Technology on Trial

Do the world's leading technology companies have a governance problem?

A CQI Insight Report

Foreword

Welcome to our first CQI Insight Report. In this report our intention is to provide new understanding of the performance of organisations, both individually and by sector. We look beyond a single corporate misdemeanour, so we can analyse performance over a longer period of time, look beyond short-term financial performance and question the health of the essential compact between commercial organisations and society.

Our purpose in researching and publishing is not to castigate or throw brickbats for the sake of it. Rather, we want to throw light on problem areas and encourage organisations to improve both their corporate and, crucially, their operational governance.

I have great sympathy for the circumstances in which many companies find themselves. Globalisation, diverse company structures - such as JVs - and extended supply chains have created oversight issues that we are only beginning to grasp and solve. Similarly, societal changes are having an impact on organisations; what was acceptable a decade ago is now regarded as being 'beyond the pale'. Organisations must recognise, respond and adapt to their changing environments.

A Volkswagen emissions scandal; a Facebook data breach or newspaper headlines about horse meat entering the human food chain, should be the point at which leadership teams ask themselves some difficult questions, re-evaluate the values of their organisation and determine how these values inform their decision-making process. More so than ever before, businesses need to consider the long-term operational impact on their customers, their staff, their supply chain and wider society - not just their short-term returns for shareholders.

But, there is more to our research and decision to publish these analyses than simply holding a candle up to corporate misdemeanours. Sustained success requires a deep understanding of all stakeholder needs and an ability to translate those needs into operational practices. It also requires a data-driven way of reviewing performance, organisational 'change-muscles' that can be applied if things need to be improved and an executive and board who recognise that they own the stewardship of the systems that support success. It is their job to put these systems in place and to monitor them.

Our belief is that quality management lies at the heart of success and quality management systems always underpin the consistency and trustworthiness that ensure sustained success. These systems continue to shape the world we live in and the CQI provides society with the professionals who know how to design, implement and maintain these systems. Every time you identify an organisation that acts as a good neighbour you will find the skills of quality professionals in the thick of it.

I am indebted to the work of our strategic partner, RepRisk, for the data that has gone into this report. I hope you find it insightful and that it sparks robust discussion, in the boardroom and outside.

Vince Desmond, CEO, Chartered Quality Institute

Executive Summary

- The average tech company RepRisk Index (RRI) score is 39/100, a full 14 points above the recommended medium risk RRI threshold.
- The highest tech company RRI scores are Amazon and Facebook with 64
- A random sample of 20,000 companies recorded an average RRI of 20, a full five points below the recommended medium risk RRI threshold.
- Research highlights disturbing levels of allegations of child labour, forced labour and chronic human rights abuses
- Facebook (102), Google (67) and Apple (54) all faced in excess of 50 human rights allegations in an 18-month period
- Of the tech companies researched only SAP faced no allegations of child labour, forced labour or human rights violations
- Amazon (42), Apple (47) and Samsung (45) all faced more than 40 allegations of employment or occupational health violations
- Samsung faced 137 separate allegations of corruption and fraud in 18 months
- Three organisations - Google (150), Apple (136) and Samsung (166) - faced in excess of 100 alleged violations of national regulations
- Facebook faced 23 allegations of privacy violations
- Amazon faced 145 allegations of supply chain related issues in 18 months

Motivation and Methodology

The Top 14 Global Tech Companies by Turnover:

Company
01. Apple Inc
02. Samsung Group
03. Amazon.com Inc
04. Foxconn
05. Alphabet Inc.*
06. Huawei
07. Microsoft
08. Hitachi
09. IBM
10. Dell Technologies
11. Sony
12. Panasonic
13. Intel
14. Cisco Systems

Other Household Tech Companies:

Company
15. Facebook Inc
16.Google Inc*
17.WhatsApp Inc
18.Twitter Inc
19.Altaba Inc (formerly Yahoo!)
20.YouTube LLC
21.SAP SE
22.LinkedIn Corp
23.Nokia
24.HP Inc

In October 2017 the CQI and IoD released The Good Governance Report on the status of governance among the FTSE 100. We measured many factors, from the regularity of meetings for the audit and remuneration committee through to their policies on whistle-blowers.

We then ranked the FTSE members according to their performance against these metrics from the top performing, at number one to the bottom performer at number 100.

We tried to find linkages between the companies at different performance levels and wondered if sectoral analysis might provide some insight. It did, and, despite the small sample size for any sector, there was clear evidence that energy companies were performing well against many governance factors, but also a hint that technology was performing badly. With a small sample it was hard to draw any firm conclusions - but a seed had been planted in our minds.

Then the Facebook / Cambridge Analytica data breach scandal hit the mainstream press in March 2018. For us this was further indication that our hunch was correct and that many technology companies had insufficient corporate governance structures in place.

With the help of our partner, RepRisk we dug further. RepRisk is a leading environmental, social, and governance (ESG) data science company, specialising in ESG and business conduct risk. RepRisk believes it is important to look at performance, not just policies, and therefore captures and analyses information from media, stakeholders, and other public sources external to a company. If there is a small chemical leak reported in a local newspaper in South America perpetrated by a Tier 2 supplier to a Fortune 500, they'll find it.

On a daily basis RepRisk combines artificial intelligence with a highly-trained analyst team to curate this information, and then quantifies a company's exposure to ESG risk through its proprietary algorithm, the RepRisk Index (RRI)**. We asked for data on the world's 14-largest tech companies by turnover, from Apple and Amazon, through to IBM, Sony and Cisco. In June 2018 we asked for additional data on a number of other high-profile tech companies outside the top 14, including Facebook, Google, YouTube and LinkedIn. Finally, we compared their performance with that of a random selection of 20,000 organisations across all sectors and countries, taken from RepRisk's ESG Risk Platform. The charts have been compiled using data from January 2017 to June 2018, equating to circa 18 months of information at the time of writing.

Estelle Clark, Director of Policy, Chartered Quality Institute

"The Facebook / Cambridge Analytica data breach scandal hit the mainstream press in March 2018. For us this was further indication that our hunch was correct and that many technology companies had insufficient corporate governance structures in place."

* Alphabet Inc is the holding company of Google Inc. For the purpose of this report the two companies have been treated as separate entities

** RepRisk Index (RRI): A quantitative measure (0 to 100) of a company's reputational risk exposure related to ESG issues.

The Top 14 Global Tech Companies by Turnover:

Company	RRI as at June 2018
01. Apple Inc	56
02. Samsung Group	55
03. Amazon.com Inc	64
04. Hon Hai Precision Technology co Ltd. (Foxconn)	25
05. Alphabet Inc.	43
06. Huawei Technologies Co Ltd.	51
07. Microsoft Corp.	43
08. Hitachi Ltd.	25
09. IBM Corp	47
10. Dell Inc.	23
11. Sony Corp	23
12. Panasonic Corp	32
13. Intel Corp	25
14. Cisco	17

Other Household Tech Companies:

Company	RRI as at June 2018
15. Facebook Inc	64
16. Google Inc	61
17. WhatsApp Inc	39
18. Twitter Inc	36
19. Altaba Inc (formerly Yahoo!)	31
20. YouTube LLC	25
21. SAP SE	23
22. LinkedIn Corp	23
23. Nokia	20
24. HP Inc	36

The Rep Risk Index (RRI) measures a company's exposure to ESG and business conduct risks. It runs from 0-100 with companies scoring above 25 being regarded as having medium risk exposure, and those scoring above 50 as having high risk exposure.

The RRI considers three separate factors:

1) The influence or credibility of the news source
2) The severity of the incident
3) The novelty of the incident i.e. whether it is a repeat offence

It is clear from Table: 1 that the average RRI for the Top 14 global tech sector companies is 39, a full 14 points above the medium risk RRI threshold. The highest is Amazon with a score of 64, a full 14 points above the high risk RRI threshold of 50.

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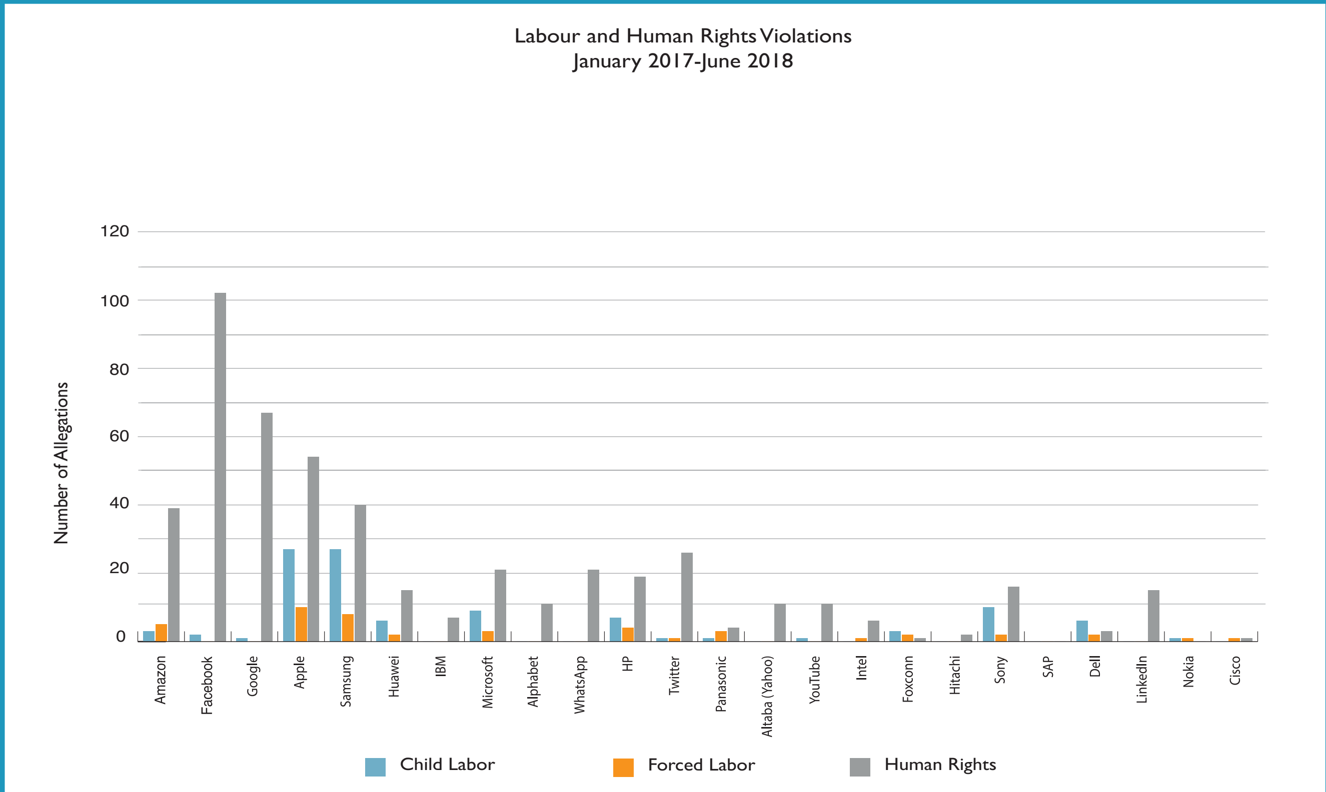
The best performing of the tech companies are Dell, Sony (23) and, most of all, Cisco with an RRI score of 17.

The story is equally concerning amongst the other household tech companies who record an average RRI of 35.8 - more than 10 points above the medium-risk RRI threshold.

In comparison, a random sample of 20,000 companies including, financial institutions and banks worldwide, recorded an average RRI of 20, well within the low risk exposure range of RRI 0-24.

"The average RRI for tech sector companies is 39, a full 14 points above the medium risk RRI threshold."

Section 2: Labour and Human Rights Violations



We then began to look at specific violations allegedly committed by the tech companies. High on our list for investigation were allegations of labour and human rights violations, specifically use of child labour, forced labour and human rights abuses with corporate complicity.

Of our Top 14, the greatest number of child labour allegations belonged to Apple (27) and Samsung (27), followed some way behind by Sony (10). Of those outside our Top 14, the worst performer was HP with seven separate allegations.

Both Apple (10) and Samsung (8) also recorded the highest number of allegations of forced labour violations. Again, of those companies outside the Top 14, HP was the worst offender with four separate allegations.

However, it is in the area of human rights abuses that the greatest number of allegations occur. Facebook (102),

Google (67) and Apple (54) all recorded in excess of 50 allegations in an 18-month period. Another five companies faced in excess of 20 allegations of violations of human rights during the same period. For example, the National Center on Sexual Exploitation in February 2018, alleged that Apple has promoted or profited from sexual exploitation through the sale of literature that normalises exploitative sexual practices.

It is important to note that a number of companies clearly have strong corporate governance structures in the areas of child labour and forced labour. IBM, Altaba, Hitachi and LinkedIn recorded no allegations, but performed less well in terms of human rights abuses. IBM, for example, faced seven allegations about human rights abuses during the period under investigation and Altaba faced 11. Only SAP faced no allegations of child labour, forced labour or human rights violations during the period.

Case Study: Amazon

Sector: *Retail*
Country: *United States of America*
Turnover: *$177.87 bn*
Number of employees (global): *566,000*
RRI as at June 2018: *64*

Amazon.com Inc. had an RRI of 64 as at June 2018, making it the highest-scoring company on our Index. When investigating allegations of labour and human rights violations, Amazon demonstrably performs poorly; the company appears to have failed to adequately police its supply-chain, often violating its own Supplier Code of Conduct.

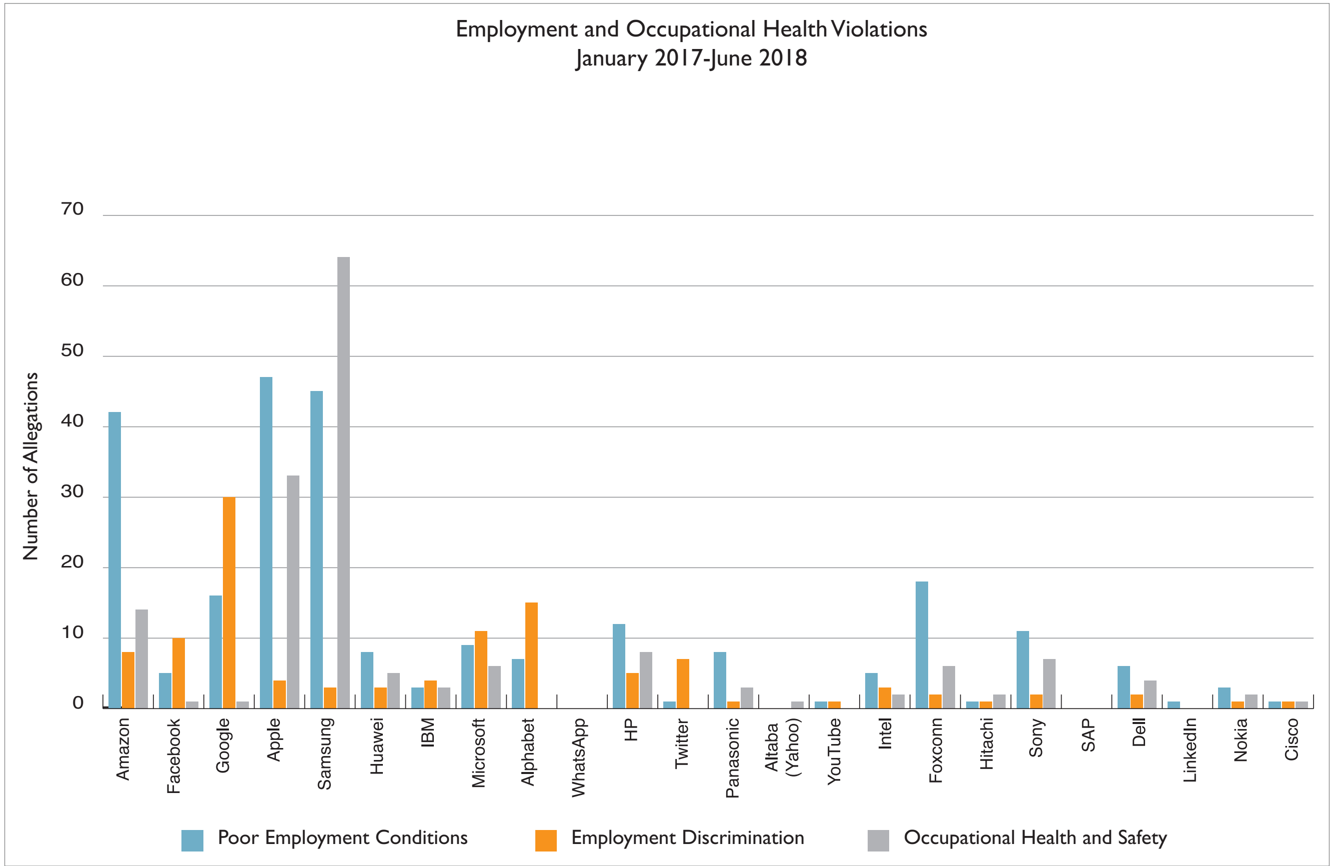
Specifically, Amazon has been linked three times to child labour in the last 18 months. In June 2018 an investigation into Amazon's US-based supply-chain unearthed cases of minors working to fulfil orders for Amazon suppliers, with violence being used against children as young as nine to force them to work in manufacturing facilities.

In April 2018, the National Council for Occupational Safety and Health included Amazon's warehouses in their list of the most dangerous workplaces in the United States. Allegedly employees have been denied pay and compensation for injuries that occurred in the workplace. Further, Amazon has faced allegations that it has fired employees before they could claim compensation for workplace injuries. Workers have alleged that they were forced to quit their roles after succumbing to exhaustion and fatigue, caused by the warehouse environments. Fulfilment centres in Haslet, Texas and San Bernardino, California are allegedly involved in some of the aforementioned cases.

Forced labour may also be a serious problem within the Amazon supply-chain with five separate cases recorded between January 2017 and the time of writing. In June 2018 a factory in Hengyang, China was alleged to have committed several violations, including forcing employees to work 100 hours of underpaid overtime (64 hours over the 36-hour monthly limit), in order to fulfil Amazon order quotas. Further cases have been observed in Sacramento, USA, with workers allegedly forced to work uninterrupted hours, having been denied rest breaks by the management of the fulfilment centre. The facility, which employs 1500 people, reportedly refused to grant federally-mandated rest-breaks during the 2017 pre-Christmas packaging period.

Human rights violations (39 allegations since January 2017) have reportedly occurred within Amazon's own primary distribution centres. A December 2016 investigation unearthed dehumanising labour conditions and abuses within the Gourock Amazon Fulfilment Centre in Scotland in the United Kingdom. Workers were allegedly forced to work compulsory extra shifts, with some employees compelled to work for up to 11 hours on some days. Bathroom breaks that were considered to be excessively long were reportedly met with disciplinary action. [1]

[1] RepRisk Company Report, Amazon.com Inc, June 20 2018.



We knew that employment issues were likely to be of major concern with the tech companies, not least because of the high-profile violations that have been recorded in regard to Amazon and Uber, to take just two examples, in recent years.

Our investigation suggests that there is deep cause for concern.

We first looked at employment conditions and found that three companies in the Top 14 had faced in excess of 40 allegations about Occupational Health and Safety in the 18-month period under investigation, namely Amazon (42), Apple (47) and Samsung (45). A further two companies, Foxconn (18) and Sony (11) faced more than 10 alleged violations. Outside the Top 14, Facebook (5), Google (16) and HP (12), racked up the largest number of allegations.

We then looked at employment discrimination, an area which includes race, sex and gender discrimination. By far the worst performing company, in both lists, is Google, with 30 allegations in an 18-month period. Of the Top 14, the worst performing company was Alphabet with 15 allegations, closely followed by Microsoft with 11. Outside the Top 14, both Facebook (10) and Twitter (7) accounted for the largest number of allegations.

Finally, we drew data on occupational health and safety issues. By far the worst performing organisation across both lists was Samsung with 64 allegations in an 18-month period, nearly double the next poor performing company, Apple, with 33 allegations. Outside the Top 14, HP Inc. was the worst performer with eight allegations.

Case Study: Google

Sector: *Software and Computer Services*

Country: *United States of America*

Turnover: *$109.65 bn*

Number of employees (global): *85,050*

RRI as at June 2018: *61*

Google Inc. had an RRI as at June 2018 of 61, the third-worst performing tech company on our Index and the company's practices have exposed employees to serious occupational health issues.

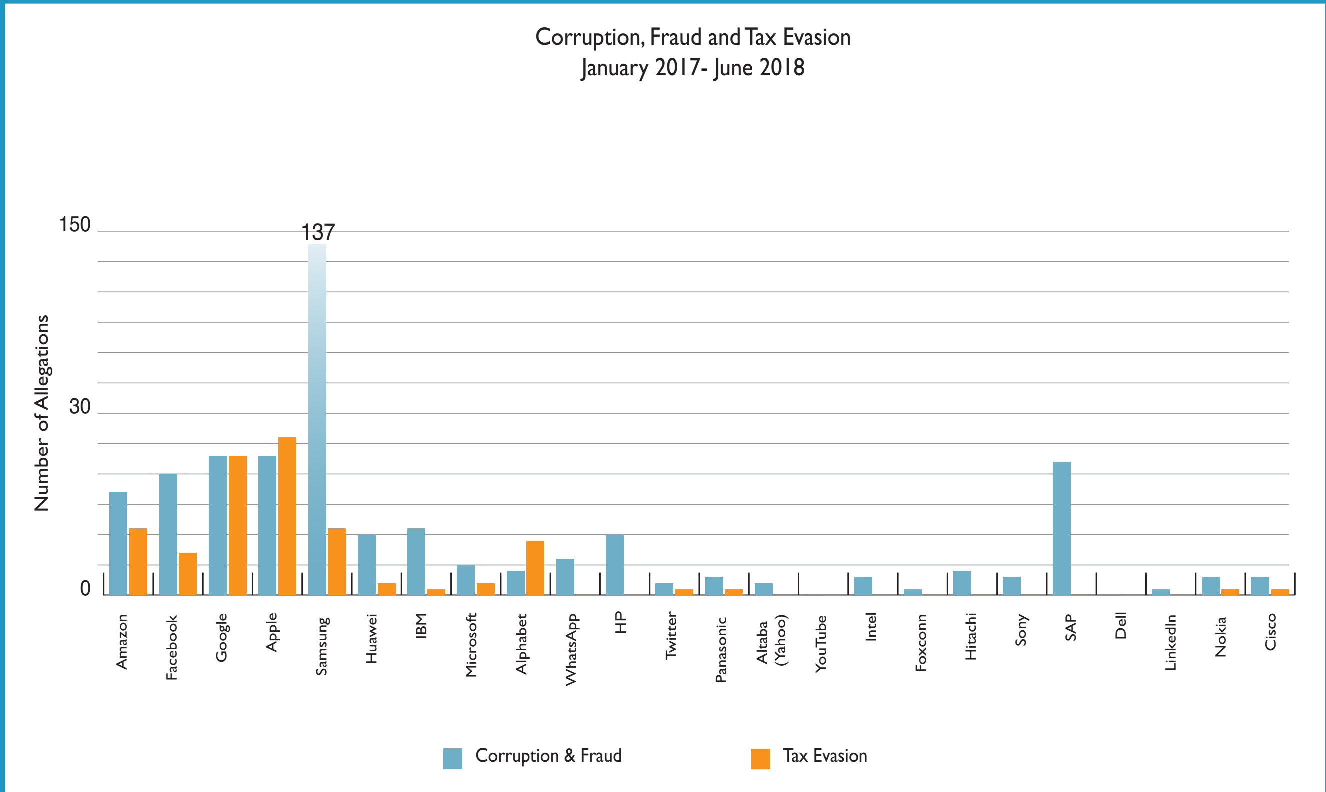
For instance, in 2013, 1000 employees at Google's Mountain View headquarters in California were reportedly exposed to excessive levels of the hazardous solvent, trichloroethylene (TCE) following the disabling of a core component of the sites ventilation system. This prevented fresh air from being pumped into the building, allowing toxic vapours to collect. TCE is known to cause varying types of cancer and to produce birth-defects in the children of expectant mothers. Google has confirmed the exposure but has not stated how many employees were exposed.

Poor working conditions have been evidenced as being of serious concern, with 16 cases reported. A further 30 allegations of discrimination have also been documented. Employees at Google's Mountain View headquarters have alleged that the work environment has left them feeling unsafe due to a lack of diversity in executive leadership positions. Indeed, only 31% of employees are women while black and ethnic minorities make up just 10% of the workforce. In 2016, of the 31 top executives within Google, only four were women - contributing to the discriminatory and exclusive work environment.

The number of allegations made against Google suggests that their attempts to encourage diversity may have actually fuelled the discriminatory environment. In 2017 it was alleged that Google cancelled interviews with white candidates and men in an attempt to meet company-mandated diversity quotas. A lawsuit filed in the same year alleged that one employee was fired after having complained about the process violating federal anti-discrimination law, particularly Title VII, which states that employers cannot make hiring decisions based on race and gender. [2]

[2]RepRisk Company Report, Google Inc, June 20 2018.

Section 4: Corruption, Fraud and Tax Evasion



The issues of corruption, fraud and tax evasion lie at the heart of concerns over the actions of multi-national companies.

For the period under investigation, by far the most number of allegations of corruption and fraud were recorded against Samsung with a total of 137.

Another four companies, Facebook (20), Google (23), Apple (23) and SAP (22) all faced in excess of 20, with 10 allegations being made against HP.

The problems of SAP are interesting, in that the company has an exemplary record in areas such as human rights, use of child or forced labour and international standards. However, SAP's record in areas such as corruption, fraud and tax evasion is of concern.

SAP is currently under investigation by the US Dept. of Justice and the Securities and Exchange Commission for contracts that potentially violate the Foreign Corrupt Practices Act. An investigation in 2017 uncovered SAP's involvement in the arranging of kickbacks to a fixer who helped close business deals in South Africa and in the paying of bribes to CAD House, a company owned by the Indian-born Gupta family, who are suspected of corruption involving the former South African President, Jacob Zuma. [3]

We also looked at the issue of tax evasion and again found that some of the biggest and most high-profile players in the sector have questions to answer. Both Google (23) and Apple (26) have the highest number of allegations, followed by Amazon (11) and Samsung (11).

[3]RepRisk Company Report, SAP SE, June 20 2018.

Case Study: Samsung

Sector: ***Electronic and Electrical Equipment***
Country: ***South Korea***
Turnover: ***$56 bn***
Number of employees (global): ***320,671***
RRI as at June 2018: ***55***

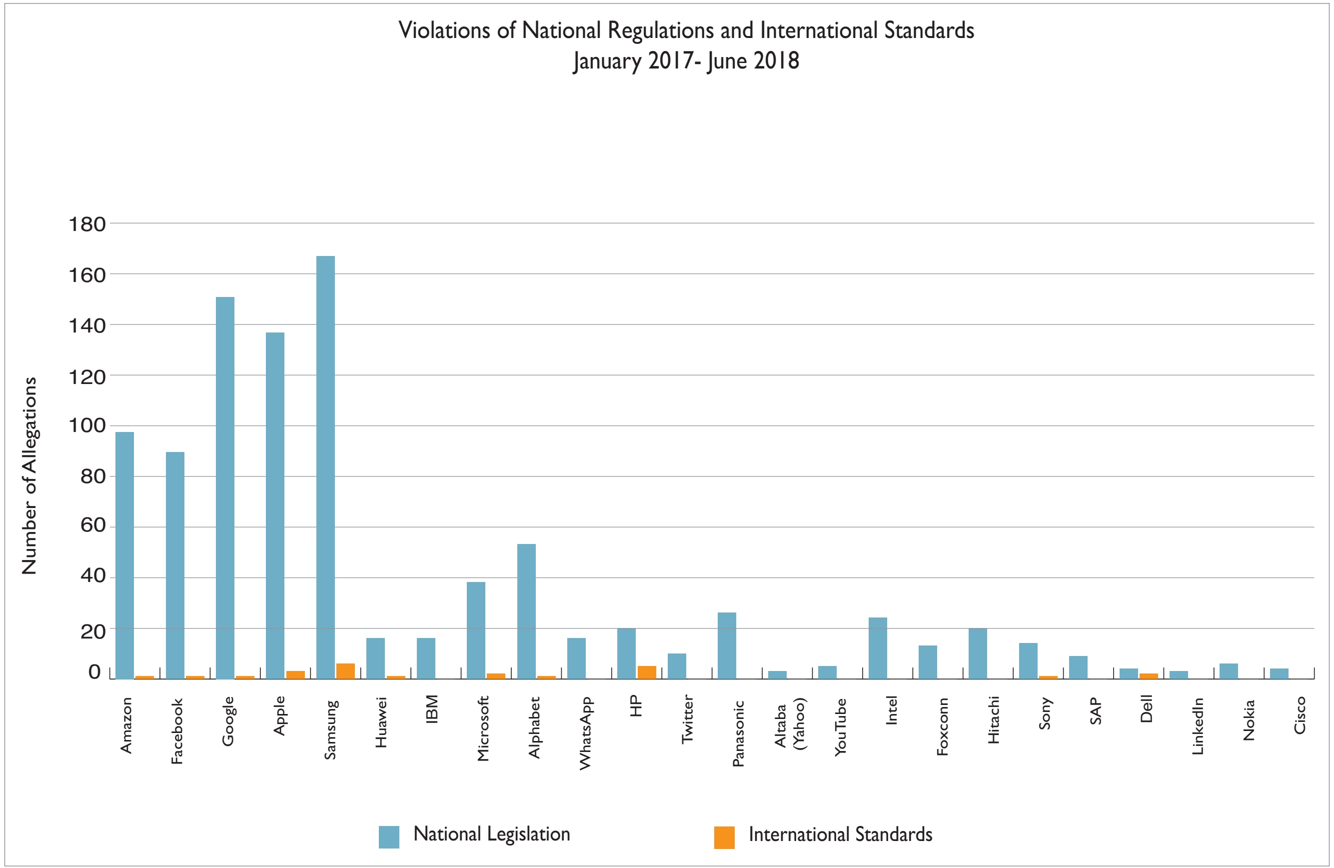
Samsung Group had an RRI of 55 as at June 2018, with 137 allegations of corruption and fraud involving both Samsung executives and politicians being recorded since January 2017. For instance, in 2017 the Samsung heir Lee Jae-yong was sentenced to five years in prison for donating USD 38 million to entities with links to former South Korean president Park Geun-hye in return for political favours. One such favour included support for a restructuring of Samsung in order to further empower Mr Lee. In February 2018, an appeals court in South Korea reduced Mr Lee's prison term by two-and-a-half-years, and then suspended it.

In the same trial, Choi Gee-sung and Chang Choong-ki, two former Samsung executives, were convicted of corruption. As the former Samsung Electronics president, Park Sang-jin was given a suspended sentence for his role in corrupt practices.

Samsung's corruption has been further linked to former South Korean president Lee Myung-bak who allegedly received a KRW 6.7 billion bribe to cover the legal fees of Das Corps (an auto parts manufacturer with ties to the former president) in exchange for a presidential pardon of the Samsung chairman Lee Kun-hee, in 2009.

Tax evasion is a significant challenge for Samsung, with 11 allegations (the third highest instance). In 2017 the South Korean National Tax Service uncovered 1000 bank accounts allegedly used for the transfer of wealth by Samsung's chairman Lee Kun-hee. It is reported that KRW 4.5 trillion was withdrawn using borrowed names to avoid paying due taxes. The investigation is not the first to implicate Mr Lee, with the Financial Supervisory Services sanctioning the chairman in 2008 for violations of real name verification in financial transactions. [4]

[4] RepRisk Company Report, Samsung Group, June 20 2018.



The willingness to adhere to national regulations and international standards is central to an organisation's impact on society.

Some of the most troubling data refers to alleged violations of national legislation, with three organisations namely Google (150), Apple (136) and Samsung (166) each facing in excess of 100 allegations during the defined period.

Another three, Amazon (97), Facebook (89) and Alphabet (53) faced more than 50 allegations. No single tech company failed to face an allegation of violating national legislation in the 18-month period under review.

Examples of alleged violations include, in 2018, Samsung coming under investigation in China for alleged anti-competitive practices to boost chip prices. [5]

In March 2018, French authorities were reportedly considering fining Apple for "abusive commercial practices" in France, to the detriment of start-ups. The French finance minister criticised the practice. [6]

Also, in 2018, Google was sued by non-profit organisation, European Center for Digital Rights, for allegedly forcing users to submit private data in exchange for online services in violation of the EU's General Data Protection Regulation (2018). [7]

Interestingly, violations of international standards are minuscule in comparison. All the companies investigated recorded single digit violations, apart from Samsung which faced six allegations.

[5]RepRisk Company Report, Samsung Group, June 20 2018.

[6]RepRisk Company Report, Apple Inc, June 20 2018.

[7]RepRisk Company Report, SAP SE, June 20 2018.

Case Study: Microsoft

Sector: ***Software and Computer Services***
Country: ***United States of America***
Turnover: ***$85.3 bn***
Number of employees (global): ***124,000***
RRI as at June 2018: ***43***

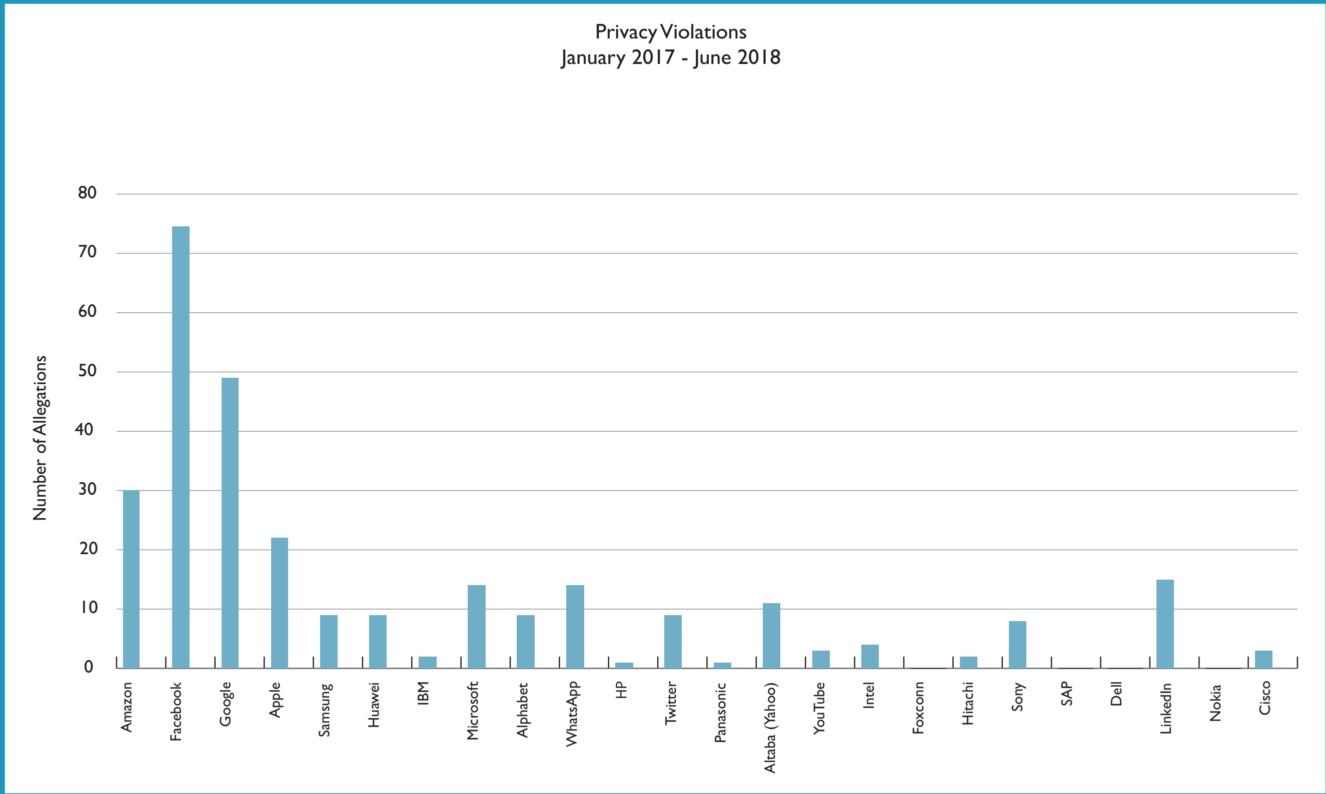
Microsoft Corporation had an RRI of 43 as at June 2018. For the period under scrutiny the company faced 38 allegations of violating national legislation, with a significant number of these breaches centred on violations of data protection laws. For example, in 2018, federal prosecutors in Brazil alleged that Microsoft's Windows 10 installation process ran contrary to local data collection laws. The process, it was alleged, provided users with little control over data processing with automatic approval for collection being given when the download process was initiated. This provided Microsoft with access to browsing history and the contents of user's emails, violating constitutional privacy protection laws.

The issue is not geographically confined. In 2017 the Dutch Data Protection Authority concluded that Microsoft's Windows 10 data collection breached local privacy laws. Four million active devices ran Windows 10 in the Netherlands, but Microsoft purportedly failed to inform users of how their data would be processed.

Microsoft is alleged to have failed to adhere to international standards in two cases, most notably by failing to police their supply chain and lacking in due diligence. This has been noted in the sourcing of cobalt from one company in the Democratic Republic of Congo. The cobalt sourced by Microsoft is associated with mines allegedly tied to child exploitation, in which children as young as seven are forced into the mines to work 12-hour days in conditions that can cause fatal respiratory illnesses. [8]

[8] RepRisk Company Report, Microsoft Corp, June 20 2018.

Section 6: Privacy Violations



For tech companies the issue of privacy is central and one which has garnered an enormous number of negative headlines in recent months, not least due to Facebook's latest problems.

The worst performing of our Top 14 companies were Amazon with 30 allegations and Apple with 22. Outside of our Top 14, poor performances were recorded by Facebook (73), Google (49), WhatsApp (14), Altaba (11) and LinkedIn (15).

Of all the companies investigated only four, Hon Hai Precision, SAP, Dell and Nokia faced no privacy allegations.

It is clear that privacy is an enormous issue across the entire sector.

In 2018, for example, Microsoft was criticised for alleged flaws in the encryption of its email applications which makes users' messages vulnerable to hackers. The company was also accused of privacy violations linked to an installation mechanism that collects user data in Brazil, again in 2018. [9]

Social media companies have been at the centre of privacy concerns. In 2017, Twitter and other app makers paid USD 5.3 million to settle class-action claims concerning the uploading of Apple device user's personal data without consent. [10]

Also, in 2017, WhatsApp was fined EUR 3 million by Italian authorities for illegally sharing data with Facebook without user consent, and the Federation of German Consumer Organisations has also filed a lawsuit against WhatsApp in Berlin's Regional Court, accusing the company of illegitimately collecting user data and passing it on. In this case, one billion WhatsApp users were likely affected. [11]

[9] RepRisk Company Report, Microsoft Corp, June 20 2018.

[10] RepRisk Company Report, Twitter Inc, June 20 2018.

[11] RepRisk Company Report, Whatsapp Inc, June 20 2018.

Case Study: LinkedIn

Sector: *Media*
Country: *United States of America*
Turnover: *$975 million*
Number of employees (global): *8,700*
RRI as at June 2018: *23*

LinkedIn had an RRI as at June 2018 of 23, making it one of the lowest scorers on the Index. However, the company faced 15 separate cases of privacy violations in the 18 months that our investigation spans, with the majority of cases centring on data breaches.

The company has been at the centre of data and privacy violations for many years. In 2012 LinkedIn experienced a major hack to its servers, compromising 117 million emails and passwords. In 2016 it was alleged that a Russian hacker had been selling data from this hack in exchange for virtual currencies.

Following the data breach, a lawsuit was filed by LinkedIn Premium users in California against the company. The suit purported that LinkedIn had violated its user agreement and privacy policy by failing to protect private user data by only utilising a weak cryptographic hash function with no further protections.

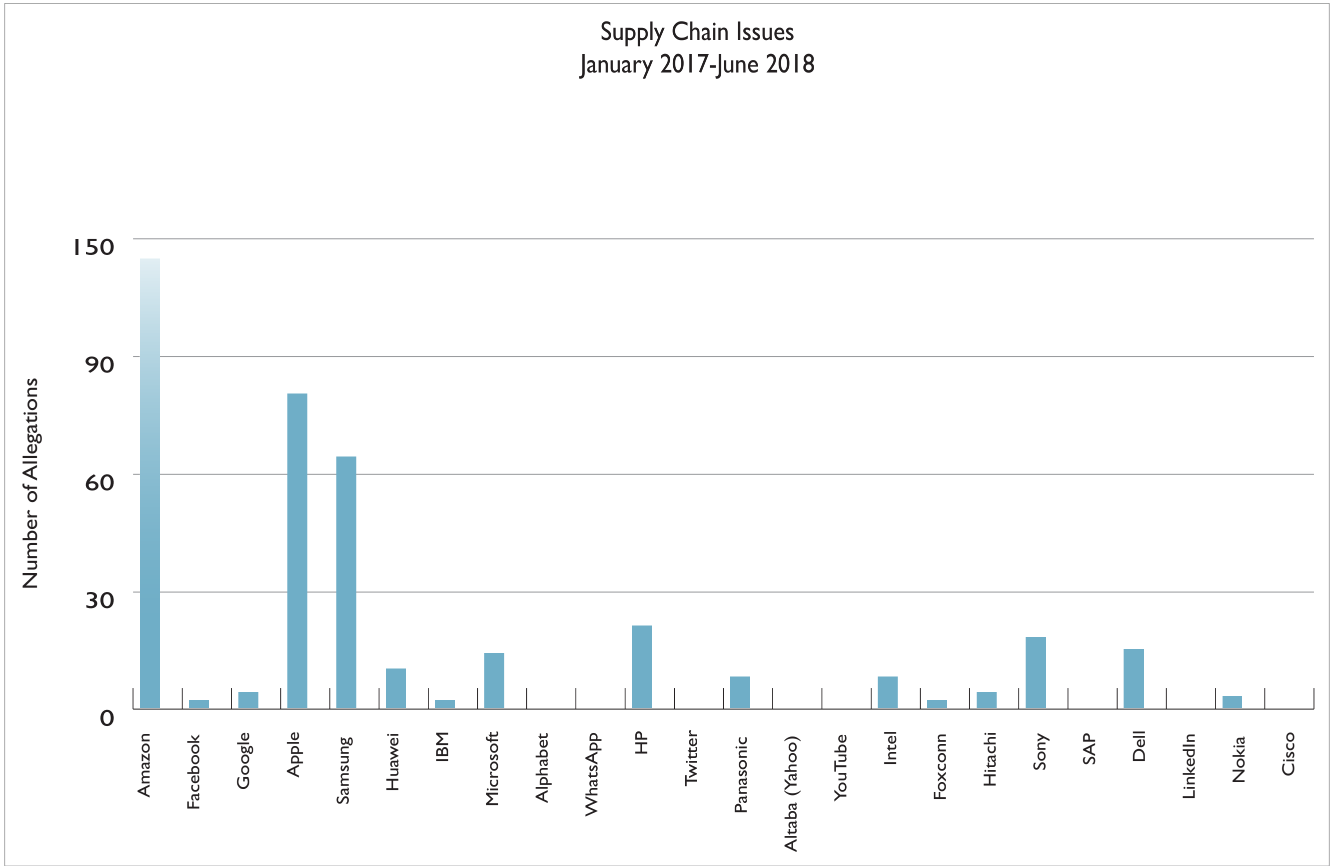
Within the period of our investigation, the LinkedIn app was removed from sale in the Russian Federation, from both the Google Play Store and the App Store, due to consumer data protection laws having been violated. Russian law requires user data to be stored on servers within their territory and not to be sent abroad for storage on foreign servers.

One of the most significant violations of user privacy came in the form of the potential exposure of the details of 9.5 million customers using Lynda.com, an online learning platform owned by LinkedIn. The site was forced to reset 55,000 passwords following the breach, which exposed customer names and email addresses.

In addition, an Amazon web server hosting data from LocalBlox was found to be exposed in 2018. Data included names, addresses, dates of birth and job history from LinkedIn. In total, 48 million detailed profiles were leaked, including many constructed from data 'scraped' from the social media channel. [12]

[12]RepRisk Company Report, LinkedIn Corp, June 20 2018.

Section 7: Supply Chain Issues



Extended supply chains are notoriously difficult to police for all organisations. With globalisation growing, so has global sourcing with companies now acquiring components and manufacturing capabilities across the world.

Of our Top 14 companies, once again Amazon fared the worst, with 145 supply chain allegations for the period being investigated. Similarly, Apple (80), Samsung (64) and Sony (18) scored badly.

For example, with Sony there is clear evidence that the company has failed to properly police its supply chain in the Democratic Republic of Congo where, in 2018, a cobalt and lithium mining company was found to have employed child labour.

In May 2017, 90 workers were hospitalised in China after allegedly being exposed to toxic gases in a factory that supplies the company. On January 4th 2018, results of samples taken from the factory's waste water revealed that the water exceeded levels of toxic chemicals stipulated by the government of Jiangsu.

In 2017 an NGO report stated that Sony were aware of the environmental challenges faced in a number of its suppliers' production facilities across the world, but had failed to take concrete, remedial steps to address the issue. [13]

Similarly, Apple has had consistent problems with its supply chain. A CNN Freedom Project Investigation has linked Apple to cobalt mining in the Democratic Republic of Congo and China Labor Watch has criticised the company and its suppliers for poor working conditions in the country. [14]

[13]RepRisk Company Report, Sony Corp, June 20 2018.

[14]RepRisk Company Report, Apple Inc, June 20 2018.

Case Study: Huawei Technologies

Sector: ***Telecommunications, Software and Computer Services***
Country: ***China***
Turnover: ***$92.5 billion***
Number of employees (global): ***180,000***
RRI as at June 2018: ***51***

Huawei Technologies Co. Ltd. had an RRI as at June 2018 of 51, making it the fifth worst performing company on the Index. The business suffers from significant challenges within its supply-chain with 10 allegations about supply chain issues in the last 18 months - leading to criticism that the group has failed to adequately police its suppliers.

In 2017, two Swiss NGO's published a report implicating Huawei in numerous supply-chain violations, including failing to guarantee worker safety in its supplier factories. This was observed in Shenzhen, China in a factory that supplies mobile phone screens to Huawei. The factory allegedly forced employees to work 140 extra hours per month, resulting in severe fatigue. Workers were further endangered through their exposure to toxic chemicals, such as potassium nitrite, and were at risk of corrosive injuries as a result of contact with glass powder.

The company has allegedly been linked to suppliers that utilise child labour in the extraction of minerals necessary for Huawei products. In the Democratic Republic of the Congo, 40,000 children, some as young as seven-years old, are forced to break rocks in mineral mines to provide resources that are utilised by the technology manufacturer. This has exposed the children to the fatal-risk of chronic disease. Huawei has, according to one international NGO, taken no action to remedy these supply-side issues.

The environmental risks associated with Huawei's supply-chain have been recorded by the two aforementioned Swiss NGO's. They allege that Huawei is the only technology company not to publish any data on greenhouse gas emissions within the supply-chain. The environmental risks are further compounded by one Chinese-based factory that supplies Huawei regularly releasing toxic effluents and hazardous waste into surrounding waterways.

Huawei's alleged refusal to acknowledge the repercussions of failing to adequately police its supply-chain has led to an increased number of recorded supply-side violations. [15]

[15] RepRisk Company Report, , Huawei Technologies, June 20 2018.

Conclusions

We expected the world's biggest tech companies to have governance issues. No organisation of their size, reach and complexity can operate without problems of oversight or allegations of one kind or another. However, we expected that any violations would centre around the issues that dogged the tech sector for some time, namely privacy and allegations of tax evasion.

Instead, we found a sector mired in alleged governance violations, more akin to the first industrial revolution, than companies at the vanguard of technological advancement in the 21st century. The products and services of the tech sector are fundamentally changing the way that everyone lives their lives and the way that society works – globally. There are many who are concerned about the speed of change and whether these changes will benefit society. If we find that we are unable to trust this sector with the fundamentals of being good corporate citizens, how on earth can we trust it to ensure that society leads technological change and not the other way around?

This is primarily a new sector; one that is wealthy, sets its own rules and is able to determine new ways of working. It should not operate as a sector that allows itself to be bound by practices of the past that were never acceptable. We should be expecting the tech sector to set new, higher, standards for governance rather than lagging way behind.

For two of the world's top phone manufacturers to have by far the highest number of allegations about child labour, forced labour, poor employment conditions and occupational health and safety is scandalous.

For Amazon, Google, Apple, Foxconn and Sony each to have multiple alleged counts of poor employment conditions documented against their name is potentially a failure of governance on an epic scale.

An apparent disregard for national regulations and allegations suggesting a cavalier attitude towards corruption, fraud and tax evasion speaks of organisations that regard themselves as being above the norms of corporate responsibility. And this is not just one company, this is an entire sector mired in governance issues and exposed here for the first time. Not individual allegations, but systemic failure.

The danger lies in reducing these allegations to mere statistics, because this approach ignores the human stories, the child labourer, the individuals pressed into forced labour and the appalling factory conditions, all documented in RepRisk's analysis of third party reports.

It is too easy, and not at all acceptable, for the boards of these companies to use their tired excuses. It isn't good enough for boards to say "we didn't know" when it is all documented.

So how can the tech sector move forward? Firstly, I have a strong sense that things are changing. When the CEO of BlackRock, Larry Fink, one of the world's leading investment management companies publishes an open letter telling the CEOs of companies he invests in that they need to make a positive contribution to society or risk losing his support, things are beginning to change.

The message is clear: the biggest companies must act as the standard bearers for corporate governance. Their boards must question their role within the communities they operate in and their impact on the environment.

Secondly, the tech sector needs to put in place the structures that can alert them to governance problems. That includes listening to whistle-blowers, developing early warning signals, reacting robustly to misbehaviour by their suppliers and ensuring that feedback loops are in place on all aspects of performance – including ethical ones. The quality profession can help with robust business assurance services which go beyond the consideration of financial risk to embrace risks concerned with an organisation's wider stakeholder community from the customer to supply chain employees and communities.

Thirdly, the sector needs to place a greater priority on quality management as a means to prevent failure. The tech sector primarily understands this in relation to products and services. But, quality applies to everything, every process, task, action and every decision. It is the way that choices made at the top get translated into understanding for the many. And, through this, is born the culture of an organisation. Again, the quality profession can help through the design of the management system which ensure that policy is lived and breathed through the day-to-day operation.

We need to believe that the tech sector will take note and not continue to behave as if they have the right to ignore our concerns. This sector and these organisations need more people who are willing to talk truth to power.

This report is a warning shot. Investors like Larry Fink are tightening the screw. It is now up to the tech sector to respond.

Estelle Clark, Director of Policy, Chartered Quality Institute

CQI | IRCA

"The danger lies in reducing these allegations to mere statistics, because this approach ignores the human stories, the child labourer, the individuals pressed into forced labour and the appalling factory conditions, all documented in RepRisk's reports. It is too easy, and not at all acceptable, for the boards of these companies to use their tired excuses. It isn't good enough for boards to say "we didn't know" when it is all documented."

Number of Reported Allegations January 2017 – June 2018
The Top 14 Global Tech Companies by Turnover:

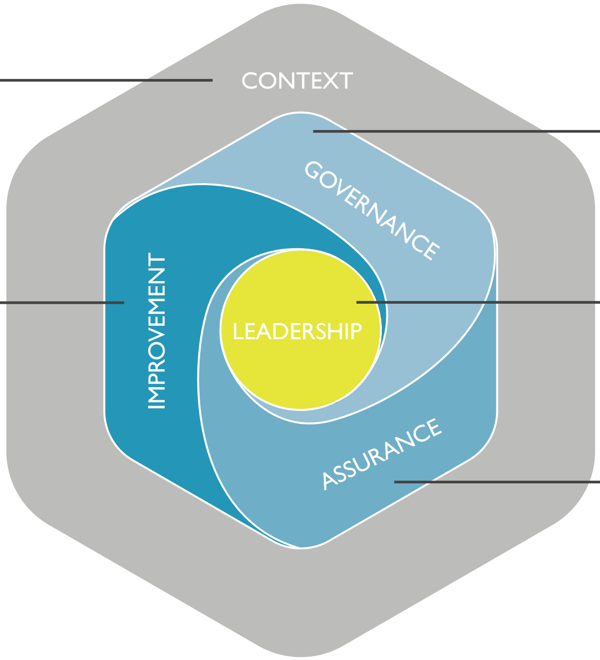
Company	RRI as at June 2018	Child labour	Forced labour	Human Rights Abuses	Employment Conditions	Discrimination	Health & safety	Corruption & Fraud	Violation of national legislation	Violation of international standards	Tax evasion	Privacy violations	Supply chain issues
01. Apple	56	27	10	54	47	4	33	23	136	3	26	22	80
02. Samsung	55	27	8	40	45	3	64	137	166	6	11	9	64
03. Amazon.com	64	3	5	39	42	8	14	17	97	1	11	30	145
04. Hon Hai Precision Industry Co Ltd (Foxconn)	25	3	2	1	18	2	6	1	13	0	0	0	2
05. Alphabet Inc	43	0	0	11	7	15	0	4	53	1	9	9	0
06. Huawei Technologies	51	6	2	15	8	3	5	10	16	1	2	9	10
07. Microsoft Corp	43	9	3	21	9	11	6	5	38	2	2	14	14
08. Hitachi Ltd	25	0	0	2	1	1	2	4	20	0	0	2	4
09. IBM	47	0	0	7	3	4	3	11	16	0	1	2	2
10. Dell	23	6	2	3	6	2	4	0	4	2	0	0	15
11. Sony	23	10	2	16	11	2	7	3	14	1	0	8	18
12. Panasonic	32	1	3	4	8	1	3	3	26	0	1	1	8
13. Intel	25	0	1	6	5	3	2	3	24	0	0	4	8
14. Cisco	17	0	1	1	1	1	1	3	4	0	1	3	0

Number of Reported Allegations January 2017 – June 2018
Other Household Tech Companies:

Company	RRI as at June 2018	Child labour	Forced labour	Human Rights Abuses	Employment Conditions	Discrimination	Health & safety	Corruption & Fraud	Violation of national legislation	Violation of international standards	Tax evasion	Privacy violations	Supply chain issues
15. Facebook	64	2	0	102	5	10	1	20	89	1	7	73	2
16. Google Inc	61	1	0	67	16	30	1	23	150	1	23	49	4
17. WhatsApp	39	0	0	21	0	0	0	6	16	0	0	14	0
18. Twitter Inc	36	1	1	26	1	7	0	2	10	0	1	9	0
19. Altaba Inc (formerly Yahoo!)	31	0	0	11	0	0	1	2	3	0	0	11	0
20. YouTube	25	1	0	11	1	1	0	0	5	0	0	3	0
21. SAP SE	23	0	0	0	0	0	0	22	9	0	0	0	0
22. LinkedIn Corp	23	0	0	15	1	0	0	1	3	0	0	15	0
23. Nokia	20	1	1	0	3	1	2	3	6	0	1	0	3
24. HP Inc	36	7	4	19	12	5	8	10	20	5	0	1	21

Uses domain and/or industry-specific knowledge t ensure effective implementation of governance, assurance and improvement

Facilitates a culture of evaluation (both qualitative and quantitative), learning and improvement which drives more effective, efficient and agile ways of working to support business strategy, enhance reputation and increase profitability



Ensures that all organisation requirements are reflected in operational frameworks, policies, processes and plans, and that these meet all stakeholder requirements

Uses leadership behaviours to maximise influence and develop a culture of evaluation and improvement

Embeds a culture of assurance to ensure that policies, processes and plans are effectively implemented, and that all outputs (both internal and deliverable) are consistent with requirements

The CQI has been helping organisations improve their performance, quality systems for more than 100 years and now numbers some 20,000 members.

At the heart of the CQI lies its Competency Framework which provides an overview of the competencies that quality professionals require to do their job effectively and is structured around governance, assurance and improvement.

Governance is one of the four key pillars of the framework and its purpose is to ensure that quality professionals are at the heart of an organisation's efforts to protect corporate reputation and stakeholder interests.

Quality is about making organisations perform for their stakeholders – from improving products, services, systems and processes, to ensuring that the whole organisation is fit and effective. Managing quality means constantly pursuing excellence, making sure that what an organisation does is fit-for-purpose, and not only stays that way, but keeps improving.

Customers will be the most important group of stakeholders for the majority of businesses, but investors, employees, suppliers and members of our wider society are stakeholders too. Delivering quality means knowing who your stakeholders are, understanding what their combined needs are, and meeting those needs without disadvantaging one stakeholder group to please another. And, this has to be done both now and in the future.

The CQI believes this capability comes down to four things: strong governance; defining the organisation's strategic ambitions and understanding its compliance obligations and then translating these into repeatable actions; robust systems of assurance to make sure things stay on track and are known to be on track; a culture of improvement if things are off track.

Why should organisations care about quality?

To survive and thrive. Robust quality systems can enhance your organisation's brand and reputation, protect it against risks, increase its efficiency, boost its profits and position it to keep on growing.

Quality is not just a box to be ticked or something you pay lip service to. Failures resulting from poor governance, ineffective assurance and resistance to change can, and do, have dire consequences for businesses, individuals and society as a whole. Many of the major corporate scandals of late, from BP in the Gulf of Mexico, through to horse meat entering the human food chain, could, potentially, have been avoided if more robust quality systems had been in place.

RepRisk

RepRisk is a leading data science company, specialized in business conduct and environmental, social, and governance (ESG) risks.

As a premium due diligence solution, RepRisk helps clients prevent and mitigate ESG and business conduct risks related to their operations, business relationships, and investments.

Since 2006, RepRisk leverages artificial intelligence and human analysis to translate big data into actionable analytics and metrics. With daily updates, universal coverage, and curated adverse data on companies, projects, sectors, and countries, RepRisk offers a suite of a powerful risk management and compliance services.

Headquartered in Zurich, Switzerland, RepRisk serves clients worldwide, enabling them to reduce blind spots and shed light on risks that can have reputational, compliance, and financial impacts on a company.

Its flagship product, the RepRisk ESG Risk Platform, is the world's largest due diligence database on ESG and business conduct risks. The RepRisk Platform supports data-driven decision-making by leveraging proprietary quantitative data (risk metrics and analytics) and extensive qualitative research for companies, projects, sectors, countries, ESG issues, NGOs, and more.

RepRisk's Methodology

On a daily basis, RepRisk screens over 80,000 media, stakeholder, and third-party sources including print and online media, NGOs, government bodies, regulators, think tanks, newsletters, social media, and other online sources at the international, national and local level in 16 languages.

RepRisk's methodology is issues-driven, rather than company-driven – i.e. RepRisk's daily screening is driven by RepRisk's research scope. The scope is comprised of 28 ESG Issues, which were selected and defined in accordance with the key international standards and of 45 Topic Tags, ESG "hot topics" that are specific and thematic.

Once a risk incident has been identified and analysed for its novelty, relevance, and severity, a RepRisk Analyst enters an original summary into the RepRisk Platform and links it to the entities in question. No risk incident is entered twice unless it has been escalated to a more influential source, contains a significant development, or has not appeared for the past six weeks. All data is collected and processed through a strict, rules-based methodology. This helps to ensure the balanced and objective rating and weighting of the risk incident.

For more information, please visit **www.reprisk.com.**

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