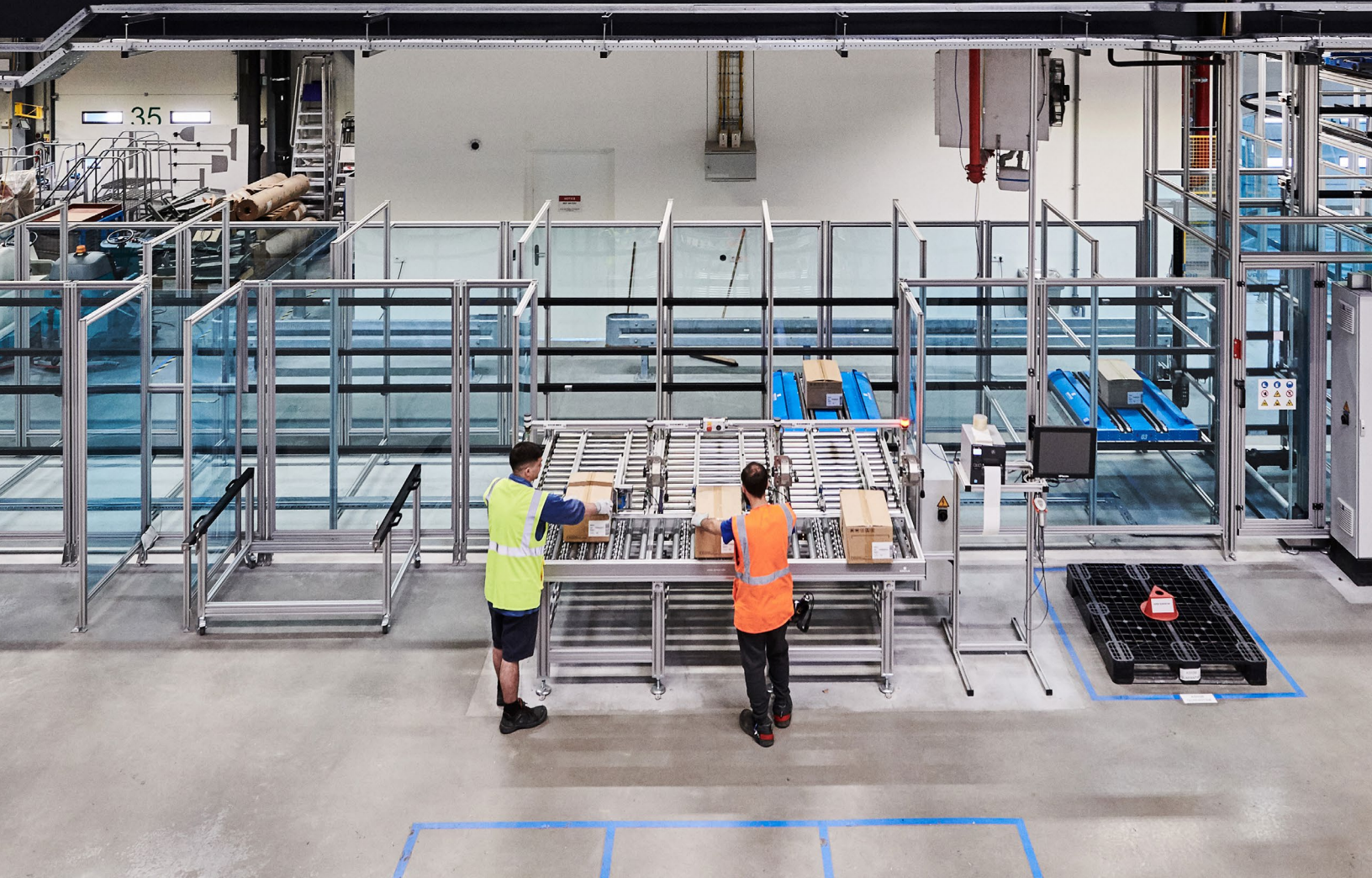


Google

Responsible Supply Chain Report 2018



Responsible Supply Chain Report 2018

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Reimagining the Google supply chain

Every year, Google's ongoing drive for innovation propels the growth of our business, which in turn expands the reach of our supply chain to include new places, people, and materials. As we work to continuously improve the way we design, source, produce, deliver, repair, and recover products, it's become increasingly clear that we need to reimagine supply chains as systems with deep connections to our business and our impact. Through this reimagining, we will chart a better path forward for Google and the industry.

From driverless cars to our 2012 moonshot goal of purchasing 100% renewable energy to match the energy consumption of our operations, Google has never shied away from challenging the status quo in order to advance progress. Striving to build sustainability into everything we do furthers this ambition. Now we're applying the core of our DNA—our spirit of invention—not just to the products and services we design and make, but to the way we make them. We're strengthening our commitment to our supply chain by setting a goal to help our suppliers transition to clean, renewable energy. We'll accomplish this by sharing what we've learned in matching 100% of our electricity consumption with renewable energy purchases for our own operations and by developing tools and support to help suppliers make this transition. We will continue to work to develop markets to create access to affordable renewable energy in the communities where we source and produce our products.

In this report, you will see evidence of our progress in areas like worker well-being, environmental impact, and conflict minerals. You'll also get a sense for the unique ways we're working across our industry and partnering with our suppliers and vendors to drive change. You'll learn about how we're creating value along the entire supply chain for individuals, communities, and the environment—all of which make our growth and success possible. You'll read about the projects we already have underway and our plans for new initiatives.

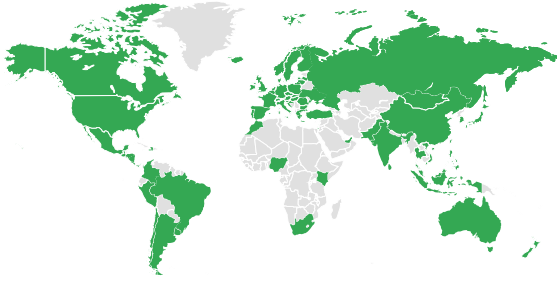
Our goal is to do more than transform our own supply chain through this work: We aim to reimagine a supply system for the future and to unlock new possibilities for the industry as a whole. We invite others to collaborate with us as we explore new territory and advance the technology industry toward a more sustainable and just supply chain model.

Join us in reimagining what's possible.

Karl Braitberg

Vice President, Supply Chain

Google



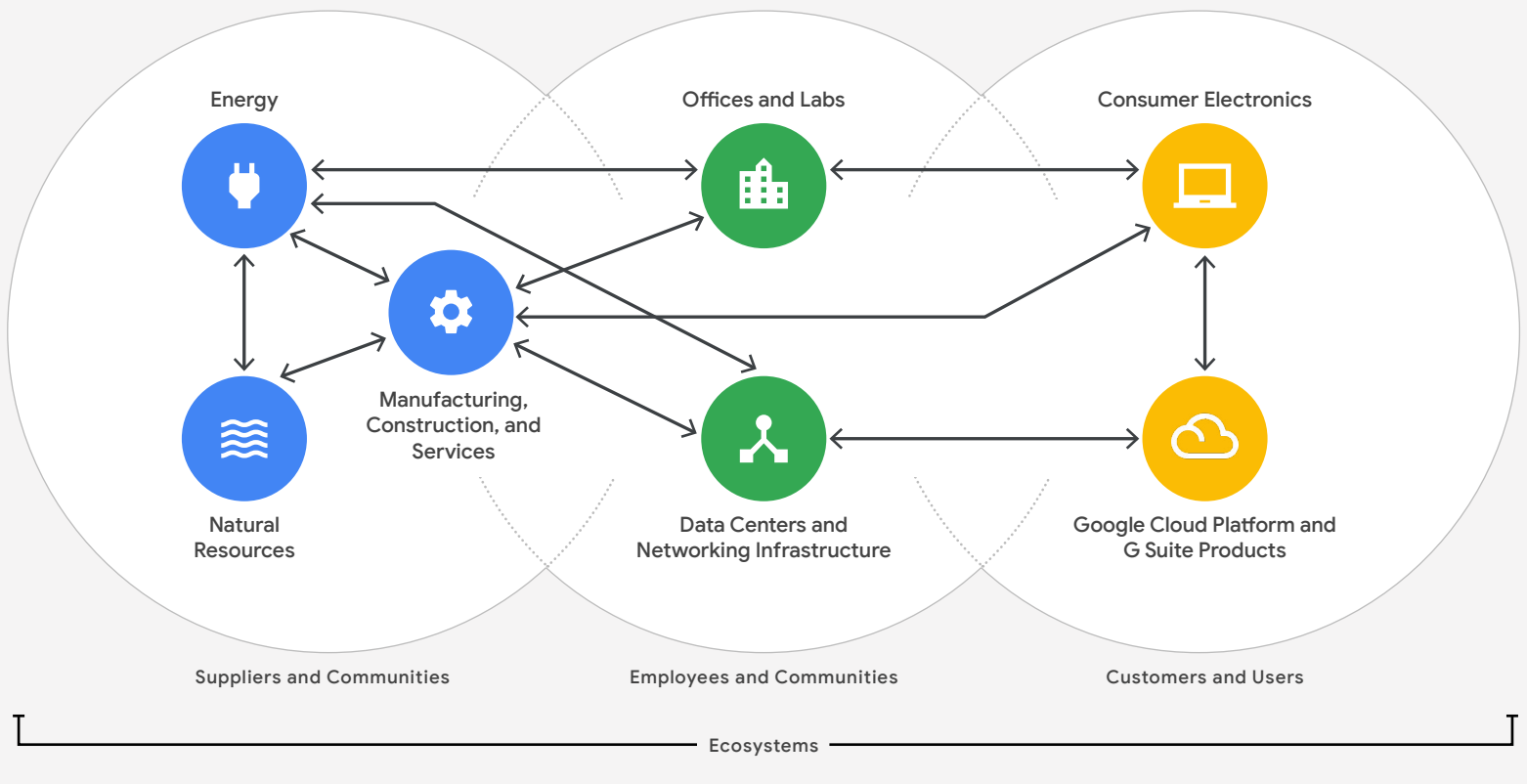
We work with more than 500 active suppliers in over 60 countries.

About our supply chain

We work with more than 500 suppliers worldwide that manufacture hardware for our consumer devices and data centers and provide services to support our operations. Our consumer devices include products such as [Google Home](#), [Chromecast](#), [Google Pixel](#) and [Pixel XL](#), and the [Nest Learning Thermostat](#). The hardware in our data centers helps power core Google products like [Search](#), [Gmail](#), [YouTube](#), and [Google Cloud](#), in addition to our offices and many of our services.

Our supply chain spans several manufacturing models that range from licensing software with minimum hardware specifications to contracting directly with manufacturers that build products designed by us.

GOOGLE VALUE CHAIN





About this report

Google and our parent company, Alphabet Inc., have been evolving our Responsible Supply Chain (RSC) program along with our hardware business for the past few years. In 2017, we published our first Responsible Supply Chain Report, which outlined our framework, tools, and key performance metrics from the beginning of our program through 2016. This year, we're giving stakeholders a deeper look at how our programs touch people's lives by highlighting several key projects across our supplier network that have achieved significant milestones in the 2017 calendar year. These stories—described briefly in this report and told in full at the [Responsible Supply Chain website](#)—showcase our program in more detail than we've shared before, and they help illustrate many of our program's successes, challenges, and aspirations.

This report also includes a summary of our 2017 social and environmental performance, communicates our progress against the goals we set in our last report, and sets new goals for 2018.

The majority of the data in this report covers January 1 to December 31, 2017, as well as cumulative data to show progress over time; the data covers both Google and Alphabet's non-Google business entities. In this report, we refer to our supply chain activities as Google's supply chain because Google is responsible for the majority of Alphabet's supply chain impacts.



Our approach



Our vision

We want people to feel good about using our products, and we want to feel good about them too. So we consider both the usefulness of our products and also the social and environmental impacts of how they are made. We aspire to create a new supply chain model for the future that accomplishes the following:

Includes everyone. From pursuing access to a healthy, safe, fair, and equitable environment for every person in our supply chain to inspiring and empowering a race to the top for suppliers, vendors, users, and competitors, we want to create shared value everywhere we operate.

Makes things better. We want to leave every place we touch better than we found it. We aspire to regenerate local ecosystems through clean, renewable energy, invest in local supplier communities and infrastructure, and end industry reliance on raw material extraction.

Transforms with technology. We are intent on inventing technologies that enable the most trusted supply chain in the world. This includes setting new standards for traceability and transparency and building a globally connected supply chain network to increase compliance, promote human rights, and enhance environmental performance.

How we make this happen

We rely on four major components to help mitigate risk and promote better results across our supply chain:

Supplier Code of Conduct. Our [Supplier Code of Conduct](#) sets standards designed to protect the health, safety, and treatment of workers, which includes the prohibition of any form of modern slavery, including forced, bonded (including debt bondage), or indentured labor; involuntary prison labor; sex trafficking; and slavery or trafficking of people.

Supplier engagement. Through mechanisms such as supplier self-assessments, risk assessments, on-site audits, and capability development, we gauge how close suppliers are to performing against our standards, identify potential risks, and address concerns.

Environmental performance. We work with our suppliers to assess the environmental impacts of their operations and encourage them to reduce potential negative impacts, such as greenhouse gas (GHG) emissions.

Capability building. We offer programs that enable our suppliers to develop stronger social and environmental capabilities.

Supplier assessments

We follow a multi-step process for evaluating our suppliers. Performing regular assessments helps us address potential issues early on, ideally before they develop into problems, and support our suppliers in taking corrective actions.

Self-assessments

Upon selecting new suppliers, we assess the level of risk they pose, and we ask certain suppliers to complete a detailed self-assessment. The company's responses help us see how closely it adheres to our Supplier Code of Conduct. Many of our suppliers already have strong programs to address our requirements. When a self-assessment indicates that a supplier does not meet our expectations, we follow up to ensure the supplier develops programs to address our concerns.

Risk assessments

Along with having suppliers evaluate their operations, we perform our own due diligence to understand current and potential risks in our supply chain. Together, these steps allow us to address issues directly and work with suppliers to mitigate them quickly.

2017 audit overview

44

Supplier site assessments

8

Countries with assessed suppliers

399

Non-conformances identified

Our extensive Supplier Risk Assessment process evaluates the social, environmental, and ethical risks of working with individual suppliers or groups of suppliers. The results give our supplier managers insights to help make better-informed sourcing decisions and to proactively manage their supplier relationships.

When performing a Supplier Risk Assessment, we look at a variety of factors, such as:

Country-level risks. Are certain countries at higher risk for water scarcity, corruption, or child labor?

Product-specific risks. Do suppliers use chemically intensive manufacturing processes? How physically demanding is the work involved in creating our products?

Supplier fines or convictions. Has the supplier been fined previously for violations related to human rights, the environment, or corruption?

Google's supplier-engagement efforts. Has the supplier submitted a self-assessment? Have we previously audited the supplier? If problems were found, has the supplier taken steps to resolve them?

Supplier relationship. How strategic is the supplier to our business? Is it the sole source of specific materials or services? Do we have influence over the design of the product or the selection of the components?

On-site assessments

We regularly perform independent third-party audits at our suppliers' facilities to determine whether they are meeting our standards and to help them identify and resolve issues. Visiting these sites in person gives us a chance to hear directly from workers and emerge with a thorough assessment of factory conditions. Our audits also provide valuable opportunities to raise suppliers' awareness of their social and environmental responsibilities, promote accountability, and encourage greater transparency.

The audits include in-depth factory, facility, and dormitory tours; management meetings; on-site worker interviews; and reviews of documents and records. Our audit program prioritizes our contract manufacturers, original equipment manufacturers, and suppliers initially identified as high risk. We performed 174 on-site assessments from 2013 to 2017.

Audit performance

Working hours and health and safety continue to be important focus areas across our industry; we also see these as primary opportunities for improvement when engaging with new Google suppliers. Here's a look at our most common non-conformance findings this past year and since the launch of our RSC program in 2013. We steadily add new hardware suppliers each year, accounting for the majority of our new non-conformance findings on a year-over-year basis.

Most common non-conformance findings in 2017

Non-conformance category and criteria Percentage

Labor

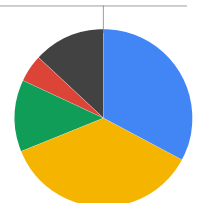
| | |
|--|------------|
| Working hours Excessive hours (over 60 per week) or more than six consecutive workdays without rest | 19% |
| Wages and benefits Not providing legally required minimum wages and benefits | 9% |
| Student workers/interns Failure to protect students working in factories from hazardous tasks, overtime, or night shifts | 7% |

Health & Safety

| | |
|--|------------|
| Emergency preparedness Fire code violations, inadequate drills, or inadequate fire alarm systems | 19% |
| Occupational safety Lacking controls for job hazards | 10% |

Audit findings by category

| | 2013 | 2014 | 2015 | 2016 | 2017 | Cumulative |
|----------------------------|------|------|------|------|------|------------|
| Audits completed | 19 | 18 | 59 | 34 | 44 | 174 |
| Labor | 30% | 28% | 34% | 33% | 38% | 33% |
| Health & Safety | 35% | 40% | 34% | 34% | 43% | 36% |
| Environment | 13% | 13% | 14% | 13% | 10% | 13% |
| Ethics | 5% | 4% | 4% | 7% | 2% | 5% |
| Management Systems | 17% | 15% | 14% | 13% | 7% | 13% |





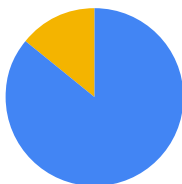
When we find that a supplier is not conforming to our expectations, we expect the supplier to provide a corrective action plan (CAP) that outlines the root cause of the finding, how and when that company will resolve the issue, and what steps will be taken to prevent recurrence. We determine whether the plan is acceptable based on the severity of the non-conformance in addition to the effort and time required to resolve the issue.

We expect suppliers to demonstrate improvements in order to continue working with us. Our goal is to resolve the most severe issues immediately. We expect all other findings to be resolved as quickly as is practical in accordance with our guidelines.

Once a CAP is approved, the supplier is expected to provide evidence of resolution and to commit to improving over time, which may require follow-up verification. When the supplier can demonstrate that it has successfully implemented the approved CAP, we change the plan's status to "closed."

Current status of audit non-conformance findings (total)

■ Closed 86% ■ In progress 14%



See the [appendix](#) on page 24 for a closer look at our non-conformance findings and improvements seen after CAP implementation.

SPOTLIGHT

Learning by listening

We're putting workers at the center of our compliance and sustainability efforts with our worker surveys, which provide anonymous information on the changes workers would like to see most. This information influences our thinking, while also giving suppliers valuable insights into how to improve worker recruitment and retention.

[Learn how we're incorporating worker voices into our RSC program](#)



Worker voices

We believe that the people providing services that support our products and operations can offer some of the most valuable insights into what's working and what needs to improve. To hear from workers, we conduct face-to-face interviews during our on-site assessments and solicit candid feedback through our anonymous worker surveys.

Our face-to-face interviews give us a chance to speak with workers about what they see on the factory floor, giving us a more thorough and transparent understanding of factory conditions. In 2017, we conducted approximately 1,200 on-site interviews during 44 audits.

When completing our surveys, workers are empowered to share their concerns and satisfaction in areas such as workplace conditions, wages, working hours, and communication with management. We analyze and correlate the survey results to identify risks and areas for improvement. In 2017, nearly 1,000 people at 10 supplier factories participated in our worker surveys.

Since the inception of the RSC program, we've interviewed approximately 4,700 workers face-to-face and have gathered survey feedback from nearly 2,000 workers.

Highlights of our 2017 worker surveys

21%

More than one in five workers said they'd like to see more career development opportunities, reflecting the preference of younger generations for career mobility.

79%

More than three-quarters of workers understand how their wages are calculated. Our surveys indicate that workers who have a clearer understanding of wage calculation are more likely to feel fairly compensated.

#1: Bonuses

The changes workers would most like to see are higher bonuses and allowances (58%), salary increases (53%), and better canteen services (49%).

Our priorities and project spotlights



Our materiality assessment

This year we undertook a materiality assessment to identify and prioritize content for our Responsible Supply Chain Report. This assessment took into consideration the social and environmental impacts of Google's supply chain, Google's approach to integrating sustainability within our business strategy, and the perspectives of a diverse range of internal and external Google stakeholders.

The assessment determined our issues of greatest relevance:

- Ensuring ethical and fair treatment of workers in our entire supply chain
- Enabling safe and healthy workplaces
- Maintaining a climate-resilient supply chain
- Sourcing minerals responsibly
- Embedding circular economy principles into everything we do
- Considering wider community impacts
- Achieving the highest standards of business practice and supply chain security

In addition to addressing these issues internally, we're committed to collaborating with suppliers and other companies in the industry and service sectors to create a safer, fairer, and more equitable supply chain.

MATERIALITY ASSESSMENT RESULTS



Ensuring **ethical and fair treatment** of workers in our entire supply chain



Enabling **safe and healthy** workplaces



Maintaining a **climate-resilient** supply chain



Sourcing minerals **responsibly**



Embedding **circular economy principles** into everything we do



Considering wider **community impacts**



Achieving the **highest standards** of business practice and supply chain security



Include everyone

We're committed to building a truly inclusive supply chain. In practice, this means honoring and respecting the contributions of every person who engages with the Google supply chain in any capacity. Our baseline in this area is ensuring that Google treats workers with dignity and respect, maintains safe and healthy workplaces, and holds suppliers to the highest ethical standards. But our long-term goal is also to unlock the power of partnerships and to change the dynamic between companies, suppliers, and users so that together we can empower equality and inclusivity across all supply chains, not just Google's.

Fair treatment for workers

We believe every supply chain worker should be treated fairly, with dignity and respect. We accomplish this by deploying policies and processes throughout our supply chain to protect the people who make our products and provide valuable services to our company. This includes expecting that employment is freely chosen and workers are paid in keeping with applicable wage laws; prohibiting the use of child labor; guarding against sexual harassment and verbal abuse; preventing discrimination; and supporting freedom of association and collective bargaining rights.

SPOTLIGHT

Made by Me

Every product we use was made by someone, somewhere. In *Made by Me*—a Google-powered virtual reality experience—we give viewers an up-close, interactive look at some of the people who make Google products.

[Read what we set out to accomplish with *Made by Me*](#)



Capability building

We work with companies throughout our supply chain to help them address issues and improve their labor practices. For example, our RSC team provides in-person training and e-learning courses to help suppliers understand our Supplier Code of Conduct criteria, other regulatory standards, and industry best practices.

Anti-modern slavery

We have zero tolerance for any form of modern slavery in our supply chain. In 2017, we continued strengthening modern slavery-specific language in our contracts, requiring suppliers to do the following: comply with international human trafficking, forced labor, and modern slavery laws; implement modern slavery due diligence for their own suppliers and business partners; extend similar modern slavery language to their suppliers and business partners; permit audits when instances of modern slavery are reported; and allow us to terminate our agreements with them for any violation of these policies.

[Read our 2017 Modern Slavery Statement](#)

SPOTLIGHT

Safer chemistry for healthy manufacturing

Just as no one should be harmed *using* a Google product, no one should be harmed *making* a Google product. Our manufacturing restricted substances program helps us assess and control workers' exposure to process chemicals—such as cleaners and degreasers—that are present during manufacturing but not in the final product.

[Read how we're working with our suppliers to promote safer substances in manufacturing](#)



Safe and healthy workplaces

We believe everyone involved in making our products should work in an environment with high health and safety standards. Suppliers are expected to maintain safe and healthy workplaces and to implement OHSAS 18001/ISO 45001 or an equivalent management system to identify and resolve related issues. Our priorities include preventing on-the-job injuries, minimizing the impact of potential emergency situations and safety hazards, and improving employees' on-site living conditions.

Ethical operations

We expect our suppliers to uphold the highest ethical standards, including not engaging—directly or indirectly—in corruption, bribery, extortion, embezzlement, or other illegal practices. To meet these standards, we encourage companies to disclose information about their business activities, financial situation, and performance in line with regulations and industry practices. We also expect our suppliers to protect Google's intellectual property and information privacy from attacks by third parties in the supply chain.



Make things better

We want to leave every place we touch better than we found it. We're starting with areas where we can make an immediate impact, such as helping our suppliers adopt better energy management systems and putting strict standards in place to source minerals responsibly. In the long run, we want to build the principles of climate resilience into our supply chain, including collaborating with others to regenerate local ecosystems through the use of clean, renewable power and zero-waste practices. We're also working on strategies to responsibly transition into and out of sourcing and supplier communities, including investing in local infrastructure and vital services to improve lives today and provide opportunities tomorrow.

[A smaller environmental footprint](#)

We expect suppliers to minimize the environmental impact of their operations and take actions that help preserve community health and safety. This includes reducing carbon dioxide and other air emissions, supporting our suppliers' transition to renewable energy, designing circularity into our supply chain, and scaling efficiency into everything we do. We're also moving to incorporate our supply chain within Google's company-wide climate-resilience strategy so that our suppliers are prepared to tackle the challenges presented by climate change.

SPOTLIGHT

A low-carbon supply chain

Google became carbon neutral in 2007 and reached 100% renewable energy for our operations in 2017. We're bringing the same spirit of innovation to our supply chain, including piloting new energy-efficiency projects and building a platform to ensure that our suppliers have access to clean energy.

[Learn about our efforts to build an energy-efficient, low-carbon supply chain](#)

Transition to renewable energy

In 2017, Google matched 100% of the electricity consumption from our global operations with purchases of renewable energy from around the world. As a first step in our journey to help our suppliers transition to renewable energy, we're committed to sharing what Google has learned on our path to 100% renewables. We're launching a new program within Google to help provide suppliers with the tools and expertise they need to develop renewable energy solutions. We'll also work to transform electricity markets in key geographies to create pathways for renewable energy procurement that can meet the needs of thousands of suppliers and manufacturers. And we will collaborate in this effort with other organizations and companies that are facing similar challenges, because we will be more effective in transforming energy for supply markets when we work together with our peers.

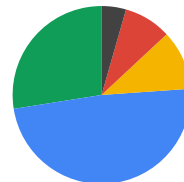
Scope 3 GHG emissions in metric tons of carbon dioxide equivalent (tCO₂e)

By fiscal year (2012–2017)

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---------|---------|---------|-----------|-----------|-----------|
| 332,612 | 479,388 | 980,783 | 1,234,683 | 1,292,267 | 2,719,023 |

By category (2017 only)

- Employee commuting **122,683**
- Business travel **233,376**
- Transportation and distribution **296,204**
- Capital goods **1,319,196**
- Purchased goods and services **747,564**



In 2017, our Scope 3 emissions grew along with our business. We have also updated our calculation methodology, which was previously based on economic input-output life-cycle assessment databases, life-cycle assessments, and primary data from some suppliers. In 2017, we shifted to using supplier financial intensity data reported by suppliers via the CDP supply chain program. We continue to work to increase the accuracy of these calculations.

SPOTLIGHTS

Journey of Gold

One of the key challenges to encouraging the demand for conflict-free minerals sourcing is greater transparency and understanding for consumers from halfway around the world. *Journey of Gold* places the viewer underground in a Congolese gold mine—and face-to-face with miners—to shine a light on how responsible sourcing supports communities.

[See how we're connecting people via virtual reality](#)

Children Out of Mining

Conflict minerals and child labor in minerals sourcing are fundamentally different challenges—and they require fundamentally different solutions. Filmed in April 2018, *Children Out of Mining* reveals on-the-ground evidence of progress in the fight against child labor in Manono, Democratic Republic of the Congo (DRC), a region that relies heavily on artisanal and small-scale mining. The video was produced by Pact with support from Qualcomm, Microsoft, and Google.

[Read about our partnerships to drive change in mining communities](#)

Congo Power

The DRC has one of the lowest electrification rates in the world, limiting economic opportunity and making it extraordinarily difficult to escape the country's violent minerals sourcing industry. In late 2017, we launched a scalable pilot program to bring more clean energy to Congolese communities.

[Learn how we're supporting renewable energy opportunities in the DRC](#)



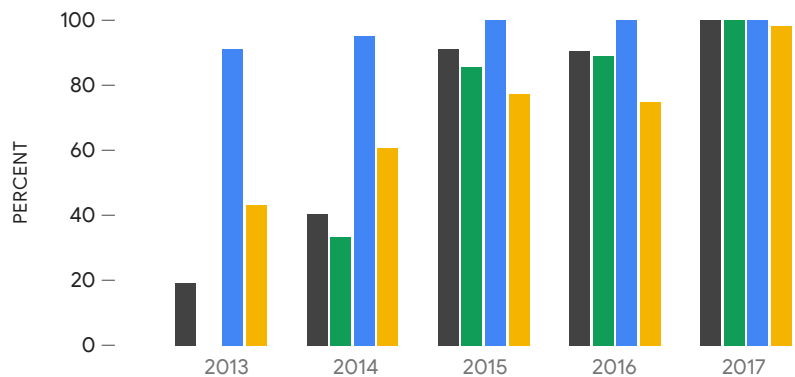
Responsible minerals sourcing

We take proactive measures to manage the social and environmental impacts associated with the sourcing and extraction of raw materials, including seeking to meet requirements on the traceability of specific conflict minerals. Recognizing that many people in sourcing communities have few options outside of the minerals trade, we also seek to improve the infrastructure in these communities so that people have the ability to pursue other economic opportunities.

As of 2017, 99% of the smelters or refiners we use are conformant, active,¹ or verified by a third party to source from countries other than those covered in the 2010 Dodd-Frank Act (collectively referred to as “Compliant” smelters or refiners for the purposes of this report). We have made major strides in sourcing from Compliant smelters since the inception of our RSC program in 2013.

Percentage of Compliant smelters or refiners, by metal (2013–2017)

■ Tin ■ Tungsten ■ Tantalum ■ Gold





Progress and commitments

Creating a more inclusive, regenerative, transparent, and connected supply chain is a long-term process. We've set a number of goals—for our own operations and those of our suppliers—to help accelerate our progress. Here's a look at some of the commitments we've made, our progress in 2017, and new commitments for 2018.

Progress against targets

Supplier engagement and capability development

| Target | Deadline | 2017 progress | Status |
|--|----------|--|--------|
| Maintain suppliers' commitment to our Supplier Code of Conduct, and perform risk assessments for all suppliers. | Annual | Our Supplier Code of Conduct is included in our Supplier Contracts and is a core element of our program. | ● |
| Conduct on-site assessments for suppliers identified as high risk and for contract manufacturers. | Annual | We conducted 44 audits in 2017, for a total of 174 from 2013 to 2017. All of our contract manufacturers have been audited. | ● |
| Conduct worker surveys at 10 additional supplier factories to increase transparency and identify opportunities for improvement in the areas most important to workers. | 2017 | In 2017, approximately 1,000 people at 10 supplier factories participated in our worker surveys. | ● |
| Extend the e-learning program as a key pillar of our suppliers' CAP resolution process and for use with all factory audit leads prior to conducting audits. | Annual | We have extended the reach of our e-learning and capability development to include supplier training on our manufacturing restricted substances and environmental compliance. | ● |
| Continue reinforcing anti-human trafficking training for suppliers in areas identified as high risk to ensure that 100% of factory sites have received this training. | Annual | A number of 2017 Google initiatives addressed major risk areas for human trafficking, including but not limited to child labor in the cobalt and tin mining industries and recruitment fees. There is far more for us and the world to do. | ● |
| Work with companies across the electronics industry to develop stronger alignment on a list of manufacturing chemicals of concern. | 2017 | In 2017, we published our restricted substances list for consumer hardware, which includes a section on manufacturing substances. Both lists are closely aligned with industry requirements. These manufacturing restricted substances are included in the audit protocol for all our vendors. | ● |

2018 goals

Maintain suppliers' commitment to our Supplier Code of Conduct, and perform risk assessments for all suppliers.

Conduct on-site assessments for suppliers identified as high risk and for contract manufacturers.


Conduct worker surveys at 15 supplier sites to increase transparency and identify opportunities for improvement in the areas most important to workers.

Extend manufacturing restricted substances, energy management training, and GHG accounting training to target suppliers based on spend and commodity provided.

Continue reinforcing anti-human trafficking training for suppliers in areas identified as high risk to ensure that 100% of factory sites have received this training.

Progress against targets (continued)

Conflict-free and responsible sourcing of minerals

| Target | Deadline | 2017 progress | Status |
|---|----------|--|---|
| Continue to work toward ensuring that our suppliers source only from smelters that are conformant with the Conflict-Free Smelter Program assessment protocols. | Annual | We have made good progress in sourcing from Compliant ² tin (100%), tungsten (100%), tantalum (100%), and gold (98%) smelters and refiners. Gold remains an area of challenge for Google and the industry, and we will continue to work with our suppliers and the Responsible Minerals Initiative (RMI) to improve responsible gold sourcing globally. |  |
| Continue engaging with cross-industry groups to expand conflict-free and responsible sourcing options through initiatives such as smelter audits and materials chain of custody verification. | Annual | We made an additional contribution to RMI's smelter audit fund for 2018 and are working on additional materials chain of custody initiatives (blockchain). |  |
| Drive collaboration activities with external stakeholders to better understand child labor in the cobalt and conflict minerals supply chains; develop strategies to eliminate these practices completely. | Annual | Google funded an effort driven by Pact and supported by multiple companies to address child mining in cobalt and tin mines in the DRC. The effort saw a 90% reduction in child mining in the pilot area. This is an ongoing focus area for Google. |  |
| Continue conflict minerals training for new suppliers and for suppliers that are not using 100% conformant ³ smelters. | Annual | This work is ongoing and will continue. |  |

2018 goals

Continue to work toward ensuring that our suppliers source only from smelters that are conformant with the Conflict-Free Smelter Program assessment protocols.

Continue engaging with cross-industry groups to expand conflict-free and responsible sourcing options through initiatives such as smelter audits and materials chain of custody verification.

Drive collaboration activities with external stakeholders to better understand child labor in the cobalt and conflict minerals supply chains; develop strategies to eliminate these practices completely.

Continue conflict minerals training for new suppliers and for suppliers that are not using 100% conformant⁴ smelters.

Progress against targets (continued)

Environmental sustainability

| Target | Deadline | 2017 progress | Status |
|--|----------|---|--------|
| Work toward ensuring that 90% of suppliers are reporting GHG emissions reduction targets. | 2017 | In 2017, 87% of the supplier facilities that we audited tracked GHG emissions and have set reduction targets for energy, emissions, waste, and water. | ● |
| Complete 10 additional energy-efficiency audits at supplier factories, and develop programs globally that support suppliers in further adopting energy management systems such as ISO 50001. | 2017 | We initiated the Technical Pilot Program for China Energy Management and Performance Evaluation in partnership with the Lawrence Berkeley National Laboratory and the China National Institute of Standardization. As part of the program, we launched pilot projects with two of Google's strategic manufacturing partners, which have already started to see energy and cost savings. Over 6 million kilowatt-hours in potential savings were identified. | ● |
| Establish a baseline of renewable energy use among our largest suppliers as measured by supplier spend. | Annual | At the time of publishing, we were still awaiting data from our suppliers via the CDP supply chain program. The data received so far indicates that some of our suppliers have renewable energy targets for portions of their businesses or specific locations. This will continue to be a focus area for Google. | ● |
| Calculate the carbon footprint associated with manufacturing our products throughout their life cycle, and work to increase the proportion of suppliers providing data to 90% of our supplier spend. | 2017 | We conducted 16 life-cycle assessments of Alphabet consumer products. We published the carbon footprints of our 2017 flagship consumer products in Google's Product Environmental reports, available in the Google Store . Suppliers representing 80% of our supplier spend provided data in Google's annual supplier environmental questionnaire. | ● |

2018 goals

Continue to work toward ensuring that 90% of suppliers are reporting GHG emissions reduction targets.

Complete 10 additional energy-efficiency audits at supplier factories, and develop programs globally that support suppliers in further adopting energy management systems such as ISO 50001.

Calculate annual renewable energy used by our largest suppliers as measured by supplier spend.

Calculate the carbon footprint associated with manufacturing our products throughout their life cycle, and work to increase the proportion of suppliers providing data to 90% of our supplier spend.

Collaborate with industry partners to develop pilot disk drives built with recovered rare-earth magnets.

Appendix

Appendix

Audit conformance data by category and criteria, including improvements following CAPs (2013–2017)

| Audit criteria | Audited suppliers with non-conformance findings | Improvement in conformance after CAP | Audited suppliers in conformance after CAP |
|--|---|--------------------------------------|--|
| Labor total | 19.22% | 17.06% | 97.84% |
| Other | 4.71% | 4.71% | 100.00% |
| Freely Chosen Employment | 21.18% | 20.59% | 99.41% |
| Child Labor Avoidance; Student Interns | 22.94% | 20.59% | 97.65% |
| Working Hours | 57.06% | 47.65% | 90.59% |
| Wages and Benefits | 39.41% | 36.47% | 97.06% |
| Humane Treatment | 7.65% | 6.47% | 98.82% |
| Non-Discrimination | 7.06% | 5.29% | 98.23% |
| Freedom of Association and Collective Bargaining | 12.35% | 11.17% | 98.82% |
| Immigration Law and Compliance | 0.59% | 0.59% | 100.00% |
| Health & Safety total | 26.84% | 24.34% | 97.50% |
| Health & Safety Management System | 1.76% | 1.76% | 100.00% |
| Occupational Safety | 46.47% | 42.35% | 95.88% |
| Emergency Preparedness | 50.59% | 47.06% | 96.47% |
| Occupational Injury and Illness | 27.65% | 24.71% | 97.06% |
| Industrial Hygiene | 33.53% | 28.24% | 94.71% |
| Physically Demanding Work | 11.18% | 10.59% | 99.41% |
| Machine Safeguarding | 18.82% | 18.23% | 99.41% |
| Sanitation, Food, and Housing | 24.71% | 21.76% | 97.05% |
| Environment total | 14.87% | 12.94% | 98.07% |
| Environmental Management System | 1.76% | 1.76% | 100.00% |
| Environmental Permits and Reporting | 22.35% | 18.82% | 96.47% |
| Hazardous Substances | 42.35% | 38.82% | 96.47% |
| Wastewater and Solid Waste | 18.82% | 16.47% | 97.65% |
| Air Emissions | 11.18% | 10.00% | 98.82% |
| Product Content Restrictions | 2.35% | 1.76% | 99.41% |
| Resource Efficiency | 5.29% | 2.94% | 97.65% |

Appendix

Audit conformance data (continued)

| Audit criteria | Audited suppliers with non-conformance findings | Improvement in conformance after CAP | Audited suppliers in conformance after CAP |
|--|---|--------------------------------------|--|
| Ethics total | 5.96% | 5.37% | 99.41% |
| Other | 1.18% | 1.18% | 100.00% |
| Business Integrity; No Improper Advantage | 17.06% | 14.71% | 97.65% |
| Disclosure of Information | 1.18% | 1.18% | 100.00% |
| Intellectual Property | 6.47% | 5.88% | 99.41% |
| Fair Business, Advertising, and Competition | 4.12% | 4.12% | 100.00% |
| Responsible Sourcing of Minerals | 2.94% | 2.35% | 99.41% |
| Privacy | 4.12% | 3.53% | 99.41% |
| Non-Retaliation | 10.59% | 10.00% | 99.41% |
| Management Systems total | 12.01% | 11.03% | 99.02% |
| Company Commitment | 5.29% | 5.29% | 100.00% |
| Corrective Action Process | 3.53% | 3.53% | 100.00% |
| Documentation and Records | 4.12% | 4.12% | 100.00% |
| Supplier Responsibility | 22.94% | 20.59% | 97.65% |
| Management Accountability and Responsibility | 15.29% | 14.11% | 98.82% |
| Legal and Customer Requirements | 18.82% | 17.64% | 98.82% |
| Risk Assessment and Risk Management | 19.41% | 18.82% | 99.41% |
| Improvement Objectives | 16.47% | 14.12% | 97.65% |
| Training | 10.00% | 8.82% | 98.82% |
| Communication | 7.65% | 7.06% | 99.41% |
| Worker Feedback and Participation | 4.71% | 3.53% | 98.82% |
| Audits and Assessments | 15.88% | 14.70% | 98.82% |

Endnotes

1. Smelters and refiners are defined as “conformant” or “active” by RMI. Conformant smelters or refiners are those that have been audited and meet the criteria for not directly or indirectly supporting the conflict; active smelters or refiners are those in the process of being audited.
2. For the purposes of this report, “Compliant” smelters or refiners are those that are conformant, active, or verified by a third party to source from countries other than those covered in the 2010 Dodd-Frank Act.
3. See note 1 above.
4. See note 1 above.



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[Additional resources](#)

Modern Slavery Statements ([2017](#), [2016](#))

[Supplier Code of Conduct](#)

SEC filings ([2017](#), [2016](#), [2015](#), [2014](#), [2013](#))

Responsible Supply Chain Report ([2016](#))