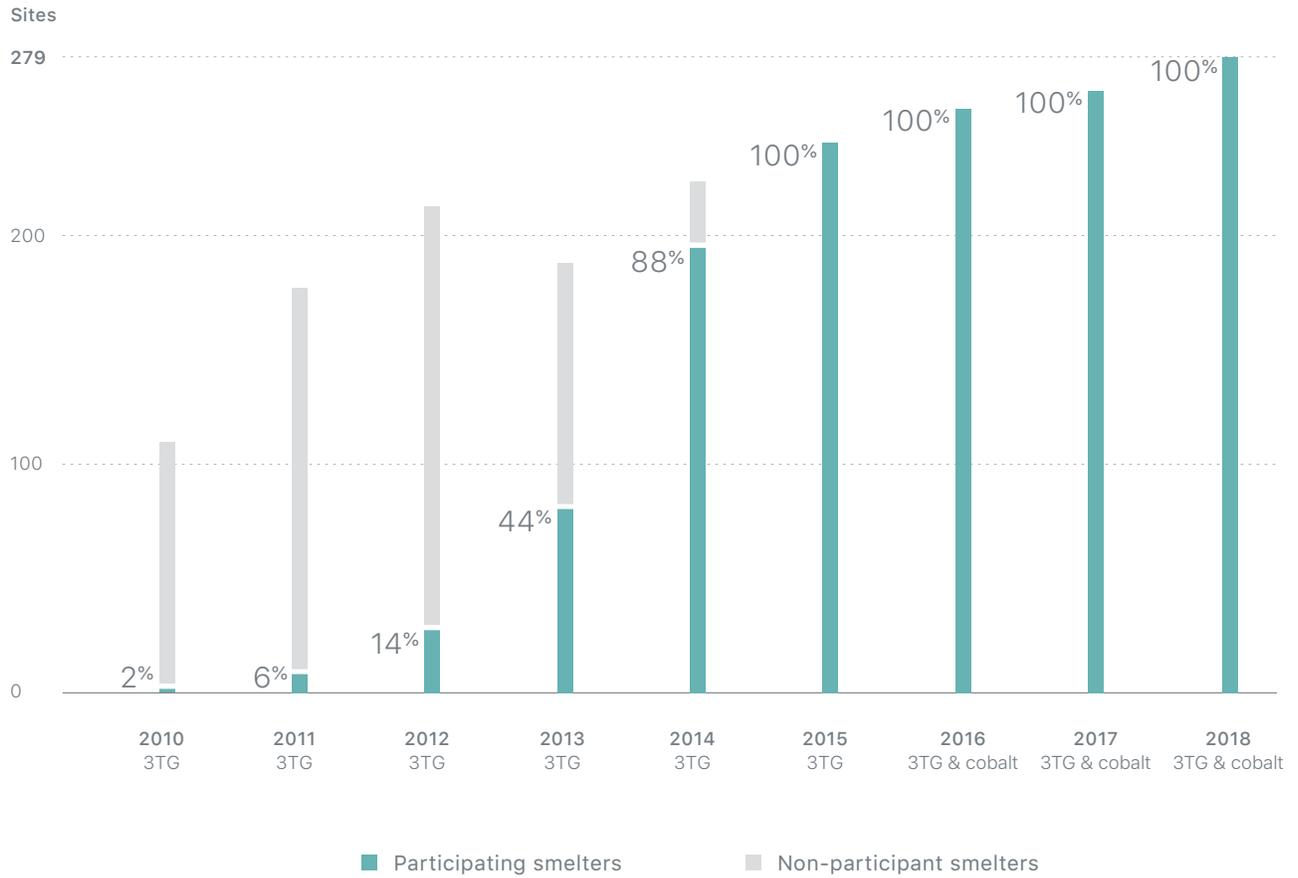
Apple's Supplier Code of Conduct and Supplier Responsibility Standard on the Responsible Sourcing of Materials (Responsible Sourcing Standard) apply to all levels of Apple's supply chain and are based on industry and internationally accepted principles, such as the United Nations Guiding Principles on Business and Human Rights and the Organisation for Economic Co-operation and Development Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. Apple is committed to meeting and exceeding internationally accepted standards to safeguard the well-being of people in the supply chain.

Our independent third-party audits go beyond conflict to consider human rights and other risks. Smelters and refiners are required to report, assess, and mitigate risks in their business practices based on the findings of their annual assessments. Additional third-party audits are conducted to verify the data reported and to ensure corrective actions are taken where gaps may exist.

We believe mapping and third party audits are not enough. We go further in our minerals due diligence programs which may include:

- Continuing to strengthen implementation of our strict Responsible Sourcing Standard
- Mapping Apple's supply chain to the smelter and refiner level, and to the mine-site level to the extent available, by collecting and processing data provided by suppliers and other sources of information
- Mitigating and addressing risks identified in the minerals supply chain
- Seeking to empower independent voices around certain mining communities
- Expanding programming deeper in the supply chain to a number of mining communities in the DRC through rights awareness and vocational education
- Measuring human rights impacts of industry-wide minerals traceability programs
- Exploring traceability mechanisms using technology
- Engaging with industry organizations to share best practices and tools such as the Apple Risk Readiness Assessment tool
- Working collectively with civil society, industry, and government

## Smelter and refiner third-party audit participation (3TG & cobalt)



# A deeper look at our Apple-managed assessment results

## 100-Point Scale Scores



is representative of a high performer



is representative of a medium performer



is representative of a low performer

## Scoring and deductions

Findings in our assessments are categorized by level of severity:

### Administrative non-compliance

Denotes policy, procedure, training, or communication-related findings.

Examples include:

- Inadequate record keeping
- Inadequate documentation of policy or procedures
- Insufficient training on policy

### Violations

Denote implementation-related findings.

Examples include:

- Insufficient provision of benefits
- Inadequate pre-placement/on-job/post-employment occupational health exams
- Inadequate environmental permits

### Core Violations

A Core Violation is considered the most serious violation against Apple's Supplier Code of Conduct.

Examples of Core Violations include:

- Underage or involuntary labor
- Document falsification
- Intimidation or retaliation against an employee
- Immediate environmental and safety threats

Suppliers are required to immediately remediate a Core Violation. Beyond immediately addressing the violation, suppliers must also make changes in their management system that address the root cause of the violation, and ensure sustained preventative measures to remain an Apple supplier.

If a supplier is unwilling, or unable, to correct a Core Violation, or in the event of a repeat Core Violation, the supplier is removed from Apple's supply chain. To date, 20 manufacturing supplier facilities have been removed from our supply chain. Smelters and refiners deeper in our supply chain are held to similar standards and if they exhibit a lack of commitment to meet our Supplier Code of Conduct, they risk losing Apple's business. In 2018, five 3TG and two cobalt smelters and refiners were removed from our supply chain.

In addition to uncovering violations during assessments, we also take allegations concerning our suppliers very seriously. Allegations concerning a supplier may come from sources including news outlets, a supplier employee, or an anonymous individual.

Once a claim is verified, a thorough investigation is conducted and a corrective action plan is immediately required. Apple partners with the supplier to ensure all corrections are made within 90 days.

When allegations occur deeper in our supply chain, such as those related to smelters and refiners who may provide minerals to our supply chain, we investigate the claim and may work with civil society and government to conduct investigations and address the allegation.



Line Operator,  
Apple Watch production, China



89 out of 100 average  
Labor and Human Rights  
assessment score

## Labor and Human Rights assessment results

In 2018, the average Labor and Human Rights score across our 770 assessments was 89.

During an assessment, our suppliers are evaluated on all Labor and Human Rights Protections outlined in our Supplier Code of Conduct. Areas assessed include: anti-discrimination; anti-harassment and abuse; prevention of involuntary labor; human trafficking and underage labor; juvenile and student worker protections; working hours; and wages, and benefits.

In order to score suppliers on these issues, we take an investigative approach during an assessment. Assessment protocols typically require a thorough walk-through of supplier facilities, a review of human resource records, and interviews with supplier employees to ensure adherence to the Code.

## Updates to our Code of Conduct

In 2018, we continued to raise the bar in Labor and Human Rights Standards in our supply chain.

### Medical testing

Restrictions regarding medical testing were added to protect workers' privacy and prevent unreasonable fees. This change in policy requires suppliers to now pay all fees for necessary medical testing and provide employees access to their medical test results.

### New and nursing mothers

Protections for new and nursing mothers increased. Suppliers are now required to more closely monitor the working hours of new and nursing mothers, ensure new and nursing mothers are not required to conduct high-risk tasks, and provide adequate nursing rooms onsite at their facilities.

## Assessment findings

In 2018, the majority of Labor and Human Rights violations found in our assessments were related to working hours violations and improper provision of wages and benefits.

One example of improper provision of wages found in our 2018 assessments included a case of employees being required to pay for their onboarding medical examinations at a facility. When a violation of this type is identified, the supplier is required to return any fees paid to their employees.

A lower percentage of assessment violations were found relating to anti-harassment, prevention of underage labor, and freedom of association and collective bargaining.

### Labor and Human Rights assessment deductions

	Core Violations	Violations	Administrative Non-Compliance	Total Deductions
 Working Hours	- 0.1	- 3.4	- 0.4	- 3.9
 Wage, Benefits and Contract	-	- 3.3	- 0.2	- 3.5
 Prevention Of Involuntary Labor	- <0.1	- 0.6	- 0.6	- 1.2
 Protected Class	-	- 0.6	- <0.1	- 0.6
 Anti-Discrimination	-	- 0.2	- 0.3	- 0.5
 Grievance Mechanism	-	- 0.3	- 0.1	- 0.4
 Anti-Harassment and Abuse	-	- <0.1	- 0.2	- 0.2
 Prevention of Underage Labor	- <0.1	- <0.1	- 0.1	- 0.2
 Freedom of Association and Collective Bargaining	-	- <0.1	- <0.1	- 0.1

Average Total Score:

89

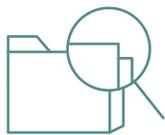
## Core Violations

In 2018, 27 Core Violations were uncovered in Labor and Human Rights; these included 24 Working Hours Falsification Violations, two Debt-Bonded Labor Violations, and one Underage Labor Violation.

## Working Hours Falsification

If falsification of employee working hours is discovered, the violation is escalated to the supplier CEO and the supplier is placed on immediate probation. The supplier's ethics policy and management systems are then thoroughly reviewed to identify the root causes and systemically correct them. The supplier is required to undergo regular audits to ensure the reviewed policy is implemented to prevent future violations. In addition, the supplier must revise all records to reflect an accurate accounting of hours worked by their employees. In 2018, we uncovered 24 cases of falsification of working hours data. In all cases, suppliers were placed on immediate probation. Our suppliers' compliance for overall working hours for the year was 96 percent.

### Working Hours Falsification corrective action process



**1. Violation identification**  
Apple assessor and third-party auditor identify Records Falsification Violation



**2. Violation communication**  
Apple communicates violation to supplier CEO and notifies supplier of immediate probation. Supplier signs probation terms



**3. Root cause identification**  
Apple and supplier review supplier's ethics policy and management systems to identify root cause



**4. Regular audits**  
Supplier required to undergo regular audits to ensure the reviewed policy is implemented to prevent future violations



**5. Correct all records**  
Supplier must revise all records to reflect accurate accounting of hours worked by their employees

# Debt-Bonded Labor

Debt-Bonded Labor was determined a Core Violation in Apple’s Supplier Code of Conduct in 2008. Since 2015, our Code has enforced a strict zero tolerance policy for fees of any kind, even those within legal limits of operating countries. In 2018, two cases of debt-bonded Labor were uncovered. In each case, the supplier was placed on an immediate one year probation and was required to repay all fees to their impacted employees.

\$616k

supplier recruitment fees repaid to 287 supplier employees in 2018

\$30.9M

supplier recruitment fees repaid to 36,137 supplier employees since 2008

## Debt-Bonded Labor corrective action process



**1. Violation identification**  
Apple assessor and third-party auditor identify Debt-Bonded Labor Violation



**2. Violation communication**  
Apple communicates violation to supplier senior management



**3. Signs terms**  
Supplier signs probation terms and repayment terms



**4. Repayment plan**  
Supplier submits repayment plan for Apple approval



**5. Employee payment**  
Supplier repays their employee



**6. Payment verification**  
Third-party auditor verifies repayment at supplier site

# Underage Labor

When underage labor is uncovered, specialized third-party assessors are brought in for an in-depth review of the case. The supplier is required to stop the underage employee from continuing to work and to return him or her safely home. Educational opportunities are presented to the underage employee and his or her guardians.

While the underage employee is attending school, the supplier is required to pay tuition and other associated fees, and must continue to pay his or her wages. Follow-up is conducted to ensure the individual's overall well-being, both at school and at home. Once the student reaches legal working age, the supplier is also required to offer the individual employment.

In 2018, we uncovered one case of Underage Labor. The individual was 15 years and 10 months old, and obtained a job through use of false identification. Once identified, the individual was immediately transported home and enrolled in his or her choice of school while continuing to receive wages from the supplier. Upon reaching legal working age, the individual was given the option to return to work.

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## Underage Labor corrective action process



**1. Violation identification**  
Apple assessor and third-party auditor identify Underage Labor Violation



**2. Return home**  
Supplier required to immediately provide safe passage home to underage employee



**3. Wages paid**  
Supplier required to continue to pay wages to supplier employee until he or she reaches legal working age



**4. Education**  
Supplier required to provide educational opportunity for supplier employee



**5. Employment guarantee**  
Supplier required to provide employment opportunity when the individual reaches legal age



93 out of 100 average  
Health and Safety  
assessment score

## Health and Safety assessment results

In 2018, the average Health and Safety score across our 770 assessments was 93.

During an assessment, our suppliers are measured on all Health and Safety Protections outlined in our Supplier Code of Conduct. Areas reviewed include occupational health and safety practices and management systems, emergency preparedness and response, and working and living conditions.

## Updates to our Code of Conduct

In 2018, we continued to raise the bar in Health and Safety Standards in our supply chain.

### High-risk tasks

We increased our standards to extend protections to subcontractors performing high-risk work such as operating a hoist or crane. Previously, our standards provided protections to facility employees. By expanding our Code to include subcontractors, our suppliers must establish a management system and emergency response procedure to ensure the safety of every contractor while performing high-risk work.



### Health and Safety Core Violations in 2018

## Assessment findings

In 2018, the majority of Health and Safety violations found in our assessments were related to occupational health and safety hazard prevention and emergency preparedness.

One example of an occupational health and safety hazard prevention violation found in our 2018 assessments included a supplier not providing appropriate health screenings to its employees who worked in hazardous roles. When a violation of this kind is identified, the supplier is required to improve their management system and enhance employee communication to ensure both pre-placement and post-employment health exams are provided to ensure health and safety.

An example of an emergency preparedness violation found in our 2018 assessments included temporary obstruction of an evacuation passage at a supplier facility. When a violation of this kind is identified, the supplier must retrain their management team and employees in safety awareness and appropriate management of emergency preparedness. The supplier must also develop a plan to improve their internal monitoring process to effectively identify safety issues and address them in a timely manner.

A lower percentage of assessment violations were found relating to health and safety permits, working and living conditions, and incident management.

### Health and Safety assessment deductions

	Core Violations	Violations	Administrative Non-Compliance	Total Deductions
 Occupational Health and Safety Hazard Prevention	-	- 3.5	- 0.2	- 3.7
 Emergency Prevention, Preparedness and Response	-	- 1.8	- 0.6	- 2.4
 Health and Safety Permit	-	- 0.8	- <0.1	- 0.8
 Working and Living Conditions	-	- 0.3	-	- 0.3
 Incident Management	-	- 0.1	-	- 0.1

Average Total Score:

93



Shift Foreman, Digital Printing,  
Apple Store glass manufacturer, Germany



93 out of 100  
average Environment  
assessment score

## Environment assessment results

In 2018, the average Environment score across our 770 assessments was 93.

During an assessment, a supplier is evaluated on Environmental Standards outlined in our Supplier Code of Conduct. Areas reviewed include environmental permits and reporting, hazardous waste management, wastewater management, stormwater management, air emissions management, and resource consumption management.

## Updates to our Code of Conduct

In 2018, we continued to raise the bar in Environmental Standards in our supply chain.

### Resource Consumption Management

A new Resource Consumption Management Standard was published that requires suppliers to reduce consumption of fossil fuel, water, hazardous substances, and natural resources. In order to do so, suppliers must create a management system to quantify, set targets, and monitor progress of conservation, reuse, recycling, substitution, or other measures.

### Air Emissions Management

New policy in the Supplier Code of Conduct requires suppliers to develop management systems to reduce greenhouse gas emissions in their operations. This new language requires suppliers to review their emission inventory and set targets to reduce emissions through conservation, clean energy, or other measures. Targets set by the supplier must include absolute reduction, normalized reduction, or both.

## Assessment findings

In 2018, the majority of Environment violations found in our assessments were related to hazardous substance management, environmental permits, and stormwater management.

An example of a hazardous substance management violation found in our 2018 assessments includes one case of a supplier not having proper labeling of their hazardous waste. In order to protect the people who work at supplier facilities, we require clear labeling with correct waste name, potential hazards, and safety measures. When a violation of this kind is identified, suppliers are provided with tools and training to correct the non-conformity and ensure employees are retrained to meet our standards.

An example of an environmental permits violation found in our 2018 assessments includes one case of a supplier not obtaining an Environmental Impact Assessment approval from their local Environmental Protection



Environment Core  
Violations in 2018

Bureau. In this case, the supplier had undergone a production process change but did not get an updated approval through proper channels before the project was put into operation. When a violation of this kind is identified, suppliers are required to seek approval through proper channels and obtain all legally required permits, as well as establish a management system to manage permit issues moving forward.

An example of a stormwater management violation found in our 2018 assessments includes one case of a supplier failing to conduct biannual monitoring of their stormwater management systems. The Supplier Code of Conduct requires frequency of stormwater testing that is beyond applicable legal requirements. When a violation of this kind is identified, suppliers must hire a third-party organization to collect stormwater samples and conduct stormwater testings in compliance with the Supplier Code of Conduct.

A lower percentage of assessment violations were found relating to wastewater, air emissions and boundary noise management, non-hazardous waste management, and pollution prevention and resource reduction.

## Environment assessment deductions

	Core Violations	Violations	Administrative Non-Compliance	Total Deductions
 Hazardous Substance Management	-	- 1.5	- 0.3	- 1.8
 Environment Permit	-	- 1.7	-	- 1.7
 Stormwater Management	-	- 1.1	- 0.4	- 1.5
 Wastewater Management	-	- 0.5	- 0.3	- 0.8
 Air Emissions Management	-	- 0.6	- 0.1	- 0.7
 Boundary Noise Management	-	- 0.2	- 0.1	- 0.3
 Non-Hazardous Waste Management	-	- 0.3	- <0.1	- 0.3
 Pollution Prevention and Resource Reduction	-	-	- <0.1	- <0.1

Average Total Score:

93

## Leading by example and sharing our work

When the tools and technology needed to build capability in our supply chain do not exist, we create them. If we find these tools would be helpful for others outside of our own supply chain, we share them openly. We work across industries and in the collective to share our progress and promote best practices.

## Sharing Environmental Health and Safety knowledge

In 2014, the Environmental Health and Safety (EHS) Academy was established in partnership with the EHS Center at Nanjing University to develop an intensive curriculum in environmental protection, air pollution, water management, chemical management, emergency preparedness, and safety equipment. The EHS Academy developed the professional skills of hundreds of EHS managers at our suppliers, and developed the suppliers' capability to manage and maintain EHS systems onsite.

We are working with the Responsible Business Alliance to open-source this curriculum and make it available online to participating companies and, by extension, EHS managers in supply chains around the world.

## Working in the collective

Apple also works to make industry-wide progress on responsible minerals sourcing, beyond its own supply chain. In addition to serving on the executive steering committee of the Responsible Minerals Initiative, Apple engages with a broad range of civil society, industry, and government experts. In 2018, we partnered with the Enough Project, an international human rights organization, to convene a series of expert group panels to discuss opportunities to work collectively on innovative approaches to the responsible sourcing of minerals.

We also worked with the International Organization for Migration (IOM) to create a clear roadmap for companies and their suppliers to address human rights allegations related to mineral sourcing in their supply chain. The guidelines were informed by the UN Guiding Principles on Business and Human Rights and clearly outline step-by-step approaches to be taken by companies, assessors, and smelters or refiners to mitigate issues in their sourcing supply chain. They also give a step-by-step process to remedy the issue. The guidelines are publicly available.

In 2018, we transitioned Apple's Risk Readiness Assessment (RRA) tool to an industry-wide platform. In total, 265 companies that were seeking a tool to assess human rights risks in their sourcing supply chains utilized the tool from a diverse set of industries.

Through the Clean Electronics Production Network (CEPN), Apple shares best practices, including our rigorous approach to chemical management, driving transparency in the supply chain, and safer, cleaner substitution. An example of this leadership is funding training videos for CEPN to share with its members and the entire electronics industry.

Additionally, we participate in cross industry collaborations and serve in leadership roles with organizations including the Responsible Business Alliance, its Responsible Labor Initiative, and the Public-Private Alliance for Responsible Minerals Trade.



Line Leader,  
iPad production, China

## Creating a ripple effect that drives change.

Our commitment to people and the planet doesn't end at our supply chain. We seek to be an example for others to follow, openly sharing our progress to accelerate industry-wide change. And we're proud of the global recognition we've received for our efforts. But we know our work will never be done, because we believe that if we aren't finding ways to improve, we aren't looking hard enough.