
2022

Information and Communications Technology

BENCHMARK FINDINGS REPORT



TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
2022 ranking	6
Recommendations	7
METHODOLOGY CHANGES	8
INTRODUCTION	9
Current context	9
KEY FINDINGS AND TRENDS	13
Companies at the top and bottom of the benchmark	14
Changes in the sector since 2020	15
Findings by region	18
Stakeholder engagement	18
Action in lower tiers	19
KEY INDICATORS AND INSIGHTS	20
Traceability and supply chain transparency	21
Purchasing practices	24
Responsible recruitment of migrant workers	28
Remedy	32
Worker voice: Freedom of association and grievance mechanisms	35
DUE DILIGENCE	38
Governance	39
Human rights risk assessments	40
Monitoring	41
CONCLUSION	42
APPENDIX 1: COMPANY SELECTION	43
APPENDIX 2: BENCHMARK METHODOLOGY	45
ENDNOTES	47

EXECUTIVE SUMMARY

The information, communications and technology (ICT) sector holds a privileged place in the global economy. The [OECD](#) estimates the sector, which has more than doubled in size in the EU since 2002, today contributes 8% to overall EU GDP. In [India](#), this figure grows to 13%, in [Taiwan](#) it is 16.5%, while in [Malaysia](#), the ICT sector contributes 22.6% to country GDP. ICT companies' profits [soared](#) during the Covid-19 pandemic, and despite the [recent sell-off](#), the largest global ICT companies have posted a [record US\\$4 trillion](#) in combined annual revenue over the last 12 months, up from about US\$3 trillion in 2021. But as the sector has grown, so too has its capacity for labour rights abuses within its vast global supply chains: irresponsible purchasing practices encourage the suppression of workers' rights to freedom of association and collective bargaining, and frequently mandate a heavy reliance on cheap labour in repressive conditions, creating a breeding ground for exploitation. The core findings of the latest KnowTheChain ICT benchmark bring this into sharp relief, with companies receiving a median score of just 14/100 – revealing abject failure by most to demonstrate sufficient due diligence to identify forced labour risks and impacts in their supply chains, or take adequate steps to address them. But the range of scores within the sector is enormous, with the highest-scoring company, **Hewlett Packard Enterprise**, receiving 63/100.

This status quo cannot remain.

With regulatory efforts and ESG standards on the rise around the globe, and workers at the mercy of skyrocketing cost-of-living increases, swift and comprehensive action is required by ICT companies and their investors. The implementation of robust human rights due diligence practices to understand forced labour and labour rights abuse and eliminate it from supply chains, must not be viewed as optional, but rather an essential component of sustainable business practice.

The findings included in this report show this is clearly possible – yet still exceptional – in the ICT sector. Companies and investors have an obligation to play their parts in changing this.

14/100

median score of ICT company efforts to address supply chain forced labour

3 companies

(**BOE Technology Group**, **Hikvision** and **NAURA**) provided no relevant information on how they are working to identify and mitigate forced labour risks in their supply chains

Purchasing practices and worker voice

were the weakest scoring themes for companies, with an **average score of 2/100** and a **top score of 50/100**

Nearly half (45%)

the companies failed to disclose undertaking human rights risk assessments in their supply chains

Only one in five (22%)

companies disclosed forced labour risks in their supply chains

Improved measurement, lower scores

This year's KnowTheChain benchmark analyses the disclosure and performance of 60 of the world's largest global ICT companies (by market capitalisation) on their efforts to identify and tackle forced labour risks in their supply chains. As the 10th publication in this benchmark series, it also reflects the use of a revised methodology. In light of the changing regulatory environment, our revision prioritises robust due diligence – the implementation of processes, stakeholder engagement, and remedy outcomes for workers to assess whether companies' actions to address forced labour risks in their supply chains result in meaningful change for workers. In other words, while having relevant policies in place is essential, the KnowTheChain methodology revision reflects the reality that the existence of policies alone is insufficient to address these risks.

The results of this benchmark demonstrate significant gaps in corporate practices to address forced labour within the ICT sector, with only 6% of companies scoring more than 50/100. At the very bottom of the list, three companies provided no relevant information¹ on how they are working to identify and mitigate forced labour risks in their supply chains: **BOE Technology Group** (supplier to Apple, Dell, HP and Samsung), **Hikvision** (the world's largest surveillance company and supplier to the UK government), and **NAURA** ("China's top semiconductor equipment maker"). As significant market players, operating in high-risk contexts, this lack of transparency regarding fundamental worker rights is alarming.

Nevertheless, industry frontrunners **Hewlett Packard Enterprise** (63/100) and **Intel** (60/100) demonstrate that **better practice is both possible and profitable**. These lead the way in more robust policy implementation, prevention of abuse, and improved outcomes for workers where a grievance has been raised. Further, a few companies posted notable improvements in their scores in comparison with those in the last KnowTheChain ICT benchmark and despite the methodological changes, reflecting real progress in certain, critical

areas of disclosure. These include **Corning** (37/100 to 40/100) and **Western Digital** (15/100 to 34/100).

Failures in basic human rights due diligence practices, despite looming regulation

Across the board, the benchmark reveals low levels of disclosure of forced labour risks (just over a fifth of companies, 22%, provided information on this) and forced labour violations (32% of companies provided information). Rather than suggesting an absence of such risks in their supply chains, these low numbers indicate a failure to look for them: nearly half of the companies assessed also failed to disclose undertaking human rights risk assessments in their supply chains – the foundation of basic human rights due diligence. Among these are European companies **ASML** (9/100), **Hexagon** (9/100), and **Infineon Technologies** (11/100), which notably do not disclose conducting human rights risk assessments despite Europe's forthcoming mandatory human rights and environmental due diligence legislation. All three companies equally demonstrate extremely limited insight into their supply chains, providing no transparency of first-tier suppliers, tracing processes for lower tiers, or data on women and migrant workers in their supply chain workforce.

The **limited evidence of effective stakeholder engagement** provided by the ICT sector highlights the lack of effective due diligence. Stakeholder engagement is widely considered to be essential to ensure accurate risk assessment and mitigation, but was reflected in just 13% of benchmarked companies – a significant gap for a sector with a propensity for worker abuse and a reputation for supply chain opacity.

These results indicate the ICT sector is largely ill-prepared for impending EU due diligence legislation and other statutory and policy initiatives targeted at ridding supply chains of forced labour; and still less growing calls for prioritisation of stakeholder engagement within

those initiatives. This year's benchmark findings suggest most of the ICT sector is on the back foot as these laws come into force, increasing both risks to business and vulnerable workers.

Poor purchasing practices and continued suppression of worker voice

Purchasing practices is the area in which companies perform **most poorly** in the benchmark (with an **average score of 2/100**, and a **top score of 50/100**), showing that companies do not consider how their purchasing practices can exacerbate forced labour risks within their supply chains. This is despite practices in the industry which heavily impact supply chain workers and conditions, such as squeezing down on price. In addition, KnowTheChain found little to no improvement on purchasing practices when compared with the 2020 benchmark. This raises serious concerns about the sector's approach to due diligence as a whole, and provides evidence for calls by some stakeholders for increased regulation of the ICT sector in respect of human rights.

Linked to poor purchasing practices is the suppression of worker voice and exercise of the right to freedom of association. Where suppliers have little choice but to accept the terms of unfair purchasing practices, workers are frequently made to bear the consequences, particularly in the absence of labour agreements, which would protect them from forced labour indicators amongst other infringements. Despite these clear links, **only three ICT companies (Apple, Intel, and Hewlett Packard Enterprise)** provided any information on how they support **collective worker empowerment** through limited engagement with unions or providing data on collective bargaining in their supply chains. Almost 75% of benchmarked companies are also members of the Responsible Business Alliance, and use its code of conduct, which also limits the right to "conformance with local law" – even where that right is locally restricted.

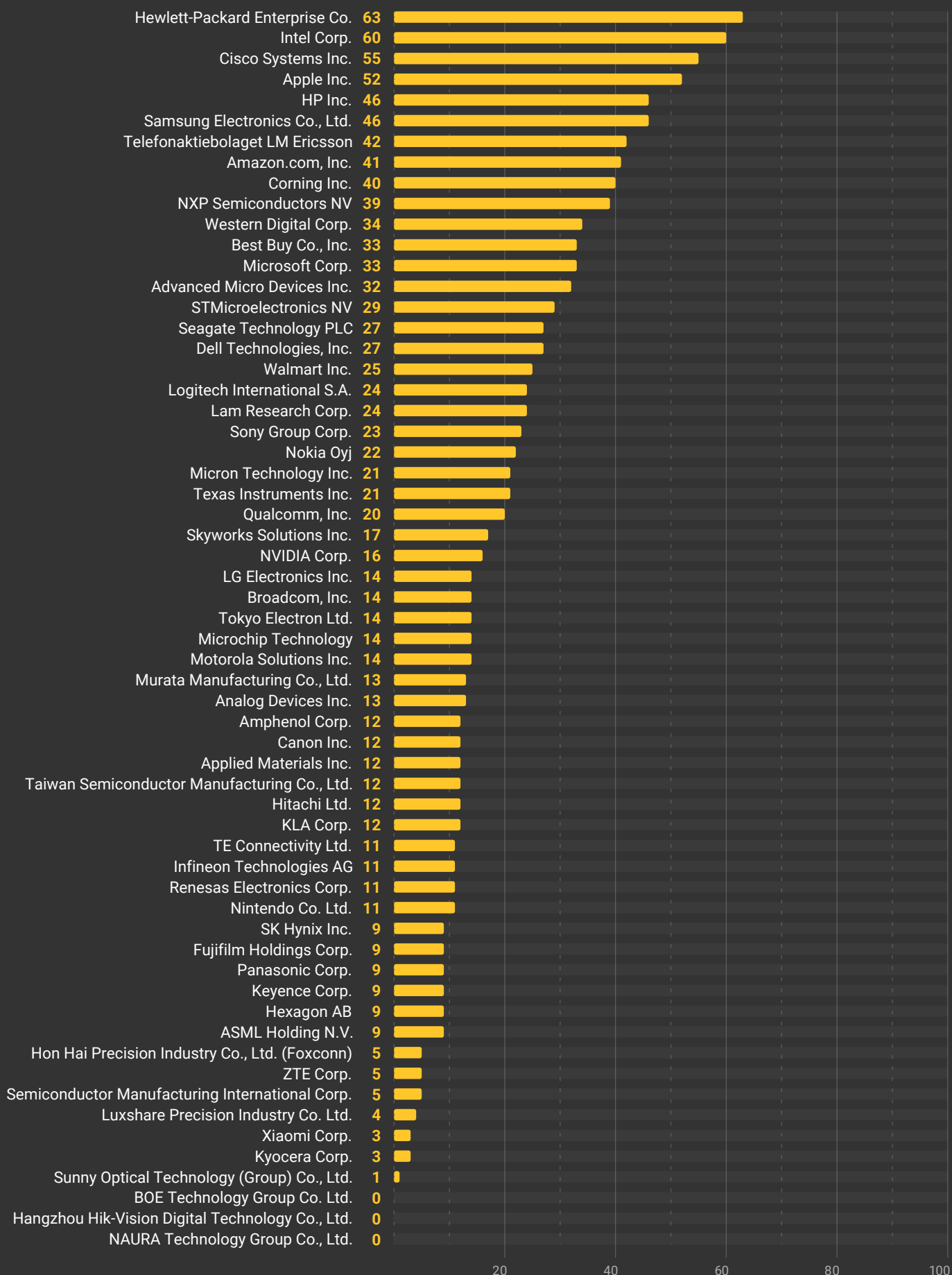
It is of little surprise, given their performance on purchasing practices and freedom of association, that no company disclosed data on delivery or progress towards living wage in its supply chains, and only one company (**Hewlett Packard Enterprise**) notes it is beginning to take steps to introduce a living wage for supply chain workers.

Increasing sectoral risk of forced labour, while remaining an ESG darling

Globally, as conflict, trade tensions and political instability combine with rising inflation and an imminent cost-of-living crisis, soaring food and energy prices have already caused an additional 71 million people in developing countries to sink into poverty. Against this background, exposure of vulnerable workers to the risk of forced labour is increasing around the world. ICT sector companies with supply chains traversing low income and conflict-affected regions, as well as a history of dependency on vulnerable workers and hardball purchasing practices, are therefore particularly ripe for forced labour risk. Where risks to human rights are greatest, there is also a significant risk to business (financial, reputational and/or legal). Yet despite these obvious risk factors, ICT companies continue to earn strong ESG ratings, with the S&P 500's tech sector making up the largest allocation in many popular ESG equity funds, suggesting these risks are not being accounted for.

This report is primarily designed for companies to guide and encourage the adoption of a more robust, worker-centric approach to tackling forced labour risks in their supply chains. Its focus is on highlighting industry trends, company progress over time, and examples of strong and weak corporate practice to make the case for improvement – particularly in the face of growing appetite for effective business regulation. Investors are also essential in this effort to transform business models to ensure respect for the rights of vulnerable supply chain workers, by holding investee companies to account and supporting efforts for regulatory reform.

2022 ranking



Recommendations

→ For more detailed recommendations per theme, please see the [Key indicators and insights](#) section of this report.

Companies should:

Adopt and disclose responsible purchasing practices: including planning and forecasting, and ring-fencing labour costs. Disclose data points on such purchasing practices to show their implementation.

Support collective worker empowerment: actively promote freedom of association and provide evidence of improvements of freedom of association and collective bargaining across supply chain contexts.

Adopt a worker-centric approach to due diligence by ensuring workers and other key stakeholders, such as unions and civil society organisations, play a central role in the design, implementation, and monitoring of key due diligence processes, including:

- risk assessment (including safe engagement with workers affected or potentially affected);
- grievance mechanisms; and
- supplier monitoring.

Lend public support for the development of mandatory human rights and environmental due diligence (mHREDD) regimes and robust Modern Slavery Acts which explicitly encompass the ICT sector and help level the playing field for company reporting and practice across jurisdictions. Impose penalties for malpractice and seek to improve outcomes for workers in global supply chains.

Investors should:

Conduct human rights due diligence of investee companies, both prior to investing and throughout the investment life cycle, and ensure they have, at minimum, supply chain codes of conduct and/or human rights policies that uphold ILO core labour standards and cover employees and non-employee workers within direct operations and supply chains.

Integrate respect for fundamental labour rights as an engagement priority to hold investee companies accountable under international norms and frameworks and commit to escalation in the absence of progress.

Adopt a stewardship policy and voting guidelines which specifically mention respect for labour rights, as defined by ILO conventions.

Maximise leverage by joining investor coalitions and collaborative engagements on the topic of forced labour, like those of ICCR and CCLA's ["Find it, Fix it, Prevent it"](#).

While engaging with companies is important, the role of governments is key. **Investors should strengthen public policy functions and publicly commit to support the development of regulatory regimes** that improve financial market transparency and facilitate responsible growth of capital markets, while mitigating financial market participant harm to society and environment.



METHODOLOGY CHANGES

After six years and nine benchmarks, KnowTheChain undertook a significant review of its methodology to ensure benchmarks focus on indicators which represent key drivers of change. A look back at five years of KnowTheChain benchmark data across three sectors revealed a **glacial rate of change**, and found that while some companies are making progress on their commitment to addressing forced labour, evidence of how policies and processes are implemented is limited. In a time of increasing regulation and scrutiny of corporate efforts to address human rights risks and violations, effective human rights due diligence is no longer optional.

To this end, the 2022-23 benchmarks focus on a set of key themes articulated in a smaller subset of KnowTheChain's previous methodology. The methodology comprises 12 key indicators, and key changes include:

Reduced focus and weight given to policies, and enhanced focus on implementation of processes, as well as outcomes for workers. Previous benchmarks have shown significant gaps between the disclosure of policy and evidence of how that policy works in practice.

Adjusted weighting: whereas previously all themes and indicators were weighted equally, the weighting of indicators has been adjusted to give increased credit for demonstrating implementation and outcomes for workers

Stakeholder engagement is integrated throughout the methodology, as opposed to one single indicator focusing on stakeholder engagement, to reflect how rightsholders should be engaged through all stages of due diligence processes.

Action on lower tiers has been integrated throughout the methodology. While some leading companies have shown that addressing forced labour risks beyond the first-tier of supply chains is possible; others fall behind.

The higher standard of expectations set in the 2022-23 methodology has resulted in lower company scores across the board. However, a lower score should not necessarily be taken as an indication that the company has failed to improve.²

→ Find out more about our **[methodology review process](#)**.



INTRODUCTION

Current context

Conflict and supply chain volatility

Rising geopolitical tensions and global events, such as Russia's invasion of Ukraine, are causing soaring energy and raw material prices and supply chain vulnerability, leading some companies to shift sourcing to contexts in which they have less supply chain visibility. This is particularly true for the ICT sector, where, as a result of China's "zero-covid" strategy and its trade war with the US, tech companies are shifting production away from China to countries such as India, Malaysia and Vietnam, with increased demand for low-wage workers and higher forced labour risks.

Impacts of Covid-19 and the cost-of-living crisis: reduced protection and precarious work

Despite forecasted profit decline as consumers cut back on discretionary spending amid a worsening cost of living crisis, ICT company profits soared during the pandemic. At the same time, workers' wages have stagnated amidst inflation and rising costs of energy, food, and other essentials.

Further, the foundational rights of freedom of association and collective bargaining continue to be eroded and repressed globally. The impact on workers has been significant, ranging from health and safety issues, restricted hours and income, dismissal, non-payment of wages, and restriction of movement, with labour laws in a range of jurisdictions, such as India, weakened in a bid to reboot economies. These are concerning developments for workers' rights as supply chain locations shift. A study by Cividep on the Covid-19 pandemic's impact on India's electronics sector found that workers had lost their income and were forced to borrow money to sustain their families and themselves as a result of these changes.

This reveals the gulf between the industry's wealth and that of its workers, with industry players showing little appetite for unionisation in supply chains. The noted low union density in the ICT sector, particularly in the largest companies, has been exacerbated by the increase in the number of workers entering electronics manufacturing in developing countries, where union protections may not be as strong.

“ ***Coupled with a shortage of raw materials, supply chain issues and a talent shortage, the continued acceleration of the digital transformation presents challenges to the workers and their unions.***”

Alexander Ivanou, IndustriALL ICT electrical and electronics director

Across the board, employers used the pandemic to make their workforce more flexible by asking permanent workers to resign so they could rehire them on a temporary basis, as only permanent workers were offered support to cover medical expenses.³ In the aftermath, workers in Vietnam face reduced hours and pay amidst a slowdown in the global demand for electronics, and chip-making factories in Malaysia have continued to evade collective bargaining talks. The decision to outsource and shift sourcing contexts needs to be accompanied by effective human rights due diligence so that risks to workers in these contexts can be detected – but this is not often the case. In Mexico, where Covid-19 had a significant impact on precarious work, CEREAL (Centre for Reflection and Action on Labour Rights) reported on agreements that lowered wages, increased hours and workload, and heightened the risk of gender-based violence and harassment.

Mandatory due diligence

Reporting requirements, such as those in force in California, the UK, and Australia, have thus far failed to substantially shift company behaviour towards addressing risks to supply chain workers, due to the limited financial impact of these laws for companies. However, emerging legislation across Europe, New Zealand and Canada may turn such risks to supply chain workers into more tangible operational and financial risks to the company through mandatory human rights due diligence and disclosure, with the EU's Corporate Sustainability Due Diligence Directive set to create a new obligation of due diligence, as well as systems to prevent and remedy corporate human rights and environmental harms.

The Uyghur Forced Labor Prevention Act (UFLPA) and continued operation of related trade instruments like the Customs and Border Protection's Withhold Release Orders in the US, is another example of the new wave of mandated supply chain due diligence supported by sanctions. The law creates a “rebuttable presumption” that all goods produced in Xinjiang are made with forced labour and therefore banned from entering the US, necessitating comprehensive supplier mapping and due diligence to overcome this presumption. The development of a similar instrument is being proposed in the EU. Importantly, the End Uyghur Forced Labour Coalition highlights the need for companies to refrain from re-exporting goods denied entry to the US under the UFLPA and attempting to sell products in other markets. In other words, companies' approaches to due diligence must go beyond the narrow focus on sanction mitigation to ensure forced labour risks are being addressed across contexts and in order to keep pace with the latest requirements.

Forced labour in electronics supply chains

Most electronics supply chains are based, at least in part, in countries at **high risk for forced labour**. **Such risks** manifest due to weak labour law protections or enforcement, including those relating to freedom of association and collective bargaining, as well as companies' own purchasing practices. **China and Malaysia** are two major sourcing countries where electronics may be produced with forced labour, as well as countries such as **Taiwan** and **Thailand**.

Malaysia is one of the world's largest exporters of semiconductors, said to be in "**virtually every device on the market**," and is a **key supplier** of semiconductors to the US. Further, the US and Malaysian governments signed a **memorandum of cooperation** to strengthen the resilience of semiconductor supply chains and empower investment in the subsector.

China **remains** the world's most important centre for ICT hardware manufacturing. The **value of the country's electronics industry** reached nearly US\$350 billion in 2020, accounting for a quarter of worldwide assembly value in that year. However, companies from **Apple** to **Nintendo** are shifting their supply chains to alternative contexts such as India and Vietnam, and other companies are investing in production in **locations including** Indonesia, the Philippines, Thailand, Singapore and Taiwan. While an **estimated** 90% of manufacturing takes place in Asia, companies are expanding their sourcing contexts into **Mexico** and **Central and Eastern Europe**.

Risks tend to be prevalent in the lower tiers of supply chains, where production processes are more labour intensive but oversight of factories is reduced. Risks for workers are also present deeper into the supply chains of ICT companies, right down to the **raw material** level. **The US Department of Labor notes** that tin, tungsten, and tantalum in the Democratic Republic of the Congo, and gold in Burkina Faso, the Democratic Republic of the Congo, North Korea, Peru and Venezuela, may be mined with forced labour.

Working conditions in electronics supply chains

Workers in the electronics sector are subjected to a range of poor working conditions. These cover a spectrum from health and safety risks to violence and debt bondage.

As a primary example, **health and safety risks** on production lines are common. Workers may be forced to work with dangerous chemicals, and many toil in cramped and unventilated conditions which aid the spread of disease. It was reported that over a number of months, 19 workers at STMicroelectronics Malaysia (supplier to companies such as Apple, Cisco, and HP) **died from Covid-19**. A **deadly fire** in a factory manufacturing CCTV hardware in Delhi killed 27 people and injured 12.

“ **According to local trade unions, the factory had been operating beyond the one-third capacity mandated by the government, and workers were also... told that they would not receive wages for May if they did not report to work... [creating] a situation where they were forced to return to work.**”⁴
Monitoring partner of Electronics Watch

Without appropriate worker-led monitoring and functioning grievance mechanisms, health and safety risks often go unchecked.

Required, **excessive overtime** is also prevalent. In China it is compulsory for vocational students to undertake a 6-month student internship in the final year of their studies and **many do so in factories**. The Ministry of Education reported there were 13 million vocational students in secondary and post-secondary schools in China in 2021. Students at **Foxconn** were reported to have been forced to work nights and overtime illegally to produce Amazon's Alexa devices. Following an incident in which a 17-year-old jumped to his death from a factory dormitory as a result of long hours and gruelling work, **it has been reported** that the government has drawn parameters for acceptable work as part of internships. **Chronically low wages** in the sector contribute to the **accepted norm** of excessive overtime, as workers seek more hours in order to increase their salary.

Violence and threats of abuse are common, with already-marginalised worker groups at particular risk. **Migrant workers** are reportedly **more than three times more likely** to be trapped in forced labour than non-migrant workers. A **report** on migrant workers in Malaysian electronics factories and other manufacturing sectors found migrant workers, especially those without access to their passports, are vulnerable to excessive hours, wage theft and/or underpayment, and are often forced to work under the threat of violence. An estimated 20-30% of the electronics sector workforce in Malaysia is composed of migrant workers, of which two-thirds are women. **In many sourcing contexts, women** comprise the majority of the workforce. A report from **Brazil** demonstrated a hiring preference for women for the assembly line in electronics factories as they "are regarded as less likely to stand up for their rights".

Workers in the sector face risks of **forced labour and debt bondage** stemming from the payment of **recruitment fees**. Major sourcing countries such as **Taiwan** and **Malaysia** rely heavily on migrant workers, and as such the risk of debt bondage in the sector is systemic and widespread. Electronics Watch, together with its monitoring partner the Migrant Worker Rights Network, **worked to secure compensation** for migrant workers from Myanmar forced to pay to secure jobs at two sites of **Cal-Comp Electronics** in Thailand. Worker-driven monitoring documented evidence that over 10,000 migrant workers had been charged excessive and unlawful recruitment fees and related costs equivalent to 30-90 days of their wages.

Workers in the ICT sector are also increasingly facing restrictions on the rights to **freedom of association and collective bargaining**, compounding the risk of poor working conditions, low pay and unresolved worker grievances. Instances of union busting have been reported in electronics factories in **Malaysia** and **Turkey**, including threats, intimidation and firing of union members.





KEY FINDINGS AND TRENDS

This section presents the key findings and trends KnowTheChain identified in the sector – including the companies scoring highest and lowest in the benchmark, how the sector has improved since the 2020 ICT benchmark, company action on lower tiers and on stakeholder engagement, and regional findings.

Companies at the top and bottom of the benchmark

Only four companies (**Hewlett Packard Enterprise**, **Intel**, **Cisco**, and **Apple**) scored above 50/100. These companies distinguish themselves from their peers through strong practices on responsible recruitment – all four companies score higher than others on recruitment-related fees by disclosing related policy, prevention, and remediation efforts. In particular, all four companies also demonstrated improvement since the 2020 benchmark, including on their responsible recruitment programmes. They also disclose strong human rights risk assessment processes and report on the risks they have identified. For example, **Hewlett Packard Enterprise** disclosed detail on the sources used and stakeholders engaged in its risk assessment, as well as the types of risks assessed, including locations, product types, and employment of vulnerable groups. Three out of the four companies disclose some data on the demographics of their workforce, such as the percentage of migrant and women workers.

Three companies scored zero in the benchmark: **BOE Technology Group** (supplier to companies including Apple, Dell, HP and Samsung), **Hikvision** (the world's largest surveillance company and supplier to the UK government) and **NAURA** ("China's top semiconductor equipment maker"), meaning they disclosed absolutely no relevant detail with respect to their policies or practices on forced labour prevention in their supply chains. This does not indicate the absence of forced labour risks; rather there is no evidence that these companies are investigating such risks.

The average ICT company...

TYPICALLY DISCLOSED:

- A policy prohibiting worker-paid recruitment fees in its supply chains
- A human rights risk assessment on its supply chains
- A grievance mechanism for suppliers' workers and their legitimate representatives

TYPICALLY LACKED:

- Evidence of how the Employer Pays Principle is implemented by suppliers, and how fees are proactively prevented from being charged to supply chain workers
- Disclosure of forced labour risks identified through the assessment, or steps taken to follow up on specific risks identified
- Data demonstrating that grievance mechanisms are effective and used by supply chain workers, or examples of remedy outcomes for workers

A **higher score** means a company publicly disclosed stronger efforts to address the forced labour risks in its supply chains. It does not mean that a company has "slavery-free" supply chains. In fact, KnowTheChain operates under the assumption that forced labour is likely present in large global supply chains, particularly in high-risk sectors like the ICT sector. Therefore, KnowTheChain includes publicly available allegations of forced labour and company response to such allegations, but it also asks all companies to provide examples of labour-related remedy outcomes for workers in their supply chains.

Changes in the sector since 2020

KnowTheChain's 2022 ICT benchmark highlights gaps in areas that are fundamental to eradicating forced labour, with Purchasing Practices (2/100) and Worker Voice (8/100) representing the lowest-scoring themes of the benchmark.⁵

Change appears stagnant in...

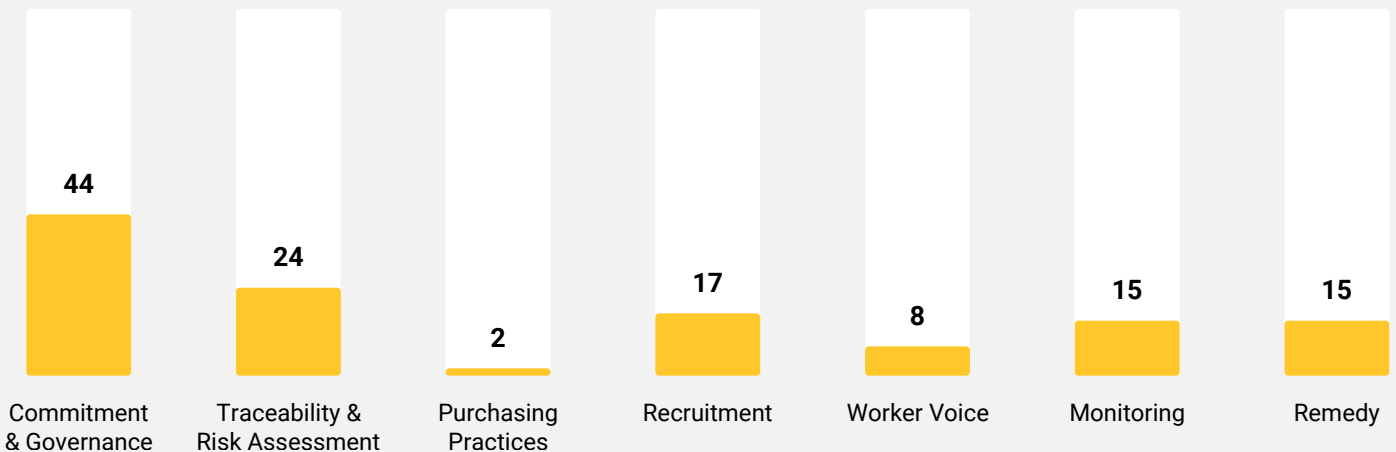
The right to organise

The sector's failure to evidence support for the right to organise in ICT supply chains has continued. In 2020, all ICT companies scored zero on freedom of association, with none disclosing engagement with local or global unions to improve freedom of association in supply chains. Neither did they describe how they ensure alternative forms of organising, or disclose examples of how the right to organise has been improved for supply chain workers. In 2022, with an average score of 1/100 on the freedom of association indicator, improvements in this area remain extremely limited. However, it is notable that one company (**Hewlett Packard Enterprise**) reported working with a union, in collaboration with a supplier and a non-governmental organisation, to resolve a worker grievance. A six-month programme of improvement following this included "increased and more effective engagement with the union." In addition, the new KnowTheChain methodology now includes an indicator on the percentage of supply chains covered by collective bargaining agreements, and it is positive that two companies (**Apple** and **Intel**) disclosed this data for all or part of their first-tier suppliers.

Purchasing practices

Although methodology changes have affected the average score of the theme,⁶ direct comparison with indicators that remain largely aligned with previous years shows that improvement in this area is very limited. While 5% of companies disclosed information on how they have adopted responsible purchasing practices such as planning and forecasting this year, fewer companies disclosed this information in comparison with previous years.

AVERAGE COMPANY SCORES



Particularly strong improvements can be seen on the themes of...

Recruitment

The ICT sector continues to show improvement on the topic of responsible recruitment. Since 2020, 12 companies have either adopted policies on recruitment-related fees or improved their existing ones. Eight companies have adopted a policy prohibiting fees in their supply chains, whilst four have improved their version of this policy, which now requires that fees be repaid to workers where they have been charged. Overall, 87% of companies benchmarked in both 2020 and 2022 have a policy prohibiting fees.

In addition, it is encouraging that nine companies disclosed stronger steps to prevent fees since 2020, showing a greater focus on the implementation of policies. Such steps included detail on labour agency mapping processes across supply chain locations, specialised investigations into the charging of fees to workers, and processes to ensure that employers, rather than workers, paid fees directly to labour agencies. The ICT sector has also shown progress on the remediation of fees: with six companies newly disclosing reimbursement of recruitment fees to supply chain workers.

Risk assessment

Since 2020, 13 more companies have disclosed a human rights risk assessment on their supply chains. It is positive that among the companies benchmarked in both years, 58% have now disclosed a risk assessment. However, improvements regarding the public disclosure of forced labour risks identified is more limited, with only three companies newly disclosing risks – indicating that the sector has significant room for improvement in respect of this basic building block of human rights due diligence.

Commitment & governance

Eleven companies strengthened their supplier codes of conduct since 2020, for example by improving their policies on freedom of association and collective bargaining. In addition, 10 companies newly disclosed information on the internal teams, committees or programmes responsible for the implementation of their supplier code of conduct, and nine additional companies disclosed more information on board oversight of relevant policies and programmes. This suggests companies are turning their attention to strengthening their governance processes, as well as their internal mechanisms for managing policies and programmes addressing forced labour in supply chains.



Who improved?

Some companies improved their scores despite significant KnowTheChain methodological changes, which reflects real progress in critical areas of disclosure.

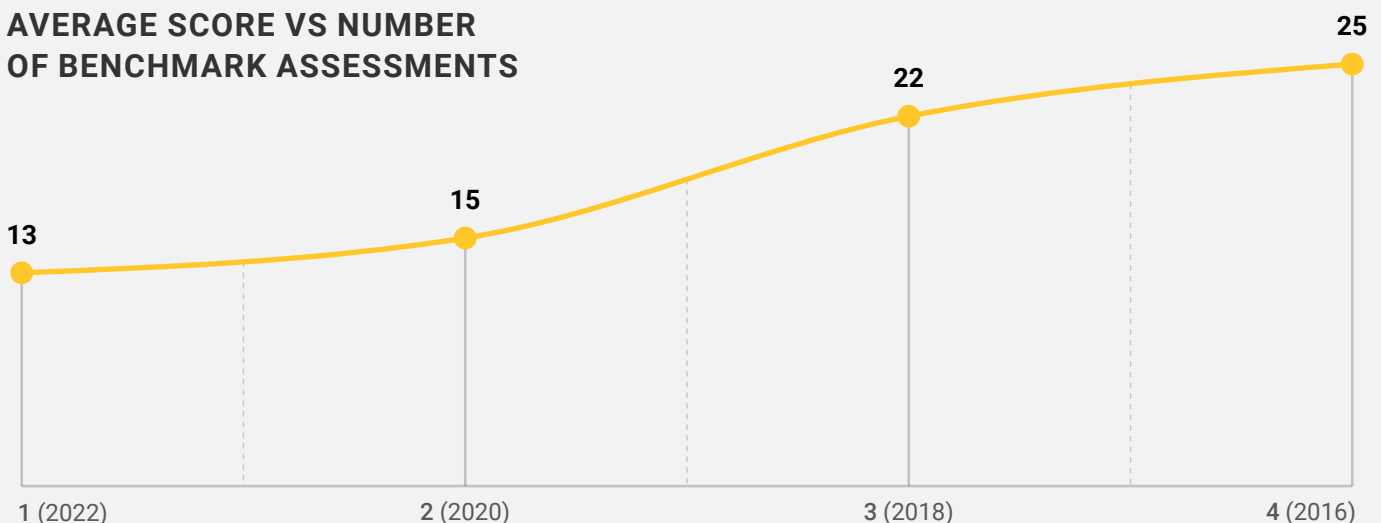
Cisco (51/100 to 55/100): The company improved by disclosing training and capacity building on its supplier code of conduct, which addresses forced labour for both contract manufacturers and component suppliers. This includes “next tier supplier management training”, which gives guidance for suppliers on implementing the supplier code at their own suppliers. It also disclosed the number of male, female, and migrant workers for manufacturing and component suppliers; information on responsible purchasing practices including planning, forecasting, and ring-fencing; fee repayment to workers at a second-tier supplier; and new disclosure on how it prevents fees, including working with suppliers to develop models that ensure employers pay for workers’ health examinations directly, removing the need for worker repayment.

Corning (37/100 to 40/100): The company improved by disclosing detail on its human rights risk assessment on its supply chains, as well as: forced labour risks identified across supply chain tiers; data on the use of its grievance mechanism; supplier training for its highest-risk suppliers on its supplier code; and building suppliers’ capacity to identify forced labour risks within their own operations and supply chains.

Western Digital (15/100 to 34/100): The company disclosed information on: internal teams responsible for implementing its supplier code of conduct; supplier training on forced labour for suppliers in Taiwan, Malaysia, Singapore and Thailand; mapping the labour sources of suppliers in Malaysia and Thailand who use migrant workers; responsible hiring workshops for suppliers; a human rights impact assessment; and US\$5.5 million in fee repayments to supply chain workers.

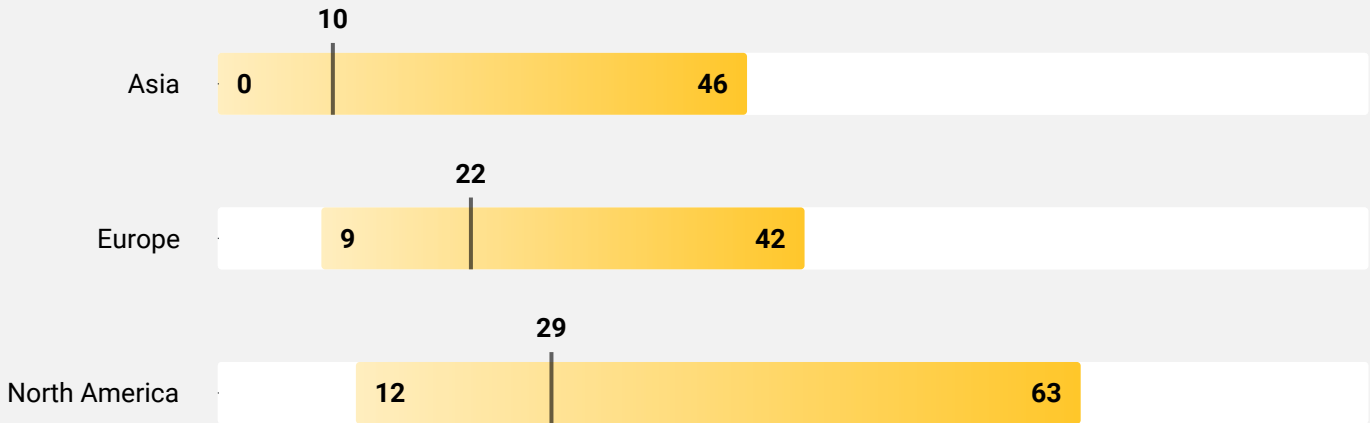
It is noteworthy that companies assessed by KnowTheChain for the longest period of time tend to score higher on average than those who are newly added to the benchmark. This suggests companies which have been benchmarked by KnowTheChain for consecutive years may have more advanced programmes and processes in place for addressing forced labour risks in their supply chains.⁷

AVERAGE SCORE VS NUMBER OF BENCHMARK ASSESSMENTS



SCORES BY REGION

SCORES: MIN AVERAGE MAX



Findings by region

The 2022 benchmark includes 24 Asian companies, 10 European companies, and 26 North American companies. Across all regions, there is a significant difference between the highest and lowest scoring companies, indicating a level playing field does not yet exist in any region.

Stakeholder engagement

Meaningful stakeholder engagement should inform all stages of companies' due diligence processes. Workers directly experience the conditions and harm caused by companies and as such it is critical worker perspectives inform processes including risk identification, steps taken to address risks, and access to remedy. However, the benchmark data suggests the majority of companies fail to integrate meaningful stakeholder engagement throughout their due diligence processes:

- 13% (approx. one in eight) of companies engage relevant stakeholders as part of risk assessments
- 8% (approx. one in 12) of companies work with stakeholders to support responsible recruitment
- 7% (approx. one in 14) of companies describe how they engage with workers on the remediation of recruitment fees

Some examples of better practice were nevertheless identified, showing improvement is possible.

Hewlett Packard Enterprise, for example, reported on how stakeholders are engaged during risk assessment and as part of remediation processes with workers. The company reported that a supplier in Nepal, which repaid recruitment fees to workers, ensured workers were consulted on the remediation plan and worked with the company to survey workers. It reported high levels of understanding of the no-fee policy and satisfaction with the reimbursement programme. **Apple** reported working with stakeholders to address risks it has identified, and, as a result of risks associated with the pandemic, with the International Organisation for Migration, to ensure temporary housing provided by suppliers did not impede workers' freedom of movement.

Action in lower tiers

Forced labour risks are prevalent across the tiers of electronics supply chains.⁸ As one company notes: “the nature of forced labour risks are the same across all suppliers, namely fees, restricted movement, and withheld documents, but are more prevalent further down our supply chain.” However, the proportion of benchmarked companies disclosing steps taken to address forced labour risks beyond the first-tier is limited, which may indicate increasing forced labour risks for workers beyond the first tier.



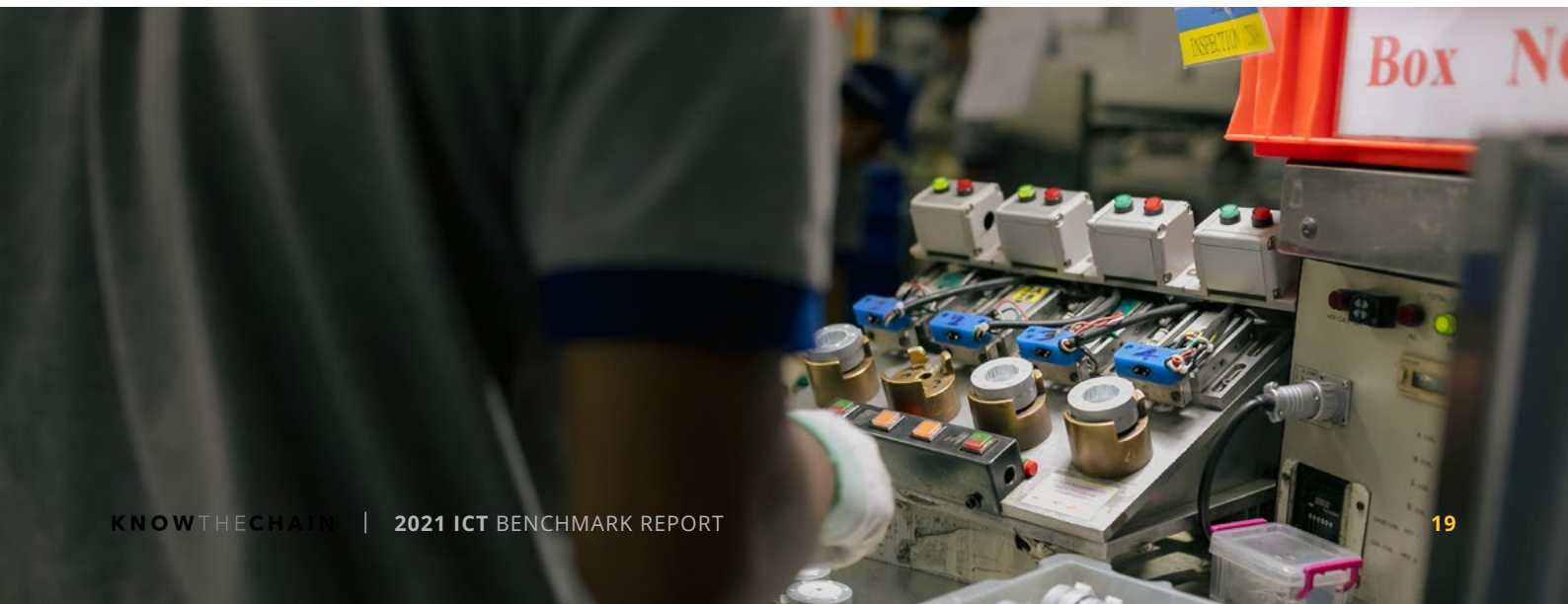
15% (approx. one in seven) of companies build the capacity of their suppliers to address forced labour risks through training first or second-tier suppliers. For example, **Intel** reported working with its suppliers to develop their own corporate responsibility programmes, and states that it has required 50 of its suppliers to work with three of their own suppliers to address forced labour risks. It states that this has resulted in: second-tier suppliers implementing changes to their own recruitment policies, expectation setting with labour agents, and returning US\$1.2 million in fees to workers.



17% (approx. one in six) of companies disclosed monitoring below the first tier of their supply chains (for example, including a portion of second-tier suppliers in monitoring programmes). Eight per cent (approx. one in 12) of companies additionally disclose findings of monitoring below the first tier. **Cisco** reported that at six component supplier sites, it found non-compliance related to grievance mechanisms for workers, excessive working hours and overtime. In addition, it identified workers paying health check fees in China and at a component supplier’s next-tier supplier in the Philippines.



Only **12%** (approx. one in eight) of companies disclose remedy outcomes for workers below the first tier. **Advanced Micro Devices, Cisco, Ericsson, Intel,** and **Microsoft**, disclose the remediation of fees to workers in the second tier of their supply chains.





KEY INDICATORS AND INSIGHTS

This section of the report highlights findings across key indicators of the methodology and insight into corporate practice in these areas, including: traceability and supply chain transparency; purchasing practices; responsible recruitment; remedy; worker voice; and due diligence. This section highlights company practice examples and recommendations for companies for each indicator covered.

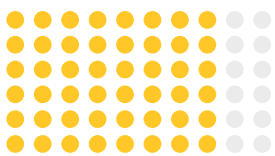
Traceability and supply chain transparency

49/100 AVERAGE SCORE

ICT supply chains are highly interconnected. Many of the largest global ICT companies buy from and supply to each other, which means that companies may be exposed to labour rights risks and impacts through their direct and indirect sourcing relationships. Effective human rights due diligence throughout supply chain tiers is therefore particularly important, including demonstrating an understanding of where supply chains are based.

KnowTheChain assesses the extent to which a company understands its suppliers and their workforces by disclosing relevant information, such as supplier names or sourcing countries, as well as risk factors, such as the percentage of women or migrant workers in its supply chains. This level of visibility and transparency into company supply chains is crucial in an age of budding legislation and import bans which will require companies to know where their products are coming from. Yet KnowTheChain has seen only limited improvements on this indicator since 2020. The pace of change in company practice does not appear to be in-keeping with that of regulatory requirements, with just one additional company disclosing its first-tier supplier list since being assessed in 2020, and three companies disclosing new data on women and migrant workers in their supply chains.

First-tier supplier lists



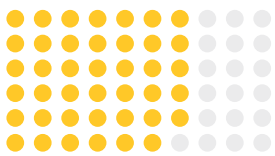
80% (four in five) of companies in the sector are yet to disclose a first-tier supplier list, and nearly all (92%) are yet to disclose the addresses of suppliers from which they source. Ensuring public access to this data is important as it enables worker representatives and groups to swiftly identify the specific location where a violation has occurred. By failing to disclose this type of information, companies are effectively enabling abuse to continue.⁹

The ICT sector is particularly poor when it comes to disclosing first-tier supplier lists.¹⁰ Of the 8% of companies disclosing a first-tier supplier list including names and addresses, **Amazon** disclosed a downloadable supply chain map that can be filtered for product categories, including electronics. The map shows supplier names and addresses, number of workers within a particular range (e.g. between 0-100) and the percentage of women workers in its supply chains. **Dell** has published a list of the names and addresses, as well as the product line, procurement category and supplier type, of original design manufacturers, final assembly, and suppliers that it buys from directly and/or “provide substantial product transformation.” It states the list covers at least 95% of its spend during fiscal year 2021. **Hewlett Packard Enterprise** disclosed a supplier list of the names and addresses of final assembly suppliers and the names of commodity and component suppliers. It states this comprises more than 95% of its procurement expenditure for materials, manufacturing, and assembly. **HP** also disclosed a first-tier supplier list covering 95% of its procurement expenditure including names, addresses, number of workers per supplier, and product type.

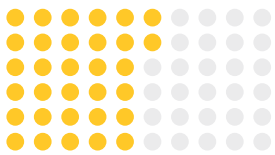
Why disclose a supplier list? Making a supplier list publicly available can yield benefits, such as identifying unauthorised subcontracting and receiving early and real-life notice from stakeholders when violations in a company's supply chains arise. As such, it is a key part of human rights due diligence. It further builds trust among workers, consumers, and other stakeholders and makes commitments to good labour practices more credible.¹¹

Beyond first tier

The number of companies disclosing the names and locations of suppliers below the first tier, as well as the sourcing countries of at least three raw materials at high risk of forced labour and human trafficking, is much higher, but disclosure is limited to smelters and refiners and the sourcing countries of so-called "conflict minerals" (tin, tungsten, tantalum and gold), as mandated by the US [Dodd-Frank Act](#).



68% (two thirds) of companies disclose information on the names and locations of suppliers below the first tier while a further 9% of companies disclose efforts to trace suppliers below the first tier, such as tracing the cobalt refineries in its supply chains.



53% (over half) of companies disclose the sourcing countries of at least three raw materials at high-risk of forced labour, while an additional 17% disclose efforts to trace raw materials in their supply chains. Disclosure beyond conflict minerals remains limited.



Supply chain workforce

ICT companies' transparency of their supply chain workforce is particularly poor. Understanding these demographics is important for companies to ensure they are aware of and can mitigate risks faced by workers – particularly highly marginalised groups. Yet 92% of companies don't disclose any information on the percentage of women workers in their supply chains and 90% don't disclose any information on the percentage of migrant workers in their supply chains. This is in spite of high levels of women electronics workers in sourcing countries such as Malaysia, Vietnam, or Thailand and the heightened levels of discrimination they often face.¹²

However, some good practice examples can be gleaned from company disclosure:

Cisco disclosed the overall number of male, female and migrant workers for its manufacturing partners, components suppliers (which it describes as suppliers that provide parts to contract manufacturers) and logistics suppliers.

Intel disclosed that based on 2022 data “primarily from Tier 1 suppliers but also some limited deeper tiers, 36% of workers in our supply chain are women” and 3% are migrant workers.

Amazon disclosed, as part of its supply chain map, the percentage range of women at each supplier (for instance 26-50% of workers are women).

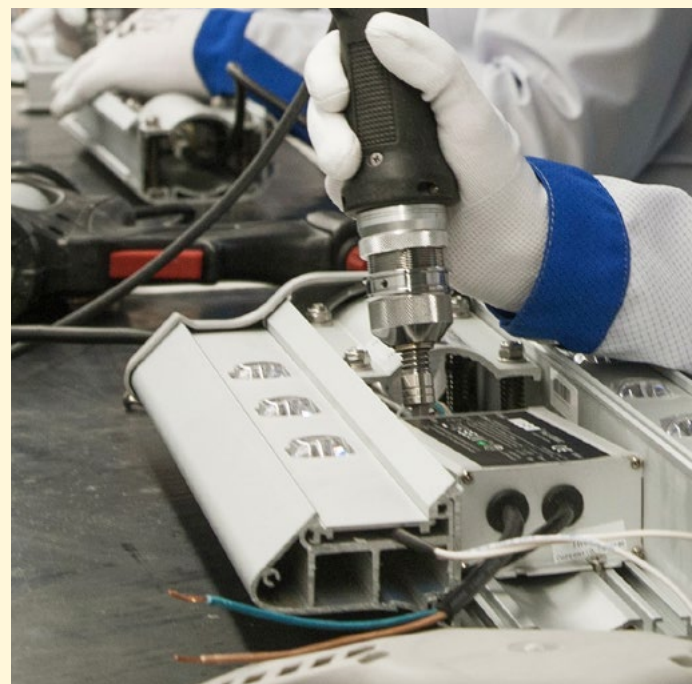
Hewlett Packard Enterprise disclosed that it has 3,803 foreign migrant workers in its supply chains.

Samsung disclosed that the number of workers at its first-tier suppliers is 3,700,000. It reported that, of these, 1.7% are migrant workers.

RECOMMENDED COMPANY ACTION

Traceability and supply chain transparency:

Disclose a supplier list that includes the names and addresses of first- and second-tier suppliers, and data on supply chain risk factors, such as the percentage of women and migrant workers in the supply chain workforce.



Purchasing practices

2/100 AVERAGE SCORE

As demand for microchips plummets, supply chain workers are likely to be hit the hardest. Responsible purchasing practices could mitigate this, ensuring supply chain workers are not forced to bear the brunt of fluctuating demand and slowdowns in production, as witnessed during the Covid-19 pandemic. Yet there is little evidence that companies have improved in this area.

KnowTheChain assesses whether companies commit to responsible purchasing practices in their contracts with suppliers, including through planning, forecasting and ring-fencing labour costs.¹³ Concrete data on purchasing practices aids in assessing what steps companies take to ensure their own actions contribute to and don't undermine the realisation of their human rights policies.

Purchasing practices is the **lowest scoring theme of the benchmark**, indicating a failure to exercise due diligence in assessing companies' own contribution to harm, and in ensuring companies' purchasing practices are consistent with human rights commitments, especially when it comes to the labour rights of supply chain workers. In addition, KnowTheChain found little to no improvement on purchasing practices when compared with the 2020 benchmark.

Most companies integrate their supplier code of conduct into contracts with suppliers but no company assessed disclosed any movement towards shared responsibility contracting, including the integration of responsible purchasing practices into contracts with suppliers. This indicates both a lack of willingness to commit to responsible purchasing practices in any binding manner and an awareness contracting can play a role in bolstering human rights due diligence along supply chains. In addition, it suggests an internal disconnect: while supply chain management teams may train suppliers on forced labour, the approach of legal teams to contracts would appear to offshore human rights risk to suppliers, potentially undermining the company's own human rights standards.



HOW SHOULD COMPANIES COMMIT TO RESPONSIBLE PURCHASING PRACTICES IN THEIR CONTRACTS WITH SUPPLIERS?

The [Responsible Contracting Project](#) (RCP), housed at Rutgers Law School, builds on the work of the American Bar Association (ABA) Business Law Section Working Group which developed the [Model Contract Clauses 2.0](#) (the MCCs) and the Responsible Buyer Code of Conduct. These tools, which together form the foundation of RCP's Responsible Contracting Toolkit, promote an alternative approach to traditional contracting. Specifically, this new approach shifts away from a regime of one-sided representations and warranties of compliance which make the supplier solely responsible for upholding the buying company's human rights standards in the supply chain. In its place, the RCP Toolkit introduces a model of contracting that operationalises the shared-responsibility principles enshrined in the UNGPs and the OECD Due Diligence Guidance for Responsible Business Conduct. This is referred to as shared-responsibility or due diligence-aligned contracting.

Shared-responsibility contracting requires both the buying companies and their business partners to commit to a regime of human rights due diligence and take joint responsibility for human rights in their supply chain. This means that both parties – not just the supplier – must make a contractual commitment to taking active and ongoing measures to identify, mitigate, and prevent potential adverse human rights impacts from occurring.

A shared-responsibility contracting regime has implications for the buying companies' purchasing practices. Indeed, one way that buyers fall afoul of their due diligence obligations is by engaging in irresponsible purchasing practices that aggravate the risk of harm. This is why the Responsible Contracting Toolkit includes several model clauses designed to formalise the buyer's obligation to engage in responsible purchasing practices, as well as a Responsible Buyer Code of Conduct.

Irresponsible purchasing practices may include: pricing below the cost of production, last minute change orders, unilateral changes to payment terms, demands for discounts or irresponsible exit.

In addition to integrating responsibilities relating to the buyer's purchasing practices, the MCCs integrate human rights remediation into supply contracts. They do this by ensuring that, should adverse impacts occur, both companies are contractually responsible for working together to provide remedy to victims, in proportion to their contribution to the harm. This addresses a major shortcoming of traditional contract remedies, which is that they flow from the breaching party to the non-breaching party, instead of to the victims. The MCCs place human rights remediation ahead of traditional contract remedies, so when a social or human rights-related breach happens, there is redress for the victims. They further specify neither party should benefit from a human rights violation or a social breach of contract.



Just **5% (one in 20)** of companies disclose data points showing they have responsible purchasing practices in place – a damningly low number in light of its significance for worker rights. Even among the top performers in the benchmark, including highest-scoring companies **Hewlett Packard Enterprise** and **Intel**, data on responsible purchasing practices such as planning, forecasting, lead times, or payment terms is limited or non-existent.

Better practices include those of **Samsung**, which disclosed it has automated the submission of requests for the provision of parts to its suppliers, and that delivery dates cannot be changed without approval from the supplier. The company also disclosed how it supports fair payment terms in its supply chains, providing interest-free loans to suppliers so they may pay suppliers below the first tier within 30 days.

Only one company, **Cisco**, disclosed comprehensive information on how it adopts responsible purchasing practices, including planning and forecasting, and how it ringfence¹⁴ labour costs; it further reported that it actively works to reduce changes in orders. It disclosed that in 2022 it worked with key partners to address labour costs independently of production costs to protect the workforce from supply volatility.

Corning and **Texas Instruments** also disclose payment terms, stating that “97% of small, disadvantaged suppliers are paid in 60 days or less”, with payment terms for all suppliers being 30 days. Corning also states that the average length of its contracts is two years, and that 15% of all orders are changed after an order is placed.

Living wage

Only one company assessed in the ICT benchmark disclosed some limited efforts to introduce a living wage in its supply chains. **Hewlett Packard Enterprise** said it recognises forced labour and wage risks are often linked, and that in 2021 it “helped establish and actively participate in a task force specifically researching and planning how to introduce living wage measures across the electronics supply chain.” However, beyond this example, benchmarked companies do not appear to be taking steps to assess, understand or support living wages for supply chain workers, and no companies disclose data on the number or percentage of workers paid a living wage.

Fairphone details the need for scalable living wage initiatives in the electronics sector. It is supporting one of its suppliers to enable them to pay living wages to their workers. It states that one of the central aspects of its approach is to ensure it is worker-driven, actively seeking input and participation from workers. It notes that after reviewing living wage estimates from organisations such as GLWC and Asia Floor Wage and consulting workers, it set a target wage and calculated how much it would need to contribute in order to ensure that each worker received this wage.

RECOMMENDED COMPANY ACTION

Responsible purchasing practices: Adopt responsible purchasing practices with first-tier suppliers including planning and forecasting as well as the ring-fencing labour of costs.

Data points on responsible purchasing practices: Adopt and disclose several year-on-year data points on responsible purchasing practices relating to all first-tier suppliers, including:

Payment practices: Payment terms (noting that 30 days is best practice) and percentage of suppliers paid in full within 30 days (or 60 days) of delivery;

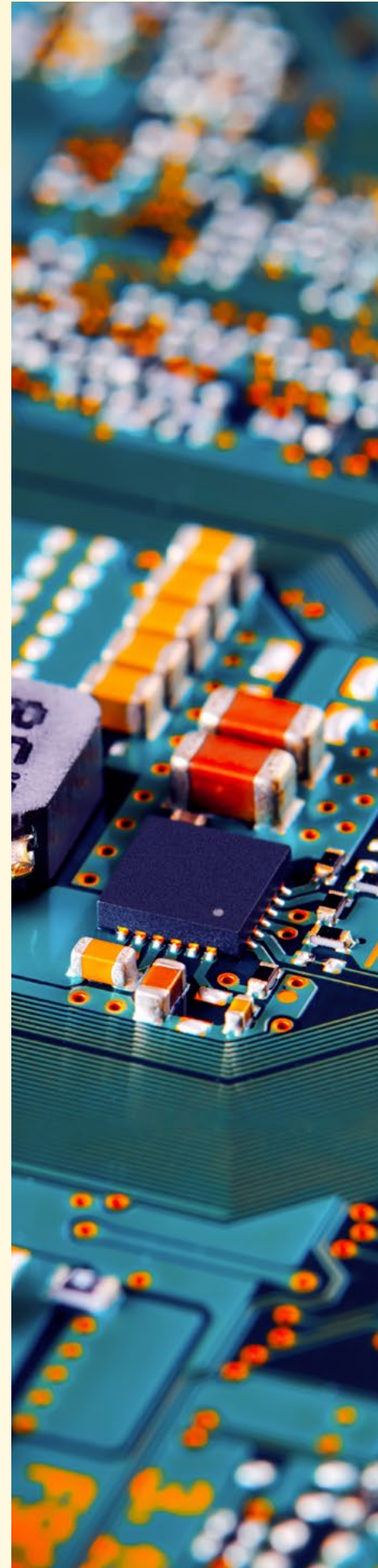
Planning and forecasting, such as: whether a forecast is issued, the timing (noting that 90 days or more is good practice), whether it is regularly updated, and whether it is accurate; and

Costing: Percentage of orders priced to cover the costs of compliance with the company's supplier code (including the costs of the Employer Pays Principle, i.e. the costs for responsible recruitment of migrant workers and repayment of worker-paid recruitment fees) and to allow for a reasonable and maintained supplier profit.

Shared-responsibility contracting: Companies should pivot away from traditional contracting regimes which pass all the responsibility and risk for human rights outcomes on to their business partners and adopt a shared-responsibility approach to contracting. This may include incorporating the following into supplier contracts:

Buyer responsibilities, including responsible purchasing practices: Buyer and supplier must each commit to engage in responsible sourcing and purchasing practices, including with respect to pricing, order changes, providing reasonable financial and non-financial assistance to business partners, and responsible exit. A fuller description of responsible purchasing practices can be found in the Responsible Contracting Toolkit's Responsible Buyer Code and the MCCs section 1.3.¹⁵

Living wage: Work towards ensuring supply chain workers are paid a living wage to reduce risks, such as excessive overtime, and to ensure a decent standard of living for supply chain workers. Disclose the methodology used for assessing a living wage.



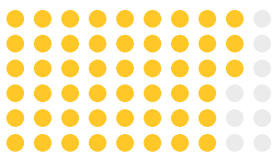
Responsible recruitment of migrant workers

17/100 AVERAGE SCORE

The cost-of-living crisis and precarity of work typical since the Covid-19 pandemic is increasing migrant workers' vulnerability to bonded labour. Recruitment agency fees remain a persistent issue in the sector. Migrant workers are often expected to pay fees directly to recruitment agencies and brokers while also covering related costs such as those purportedly associated with travel, visa and administration, health checks, training, and unspecified service charges, which may not be accurate.

KnowTheChain assesses whether companies have a policy commitment, adopt preventative efforts, and can provide evidence of repayment of fees to supply chain workers. It also assesses companies' transparency regarding the recruitment agencies used by suppliers, and whether companies provide details of how they support responsible recruitment in their supply chains. Since 2020, the ICT sector has made good progress, but the overall gap between disclosure of policy and practice remains wide.

Policy



The majority of companies assessed (**85%**) disclose a policy prohibiting recruitment fees in their supply chains, while three-quarters (75%) of companies assessed included a commitment to the Employer Pays Principle, which specifies that the employer rather than the worker is responsible for paying fees. It is positive to see of the companies assessed in both 2020 and 2022, 12 more companies have introduced or improved a policy prohibiting recruitment fees. All North American companies assessed have established such a policy, while all but one of the European companies have (**TE Connectivity**). Eight Asia-based companies have yet to disclose a policy prohibiting fees.

Some companies stand out for particularly detailed policies which specify the types of fees covered, and which specify that suppliers must be responsible for the payment of recruitment costs directly. **Apple** requires suppliers to have processes in place to determine the amount paid by each worker, including recruitment service fees in the sending country as well as a range of other related fees. **Hewlett Packard Enterprise** requires suppliers to provide evidence of payment and to have written contracts with labour agencies prohibiting charging of fees to potential migrant workers by recruitment partners and sub-agents.

Risk assessment



Only **10%** of companies assessed **disclose data on the percentage of migrant workers** in their workforce, which is a vital first step in identifying and mitigating the risks to this vulnerable group.



Eight companies (13%) disclosed some mapping efforts relating to the labour agencies used in their supply chains (e.g., requiring suppliers to disclose the recruitment agencies they use). Companies that demonstrate they are tracing the agencies used in their supply chains are able to show they are taking steps to understand and address the risks associated with labour agencies.

Only one company provided further detail. **Apple** reported that in 2021, it identified 1,182 labour agencies supporting 482 facilities in 32 countries. It states these labour agencies represent more than 870,000 workers (with 427,000 working on Apple's products) and that it requires "prospective suppliers in India, Malaysia, South Korea, Taiwan, Thailand, and Vietnam to undergo labour agency mapping and responsible labour recruitment training" as part of its supplier selection process.

Risk prevention

It is encouraging that policies prohibiting worker-paid fees are commonplace in the ICT sector. However, KnowTheChain continues to see a significant gap between the disclosure of policy and the implementation of this policy. Companies should be able to demonstrate workers do not have to pay fees in the first instance. This may include showing:

They know where workers are recruited from and understand practices used by labour agencies by demonstrating mapping of both migrant worker corridors and associated costs, and of labour agencies in sending and receiving countries. Cost mapping should be conducted on a regular basis (at least annually) to ensure that the amounts calculated are accurate.

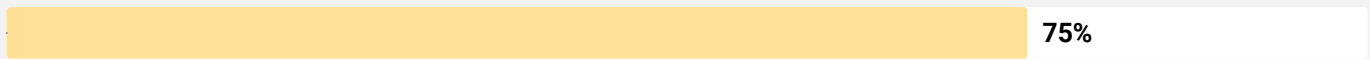
Specialised investigations are used to ensure workers have not paid fees, which incorporate recruitment cost mapping and include an assessment of foreign worker quotas, and key documentation such as contracts and agreements with labour agencies, letters regarding worker visas, and verification that the employers, and not the workers, paid.



In spite of this, only **13% (one in eight)** of companies disclose some effort to **prevent recruitment fees being charged to workers in the first place**. Companies' inability to proactively prevent fees being charged may correspond to the lack of data they disclose on migrant workers in their supply chains.

RECRUITMENT FEES

Companies disclosing a policy prohibiting worker-paid fees



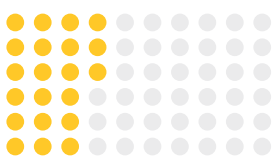
Companies disclosing how they proactively prevent the charging of fees to workers



Examples of good practice would include collaborating with stakeholders to conduct due diligence (**Amazon**), or developing models to ensure employers pay for health examinations to remove the need for workers to be reimbursed (**Cisco**). **Apple** disclosed particularly strong preventative efforts: it conducts specialised debt-bonded labour audits in high-risk environments and high-risk labour corridors. It states such assessments were conducted in Japan, Malaysia, the Philippines, Singapore, Taiwan, Thailand, Vietnam, and the United Arab Emirates in 2021. It reported that each audit includes verification of documents from suppliers and labour agents, as well as interviews with labour agencies and workers, and said it mapped 1,182 labour agencies in its supply chains in 32 countries.

The lack of company action on fee prevention raises doubts about companies' policy commitments. No company said it integrated recruitment-related costs into its purchasing practices. If such costs are no longer to be absorbed by workers and are to be accounted for by companies and their suppliers, companies should be able to show their purchasing practices incorporate the costs of meeting the Employer Pays Principle into supplier payments. Contracts with suppliers should include express obligations the employer must pay recruitment-related fees, and specify that the costs of products or components include recruitment-related fees or costs.

Remediation of worker-paid recruitment fees



Twenty-one companies assessed (35%) disclose that recruitment-related fees have been repaid to workers in their supply chains, and six additional companies disclose evidence of fees being repaid to workers since they were last assessed in 2020 (**Amazon, Lam Research, Murata, Sony, Tokyo Electron, Western Digital**). A limited number of companies report on payback of recruitment fees in lower tiers. While the increased scrutiny on the issue by civil society groups has improved disclosure, details of what is reported remain limited. Good practice in this regard includes disclosing reimbursement for recruitment and related fees, such as health checks or travel costs, as well as important details, such as the number of workers reimbursed, the countries where the violations occurred, the time frames, and the amounts paid back over time. This demonstrates fee remediation is being undertaken systematically.

For example, **Hewlett Packard Enterprise** reported that in 2020 it worked with four suppliers to repay US\$500,000 to workers who had paid recruitment fees to agencies. It said it found evidence five workers at a supplier manufacturing facility based in Malaysia that paid fees and associated costs, including those relating to medical, immigration security clearance, orientation, and agency fees in their home country. The company states the supplier then identified further instances of recruitment charges and agreed to repay all migrants from Nepal, regardless of whether they had reported paying fees or had evidence to support fee payment, and ensured workers were reimbursed within three months.



Just four (7%) companies (**Apple, Best Buy, Hewlett Packard Enterprise** and **Intel**) describe how workers are engaged as part of repaying recruitment-related fees. **Hewlett Packard Enterprise** disclosed a supplier in Nepal which repaid recruitment fees to workers ensured workers were consulted on the remediation plan. It said it found high rates of understanding of the no-fee policy and satisfaction with the reimbursement programme.

RECOMMENDED COMPANY ACTION

Recruitment fees:

Incorporate the Employer Pays Principle into policies and contracts to ensure the employer, not the worker, bears the costs.

Implement the Employer Pays Principle by ensuring the prevention of fees being charged to workers. Identify recruitment corridors, as well as recruitment fees and related costs charged in different recruitment corridors, and undertake detailed checks on relevant documentation from suppliers (such as contracts with recruitment agencies or worker visas). To ensure that fees are being paid upfront by suppliers, companies should request specific documentation to verify that instead, fees are being paid directly to agencies, government agencies or service providers as appropriate.

Take steps to ensure the effective, timely and transparent remediation of worker-paid fees across supply chains.

Ensure purchasing practices incorporate the costs of meeting the Employer Pays Principle into payments to suppliers.

Responsible recruitment:

Disclose the names of recruitment agencies used by suppliers and carry out due diligence on supplier relationships with labour agencies – a key predictor of risks to workers.

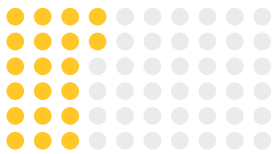
Support responsible recruitment in company supply chains, for example, by collaborating with relevant stakeholders to engage policy makers to strengthen recruitment standards.

Remedy

15/100 AVERAGE SCORE

The UN Guiding Principles on Business and Human Rights describes the dual purpose of having a grievance mechanism: to identify adverse human rights impacts and to make it possible for these impacts to be remedied.

With an average remedy score of 15/100, companies are falling short of providing concrete remedy for workers and ensuring that remedy outcomes are satisfactory to workers.¹⁶ KnowTheChain assesses whether companies disclose a process for providing remedy to workers that includes engagement with affected stakeholders, outcomes of remedy for workers across supply chain contexts, and how companies have remediated allegations of forced labour in their supply chains. While scores remain poor on remedy overall, it is encouraging to note that eight companies newly disclosed remedy outcomes for supply chain workers since reporting in 2020. However, most (49) companies (82%) do not disclose having a process for responding to reported violations of labour rights in their supply chains. Even in those few instances, details such as those relating to responsible parties, approval procedures, timelines for dealing with allegations, and how engagement with affected workers takes place – a vital part of any remedy process – are not always provided. **Samsung**, for example, said it seeks to ensure its grievance procedure is transparent and engages with those involved to listen to their desired measures, reviews remedial measures within seven days of receipt, and gathers feedback from the affected worker.

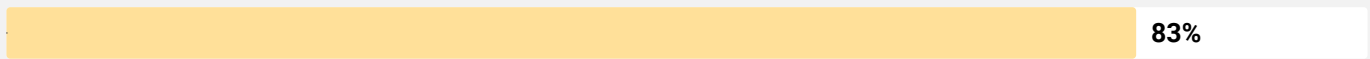


Approximately **one-third of the companies (32%)** disclosed at least one example of a remedy outcome for their supply chain workers related to labour rights violations. Only 15% disclosed more than one concrete instance of remedial outcomes for workers – a very low number given labour rights violations are likely present in all large global supply chains at some level – perhaps indicating that grievance mechanisms are not trusted or used by workers.

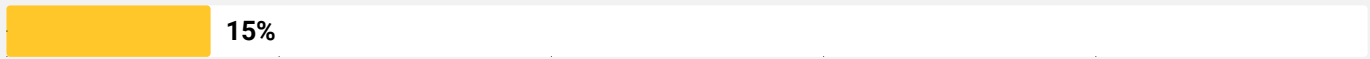
Companies which disclose remedy outcomes for workers do not typically present the full picture, for example, by disclosing the number of workers affected, timeframes, locations, and supply chain contexts or tiers. However, presenting a high level of detail demonstrates an awareness of risk factors in supply chains so that such risks may be avoided. **Best Buy** said it engaged with two factories that moved production from mainland China to Taiwan and Thailand because of the elevated risk to foreign migrant workers at these locations, and supported the factories in the recruitment process. It stated its proactive engagement regarding recruitment fees resulted in 294 workers from Vietnam and 156 workers from Myanmar being reimbursed over US\$72,000 in total.

GRIEVANCE MECHANISMS VS REMEDY OUTCOMES

Companies disclosing grievance mechanism



Companies disclosing multiple remedy outcomes



A limited number of companies disclose remedy outcomes beyond the first tier. **Microsoft** disclosed that one of its suppliers established a sub-tier supplier management system supported by capacity building efforts, and that this supplier identified two forced labour non-conformances and required their lower tier suppliers to repay a total of US\$216,000 to 104 workers.

The low number of companies disclosing multiple examples of remedy outcomes for workers contrasts starkly with the number of companies that disclosed supply chain workers' access to grievance mechanisms (83%). This calls into question the effectiveness of the operation of such grievance mechanisms.

Remedy outcomes in cases of allegations

KnowTheChain includes publicly available allegations of forced labour in the benchmark to assess companies' responses to the allegations and whether they provide a remedy the affected workers find satisfactory. In total, allegations relating to 19 companies (32%) were found in companies' supply chains. Elements of 18 of these allegations include forced labour in Xinjiang and the transfer of Uyghur and other ethnic minority Muslims from Xinjiang to work in factories around China. They also include **subjecting workers** to conditions described by the ILO as indicators of forced labour, including abuse of vulnerability, deception, restriction of movement, intimidation and threats, and abusive working and living conditions.



While some companies disclosed carrying out audits in response to the allegations of Uyghur forced labour (although it is widely acknowledged that due diligence in the region is not possible), none of the companies with such allegations against them disclosed engaging in dialogue with the affected workers.¹⁷ No company disclosed outcomes of their remedy process for workers, or evidence the remedy outcomes are satisfactory to the victims or groups representing the victims. As such, all companies scored zero on this section.

In circumstances where conducting due diligence is considered impossible, engagement with workers and rightsholder groups on remediation is critical. Principle 18 of the UN Guiding Principles on Business and Human Rights states that where consultation with affected stakeholders is not possible, businesses should consider reasonable alternatives, including consulting credible, independent expert resources “including human rights defenders and others from civil society.” In addition, responsible exit should be considered. The UN has published guidance on heightened human rights due diligence for business in conflict-affected contexts. In the apparel and footwear sector, the Ethical Trading Initiative has recommended that, in line with the UN Guiding Principles on Business and Human Rights, companies should reconsider their presence in Myanmar due to conditions for workers following the military takeover. It cites that responsible exit must mitigate impact on both suppliers and workers.

RECOMMENDED COMPANY ACTION

Remedy outcomes: Companies should disclose concrete remedy outcomes for workers, including in cases of specific allegations. In particular, companies should:

Engage with workers on an ongoing basis to ensure the full extent of rights violations is identified (such as the amount of any recruitment fees and related costs paid by workers), meaningful remedy is developed, and workers are satisfied with the remedy outcomes.

Work with suppliers and, where relevant, peer companies to ensure that migrant workers receive remediation, including for recruitment fees and related costs and unpaid wages.

Where allegations against the company have been made, contribute financially to remediation in collaboration with affected workers or their representatives.

Shared-responsibility contracting: Contractually commit to remedy in contracts with suppliers, for example by including clauses which address the following:

Buyer and supplier must each prioritise stakeholder-centred remediation for human rights harms before or in conjunction with conventional contract remedies and damage assessments.

Buyer must participate in remediation if it caused or contributed to the adverse impact. Prioritising remediation helps ensure that human harms will be addressed and that neither party will benefit – by receiving damages as a result of a human rights-related breach of contract – from a human rights harm.¹⁸

Worker voice: Freedom of association and grievance mechanisms

8/100 AVERAGE SCORE



Ensuring workers' rights to freedom of association and collective bargaining are respected is critical to addressing forced labour. The right to freedom of association is curtailed in the ICT sector due to low levels of unionisation among supply chain workers and a heavy reliance on migrant workers, who the UN Special Rapporteur on the rights to freedom of peaceful assembly and of association notes are at particular risk "because of their irregular status or by structural barriers in legal channels that systematically disempower workers." In addition, grievance mechanisms should play a central role in workers' access to remedy, and are critical to companies' due diligence processes due to the role they can play in the identification of risks or harm to workers.

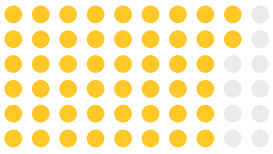
KnowTheChain assesses how companies support the right to freedom of association for supply chain workers by engaging with local or global unions, or other legitimate worker representatives, in their supply chains, and whether companies are party to enforceable labour rights agreements. In addition, KnowTheChain assesses whether companies disclose grievance mechanisms for supply chain workers and their representatives across supply chain tiers, as well as data on the use of mechanisms. Worker voice is the second-lowest scoring theme of the benchmark, raising significant concerns as to workers' ability to challenge abuse and exploitation in the sector. Progress on worker voice is slow, with only three companies (**Cisco**, **Corning** and **Tokyo Electron**) newly disclosing data on their grievance mechanisms since 2020, and progress on freedom of association a far cry from the step change needed, with just one company disclosing engaging with a union.

Freedom of association

There are few examples of labour rights agreements in the sector, with no company assessed disclosing being party to global framework agreements that cover supply chains, or other agreements with trade unions or worker organisations. Only two companies – **Intel** and **Apple** – disclosed the number or percentage of their supply chains covered by such agreements. **Intel**, for example, reported on its supplier data from 2022, predominantly from first tier suppliers but with some limited data on lower tiers, which revealed approx. half (51%) of the facilities reported having a collective bargaining agreement in place. **Apple** disclosed that in 2021, 442 sites had negotiated collective bargaining agreements with workers.

Creating space and respect for unions can improve respect for freedom of association across supply chains. One company in the sector (**Hewlett Packard Enterprise**) disclosed working with a union to improve freedom of association in its supply chains – the first time such an example has been disclosed in KnowTheChain assessments of the ICT sector. **Hewlett Packard Enterprise** reported that in 2021 it worked with a final assembly supplier, a union, a third party expert and an NGO to address concerns raised by an NGO. It states that it spoke with a large sample of worker and union representatives, and that the supplier engaged in a six-month programme of improvement that included training, worker engagement, and heightened monitoring focusing primarily on effective grievance mechanisms and more effective engagement with the union.

Grievance mechanisms



The **majority of companies (83%)** disclose some form of grievance mechanism for suppliers' workers, although only 48% disclose mechanisms for reporting human rights concerns or violations clearly accessible to both suppliers' workers and their legitimate representatives. However, the benchmark findings show a significant gap between the disclosure of grievance mechanisms *and* evidence the mechanisms are effective and used by workers. Only one in eight (12%) of companies disclose data describing the types of grievances submitted by workers. With mHREDD on the rise globally, companies should have an interest in disclosing data on grievance mechanisms to show that mechanisms, key in both due diligence and access to remedy, are used and trusted by those for whom they are intended. Notably, though, despite imminent legislation at EU level, none of the 10 European companies assessed disclose data on the use of grievance mechanisms.

On the other hand, **Apple** said grievances reported to supplier hotlines involved wages and benefits, employee relations, amenities, workforce stability, and health and safety. In addition, it disclosed follow up actions: the company said it received reports from suppliers' workers alleging remuneration promised by labour recruiters was different than what they were offered upon employment. It conducted an audit at the facility, including hundreds of worker interviews, and found that "labour recruitment agencies had been inflating hiring bonuses to attract more employees" and that insufficient labour recruitment agency due diligence was carried out.

Samsung disclosed a chart which includes the number of grievances filed in each of the following categories: complaints related to managers, wages, environmental health and safety, and benefits. It additionally stated that a grievance by a worker in Southeast Asia related to bedding hygiene and food provided by the company, and that another related to wage deductions at one of its suppliers in Europe.

GRIEVANCE MECHANISMS

Grievance mechanism for suppliers' workers



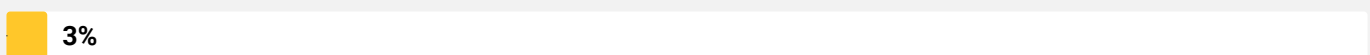
Grievance mechanism for all key stakeholders



Disclose data showing that grievance mechanisms are used by workers



Involving workers in the design or performance of the mechanism



The sector's overall failure to demonstrate the effectiveness of grievance mechanisms is further compounded by the fact only 3% of companies disclose the involvement of workers or their legitimate representatives in the design or performance of grievance mechanisms. Involving workers or their legitimate representatives in the design and operation of grievance mechanisms helps ensure their independence, and that mechanisms are trusted by their users.

As such, there is little evidence workers in the supply chains of benchmarked companies have meaningful access to remedy, which calls into question the effectiveness of companies' due diligence.

RECOMMENDED COMPANY ACTION

Freedom of association: Actively promote freedom of association and provide evidence of improvements of freedom of association and collective bargaining across supply chain contexts, for example, by disclosing year-on-year data on the percentage of workers under collective bargaining agreements (preferably at the factory level as part of a supplier list) or by disclosing examples of tangible outcomes for workers.

Grievance mechanisms: Ensure independent and effective grievance mechanisms are available to suppliers' workers and their representatives, including below the first tier of supply chains. Demonstrate their effectiveness by disclosing data on the operation and use of the mechanism by suppliers' workers or their representatives.





DUE DILIGENCE

Imminent **mHREDD legislation** in the [EU](#), as well as developments globally including in [Canada](#), [France](#), [Germany](#), [Norway](#), [Japan](#), [New Zealand](#), and the [UK](#) may turn labour rights risks to workers into more tangible operational and financial risks to the company. In addition to key aspects of due diligence discussed in other areas of this report, such as stakeholder engagement, purchasing practices, and grievance mechanisms, KnowTheChain assesses company performance on different aspects of due diligence including: governance assessment and disclosure of risk, and monitoring.

In sum, ICT companies assessed provide some evidence of the basic building blocks for due diligence, and since 2020, 13 companies have disclosed a human rights risk assessment on their supply chains, which suggests an increasing focus on baseline due diligence steps. However, the sector reflects serious gaps in the areas of human rights risk assessment – with nearly half failing to disclose supply chain assessments – as well as worker engagement and worker-driven monitoring.

DUE DILIGENCE: KEY INSIGHTS

Disclosed a supplier code of conduct prohibiting forced labour



Information on internal accountability for supplier code



Conducted a human rights risk assessment on supply chains

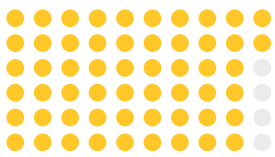


Disclosed detail on forced labour risks identified across supply chain tiers



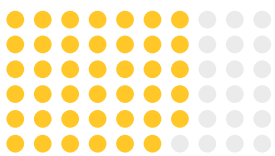
Governance

Supplier code of conduct and implementation



The **majority of companies (93%)** assessed in the ICT sector have a supplier code of conduct addressing labour rights in their supply chains; this indicates the willingness of companies to develop policies, but not ensure effective implementation. The majority of codes prohibit forced labour, child labour, and discrimination, yet only 18% of companies require suppliers to respect the ILO core labour standards, which cover the human rights that the ILO has declared to be fundamental rights at work. These include, crucially, freedom of association and collective bargaining. The restriction of the right to freedom of association and collective bargaining is endemic to the sector. Almost three quarters (73%) of benchmarked companies are members of the Responsible Business Alliance's (RBA) and use the industry association's code of conduct, which also limits that right.

Management and accountability



Over two-thirds (68%) of companies disclose some information on who, internally, is responsible for the **management of their supply chain policies** which address forced labour. However, only five companies disclose the use of **incentives for staff** which are tied to supply chain working conditions, which mostly relate to compensation. Less than half the companies (43%) disclose at least a limited level of information on **board oversight of supply chain policies** addressing forced labour. No company describes how the experiences of affected workers or relevant stakeholders (such as civil society, unions, and workers or their representatives) informed board discussions. This indicates a heavy top-down approach, with little to no involvement of workers in the design, implementation, and verification of labour rights issues.



Human rights risk assessments

As a key aspect of a company's due diligence process, it is concerning so many companies still do not report undertaking human rights risk assessments of their supply chains that include addressing forced labour risks. Nearly half (45%) of companies **do not disclose carrying out a human rights risk assessment** of their supply chains, indicating they will not be prepared for imminent legislative developments requiring published assessments of the human rights risks in their supply chains and associated risks. Notably, the three lowest-scoring European companies (**Infineon Technologies**, **Hexagon**, and **ASML**) did not disclose conducting a human rights risk assessment on their supply chains – which is of particular concern given the incoming Corporate Sustainability Reporting Directive in the EU.

Risk assessment processes should include engagement with stakeholders. Yet, just under one in eight (13%) of benchmarked companies disclose engaging with stakeholders as part of their efforts to understand risks. **Hewlett Packard Enterprise**, for example, reported it engages with non-governmental organisations (NGOs) on forced labour topics to research and better understand risk, including “Verite, Migrant Forum in Asia, International Organization for Migration, Our Journey, Institute for Human Rights and Business, Freedom Fund, Coalition to Abolish Slavery and Human Trafficking, Save the Children, UNICEF and the OECD.” In addition, only one in 12 (8%) of companies disclose how they have engaged with relevant stakeholders in the steps taken to address specific risks identified. For example, **Apple** reported that as a result of risks associated with the pandemic, it worked with the International Organisation for Migration to ensure temporary housing provided by suppliers did not impede workers' freedom of movement.

What constitutes a robust human rights risk assessment?

A risk assessment process involves assessing the potential a company has, by virtue of its suppliers and where they are located, of complicity in forced labour. This is a process which occurs outside of and in addition to monitoring or auditing. Risk assessments should engage expert stakeholders and rightsholders, and take into account a range of sources, which may include third-party information, grievance mechanism data, and audit findings. The risk types assessed should include those associated with specific raw materials, manufacturing processes, countries or regions, or types of workers (such as migrant workers).

Disclosure of risk

Nearly 80% of companies don't disclose details on the types of forced labour risks their assessment process discovered, despite 62% of companies disclosing sourcing from Malaysia and/or China. These two countries are listed by the **US Department of Labor** as locations where electronics may be produced with the use of forced labour. **Intel** is an exception. It identified high priority areas, which include foreign interns who pay fees in their home countries to secure roles before travelling to facilities. It reported increasing its focus on Japan and South Korea due to programmes which allowed the charging of fees to job seekers and disclosed programmes which require second-tier suppliers to work with recruiting agencies to implement stronger standards.

Companies cannot demonstrate their human rights risk assessment processes are effective and meaningful as part of due diligence without disclosing information on the risks identified through the assessments: yet seven of 10 European companies assessed have yet to disclose what types of forced labour risks have been identified in different tiers of their supply chains (**ASML, Hexagon, Infineon, Logitech, Nokia, TE Connectivity, and STMicroelectronics**). As such they fall behind their regional peers (**Ericsson, NXP Semiconductors, and Seagate Technology**).

Monitoring

Over half (55%) of companies disclosed some level of detail about their monitoring methodology for implementation of supply chain policies addressing forced labour. However, there is a lack of disclosure by the companies assessed regarding monitoring data. More than two-thirds of companies did not disclose findings of monitoring reports, including regarding violations revealed in relation to forced labour across supply chain tiers. This indicates an unwillingness to disclose risks and instances of forced labour found in supply chains, which undermines the effectiveness of companies' monitoring processes.

Although workers should play an essential role in risk identification, the monitoring of supplier performance and design, and operation of grievance mechanisms, no companies disclosed the use of worker-driven monitoring¹⁹ in their supply chains. The [Worker-Driven Social Responsibility Model](#) demonstrates the positive impact of programmes where workers and worker organisations are the driving force (as creators, monitors and enforcers) on wages and working conditions. One company, **Hewlett Packard Enterprise**, notes: "engagement is more effective when worker interviews are conducted through third-party local experts" and stated it was looking for opportunities to improve worker-led monitoring through local partners. However, no ICT company currently disclosed the use of worker-driven monitoring.

RECOMMENDED COMPANY ACTION

Worker engagement: Ensure workers play a central role in the design, implementation, and monitoring of key due diligence processes, including:

- | risk assessment (including safe engagement with workers affected or potentially affected);
- | grievance mechanisms; and
- | supplier monitoring.

Risk assessment: Conduct and disclose detailed supply chain risk assessments which include assessment of forced labour risks across supply chain locations and tiers. Disclose risks identified in different supply chain tiers.

CONCLUSION

With a median score of 14/100, the ICT sector has significant progress to make to ensure it is effectively addressing forced labour risks and impacts in global supply chains, as well as keeping up with the requirements of incoming regulation. In particular, there is a concerning lack of transparency over companies' purchasing practices, and an apparent absence of any effort to support supply chain workers' rights to organise. These practices are essential for worker-centric due diligence.

It is nevertheless encouraging to see some companies have shown significant improvements since being assessed in 2020. However, as risks of worker exploitation increase in the face of a cost-of-living crisis, climate change, and growing inequality, companies will need to rapidly step up their efforts if they are to ensure meaningful change for workers. Gaps between the disclosure of policy and evidence that paper commitments are implemented remain: the significant lack of verifiable evidence of changed practice on recruitment-related debt bondage makes it clear that company policy pronouncements are not leading to meaningful change toward true employer-pays models of recruitment in countries like Malaysia, Taiwan and Thailand, where the ICT sector is deeply entrenched. It is also deeply disturbing that ICT companies are still fundamentally connected to extremely high-risk sourcing locations where effective due diligence is impossible. Similarly, rightsholder engagement appears absent from the approach of many companies, as these companies continue to take a "tick-box" approach to due diligence. The impunity with which companies operate may soon be coming to an end, however, as legislation and enforcement mechanisms help address power imbalances across global supply chains and eradicate the egregious human rights abuse that is forced labour.



APPENDIX 1:

COMPANY SELECTION

KnowTheChain assesses companies in sectors in which forced labour risks have been widely documented. It reviews the largest global companies per sector, as these companies have a large supply chain workforce as well as significant leverage (and therefore may have the potential for both the greatest negative impact on workers and the ability to significantly improve supply chain working conditions). Due to its focus on (listed equity) investors, KnowTheChain assesses publicly listed companies only. The 60 ICT companies included in the assessment were selected using primary criteria: companies must be publicly listed and are selected on the basis of their size (market capitalisation) and the percentage of revenues derived from own-branded ICT products.

In addition, for the 2022-23 benchmarks, company selection also took into account additional considerations to ensure regional or sub-industry representation. The initial company selection took place in 2022, including a review of the companies' market capitalisation. Two of the companies in KnowTheChain's benchmarks have significant revenues from several product types and are, therefore, included in more than one sector benchmark (**Amazon** and **Walmart**).

For this report, KnowTheChain has assessed the following 60 companies against its benchmark methodology:

Engaged with KnowTheChain:²⁰ ● Yes ⓘ Informal ○ No

↓ Company	Market cap in US\$bn	Headquarters	Year
● Advanced Micro Devices Inc.	191,249	United States	2022
● Amazon.com, Inc.	1,778,602	United States	2018
○ Amphenol Corp.	48,189	United States	2018
● Analog Devices Inc.	96,868	United States	2018
● Apple Inc.	2,711,977	United States	2016
○ Applied Materials Inc.	132,902	United States	2018
○ ASML Holding NV	326,541	Netherlands	2016
● Best Buy Co., Inc.	26,284	United States	2020
○ BOE Technology Group Co. Ltd.	28,708	China	2016
○ Broadcom, Inc.	252,406	United States	2016
● Canon Inc.	22,971	Japan	2016
● Cisco Systems Inc.	231,294	United States	2016
● Corning Inc.	31,653	United States	2018
● Dell Technologies, Inc.	43,206	United States	2020
● FUJIFILM Holdings Corp.	31,449	Japan	2020
○ Hangzhou Hik-Vision Digital Technology Co., Ltd.	72,120	China	2020
● Hewlett-Packard Enterprise Co.	18,771	United States	2018
● Hexagon AB	39,292	Sweden	2020
● Hitachi Ltd.	56,833	Japan	2016
○ Hon Hai Precision Industry Co., Ltd. (Foxconn)	51,652	Taiwan	2016
● HP Inc.	40661	United States	2016

Engaged with KnowTheChain:²⁰ ● Yes ⓘ Informal ○ No

↓ Company	Market cap in US\$bn	Headquarters	Year
● Infineon Technologies AG	58,680	Germany	2018
● Intel Corp.	200,096	United States	2016
● KEYENCE Corp.	149,865	Japan	2016
● KLA Corp.	61,882	United States	2020
○ Kyocera Corp.	21,435	Japan	2018
● Lam Research Corp.	84,738	United States	2018
● LG Electronics Inc.	15,794	South Korea	2020
● Logitech International S.A.	13,219	Switzerland	2022
○ Luxshare Precision Industry Co. Ltd.	43,741	China	2022
● Microchip Technology	46,293	United States	2018
● Micron Technology Inc.	98,675	United States	2018
● Microsoft Corp.	2,482,063	United States	2016
○ Motorola Solutions Inc.	42,761	United States	2020
● Murata Manufacturing Co., Ltd.	47,110	Japan	2016
○ NAURA Technology Group Co., Ltd.	31,839	China	2022
○ Nintendo Co. Ltd.	51,644	Japan	2018
○ Nokia Oyj	31,270	Finland	2018
● NVIDIA Corp.	816,900	United States	2018
● NXP Semiconductors NV	59,399	Netherlands	2018
● Panasonic Corporation	25,476	Japan	2020
● QUALCOMM, Inc.	202,227	United States	2016
○ Renesas Electronics Corp.	24,570	Japan	2020
● Samsung Electronics Co., Ltd.	401,477	South Korea	2016
○ Seagate Technology PLC	22,858	Ireland	2022
○ Semiconductor Manufacturing International Corp	32,867	China	2022
● SK Hynix Inc.	65,808	South Korea	2016
○ Skyworks Solutions Inc	25,083	United States	2018
● Sony Group Corp.	150,654	Japan	2020
● STMicroelectronics NV	44,151	Switzerland	2020
○ Sunny Optical Technology (Group) Co., Ltd.	33,158	China	2022
ⓘ Taiwan Semiconductor Manufacturing Co., Ltd.	556,406	Taiwan	2016
○ TE Connectivity Ltd.	50,229	Switzerland	2018
● Telefonaktiebolaget LM Ericsson	33,534	Sweden	2016
● Texas Instruments Incorporated	177,659	United States	2016
● Tokyo Electron Ltd.	81,784	Japan	2018
● Walmart Inc.	392,146	United States	2020
● Western Digital Corp.	18,024	United States	2018
○ Xiaomi Corp.	61,751	China	2020
○ ZTE Corporation	21,131	China	2020



APPENDIX 2: BENCHMARK METHODOLOGY

→ [View benchmark methodology](#)

KnowTheChain assesses companies' English language publicly disclosed efforts to address forced labour risks in upstream supply chains. The KnowTheChain methodology is based on the UN Guiding Principles on Business and Human Rights and covers policy commitments, due diligence, and remedy. The methodology uses the ILO core labour standards (which cover the human rights that the ILO has declared to be fundamental rights at work: freedom of association and collective bargaining, and the elimination of forced labour, child labour, and discrimination) as a baseline standard. The methodology has been developed through consultation with a wide range of stakeholders and a review of other benchmarks, frameworks, and guidelines such as the OECD Due Diligence Guidance on Responsible Business Conduct.

KnowTheChain reviews and, where relevant, updates its methodology ahead of every benchmark to integrate emerging good practices, align with relevant frameworks and benchmarks, and respond to the dynamic nature of human rights and labour abuses. Further, KnowTheChain aims to decrease companies' reporting burdens and increase the objectivity of the benchmark by integrating third-party information in addition to corporate disclosure. Research was conducted through July 2022 or through September 2022, where companies provided additional disclosure or links.

Engagement with benchmarked companies

KnowTheChain contacted all the benchmarked companies in April 2022, inviting them to join introductory webinars. Where needed, KnowTheChain followed up via phone and in local languages to ensure the companies had received the communication. The majority of the companies (90%, or 54 out of 60) confirmed a contact person for communication to KnowTheChain. Benchmarking companies were given the opportunity to review the initial research findings and disclose additional information over two months (July to September 2022). In addition to English language information on each company's website, KnowTheChain evaluated additional public disclosure provided by half (50%) of the companies. Another 8% of the companies sent links to existing or newly added disclosure on their websites. Further, membership in initiatives that address forced labour and include requirements for companies to address forced labour risks were given some credit in the benchmark (where the company disclosed membership).

Forced labour allegations

KnowTheChain undertook comprehensive desktop research for allegations of forced labour within the companies' supply chains. KnowTheChain included only those allegations that met the minimum threshold of the Corporate Human Rights Benchmark and multiple forced labour indicators of the ILO.

KnowTheChain operates on the assumption forced labour likely exists in all large global supply chains. Therefore, a high score in the benchmark indicates that a company disclosed strong efforts to address the forced labour risks in its supply chains; it does not mean a company has "slavery-free" supply chains. The benchmark should not be seen as reflective of all labour rights issues occurring within ICT supply chains, and it should be read alongside other information on the sector, such as allegations regarding labour and other human rights issues collected by the Business & Human Rights Resource Centre.

Scoring

Each company received a benchmark score, ranging from zero to 100. All indicators are weighted equally, with the exception of the Remedy indicator, which is weighted slightly higher than the other 11 indicators at 10%, as opposed to 8.18%.

Indicator elements are weighted differently depending on whether they focus on a policy, implementation of a policy or process, or outcomes for workers. All indicator elements will be scored out of 100. You can find more information on the weighting of indicators and indicator elements on our website here. In all cases, a company may receive partial points toward an indicator element.

Non-scored information

Where relevant, the benchmarks also assessed whether companies have available a disclosure under the California Transparency in Supply Chains Act, the UK Modern Slavery Act, and/or the Australian Modern Slavery Act. This information is provided on a company's scorecard but is not included in a company's benchmark score. In addition, KnowTheChain assessed corporate disclosure (and in limited instances, third-party disclosure relating to the company's products) to determine which high-risk commodities are sourced by the companies and from which high-risk locations they are sourced.



ENDNOTES

- 1 For more information on what is captured by the KnowTheChain benchmark, refer to [Appendix 2: Benchmark methodology](#).
- 2 Individual company scorecards can be consulted here for detail on improvements made by companies.
- 3 For more information on the conditions experienced by workers during the Covid-19 pandemic, see Business & Human Rights Resource Centre, [“Impacts of Covid-19 on supply chain workers in the electronics sector.”](#) For example, migrant workers experienced [prolonged restrictions](#) on their freedom of movement, and [slept inside their workplace](#).
- 4 For more information see Electronics Watch, [“Covid-19 updates from workers and monitoring partners.”](#)
- 5 There are 53 companies in the 2022 benchmark that were also assessed in the 2020 benchmark.
- 6 Indicators 3.1(1), 3.1(3), 3.2, and 3.3 of the 2020/21 benchmark methodology are no longer assessed in the updated methodology.
- 7 These companies may be more accustomed to stakeholder expectations regarding human rights, as they include some of the bigger consumer-facing names. In addition, as companies selected in 2016 were the first 20 companies to be selected, they would have represented the largest companies in the sector at the time.
- 8 See [Introduction](#) for more information.
- 9 Transparency Pledge, [“Why disclose.”](#)
- 10 In the apparel and footwear sector, for example, [49% of companies disclose first-tier supplier lists](#). In addition, transparency appears to have reduced in some cases: for example, Apple’s supplier list previously included the addresses of first-tier supplier facilities, but now only includes supplier names.
- 11 For more information, see Transparency Pledge, [“Why disclose,”](#) accessed 7 October 2022. It is also important that transparency is worker-driven, meaning that it is driven by “the rights and needs of workers to improve their working conditions and living standards” and enables workers to address the problems they face in their workplaces. Electronics Watch (2018), [“Electronics Watch Policy Brief #1: Worker-Driven Transparency,”](#) p. 2.
- 12 Equal Times (22 December 2017), [“The gender gap in electronics factories: women exposed to chemicals and lower pay,”](#) accessed 7 October 2022. Institute for Human Rights and Business (July 2019), [“Breakout Groups Summary: Global Forum for Responsible Recruitment – Bangkok, July 2019,”](#) p. 3.
- 13 Ring-fencing labour costs in effect separates labour costs from price negotiations, such that workers’ wages are not negatively impacted.
- 14 Ring-fencing labour costs in effect separates labour costs from price negotiations, such that workers’ wages are not negatively impacted.
- 15 As a general matter, shared-responsibility contracting is designed to improve the buyer-supplier relationship. It encourages cooperation and clearer, more transparent and responsive communication between the parties, so that, should needs change or issues arise, the parties can work on addressing them together to minimise the risk of adverse human rights impacts.
- 16 To achieve access to remedy, the UN Guiding Principles on Business and Human Rights make clear that workers must have access to effective grievance mechanisms (i.e., mechanisms that are legitimate, accessible, predictable, equitable, transparent, rights compatible, a source of continuous learning, and based on engagement and dialogue with stakeholder groups). See Worker Voice: Freedom of Association and Grievance Mechanisms chapter.
- 17 Auditors were [invited to respond](#) to questions on their approach in 2021.
- 18 See also [Purchasing practices](#).
- 19 Worker-driven monitoring (i.e. monitoring undertaken by independent organisations that includes worker participation and is guided by workers’ rights and priorities) can be undertaken by independent organisations, such as local worker-led organisations, unions, or civil society partners. As they are on the ground year round and trusted by workers, these organisations can conduct in-depth investigations and worker interviews, and understand local conditions.
- 20 KnowTheChain assesses engagement levels in the same way as the Corporate Human Rights Benchmark: “Formal” engagement (“yes”) means a company participated in the research process by having an engagement call with KnowTheChain or submitted links or additional disclosure to KnowTheChain during the two-month engagement period (July–September 2022). “Informal” engagement means a company had some form of contact with KnowTheChain in the lead up to the engagement period. This could include an email enquiring about KnowTheChain or its benchmarking methodology or a call outside the engagement period. “No” or “Non-engaged” (“no”) means a company hasn’t interacted with KnowTheChain at all within the benchmark cycle.

ABOUT KNOWTHECHAIN

KnowTheChain – a programme of the Business & Human Rights Resource Centre – is a resource for business and investors to identify and address forced labour and labour rights abuses within their supply chains. It benchmarks current corporate practices, develops insights, and provides practical resources with the aim of informing investor decision-making and changing corporate approaches to the identification, prevention and remedy of forced labour conditions.

Humanity United is a foundation dedicated to bringing new approaches to global problems that have long been considered intractable. It builds, leads, and supports efforts to change the systems that contribute to problems like human trafficking, mass atrocities, and violent conflict. Humanity United is part of The Omidyar Group, a diverse collection of organisations, each guided by its own approach, but united by a common desire to catalyse social impact.

Sustainalytics is a leading independent ESG and corporate governance research, ratings, and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies. Sustainalytics works with hundreds of the world's leading asset managers and pension funds that incorporate ESG and corporate governance information and assessments into their investment processes. The firm also works with hundreds of companies and their financial intermediaries to help them consider sustainability in policies, practices, and capital projects.