



CITI Evaluation & Best Practices

Green Supply Chain 2019

About IPE

Institute of Public & Environmental Affairs

The Institute of Public & Environmental Affairs (IPE) is a non-profit environmental organization based in Beijing, China. Since its establishment in May 2006, IPE has developed and operated the Blue Map Database (www.ipe.org.cn), and launched the Blue Map mobile app in June 2014, consolidating nationwide environmental quality data and real-time emissions data for key pollution sources into a mobile app for the first time. IPE aims to leverage the Blue Map Database and app to promote environmental information disclosure and public participation and to improve environmental governance mechanisms.

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Note

1. The duration for this round of evaluation is between: 1st Oct 2018 and 30th Sept 2019.
2. If any divergences arise between the English and the Chinese versions of this report, please refer to the Chinese version, which is the official version of the report.



Background

Over the past decade, as the globalization of manufacturing has accelerated, there has been an increasing recognition of the central importance of supply chain emissions to a company's environmental footprint. In spite of this, some companies have delayed reducing their supply chain footprints, claiming that they do not know how to manage the environmental performances of their suppliers in China, while others have argued that the environmental information required to properly inform their oversight in China is inadequate or unavailable to them.

To close this gap and illuminate a path forward for supply chain responsibility, six years ago, the Institute of Public and Environmental Affairs (IPE) and the Natural Resources Defense Council (NRDC) co-developed the Green Supply Chain CITI Evaluation, which provides brands with a road map tool to improve the environmental performance of their supply chains. Today, informed by IPE's Blue Map Database, which provides easy user access to extensive public government records on factory environmental performance, the once moon-shot exploration taken by a handful of brands is now easy to launch for any who wants to try.

Additionally, with the widespread promotion of green finance, more financial institutions are starting to pay attention to the environmental performance of enterprises. A number of financial institutions have recently contacted IPE to discuss and collaborate on green supply chain finance mechanisms to help suppliers achieve green development.

Green Supply Chain 2019: CITI Evaluation & Best Practices introduces readers to the key components of effective supply chain oversight that make beneficial use of the readily available data on environmental performance available in China. Organized by "Frequently Asked Questions", this report delineates a path to initiate and then mature corporate supply chain programs. We hope this document can serve as a practical guide to enable companies to incorporate suppliers' environmental behavior in sourcing qualification criteria and start elevating environmental performance matters in their business decision-making. Given the large influence that corporate stakeholders can leverage, efforts such as these will make a precious contribution to improving China's environmental quality and serve as a model of how private sectors and market-based mechanisms can contribute to solutions that drive sustainable manufacturing and development around the world.

Q&A

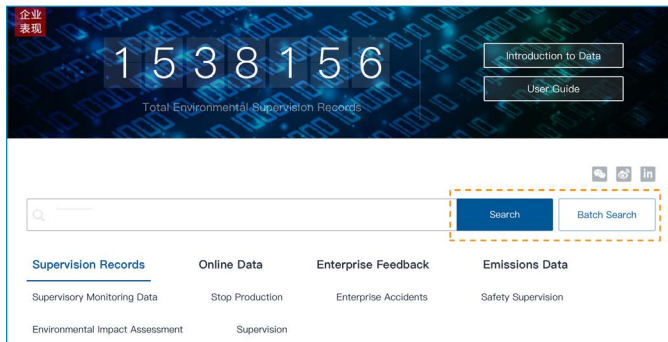
How do I know if my suppliers in China have violated laws and regulations?

Government agencies in China began to release substantial environmental information on factory non-compliance to the public through the implementation of the Measures for Environmental Information Disclosure (Trial) in 2008. Subsequently, over the past decade, due to unremitting efforts by the central government as well as continuous attention from and promotion by all sectors of society, the disclosure of pollution source supervision information (a.k.a. compliance records) – a key category of environmental information – has made significant breakthroughs.

IPE launched the Blue Map Database in 2006, and since then has continued to collect and consolidate environmental quality data, emissions data and pollution source supervision records published by 31 provinces and administrative areas and all 337 prefecture-level cities across China.

Getting Started

To assess a supplier’s compliance status, brands can simply **type the supplier’s Chinese name or Unified Social Credit Code into the [Blue Map Database search box](#) accessible on IPE’s website** (Figure 1). This search will access all 6 million facilities and 1.5 million records detailing factory violations of the environmental laws and regulations in China. Companies can also batch search a full list of their suppliers, in which case the system **will automatically match the uploaded supplier list with the facilities in the Blue**



► Figure 1 Blue Map Database search page

Map Database and provide a breakdown of each and every supplier with their environmental performances.

Best Practices

IPE’s Blue EcoChain, built to increase the efficiency and effectiveness of supply chain oversight, is a key tool available to brands to oversee long supplier lists and keep track of the environmental performances of all their suppliers in the Blue Map Database. With this tool, brands establish an account on the Blue Map website and upload their supplier list, and **the Blue EcoChain automatically scans and provides instantaneous updates of their suppliers’ environmental performance** – both with regards to violations of emissions standards in the real-time monitoring data where available, and the appearance of violation records and corrective actions in the Blue Map Database. Blue EcoChain greatly reduces the amount of manual labor previously required to search for violations, track progress and confirm remediation.

In 2019, 37 brands made use of the Blue EcoChain to great effect, enhancing their efficiency and expanding the breadth and depth of supply chain compliance oversight across China (Figure 2).



► Figure 2 Brands using the Blue EcoChain to oversee supply chain environmental performance



What should I do with suppliers with violation records?

IPE has developed a well-tuned process for facilities to address their violation records on the Blue Map Database. To date, 58 multinational and local brands have adopted this process and incorporated it into their supply chain oversight to great effect.

Getting Started

For the first step, brands contact suppliers with violation records and request that they contact IPE and provide a public explanation regarding why the violation happened and what corrective action plans they may have drafted or already adopted to remediate the problem. IPE puts a notice of the conversation on its web page, under [Communication Records](#). (Figure 3)

Columbia
Pushed tannery to conduct corrective actions for wastewater violation record(s).
This factory, through motivation from its customer brand Columbia, actively communicated with environmental groups to implement corrective actions for its violation record(s) from the year(s) 2018, and disclosed information on the status of its corrective actions.
Qingdao | Publication Date: 2019-09-29

FOXCONN
Pushed optoelectronics factory to conduct an audit for its procedural, hazardous waste violation record(s).
This factory, through motivation from its customer brand Foxconn, actively communicated with environmental groups to implement corrective actions for its violation record(s) from the year(s) 2018, 2019, and underwent a third-party audit to verify the effectiveness of its corrective actions.
Shenzhen | Publication Date: 2019-09-18

TOYOTA
Pushed machinery factory to conduct corrective actions for air emissions violation record(s).
This factory, through motivation from its customer brand Toyota, actively communicated with environmental groups to implement corrective actions for its violation record(s) from the year(s) 2017, 2018, and disclosed information on the status of its corrective actions.
Tianjin | Publication Date: 2019-07-17

► Figure 3 Communication records on IPE's Blue Map website

Suppliers are also encouraged to provide supporting documents for their explanations ranging from environmental impact assessment (EIA) approvals to discharge permits to third-party or self-testing reports that verify the legality and effectiveness of their environmental management systems. Typically, companies agree to post these explanations and documents in the Blue Map Database, though occasionally some prefer to post on their own websites first and then later in the Blue Map Database.

For suppliers, a timely public explanation can **demonstrate a positive attitude and accountability to stakeholders and help rebuild trust with local communities**.

Some brands and suppliers may want to remove their non-compliance records from the Blue Map Database. In this case, IPE has a process to **validate the effectiveness of the corrective actions**. In most cases, an off-site document review will suffice, and IPE can undertake that review on its own. Where problems are more serious, suppliers need to conduct **an on-site third-party audit to verify the effectiveness**. Please visit the "[GCA Audit](#)" page on the IPE website for a full description of the Green Choice Alliance (GCA) review/audit procedure.

Compared to other auditing mechanisms typically used by companies, both on-site and off-site GCA audits uniquely include the participation of environmental NGOs from the Green Choice Alliance to ensure the integrity of the audit. Once the records are removed, the audit report is made publicly accessible on the Blue Map Database, with the removal of any commercial secrets, so as to accept public supervision and to enhance its credibility (Figure 4).

Ningbo Jinjin Finery Co., Ltd. + Follow

Expand Basic Enterprise Information

Supervision Records | Online Data | Enterprise Feedback | Emissions Data

Supervisory Monitoring Data | Stop Production | Enterprise Accidents | Safety Supervision

Environmental Impact Assessment | Supervision

2018 violation record(s) have been addressed via third-party environmental audit and removed accordingly. For details, please consult the "enterprise feedback" page.

2016 violation record(s) have been addressed via third-party environmental audit and removed accordingly. For details, please consult the "enterprise feedback" page.

2014 violation record(s) have been addressed via third-party environmental audit and removed accordingly. For details, please consult the "enterprise feedback" page.

► Figure 4 Records removed after the GCA audits

As of September 2019, a grand total of 9,800 factories have engaged with IPE regarding their violation records or environmental information disclosure to demonstrate accountability for their pollution problems¹. Among them, more than 3,200 facilities have passed GCA audits and had their records removed. These suppliers come from a variety of industries including: textiles and apparel, footwear, electronics, ceramics, plastics, glass, stationary, yarn, fiber, buttons and zippers, mechanics, printing and ink, paper and packaging, food and beverage, automotive parts, chemicals, pharmaceuticals, metals, building materials, wastewater treatment and hazardous waste treatment.

¹ IPE tracks the total number of enterprises responding to environmental issues through the green supply chain program each year. 9,800 enterprises represent the sum of these annual measurements from 2006 to 2019. Some enterprises, therefore, may be double-counted if their issues were not resolved within one year.



How can I extend my influence beyond the first tier of the supply chain?

Getting Started

In most manufacturing sectors, the bulk of the environmental footprint rests on components/material suppliers who are usually beyond the first tier of the supply chain. These facilities should be prioritized for oversight **because they generate higher risks to the environment as well as to business operations, supply chain reliability and brand reputation with stakeholders**. However, typically a brand will lose a significant amount of influence over factories further up its supply chain, because it does not have direct contracts with those suppliers.

IPE's database and search tools offer particularly helpful solutions to this problem because brands can use them to remotely identify the high-risk upstream suppliers without any on-site checks and raise well-founded concerns when requesting the facilities address any legal violations.

The first step to getting started on full supply chain oversight is **mapping out the upstream supply chain**. Most brands choose to start by identifying their Tier 2 or 3 suppliers from high risk sectors. Vendors, trading partners and direct suppliers themselves might be helpful resources to collect the names of these upstream suppliers.

Best Practices

To most effectively drive change throughout their supply chains, brands should **train their suppliers to undertake the same supplier screening that the brand is undertaking and to address any compliance problems they find directly**, using the same procedures outlined above. It may also be helpful to work in collaboration with other brands and industry associations to achieve impact in this regard. See the next section for details.

Dozens of brands, primarily from the textile and apparel and IT industries, have been able to effectively extend their influences beyond Tier One of their supply chains in this past year. They have successfully engaged metal processing and chemical processing suppliers, as well as facilities for centralized wastewater treatment and hazardous waste treatment by motivating their direct suppliers to take action (Table 1).

Metal Processing



In one case, Apple required one of its aluminum processing suppliers based in Jiangmen, Guangdong Province to address its 2018 violation for the improper management and storage of a small amount of hazardous waste. The documents provided by this supplier demonstrated that it has since strengthened its waste management system, built a new storage facility with clear labels and transferred the hazardous waste to treatment facilities with legal permits in a timely manner.

Hazardous Waste Treatment Facilities



A supplier of Huawei in Shanghai reported that the brand notified them in a supplier CSR audit that the hazardous waste treatment facility they worked with had two violation records. This supplier subsequently contacted the facility to request a public explanation regarding any corrective actions they might have taken. The hazardous waste facility then provided exhaust and wastewater testing reports following their corrective actions, and explained that the online monitoring data which is also collected and displayed publicly on the Blue Map Database shows that the facility has adequate capacity to control its pollutant emissions in compliance with legal standards.

Table 1
Exemplary brands extending influence to upstream suppliers

	Exemplary brands	Number of suppliers contacting IPE during the evaluation period
Metal Processing	Apple, Dell, Foxconn, Hitachi, Huawei, Microsoft, Panasonic, Royal Philips, Toshiba	40 suppliers of aluminum, cobalt, copper, magnesium, titanium, zirconium processing and powder metallurgy, iron and steel
Chemical Processing	Apple, Archroma, Cisco, C&A, Dell, Esquel, Foxconn, Gap, Hitachi, Huawei, Inditex, Kao, Levi's, Lindex, Nike, Oji, Panasonic, Primark, P&G, Samsung, Target, Toshiba	124 suppliers of resin, fluorine, coating, paint, viscose, disperse dyes and auxiliary, cosmetics, white carbon black, special materials
Centralized wastewater treatment	Adidas, Cisco, Columbia, C&A, Dell, Esprit, H&M, Inditex, Levi's, Primark, Target	11 centralized wastewater treatment facilities
Hazardous waste treatment	Apple, Cisco, Dell, Esquel, Hitachi, Huawei, Inditex, Levi's, Primark, Marks & Spenser, Suitsupply	53 hazardous waste transport companies and treatment facilities



As a brand with limited influence on my suppliers, how can I motivate them to improve their environmental performance?

Some brands may have a limited volume of sourcing in China and therefore have less leverage when engaging with their suppliers. They can be stonewalled by their powerful suppliers while trying to improve their environmental responsibility programs.

Getting Started

As with the recommendations above, IPE's database and tools are helpful for this situation because a brand with limited influence does not have to send its own team or third-party agency to do an on-site check at every facility in its supply chain. Instead, it may start by checking the database and identifying the highest-risk suppliers. The brand can then require those suppliers to simply make a public explanation, a low-cost initial action that moves toward assuming their own responsibility for environmental protection.

Best Practices

To further motivate suppliers to address their problems and to validate the results, brands with smaller volumes may benefit from **joining in an industry alliance to work with other brands and create collective influence alongside members of the group.**

The Sustainable Apparel Coalition (SAC), Pharmaceutical Supply Chain Initiative (PSCI), Responsible Business

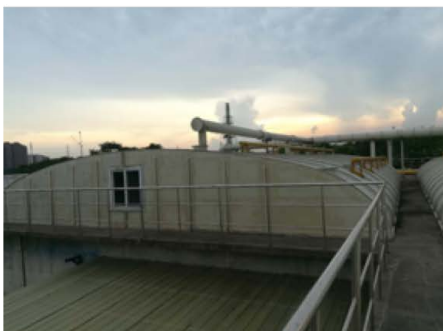
Alliance (RBA), Zero Discharge of Hazardous Chemicals (ZDHC) and Together for Sustainability (TfS) are examples of industry coalitions formed to address environmental problems in the global supply chain. All of them have recognized the work of IPE and some are exploring methods of integrating the Blue Map Database as a part of what they offer as member services. We look forward to further progress with these organizations in 2020.

CURA In 2019, the China Urban Reality Association (CURA) decided to incorporate the requirement of environmental compliance into their collective procurement initiative. It has since required 20 suppliers of escalators, pumps, waterproof material, glass and windows, solar heaters, paint and door locks to at least provide public explanations regarding previous violation records to qualify for orders. This demonstrates the power of industrial coalitions in raising the bar of supply chain environmental management, and the significant impact this can generate in reversing the conditions in which bad performers are rewarded with more business due to the lower prices and drive out good performers in environmental compliance.

When it comes to indirect suppliers, especially centralized wastewater treatment plants (WWTPs) and hazardous waste treatment facilities, even brands with high volume contracts and strong procurement leverage may feel powerless. It is inspiring to see some of them collaborate for improvements in this critical area.

adidas ESPRIT INDITEX

In one case in Changzhou, Jiangsu Province, Adidas, Columbia, C&A, Esprit, H&M and Inditex each determined that three dyeing and washing mills who supplied them all shared one WWTP. Collectively, the dyeing mills pushed the WWTP to verify the rectification of a 2016 odor violation through a GCA audit. The photos and documentation subsequently disclosed by the WWTP showed that it has installed odor collection and treatment facilities and its current emissions are in compliance with legal standards (Figure 5).



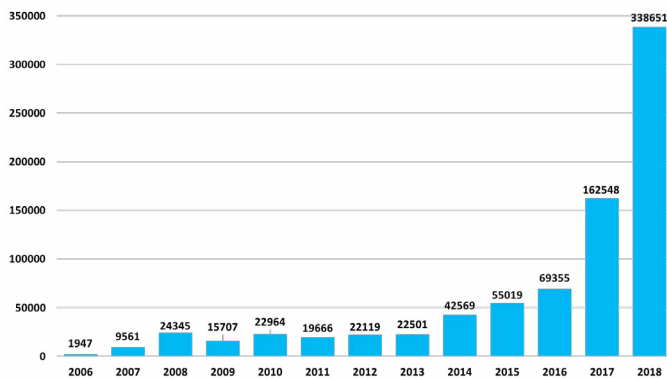
► Figure 5 Upgrade of the WWTP odor collection systems

Q&A

How can I motivate so many suppliers with limited capacity and resources?

Getting Started

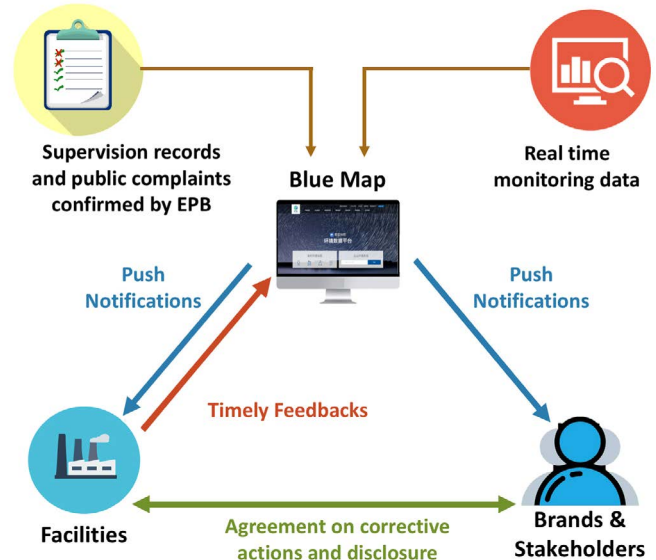
Government inspections and the enforcement of environmental and safety regulations, which have been on the upswing in China for the past several years, maintained a high pace in 2019 (Figure 6). In particular, the Chinese government continued to release tens of thousands of additional compliance (“supervision”) records to the public this past year, which expanded the number of records in the IPE Blue Map Database to over 1.5 million. It poses a significant challenge even for brands with mature and well-resourced supplier responsibility programs to keep up with the influx of new violation records.



► Figure 6 Number of pollution source compliance records collected into the Blue Map Database

There is an increasing understanding that the fundamental solution to this problem is to replace the conventional relationship of brands policing suppliers with one of equal partnerships, in which suppliers feel individually accountable for compliance problems as they arise, without the need for a push from their brands each time. This welcome maturation in a supplier’s sense of personal responsibility is a natural result of the increased transparency evidenced by the unprecedented volume of government compliance records in recent years.

Based on this recognition, most of the 37 brands adopting the Blue EcoChain have begun to require their suppliers to register themselves on the Blue Map Database (Figure 7). Blue EcoChain motivates and enables suppliers **to take more proactive action in pollution control** by empowering them to receive timely updates on their own performance, disclose public explanations regarding violations in a timely manner and demonstrate continued compliance.



► Figure 7 Suppliers and stakeholders simultaneously receive push notifications regarding new violations and public explanations made by the suppliers

Benefits for Brand Users

- Easily follow thousands of suppliers and receive real-time push alerts via mobile app or email when suppliers have new violation records and keep track of real-time monitoring data where available;
- Retrieve suppliers’ environmental performance data via automated data-chart;
- Mitigate reputational and operational supply chain risks by directing suppliers to follow a set process for promptly adopting follow-up corrective actions and conducting information disclosure.

Benefits for Supplier Users

- Track your own environmental performance and disclose public explanations regarding violation records in a timely manner;
- Restore damaged environmental credit to mitigate market and public supervision risks;
- Easily subscribe/follow subsidiary companies as well as your own suppliers’ environmental performances.

Best Practices

A handful of leading brands, including Apple, Dell, Primark and Levi's are moving toward adopting sophisticated equal partnerships with their suppliers through the Blue EcoChain.



Unique among all leading brands, Dell has reached a written agreement with its suppliers to proactively participate in the Blue EcoChain before problems arise. In this agreement, Dell suppliers are required to promptly adopt follow-up corrective actions and publicly disclose a written explanation on the Blue Map Database if and when they ever receive a push alert notification regarding their supervision records or real-time monitoring compliance problems. We have therefore seen Dell's suppliers proactively contacting IPE before the brand itself turns to the issue at hand.

The Dell system achieves an important new level of performance in supply chain oversight, transferring the primary responsibility and public accountability for pollution problems to suppliers themselves as they arise, instead of relying on brand personnel to push the supplier to take action on a case by case basis when problems arise. As such, the Dell system aligns well with the environmental protection laws in China, which state that enterprises should bear the primary responsibilities of pollution control.

By enrolling in Blue EcoChain under these terms, Dell's suppliers are expected to provide timely explanations on their own, which allow both the brand and local communities to understand the reasons for the violation, the corrective actions suppliers have adopted and the current status of environmental performances. This enables Dell to move beyond the basic oversight of supply chain compliance to build mutual trust with their suppliers in improving their environmental performances beyond compliance. The company will continue to check that its system is delivering the expected results in the coming year.

Getting Started

Brands concerned with pollutant reduction beyond compliance can encourage suppliers to measure their energy and water use, track their discharge of conventional pollutants and specific chemicals, and publicly disclose this data via IPE's Pollutant Release and Transfer Registry (PRTR) platform.

PRTR is an environmental database or inventory of both **hazardous chemical substances and conventional pollutants released into the air, water and soil, and transferred off-site for treatment and disposal** collected on an annual basis. PRTR reporting systems are commonly used in the U.S., the E.U., Japan and other regions around the world.

In 2019, **24 brands** (Figure 8), including first-timers Bestseller, Li-Ning and VF Corporation, now actively require their suppliers in China to calculate and disclose their annual PRTR data via the Blue Map Database. Other brands such as Huawei, Microsoft and Panasonic require suppliers who conducted on-site GCA audits to also disclose PRTR data.



► Figure 8 Brands who require suppliers to disclose PRTR data

Best Practices

The efforts of these brands have vastly increased the number of facilities who voluntarily go beyond compliance and disclose their PRTR data to the public. As of September 2019, more than 1,500 suppliers have disclosed more than 3,500 annual PRTR data forms to the Blue Map Database, which enable the facilities themselves, brands, industrial experts and the public to **track the pollutant emissions and resource usage efficiency of these factories.**



I would like to go beyond basic compliance with my suppliers. What else can I do in China?

Moreover, brands like Adidas, Dell, Foxconn, H&M, Inditex and New Balance have provided training to their suppliers on how to disclose PRTR data and ensure they disclose industry priority parameters in their data forms.

Benefits of Publishing PRTR Data

- Identify priority sectors of resource usage and emissions across the value chain;
- Measure progress and demonstrate year-on-year reductions to stakeholders;
- Verify the rationality of publicly disclosed targets and benchmark with industry average performances.



I am concerned about climate change and my company's carbon footprint. What more can I do with my suppliers in China?

To help achieve the goals of the Paris Agreement, many brands have announced their commitments to reducing greenhouse gas (GHG) emissions. Research shows that the majority of industrial sector emissions resides within supply chains as opposed to office buildings, distribution centers or retail stores. Thus, engaging with suppliers is an important cornerstone for any serious carbon reduction commitment. The Chinese government is working to integrate the reduction of carbon emissions into the control of conventional pollutants, sending a signal to facilities along the supply chain to start reviewing their carbon emissions.

Getting Started

Management should start from calculation. The first step for brands to start effectively managing carbon emissions is to push suppliers to publicly disclose their energy consumption and GHG emissions data. The PRTR developed by IPE in 2013 provides facilities along the supply chain

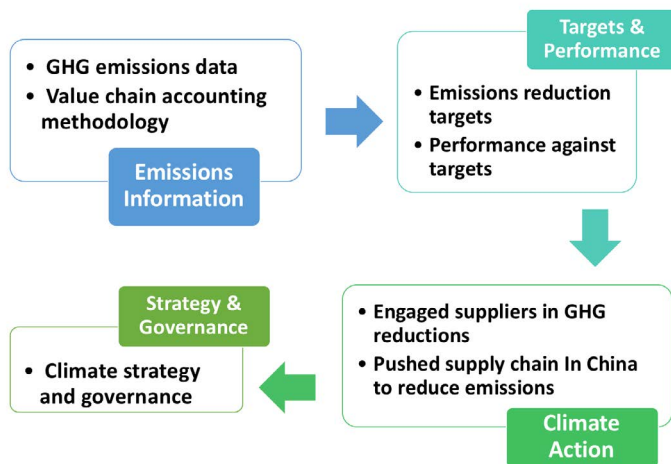
with a datasheet to assist in the collection and calculation of enterprise-level data, as well as a platform on which to disclose it.

Features of IPE's PRTR Datasheet

- Enables the disclosure of carbon and pollutant emissions data in one datasheet;
- Integrates annual emissions data and target/performance indices for self-assessment and public disclosure;
- Provides an accurate benchmark with mainstream carbon indicators such as those measured by CDP;
- Provides automated cross-checking functions and requires third-party verification by IPE prior to publication.

Best Practices

Brands can motivate their suppliers to set GHG emissions reduction targets based on calculating and disclosing their PRTR data, and engage them in programs to reduce their carbon footprints. Suppliers can then make use of the PRTR form to track their progress towards meeting their reduction targets. This road map is reflected in the Supply Chain Climate Action SCTI Index, a spin-off of the Green Supply Chain CITI Evaluation centered on climate change (Figure 9).



► Figure 9 The SCTI provides brands with a roadmap to reduce supply chain carbon emissions through these indicators

Adidas, Apple, Cisco and Dell have made climate policies requiring their suppliers to set their own emissions reduction targets, while Dell and Levi's required their suppliers to publicly disclose their targets and reduction progress on IPE's PRTR platform in 2019. Moreover, 60 brands evaluated in the SCTI have included supply chain emissions in their carbon reduction targets, 39 of which were approved by the Science Based Targets initiative (SBTi).



How can I better demonstrate my efforts on green supply chain to stakeholders?

Getting Started

Brands can proactively disclose their supply chain performance in their own publications. In 2019, Apple, Cisco, Dell, Fiskars, Huawei, Levi's, New Balance, Signify, Suitsupply and others **shared their achievements on their corporate websites, and in their sustainability or environmental responsibility reports**, highlighting their efforts to drive suppliers in China to follow the environmental laws and regulations, and improve their overall environmental performance. See selected quotes taken from their publications at the end of this report.

Best Practices

C&A, Dell and M&S notably shared their work via social media platforms such as WeChat and Weibo, guiding the Chinese public to understand the positive impacts a more sustainable way of consumption can have on the environment.

C&A "For a more efficient green supply chain, we require wet processing suppliers (dyeing and weaving factories; washing and printing factories) to do the following:

1. Track the environmental performance and real-time monitoring data of their upstream and downstream suppliers in China through the Blue Map app or Blue EcoChain system;
2. Provide timely feedback on environmental violation records and remove any records through a document review or Green Choice Alliance (GCA) audit;
3. Publicly disclose annual energy, hazardous waste, wastewater and air emissions data by uploading it onto the Institute of Public and Environmental Affairs (IPE) Pollutant Release and Transfer Registry (PRTR) platform;
4. Publish wastewater testing reports on the Greenpeace Detox platform."

----- *Green Fashion | Second Place in the Industry! C&A's Listing on the Green Supply Chain CITI Index, CA China, January 11, 2019.*



► Figure 10 Green Supply Chain Map

Beyond publishing sustainability actions in their own publications, brands can demonstrate true leadership in their commitment to supply chain responsibility by transparently disclosing their supplier list in the form of a map which encompasses environmental data. As of September 2019, 15 brands chose to come onto IPE's [Green Supply Chain Map](#), co-developed by IPE and NRDC in 2018 (Figure 10) for this purpose. By doing so, these brands not only keep their stakeholders updated on their supply chain environmental management initiatives but also put the onus on their suppliers to actively keep track of their own environmental performance. Placement on the map also offers the potential to facilitate sustainable consumption by displaying the environmental footprints of any purchased goods.



How can I best forecast the environmental risks along my supply chain in China?

IPE developed the **Dynamic Environmental Credit Risk Assessment (DECRA)** system in 2018 to enable brands, financial institutions and other interested parties to more efficiently evaluate the regulatory compliance of enterprises in China.

DECRA provides dynamic environmental risk evaluations for over one million facilities based on the environmental information collected in the Blue Map Database. The system uses keyword searches and other data-based means to analyze key components of corporate violation records, emissions monitoring data and rectification plans within a facility's docket in the Blue Map Database. It then provides a dynamic quantitative risk score based on the severity of illegal activity and demonstrated progress toward future compliance (Figure 11).

The DECRA distillation of government-issued violation records and updated policy references can be very helpful to brands to more easily identify hot spots of environmental risks along their supply chain in China.

IPE has also worked with industrial professionals on a derivative risk assessment product that incorporates other aspects of operational risk that a factory faces, beyond the risks triggered by environmental compliance matters as calculated in IPE's DECRA evaluation. This related tool, the Dynamic Environmental Risk Assessment

(DERA) incorporates factors such as policies and planning, governmental supervision, infrastructure and the environmental quality of a given region for a more comprehensive data-driven quantification of supply chain risk.

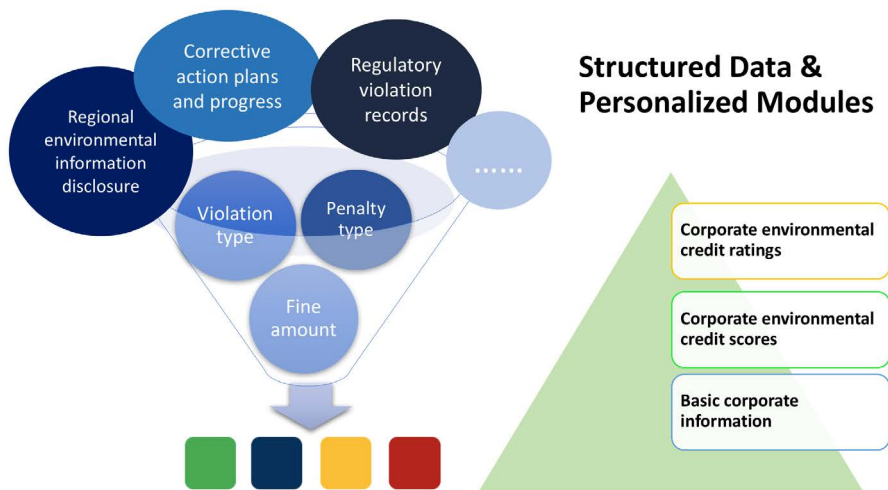


Can I employ any of IPE's data-based solutions to manage my suppliers outside of mainland China?

IPE's vision is to build a regional database for stakeholders to understand the environmental performance/credit of any given company.

This year, we started collecting information on the environmental compliance of facilities outside of China - both violation records issued by governments and real-time monitoring data disclosed by the facilities, where it is available. We are looking to partner with organizations in other countries and regions, particularly in Southeast Asia and South Asia to work together to mature this program and develop a regional database.

In the meantime, we encourage brands to apply the same standards to their global suppliers as they do in China and ask those with violations to **address the issues and provide public explanations** to IPE using the procedures outlined above.



► Figure 11 Environmental risk assessment provided by DECRA

CITI Top 50

The table on the next page shows this year's CITI scores for the top 50 brands who have demonstrated excellence in undertaking supply chain environmental responsibility in China. Most of these brands have consistently scored well in the CITI evaluation over the past few years, while a few new brands, including Cisco, Huawei and Tesco, whose supplier oversight accelerated significantly during 2019 have entered the Top 20. The full list of scores for all 438 brands in the CITI evaluation is provided at the end of the report.

CITI scores are designed to reflect supply chain responsibility across five key component areas, spanning **data transparency and disclosure, responsiveness to public and stakeholder concerns, and compliance and corrective action**, among others. The most important core component of high CITI scores, of course, is **high-functioning environmental oversight** that enables a brand to develop a supplier portfolio of strong factories that guarantee their environmental responsibilities – both **compliance**

and beyond compliance –are regarded with the utmost importance. CITI Evaluation Criteria changes every year to reflect the latest environmental policy changes and trends in supply chain management. As such, scores may change slightly from year to year. For this year's detailed evaluation criteria, please see the [CITI 6.0 Evaluation Guidelines](#).

As in previous years, brands in the IT and apparel sectors are the most active in IPE's green supply chain CITI evaluation. With the expansion of their screening scope, these brands have provided a helpful boost to government oversight over the large environmental footprint of industrial sectors beyond apparel and textiles, footwear and electronics. In 2019, they have begun to drive changes among suppliers of fashion accessories, ceramics, plastics, glass, yarn, fiber, buttons and zippers, mechanics, printing and ink, paper and packaging, and chemicals, as well as hazardous waste treatment, wastewater treatment and household waste incineration facilities.

CITI Master



This year IPE took a new step in the CITI Green Supply Chain program to inaugurate a **CITI Master** category. This category has been conceptualized to drive aspiring Masters to mature their supply chain programs to the point of equal partnerships with suppliers – such that accountability for compliance issues rests equally on the brand's and its suppliers' shoulders, rather than relying on the continued efforts of the brand to detect problems and inform the supplier of its responsibilities, issue public explanations and lead corrective action efforts each time a problem arises.

To qualify as a CITI Master, exemplary brands must:

1. Rank as a top performance brand in the annual CITI;
2. Maintain high performance standards in their supply chain environmental management through the Blue EcoChain or equivalent data system, which enables brands and suppliers to communicate dynamically;
3. Require all key suppliers to track their environmental performance in real time through Blue EcoChain or an equivalent automatic data system to ensure their accountability to the public.



Once designated a Master, the brand is no longer scored in annual CITI evaluations, making room for a new top performer in the coming year.



Apple was designated as the inaugural CITI Master in 2019. The company has ranked #1 in CITI annual reporting for five years in a row. It has been tracking and rectifying compliance problems for 223 suppliers in China in coordination with IPE and the Green Choice Alliance since 2012, and has delivered high levels of compliance among its suppliers with its diligence and persistent work. Most notably, the company has recently joined Blue EcoChain in 2019 and has committed to bringing all of its existing suppliers into the Blue EcoChain.

CITI Top 50

01  80.07	02  75.88	03 adidas 70.64	04  70.24	05 INDITEX 69.36
11  56.48	12 M&S EST. 1884 56.36	13  HUAWEI 54.09	14 FOXCONN 53.99	15  53.2
21  44.26	22  43.64	23  ESQUEL GROUP 43.58	24  41.62	25 HITACHI Inspire the Next 41.53
31 PHILIPS 34.82	32  34.65	33  Carrefour 34.42	34 领取新未来 OJI 34.12	35 LINDEX 33.96
41  29.48	42  HONDA 29.42	43 KONTOOR™ 25.28	44 SUITSUPPLY 24.36	45 TOSHIBA 23.76

06



69.12

07

PRIMARK®

67.8

08



67.74

09



67.32

10



60.12

16

ESPRIT

50

17



49.44

18

Panasonic

46.14

19

TESCO

45.4

20

Gap Inc.

44.56

26



41.48

27



40.01

28



38.4

29

BURBERRY

37.56

30

Canon

36.37

36

Columbia

33.5

37



32.12

38



31.44

39

BESTSELLER®

30.96

40



30.84

46

Walmart*

23.2

47



22.5

48



22.26

49

P&G

21.98

50



21.7

Leading brands promote supply chain environmental management in their publications



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.

---- *Supplier Responsibility 2019 Progress Report*



We assess our suppliers' performance in preventing the release of potentially harmful chemical substances or pollutants. Last year, over 100 of our suppliers' factories reported information about these releases to a monitoring database maintained by the Institute of Public & Environmental Affairs (IPE) in China.

We also worked with our Original Design Manufacturers to better manage their own supply chain's using the IPE database.

---- *Supply Chain Sustainability Progress 2018 Annual Report*



Since 2011, Huawei has been supporting the Green Choice Alliance, which was established by the Institute of Public and Environmental Affairs (IPE), a nongovernmental organization. We have added the IPE's enterprise environmental data to our supplier audit list and supplier self-checklist. When query results show that a supplier violates environmental

rules, Huawei immediately asks them to solve the problems within a designated timeframe. In 2018, routine queries about the environmental data of 900 key suppliers revealed 52 violations of environmental protection rules, and these violations were properly addressed. On the IPE's 2018 Greening the Global Supply Chain – Corporate Information Transparency Index (CITI), Huawei was scored as the leading company in mainland China and ranked 7th in the IT sector.

---- *Huawei Investment & Holding Co., Ltd. 2018 Sustainability Report*

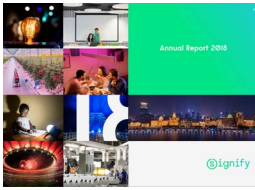
SUITSUPPLY



A large share of a garments' environmental footprint is generated in its supply chain, often in places where it's hard to see or measure. In order to address and monitor this better, we joined the Green Supply Chain initiative in 2018, a publicly available online transparency tool that ties companies to their suppliers' environmental performance...

We will continue and improve tracking the environmental performance of our suppliers in this way.

---- *Suitsupply 2018-2019 Sustainability Report*



To reduce the environmental pollution in China, Signify worked with the Chinese Institute of Public & Environmental Affairs (IPE), leveraging their work to engage with our suppliers... Signify engages with any suppliers on the IPE list to

resolve environmental non-conformances. From 2015 to the end of 2018, there were 34 direct suppliers flagged on IPE's list, which was reduced to 7 by this year-end and 27 suppliers have taken actions to remediate and their violation records were removed from IPE website. Signify also requested direct suppliers to engage their own direct suppliers that appear on IPE's list for them to resolve non-conformances.

---- Signify 2018 Annual Report



We have utilized their databases to monitor the environmental related legal compliance of our suppliers in China. In case any such violation is detected from their database, which the IPE collects from government reports and websites, we will require

immediate actions from our suppliers and provide our support during the remedy process. We piloted this at the beginning of 2017 and in 2018 we already have established a process and demonstrated our ability for quick response. During 2018, we have managed to support our suppliers in responding and taking actions to address six instances of such environmental legal violations.

---- Fiskars Group 2018 Sustainability Report



C&A highly values IPE's contribution to the disclosure and transparency of corporate environmental performance in China. With the launch of the Green Supply Chain Map, we are looking to expand our partnership with IPE to make transparency the new normal. Because transparency leads to accountability we embrace the new ability to understand the environmental performance in real-time so that we can react and support our suppliers' wet processing units to increase performance and leadership.

---- Jeff Hogue, Chief Sustainability Officer C&A Global



China is an important market for us, as nearly 50% of our component supplier facilities and manufacturing sites are located in the region. Jointly developed by IPE and the Natural Resources Defense Council, the CITI index is the first quantitative evaluation system designed to assess brands' environmental management of their supply chains.

Cisco's jump in the ranks reflects the work we've been doing with our suppliers in China, including wastewater surveys and pollution mitigation projects, tracking and addressing reports of illegal pollution, and requiring our tier 1 suppliers to assess and manage the environmental performance of their tier 2 suppliers.

---- Cisco Receives Top Rankings from China's Institute of Public and Environmental Affairs
Cisco Corporate Social Responsibility Blog



The Corporate Information Transparency Index released their rankings of companies leading the way on transparency and supply chain practices in China. For the second consecutive year, Levi Strauss & Co. was the top ranked apparel company on the list, ranking third overall behind only Apple and Dell..... These rankings, and the work that IPE and CITI do more generally, are pushing companies to be more transparent and accountable... It's extraordinary that this information is available online to consumers, citizens, and companies working in the country, especially now that pollution is such a prevalent issue in China and there's more scrutiny, as there should be, of supply chain management globally. All of this has rightfully raised the pressure on corporations operating in China, through their own facilities or through vendors, to ensure greater transparency and better performance.

---- Levi Strauss & Co. Official Website



New Balance was one of only six companies to step forward and be featured on a new online map that links brands to their suppliers' environmental performance in China..... In 2017, New Balance ranked 16th of 267 companies in the Corporate Information Transparency Index (CITI) that evaluates brands according to how well they address supply chain environmental responsibility in China. In 2018, we climbed to 11th overall.

---- Responsible Leadership
New Balance Official Website

2019 CITI Scores

Brand	Score	Brand	Score	Brand	Score	Brand	Score	Brand	Score
Dell	80.07	Toshiba	23.76	sunkwan	16	Anhui Xinyi Group	11	Nissan	8.78
Levi's	75.88	Walmart	23.2	DaAi City	16	OPPO	11	Arkema	8.76
Adidas	70.64	Sanfeng Envr.	22.5	Dafa	16	Vantone Real Estate	11	Merck Group	8.76
C&A	70.24	GE	22.26	AUX	16	SAMTAK	11	KIA	8.6
Inditex	69.36	P&G	21.98	Hisense	16	Hodo	11	Tiffany	8.6
H&M	69.12	SMIC	21.7	HUAYUAN	16	SINYI	11	Solvay	8.6
Primark	67.8	Everbright Intl.	21.68	TENTIMES	16	Chengdu Jiaoda Real Estate	11	Dystar	8.56
Cisco	67.74	Coop	21.5	BEIJING HUANWEI	16	BSD	11	Shanghai Envr.	8.5
Nike	67.32	MOMA	20.48	Central China Real Estate	16	LUCKYKING	11	ENFI	8.5
Target	60.12	Vanke	20.48	Tahoe	16	TENHONG LAND	11	Fonterra	8.49
New Balance	56.48	SIIC Envr.	20.42	BRC	16	Electrolux	10.98	Sanofi	8.48
M&S	56.36	Mizuno	20.4	Shanghai Electric	15.86	UPM	10.88	SAIC MOTOR	8.48
Huawei	54.09	Grandblue	20.18	Jinjiang Environment	15.84	Lenovo	10.76	LG	8.46
Foxconn	53.99	ASICS	18.74	China Tianying	15.5	Canvest	10.7	Novartis	8.38
Puma	53.2	BASF	18.08	Conch Venture	15.5	Swire Foods	10.68	Mercedes-Benz	8.23
Esprit	50	Takeda	17.98	Sony	15.15	General Mills	10.65	GM	8.08
Samsung	49.44	Weiming Envr.	17.7	Intel	14.92	Merck & Co.	10.58	Youngor	8
Panasonic	46.14	Ericsson	17.44	Starbucks	14.76	Pepsi	10.38	Vodafone	7.92
Tesco	45.4	Coca Cola	17.42	Stora Enso	14.56	McDonald's	10.33	AkzoNobel	7.92
GAP	44.56	CIFI Group	17	Abercrombie & Fitch	14.54	Mars	10.17	Unilever	7.9
Microsoft	44.26	sunnyworld	17	Bridgestone	14.04	Sharp	10.1	Next	7.68
Uniqlo	43.64	SHOUGANG Envr.	16.9	yingfeng	13.5	Colgate-Palmolive	10.08	CECEP	7.48
Esquel	43.58	ChiXia Development	16.48	ANTA	13.02	ReckittBenckiser	10.06	APP	7.12
VF	41.62	Gold Mantis	16.48	HPE	12.98	SE Environment	10	Eastman	7.12
Hitachi	41.53	zhenro	16.48	BMW	12.92	Seiko Epson	9.78	Perfetti Van Melle	7.09
Landsea	41.48	Dongdu Intl.	16.48	Ford	12.58	Kraft Heinz	9.73	Prada	7.06
Kao	40.01	Kingdom	16	BT	12.51	Groupe PSA	9.71	Shengyuan	7
Li-Ning	38.4	DaHan	16	COFCO PROPERTY	12.5	ABInBev	9.66	CSG Environment	7
Burberry	37.56	ZhongFang	16	Pfizer	12.4	Volkswagen	9.56	Guess	7
Canon	36.37	ROFFAR	16	GlaxoSmithKline	12.26	huimignhuanbao	9.5	Yanjing Beer	6.98
Royal Philips	34.82	New Space	16	Nokia	11.72	Bosch	9.46	Clarks	6.98
TCL	34.65	yahe	16	L'Oréal	11.5	Hyundai	9.3	Fujitsu	6.88
Carrefour	34.42	Xinyang	16	Huntsman	11.34	Nestlé	9.28	COFCO	6.84
Oji Paper	34.12	worldunion	16	IBM	11.3	Lilly	9.22	Cortefiel	6.7
Lindex	33.96	Sansheng Hongye	16	Whirlpool	11.26	Mazda	9.18	Victoria's Secret	6.56
Columbia	33.5	huajian real estate	16	HUGO BOSS	11.24	Clariant	9.12	Google	6.56
Toyota	32.12	Sincere	16	FC ENVIRONMENT	11.22	FCA Group	9.08	PEP	6.5
Danone	31.44	Zhongda	16	ZTE	11.2	Henkel	9.08	DAJIHUANJING	6.5
Bestseller	30.96	TUNGHSU	16	Tommy Hilfiger	11.2	Singtel	9.02	TIANLONG	6.5
HP	30.84	Joyi	16	Calvin Klein	11.2	Midea	9	JAC	6.48
IKEA	29.48	JUNFA	16	DSM	11.04	Wanna Environment	9	Vinda	6.14
Honda	29.42	Golden Eagle	16	CPNE	11.04	DYNAGREEN	9	Asahi	6.08
Kontoor	25.28	Sunriver	16	Tus-sound	11	Carlsberg	8.94	Benetton	6
Suitsupply	24.36	ruchen	16	HISUN	11	Disney	8.78	DONGFENG	6

Brand	Score	Brand	Score	Brand	Score	Brand	Score	Brand	Score
BAIC GROUP	6	Ralph Lauren	4.2	Hisense	2.48	LMZ	1	Oishi	0
INTL. ENERGY	6	SHISEIDO	4.12	New Hope	2.48	Nice	1	Kingstar Beer	0
YUNNAN WATER	6	Volvo	4.04	Mothercare	2.34	NEXEN TIRE	1	Wahaha	0
FEIMA	6	Modern Farming	4	Yili	2.32	Yunnan Baiyao	1	Belle	0
yonker	6	Want-Want	4	361°	2.12	Huiyuan	1	Nongfu Spring	0
JUNXIN	6	Shengyun	4	CHANEL	2.04	WEIQUAN	1	CP	0
Syngenta	6	Dachan	4	Long Chen Paper	2.04	Panpan Foods	1	Kappa	0
Motorola	5.98	Uni-president	4	Sun Paper	2	Brilliance Auto	1	DKNY	0
Haier	5.96	BEHET	4	Spalding	2	Costa	1	Junlebao	0
Mondelēz Intl.	5.62	Avic Renewable Energy	4	mobike	2	Master Kong	0.84	Kangnai	0
Hankook Tire	5.6	DCEP	4	ofo	2	Chery	0.72	Whitecat	0
MICHELIN	5.56	Xiamen Municipal Constr. Group	4	Valentino	2	FILA	0.72	innisfree	0
Bayer	5.56	KNC	4	bluemoon	2	Snowbeer	0.48	CHAOYANG	0
HTC	5.55	KRE	4	GEELY	2	MEIZU	0	GITI	0
J.C. Penney	5.48	HUAGUANG SHARES	4	Hisense Kelon	2	Umbro	0	BOSIDENG	0
Siemens	5.48	HAIYING GROUP	4	C&S	2	Pierre Cardin	0	lepur	0
Johnson&Johnson	5.44	NENGDA HUAWEI	4	Tranlin	2	Dicos	0	Gloden Throat	0
RICOH	5.4	Hangzhou Envtr. Group	4	Meters/bonwe	2	Burger King	0	AUX	0
Mengniu	5.32	XINDU HOLDINGS	4	Nine West	2	River Island	0	Changhong	0
Kate Spade	5.26	keqiaoshuiwu	4	Shuanghui	2	ROXY	0	KONKA	0
COACH	5.26	SEPG	4	Toread	2	Hush Puppies	0	PurCotton	0
Cargill	5.24	Chengde Heating Group	4	KUMHO TIRE	2	Proya	0	Taiji Group	0
GREE	5.23	Zhongshan Public Utilities	4	ERDOS	2	Hanhoo	0	ASD	0
DuPont	5.2	TEDAHB	4	TIANFU	2	Unifon	0	HSU FU CHI	0
Herrel	5.2	COOPERTIRES	3.9	Nippon Paint	2	TIANYOU	0	Tong Ren Tang	0
Ann Taylor	5.08	CR Sanjiu	3.88	Nine Dragons Paper	1.96	K-BOXING	0	Xifeng	0
AVON	5.01	Boehringer-Ingelheim	3.82	SKYWORTH	1.86	HLA	0	YANGHE	0
MANGO	5	Liby	3.5	BYD	1.84	bluegogo	0	Niulanshan	0
WENERGY	5	Changan	3.48	MARY KAY	1.84	Genguquan	0	FEN JIU GROUP	0
JMC	5	G-Star	3.48	Kweichow Moutai	1.5	SENLI	0	GUJING GROUP	0
Orchard Farmer	5	Shanying Paper	3.48	Yibin Wuliangye	1.5	QINGYUAN	0	Luzhou Laojiao	0
ecco	4.98	SANYUAN	3.48	UGG	1.48	wondersun	0	SUPOR	0
Dow	4.84	Armani	3.2	Jahwa	1.48	huishan	0	Haitian	0
Vitasoy	4.73	Great Wall	3.18	Brightdairy	1.48	kaimi	0	Coconut Palm	0
SC Johnson	4.52	Giordano	3	Country Garden	1.2	watsons	0	Tesla	0
Daphne	4.5	Macy's	3	EVERGRANDE	1.2	GAC GROUP	0	NIVEA	0
Lee & Man Paper	4.48	HTRH	3	Zhujiang Beer	1	vivo	0	Hello Bike	0
Tsingtao	4.48	Lacoste	3	Hengan	1	Tonlion	0	Be & Cheery	0
Heineken	4.44	YINGE	3	MUJI	1	Semir	0	Three Squirrels	0
Amazon	4.36	Joyoung	3	Chando	1	YISHION	0	Bestore	0
JEANSWEST	4.36	Facebook	2.56	Beingmate	1	Pechoin	0	FUJIYA	0
Yuen Foong Yu	4.3	Samsonite	2.5	HEAD	1	HONGAN	0	LOCK LOCK	0
Hormel	4.24	Xiaomi	2.5	Nongshim	1	SHUANGDENG	0		
WEAL	4.2	Chen Ming Group	2.48	KFC	1	XINYA PAPER	0		



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