IBM strives to buy from companies that share our commitment to social responsibility.

We believe all suppliers should manage and report their social and environmental objectives, and we’ve built a more diverse supply chain for a half-century. We collaborate to advance these values in our industry, and to build tools for more transparency in supply chains worldwide.
Case Study

Food transparency and traceability

With the IBM Food Trust, suppliers and retailers can trace food across the global supply chain.

Leafy greens can be traced on the blockchain. As can mashed potatoes, mangoes and most recently, shrimp. They are just some of the products farmers, food producers and retailers worldwide are tracing using IBM Food Trust, the leading blockchain solution for transparency and traceability within the global food supply chain. More than 50 companies have signed on to work with the trust.

Using IBM blockchain technology running on the IBM Cloud, the Food Trust connects growers, processors, distributors and retailers through a permissioned, permanent and shared record of food-system data that can drastically cut the time needed to trace produce from farm to store, or inform a consumer on where their food came from. In a pilot program, tracing time was reduced from almost seven days to just 2.2 seconds.

The Food Trust ecosystem connects supply chains like Walmart’s and also those of other major retailers and global companies such as Carrefour, Dole, Golden State Foods, Driscoll’s and Nestlé — all without sharing any information they have not chosen to share.

As more companies adopt a digital, end-to-end traceability protocol, the IBM Food Trust’s goal is to help make the world’s food supply safer — something that is sorely needed.

Ed Treacy, vice president of Supply Chain and Sustainability at the Produce Marketing Association, believes blockchain can transform how the food industry works. “It can help by speeding up investigations into contaminated food, authenticating the origin of food and providing insights about the conditions and pathway through which the food traveled,” he says. “This will help identify opportunities to maximize shelf life and reduce losses due to spoilage.”

“We believe our vision of a transformed food ecosystem using blockchain is closer than ever.”

Raj Rao
General Manager, IBM Food Trust

5 million + transactions have been entered onto the blockchain
Supply chain

Our relationships with suppliers are built on a mutual commitment to social and environmental responsibility.

Spending $25.8 billion with a global network of more than 13,000 suppliers — as IBM did in 2018 — presents an opportunity to promote our values and help drive progress in our industry. We work with suppliers to establish requirements and assess compliance. We collaborate with industry groups to improve our sector, and we have worked for 50 years to increase supply chain diversity.

Half of IBM’s top 100 suppliers published corporate responsibility reports, and nearly 85% of those followed Global Reporting Initiative guidelines. We encourage our remaining suppliers to follow their lead for greater transparency.

2018 spending

IBM spent $25.8 billion in 2018 with more than 13,000 suppliers in more than 100 countries. Below are distributions by region (left) and category.
Supply chain

These 50 firms represent 90% of IBM’s spending in Production and Logistics Procurement (supporting our hardware brands and product distribution operations):

Acbel Polytech
Applied Materials
Artesyn
ASML Holding
BDT Media Automation
Broadcom
Celestica
Cisco Systems
Compro Business Services
Delta Electronics
DHL
FedEx
Finisar
Flextronics
Fuji Electric
Fujifilm
Geodis
GlobalFoundries
Hion Hai
i3 Technologies
Intel
Iron Mountain
Jabil Circuits
Lam Research
Lenovo
Marvell
Mellanox Technologies
Mercury Corporation
Micron Technology
Molex
NABS
NEC Platform Technologies
NetApp
Nvidia
Nippon Express
Panalpina
Pontocon
Redsys
Samsung
Seagate
SK hynix
Super Micro Computer
Syncreon
Teleplan
Toshiba
Trenton Systems
UPS
Western Digital
Wistron
Zollner Elektronik

These 50 firms represent 46% of IBM’s spending in Services and General Procurement (supporting client services, software offerings, and internal operations):

Adecco
Akamai Technologies
American Airlines
American Express
Apleona
Apple
Aricent Holdings
Artech Info Systems
AT&T
BMC Software
Broadcom
CBRE Group
CDI
Cisco Systems
Collabera
Computer Task Group
CVS Caremark
Dell Technologies
Delta Airlines
George P. Johnson
HCL Technologies
Hewlett Packard Enterprise
Hilton
Hitachi
Infinite Computer Systems
Internet Initiative Japan
Jones Lang LaSalle
Juniper Networks
LeasePlan
Lenovo
Manpower
Mitsubishi
NetApp
NTT Group
OKI Electric
Oracle
Persistent Systems
Randstad
Red Hat
Rocket Software
SAP
SDI International
SHI International
Sumitomo Corporation
The Employment Solution
TIS INTEC Group
UNICOM Systems
Westcon-Comstor
WPP Group
Zebra Technologies
Supplier assessment and improvement plans

In 2010, IBM’s Social and Environmental Management System began requiring direct suppliers to create their own systems for managing social and environmental responsibilities, with the goal of building sustainable capability by:

- Building a management system that includes employees, society and the environment, and complies with the Responsible Business Alliance (RBA) Code of Conduct (formerly the Electronics Industry Code of Conduct).

- Measuring performance and establishing voluntary, quantifiable environmental goals for waste, energy and greenhouse gas emissions.

- Publicly disclosing these goals, results and other environmental aspects of their management systems.

- Conducting self-assessments, audits and senior leadership reviews.

- Requiring these actions of their next-tier suppliers.

IBM requires all new suppliers without a social and environmental responsibility management system to create one during their first year of doing business with IBM; in 2018, 1,100 new suppliers were notified that they needed to fulfill this requirement. IBM works closely with suppliers and tracks their progress to build sustainable systems. More information on our requirements may be found on IBM’s supply chain environmental responsibility webpage.

Supply chain social responsibility

IBM’s focus on social responsibility has been a key element of our procurement strategy for 15 years. As a founding member of the RBA, IBM’s operations abide by the RBA code and IBM requires the same of our direct suppliers of hardware, software and services. The RBA also provides valuable education opportunities and audits of our suppliers’ operations to confirm they are properly following the code or to determine if they need further improvement.

Maersk, the container logistics giant, is using IBM Blockchain to create a global blockchain solution for the shipping ecosystem.

IBM Corporate Policies + RBA Code of Conduct

IBM Corporate Policies

Supplier Assessment

Supplier Audit (RBA Validated Audit Process)

Capability Building and Continuous Improvement

Correct Action Plan and Re-audit

IBM supply chain social responsibility

Compliance program
In 2018, there were audits to the RBA code with a cross-section of our Production and Logistics Procurement suppliers and Services and General Procurement suppliers. This helped us assess that our supply chain is following the RBA code and enables IBM to monitor critical issues such as human trafficking prevention. We do this through RBA's Validated Audit Process, the standardized social responsibility audit developed by the electronics industry. RBA audit reports provide a level of detail enabling suppliers to understand where noncompliance exists, and provide evidence to help suppliers identify root causes so that sustainable improvements can be made.

Since 2004, IBM has driven 2,028 full-scope audits, including 437 since 2013, measuring our suppliers’ RBA code compliance (and in earlier years, IBM’s Supplier Conduct Principles). In 2018, 62 of IBM’s first-tier suppliers had full-scope audits: 36 were Production and Logistics Procurement suppliers and 26 were Services and General Procurement suppliers.

Combined with re-audits, IBM assessed 90 first-tier suppliers in 2018 across 14 countries or territories, including in China, where the most audits and re-audits took place, followed by India, Mexico, Taiwan, Malaysia, Singapore, and the Philippines. Production and Logistics suppliers accounted for 63% of audits and re-audits and Services and General Procurement suppliers accounted for 37%.
In the 62 full-scope RBA audits in 2018, the 10 most frequent code nonconformances (major and minor) are provided in the chart to the right. To link the nonconformances to the five code sections, we have noted this via abbreviation: Lab (labor), H&S (health and safety), Env (environmental), Eth (ethics) and Mgt (management system).

These audits, along with IBM’s long-term supplier relationships and our suppliers’ progress toward code compliance, are helping drive long-term supply chain improvements. For example, consider “working hours,” where audits show that combined major and minor nonconformance declined to 13% in 2018 from 16% in 2017 and 20% in 2016.

Following an audit, IBM’s suppliers create and submit a Corrective Action Plan (CAP) for all issues identified. The CAP provides a roadmap for suppliers to make meaningful change — and later, to test those changes through a re-audit. IBM reviewed and accepted 102 supplier CAPs in 2018.

IBM’s cycle of auditing and re-auditing has been effective, as shown by the “before and after” results in the chart to the right. Within the 28 re-audits in 2018, we found 41 code provisions from the full-scope audits with major or minor nonconformance. The CAPs helped our suppliers improve across all 41 code provisions. The 10 code provisions with the highest nonconformance showed

### 2018 audit results

#### 2018 top 10 RBA Code of Conduct categories with rates of noncompliance determined by 62 full audits.

<table>
<thead>
<tr>
<th>Category</th>
<th>Major Noncompliance</th>
<th>Minor Noncompliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency preparedness (H&amp;S)</td>
<td>12%</td>
<td>8%</td>
</tr>
<tr>
<td>Working hours (Lab)</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Occupational safety (H&amp;S)</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Wages and benefits (Lab)</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Occupational injury and illness (H&amp;S)</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Freely chosen employment (Lab)</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Supplier responsibility (Mgt)</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Nondiscrimination (Lab)</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Audits and assessments (Mgt)</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Management accountability and responsibility (Mgt)</td>
<td>6%</td>
<td>4%</td>
</tr>
</tbody>
</table>

### Re-audit improvements

#### Change in nonconformance rates to RBA code provisions, from initial full audits to the 28 re-audits completed in 2018.

<table>
<thead>
<tr>
<th>Category</th>
<th>Full Audits</th>
<th>Re-audits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working hours (Lab)</td>
<td>12%</td>
<td>8%</td>
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<td>4%</td>
</tr>
</tbody>
</table>
significant improvement, including working hours (46% improvement), emergency preparedness (97% improvement) and occupational safety (81% improvement). CAPs fully corrected these 21 code provisions from an initial audit revealing both major and minor issues:

- Nondiscrimination (Lab)
- Food, sanitation and housing (H&S)
- Health and safety communication (H&S)
- Hazardous substances (H&S)
- Documentation and records (Mgt)
- Worker feedback and participation (Mgt)
- Corrective Action Process (Mgt)
- Industrial hygiene (H&S)
- Environmental permits and reporting (Env)
- Air emissions (Env)
- Storm water management (Env)
- Energy consumption and greenhouse emissions (Env)
- Company commitment (Mgt)
- Machine safeguarding (H&S)
- Wastewater and solid waste (Env)
- Protection of identity (Mgt)
- Training (Mgt)
- Communication (Env)
- Business integrity (Eth)
- Disclosure of information (Eth)
- Nonretaliation (Eth)

Additionally, 46% of re-audited suppliers addressed all code compliance issues after completing their re-audit cycle. This significant achievement shows both the value of going through the full RBA process as well as our suppliers’ commitment to investing in lasting improvements. IBM Global Procurement works with suppliers who have outstanding issues following their re-audits. IBM’s procurement executive team reviews supplier audit results monthly, and IBM’s Chief Procurement Officer reviews them quarterly.

In 2019, IBM will extend online access to RBA’s learning academy courses to help suppliers learn and apply that learning in their compliance efforts.

Center of Excellence for Product Environmental Compliance

IBM’s Center of Excellence (CoE) for Global Product Environmental Compliance helps IBM meet environmental regulations everywhere we do business. The CoE reviews regulations, develops compliance strategies, processes and deployment plans, and provides education and training materials for IBM’s employees and suppliers.

Worldwide, governments are passing more environmental laws than ever as they consider the health and safety of their citizens. IBM’s product environmental compliance work includes:

- Validating that all IBM hardware products don’t contain (or exceed acceptable amounts) of prohibited substances.
- Meeting eco-design directives, power and energy reduction regulations, and voluntary standards such as the U.S. Environmental Protection Agency’s ENERGY STAR program.
- Complying with the U.S. Toxic Substances Control Act, nanomaterials reporting requirements, battery laws, product takeback regulations and annual reporting.
- Delivering supplier education via dedicated global webinars.

IBM has deployed analytical tools for managing environmental compliance of our products. For example, one tool identifies which IBM part numbers are impacted by expiring exemptions for the European Union RoHS Directive. These tools save IBM engineers extensive amounts of time analyzing complex bills-of-materials to identify the IBM parts impacted by changing requirements.
Engagement and collaboration

IBM collaborates with industry groups, academics, nongovernmental and professional organizations, sharing our work and learning from each other to identify ways to improve supply chain social responsibility. We encourage our suppliers to participate as well.

Our primary supply chain social responsibility collaboration group is the RBA. Representing a wide range of the supply chain, the RBA has grown to over 140 members across automotive, communications, consumer electronics, computer brands, contract manufacturing, hardware components, industrial equipment, logistics, retail, services, software, and the toy industries.

Each member of IBM’s global Supply Chain Social Responsibility team is part of one or more of RBA’s workgroups. This allows us to remain engaged in, contribute to and learn from other companies that make up each group.

IBM also engages with local and nongovernmental organizations around the globe. For example, as a key member of the electronics industry in Mexico, IBM collaborates with industry chambers and nonprofit organizations — such as the NGO Centro de Reflexión y Acción Laboral — that share our commitment to a sustainable and responsible supply chain. Together, we are working to try to address mutual concerns regarding working conditions in our respective supply chains.

Conflict minerals

In 2018, IBM continued efforts to increase conflict-free tantalum, tin, tungsten and gold (3TG) in our supply chain. IBM participates in the Responsible Minerals Initiative (RMI), along with over 350 companies and industry groups focused on resolving challenges associated with conflict minerals. IBM’s due diligence measures conform to the framework set forth in the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chain of Minerals from Conflict-Affected and High-Risk Areas. Our work to date can be summarized in four categories:

1. Establish a supply chain standard for conflict minerals.
2. Perform a Reasonable Country of Origin Inquiry (RCOI) to determine potential conflict mineral sources in IBM’s products.
3. Survey direct suppliers using the RMI’s Conflict Mineral Reporting Template (CMRT) to determine the smelters or refiners (SORs) of conflict minerals in the supply chain.
4. Engage these SORs in our Responsible Minerals Assessment Program (RMAP) or equivalent programs.

IBM identified 298 upstream SORs of 3TG via 112 direct suppliers in 44 countries, and determined that 93% of these SORs were conflict-free or pursuing assessment. Names and locations of these SORs are published in IBM’s 2018 Conflict Minerals Report.

IBM’s direct suppliers that report SORs of conflict minerals that are not progressing toward being conflict-free are required to have a plan to remove conflict minerals from products provided to IBM. We work closely with suppliers to help them overcome this difficult challenge and achieve this goal through conflict minerals education, including webinars and RMI online courses.

In 2018, IBM representatives along with other RMI member companies met with conflict-mineral SORs in Indonesia and India to encourage their participation in RMAP. IBM donated to the RBA Initial Audit Fund, which offers full reimbursement for the cost of initial RMAP audits for SORs new to the program. IBM also attended conferences in China, Hungary, and India to meet with SORs of 3TG and encourage RMAP participation.

In 2019, we are continuing our work to reach conflict-free on 3TG and have started exploring our supply chain for cobalt, which has become the next material of interest.
Supplier diversity

IBM believes that diversity in our supply chain stimulates growth in a global marketplace and drives development in growing economies. Our supplier diversity program celebrated its 50th anniversary in 2018 and provides opportunities to suppliers that are majority-owned by people from an ethnic minority (as defined in each country or region), women, military veterans, people with disabilities or LGBT individuals.

In 2003, IBM expanded the program beyond the United States to seek relationships with diverse suppliers in every country where we operate, and to require our direct suppliers to seek diversity through their supply chains. We look for suppliers that not only provide value to our supply chain, but also promote economic opportunities for historically disempowered groups wherever we operate. IBM also works with our diverse suppliers to help them expand their capabilities and delivery models so they can respond more effectively to IBM’s requirements.

IBM has conducted more than $1 billion annually in business with our first-tier diverse suppliers in the United States since 2000 and more than $2 billion annually in business with first-tier diverse suppliers globally since 2006. In 2018, IBM purchased $2.5 billion in goods and services from diverse first- and second-tier suppliers globally, including nearly $1.4 billion with diverse first-tier suppliers in the United States and $710 million with diverse first-tier suppliers in other countries.

IBM’s Global Supplier Diversity organization has been widely considered an industry leader globally and was recognized more than 20 times in 2018. We will continue to foster diversity in our global supply chain as business needs evolve, and we will work to identify and develop diverse firms in countries where we have purchasing needs.

Diverse spending worldwide

IBM spent $2.1 billion directly with first-tier diverse suppliers in 2018.

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**Best of the Decade**

*Minority Business News USA* included IBM in its 2018 Best of the Decade list for “demonstrated commitment to qualified, diverse suppliers.”