



Most Sustainable Corporations in the World

**GLOBAL100**

## The 2017 Global 100: Overview of Methodology

# Global 100 fast facts

## Overview

- **Annual ranking** of corporate sustainability performance
- **Released each January** at the World Economic Forum in Davos; published in leading media including [Forbes.com](https://www.forbes.com)

## Approach

- Ranking is based on **publicly-disclosed data** (e.g., financial filings, sustainability reports). All required datapoints are pre-populated. Submissions from companies are **not** required.
- Companies on the Global 100 Shortlist **will be contacted for data verification** prior to project completion.
- Methodology is based on **14 key performance indicators** (KPIs) covering resource, employee and financial management, and supplier performance.

## Eligibility

- *Size:* Global mid, large and mega-cap companies
- *Industry and geography:* All industries and geographies are automatically considered

## Contact info and to learn more

- Email [research@corporateknights.com](mailto:research@corporateknights.com) if you would like to confirm the correct contacts for your organization
- [Sign up for email updates](#) on future rankings and research from Corporate Knights and the Global 100
- Visit [www.global100.org](http://www.global100.org) for more details

# Ranking is conducted by Corporate Knights, a specialized media and investment research firm

Corporate Knights is a Toronto-based, employee-owned B Corp that operates in three segments:

- **Corporate Knights Magazine**

- World's largest circulating magazine focused on sustainability and responsible business.
- Reaches 380,000 of the world's most influential business and political decision-makers.

- **CK Research**

- CK Research offers a range investment product sustainability ratings and tools
- CK Research also manages several external research projects (e.g. Newsweek Green Rankings, Carbon Clean 200).

- **Council for Clean Capitalism**

- CEO-supported group catalyzing smart and efficient public policy.
- Engages with leading public policy-makers.

# Key features of the Global 100

- **Approach:** driven by data, not judgment
- **Transparent:** clear approach for getting from the project's starting universe (n =~ 4,000 companies) to the 2017 Global 100
- **Scoring:** Companies are only scored on 'relevant' KPIs for their respective industry
- **Data gaps:** the project incentivizes more disclosure, not less disclosure
- **Scope:** the Global 100 sticks to indicators that can be objectively measured – it does not purport to gauge companies' exposure to qualitative sustainability risks
- The approach and methodology are reviewed annually through **stakeholder consultations** and expert input\*.

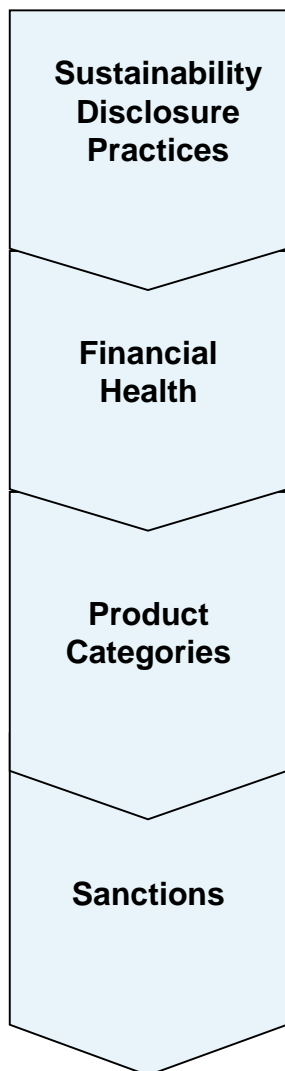
# Philosophical perspective of the Global 100

- **Relevance:** The ranking is meant to be representative of business sustainability in the current socio-economic context.
- **Transparency:** The precise methodology of the ranking and the results of the process are fully disclosed.
- **Objectivity:** Eligible companies will only be assessed using quantitative data and performance indicators.
- **Public data:** Only data-points that are part of the public domain are used
- **Comparability:** Companies are compared against their industry group peers based on performance indicators for which the underlying data are reasonably well disclosed by their industry group globally.
- **Engagement:** Companies eligible for the ranking will be informed prior to the ranking, so as to have an opportunity to ensure the necessary data is made available publicly.
- **Stakeholders:** Stakeholder feedback is actively solicited throughout the project. A Panel of Experts, consisting of several sustainability practitioners, review and comment on all aspects of the methodology.

# Overview of Global 100 ranking process

	Description	Details
Starting Universe	<ul style="list-style-type: none"> <li>Mid, large, and mega-cap public companies</li> </ul>	<ul style="list-style-type: none"> <li>All companies that had a market capitalization in excess of \$US 2 billion</li> </ul>
Screening	<ul style="list-style-type: none"> <li>Companies screened for :               <ul style="list-style-type: none"> <li>Sustainability disclosure practices</li> <li>Financial health</li> <li>Product categories</li> <li>Financial Sanctions*</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Screening criteria outlined on Slide 6</li> <li>Companies that pass all four screens constitute the 2017 Global 100 Shortlist</li> <li>Any company that was on the 2016 Global 100 is automatically included in the 2017 Global 100 shortlist if it is not in the bottom quartile of the Financial Sanctions screen in both 2015 and 2016</li> </ul>
Selection	<ul style="list-style-type: none"> <li>Companies in the 2017 Global 100 Shortlist are scored on KPIs, covering resource, employee, and financial management</li> </ul>	<ul style="list-style-type: none"> <li>Selection criteria outlined on Slide 8-11</li> <li>Companies only scored on the 'priority KPIs' for their respective GICS industry (see Slides 13-15)</li> </ul>
The Global 100	<ul style="list-style-type: none"> <li>The 2017 Global 100 is populated</li> <li>Consists of the top performing companies within each industry group</li> </ul>	<ul style="list-style-type: none"> <li>Each GICS sector is assigned a fixed number of slots in the final Global 100 list, (based on each sector's contribution to the total market capitalization of the Global 100's financial benchmark, the MSCI ACWI).</li> </ul>

# Screening criteria



## Description

- Companies that did not disclose at least 75% of the 'priority KPIs' in their respective industry group are eliminated
- Companies with an F score below 5 are eliminated
- Companies with a GICS code that relates to tobacco products or armaments are eliminated
- Companies that are bottom quartile performers in the CK Sanctions\* screen are eliminated

## Details

- A 'priority KPI' is any of the 12 KPIs that is disclosed by at least 10% of all companies in a given GICS industry (see slides 9- 11)
- KPIs 6, 8, 11 and 12 (from slide 8) are not considered since the required data points are part of mandatory disclosure and are therefore applicable to all
- The F-Score (the Piotroski F-score) is a measure of the financial strength of a company.
- The F-score is the sum of the scores for each of nine tests. See Appendix I for details.
- The sub-industries are i) "Aerospace & Defence" and ii) "Tobacco".
- In the case of Aerospace & Defense, the company will only be eliminated if it derives a majority of its revenue from its Defense business group
- The screen measures the amount of money that companies paid out in qualifying fines, penalties or settlements over the October 1, 2015 to September 30, 2016 period
- Sanctions include but are not limited to human rights, labour, environmental, anti-trust and community-related violations
- See Appendix II for details.

# New rating methodology

(effective October 1<sup>st</sup>, 2016 and to be deployed the first time for the 2017 Global 100 Ranking)



# Resource management KPIs

OLD rating methodology	KPI	Methodology
	Energy Productivity	Revenue / energy use
	Carbon Productivity	Revenue / GHG emissions (scope 1 & 2)
	Water Productivity	Revenue / water withdrawal
	Waste Productivity	Revenue / non-recycled/reused waste generated

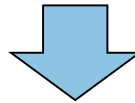


NEW rating methodology	KPI	Methodology
	Energy Intensity	Revenue (converted to USD using <b>PPP exchange rate</b> ) / (Energy use – <b>renewable energy use</b> )
	Carbon Intensity	Revenue (converted to USD using <b>PPP exchange rate</b> ) / GHG emissions: scope 1 & 2
	Water Intensity	Revenue (converted to USD using <b>PPP exchange rate</b> ) / Water use
	Waste Intensity	Revenue (converted to USD using <b>PPP exchange rate</b> ) / Non-recycled or reused waste generated

**Companies will only be scored on the KPIs that are deemed “priority KPIs” for their respective GICS industry + the four universal KPIs**

# Financial management KPIs

OLD rating methodology	KPI	Methodology
	Innovation Capacity	R&D expenses / revenue – three year trailing (2013 – 2015)
	Percentage Tax Paid	Cash tax amount paid / EBITDA – five year trailing 2011 - 2015
	CEO-Average Employee Pay	CEO compensation / average employee compensation
	Pension Fund Status	Unfunded liabilities / total assets



NEW rating methodology	KPI	Methodology
	Innovation Capacity	NO CHANGES
	Percentage Tax Paid	NO CHANGES
	CEO-Average Employee Pay	NO CHANGES
	Pension Fund Status	75% (total DB and DC employer contributions/ FTE employees percentile-ranked against peers) + 1/4(fair value of DB plan assets/FTE employees percentile-ranked - (1-(fair value of DB plan assets/liability percentile-ranked) ))

**Companies will only be scored on the KPIs that are deemed “*priority KPIs*” for their respective GICS industry + the four universal KPIs**

# Employee management KPIs

OLD rating methodology	KPI	Methodology
	Safety Performance	Fatalities and lost time incidents
	Employee Turnover	Number of departures / average total employees
	Leadership Diversity	Female representation on board of directors, executive management team and existence of a female CEO
	Clean Capitalism Pay Link	Mechanisms that link senior executive pay to clean capitalism targets



NEW rating methodology	KPI	Methodology
	Safety Performance	NO CHANGES
	Employee Turnover	NO CHANGES
	Leadership Diversity	No longer compared against same industry peers only, but against <b>all companies in the universe</b>
	Clean Capitalism Pay Link	NO CHANGES

**Companies will only be scored on the KPIs that are deemed “priority KPIs” for their respective GICS industry + the four universal KPIs**

## Additional KPIs

KPI	Calculation and notes
Supplier score	<ul style="list-style-type: none"> <li>▪ The company's largest supplier as determined by Bloomberg</li> <li>▪ Largest supplier will be scored using the same new methodology for the 2017 Global 100 minus the "Supplier score" KPI.</li> <li>▪ Primary data source: Bloomberg and CDP</li> </ul>
Clean Air Productivity score	<ul style="list-style-type: none"> <li>▪ Revenue (converted to USD using <b>PPP exchange rate</b>) / VOC emissions (25%)</li> <li>▪ Revenue (converted to USD using <b>PPP exchange rate</b>) / Nox emissions (25%)</li> <li>▪ Revenue (converted to USD using <b>PPP exchange rate</b>) / Sox emissions (25%)</li> <li>▪ Revenue (converted to USD using <b>PPP exchange rate</b>) / Particulate matter emissions (25%)</li> </ul>

**Companies will only be scored on the KPIs that are deemed "priority KPIs" for their respective GICS industry + the four universal KPIs**

# Priority KPIs for each GICS Industry under the new methodology

# Priority indicators per GICS industry – all equally weighted

GICS Industry	Energy Productivity	GHG Productivity	Water Productivity	Waste Productivity	Safety Performance	Employee Turnover	CEO – Average Employee Pay	Innovation Capacity	Supplier score	Clean Air Productivity
Aerospace & Defense	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Air Freight & Logistics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Airlines	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Auto Components	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Automobiles	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Banks	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	No
Beverages	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Biotechnology	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Building Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Capital Markets	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No
Chemicals	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Commercial Services & Supplies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Communications Equipment	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Construction & Engineering	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Construction Materials	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Consumer Finance	Yes	Yes	Yes	Yes	No	No	Yes	No	No	Yes
Containers & Packaging	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distributors	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Diversified Consumer Services	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes
Diversified Financial Services	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No
Diversified Telecommunication Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Electric Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electrical Equipment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Electronic Equipment, Instruments & Components	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No

**All companies, irrespective of GICS Industry will still be assessed on all four universal KPIs - Leadership Diversity, Clean Capitalism Pay Link, Pension Fund Status and Percentage Tax Paid**

# Priority indicators per GICS industry – all equally weighted

GICS Industry	Energy Productivity	GHG Productivity	Water Productivity	Waste Productivity	Safety Performance	Employee Turnover	CEO – Average Employee Pay	Innovation Capacity	Supplier score	Clean Air Productivity
Energy Equipment & Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Equity Real Estate Investment Trusts (REITs)	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No
Food & Staples Retailing	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No
Food Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gas Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Health Care Equipment & Supplies	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Health Care Providers & Services	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Health Care Technology	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Hotels, Restaurants & Leisure	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	No
Household Durables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Household Products	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Independent Power and Renewable Electricity Producers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industrial Conglomerates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Insurance	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	No
Internet & Direct Marketing Retail	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Internet Software & Services	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
IT Services	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Leisure Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Life Sciences Tools & Services	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Machinery	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Media	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	No

**All companies, irrespective of GICS Industry will still be assessed on all four universal KPIs - Leadership Diversity, Clean Capitalism Pay Link, Pension Fund Status and Percentage Tax Paid**

# Priority indicators per GICS industry – all equally weighted

GICS Industry	Energy Productivity	GHG Productivity	Water Productivity	Waste Productivity	Safety Performance	Employee Turnover	CEO – Average Employee Pay	Innovation Capacity	Supplier score	Clean Air Productivity
Metals & Mining	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mortgage Real Estate Investment Trusts (REITs)	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No
Multiline Retail	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Multi-Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oil, Gas & Consumable Fuels	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Paper & Forest Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Personal Products	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Pharmaceuticals	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Professional Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Real Estate Management & Development	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No
Road & Rail	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Semiconductors & Semiconductor Equipment	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Software	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Specialty Retail	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No
Technology Hardware, Storage & Peripherals	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Textiles, Apparel & Luxury Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Thriffs & Mortgage Finance	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	No
Tobacco	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Trading Companies & Distributors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Transportation Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Water Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Wireless Telecommunication Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

**All companies, irrespective of GICS Industry will still be assessed on all four universal KPIs - Leadership Diversity, Clean Capitalism Pay Link, Pension Fund Status and Percentage Tax Paid**



# The Four Universal KPIs – all equally weighted

**All** companies, irrespective of GICS Industry will still be assessed on all four universal KPIs:

- Leadership Diversity,
- Clean Capitalism Pay Link,
- Pension Fund Status, and
- Percentage Tax Paid

# Appendix I: The F-Score

- The F-Score (the Piotroski F-score) is a measure of the financial strength of a company.
- The F-Score is the sum of the scores for each of nine tests. Each test scores one for a pass and zero for a fail.
- The tests are:
  - i) net profit is positive;
  - ii) operating cash flow is positive;
  - iii) net profit  $\div$  total assets at beginning of year, minus the same number for the previous year is positive;
  - iv) operating cash flow is greater than net profit;
  - v) long term debt  $\div$  by average assets has not increased;
  - vi) the current ratio has increased (the change is more than zero, so even a negligible increase passes the test);
  - vii) no raising of ordinary (common) equity over the previous year: this test is passed if the company did not issue any ordinary shares (excluding shares from dividend reinvestment plans and employee share plans);
  - viii) gross margin has improved over the previous year; and
  - ix) asset turnover has increased.

## Appendix II: The CK Financial Sanctions Screen

- The CK Financial Sanctions\* screen measures the amount of money that companies have paid out in qualifying fines, penalties or settlements on a trailing one-year (October 1, 2015 – September 30, 2016) basis.
- *Approach*
  1. A keyword search for "fines, penalties or settlements" is run for each company. Payouts may relate to legal repercussions from environmental accidents, generalized environmental pollution, infringement of labor standards, human rights-related abuses, child exploitation or violation of collective bargaining arrangements.
  2. Payouts that occurred from October 1, 2015 to September 30, 2016 are totaled and converted to USD (using the prevailing exchange rate at the time of the payout) and then divided by total revenue reported over the same period.
  3. The resulting ratio is then percent-ranked against all companies that remain at this stage of the ranking.
  4. Those companies that receive a bottom quartile percent score (e.g. 25% or below) are eliminated.
  5. Constituents of the 2016 Global 100 that receive bottom quartile percent score (e.g. 25% or below) for the periods from October 1, 2014 to September 30, 2015 and October 1, 2015 to September 30, 2016 are eliminated.

## Appendix III: Detailed scoring methodology

#	Name of KPI	Measurement
1	Energy Productivity	In the first step, each company's Energy Productivity is calculated. Energy Productivity is defined as Revenue (\$US PPP-converted) / Total Energy Use (GJ) – Renewable Energy Use (GJ). It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Energy Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.
2	Carbon Productivity	In the first step, each company's Carbon Productivity is calculated. Carbon Productivity is defined as Revenue (\$US PPP-converted) / Total Greenhouse gas (GHG) Emissions (CO <sub>2</sub> e). Only Scope 1 and Scope 2 emissions are included according to the GHG Protocol. It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Carbon Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.

## Appendix III: Detailed scoring methodology (continued)

3	Water Productivity	<p>In the first step, each company's Water Productivity is calculated. Water Productivity is defined as Revenue (\$US PPP-converted) / Total water (m3). It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Water Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.</p>
4	Waste Productivity	<p>In the first step, each company's Waste Productivity is calculated. Waste Productivity is defined as Revenue (\$US PPP-converted) / [Total waste generated (metric tonnes) – waste recycled (metric tonnes)]. It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Waste Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.</p>
5	Innovation Capacity	<p>In the first step, each company's Innovation Capacity score is determined by measuring the ratio of research and development (R&amp;D) expenditures to total revenue averaged over a trailing three-year period. In the second step, each company's Innovation Capacity score is percent-ranked against that of all same-industry group peers within the CK coverage universe.</p>

## Appendix III: Detailed scoring methodology (continued)

6	Percentage Tax Paid	<p>In the first step, each company's Percentage Tax Paid is calculated as the amount of taxes paid in cash over a trailing five year period divided by their total EBITDA over the same period. Companies score a 0% in the event that their total EBITDA or taxes paid in cash is zero or lower over the five year period. In the second step, each company's Percentage Tax Paid is percent-ranked against that of all same-industry group peers within the CK coverage universe.</p>
7	CEO-Average Employee Pay	<p>In the first step, each company's CEO to Average Employee Pay ratio is calculated as total CEO compensation divided by average employee compensation. Average employee compensation is calculated by dividing the company's total wage bill by the total number of employees. In the second step, each company's CEO to Average Employee Pay ratio is percent-ranked against that of all same-industry group peers within the CK coverage universe. The lower the ratio, the higher the rank.</p>
8	Pension Fund Status	<p>In the first step, the sum of the company's contribution to the defined benefit and defined contribution pension plans are added up, then divided by the total number of full-time equivalent employees. This ratio is then percent-ranked against that of all same-industry group peers within the CK coverage universe. This is labelled as "A"</p> <p>In the second step, the fair value of the defined benefit plan assets is divided by the total number of full-time equivalent employees; this ratio is then percent-ranked against that of all same-industry group peers within the CK coverage universe. This is labelled as "B",</p> <p>In the third step, the fair value of the defined benefit plan assets is divided by the projected defined benefit plan obligations, then percent-ranked against that of all same-industry group peers within the CK coverage universe. This is labelled as "C".</p> <p>The Pension Fund Status Score is arrived at by the following formula: <math>(0.75 \times A) + 0.25(B - (1 - C))</math></p>

## Appendix III: Detailed scoring methodology (continued)

9	Safety Performance	Each company's Safety Performance is comprised of the Lost Time Injury Score (50% weight) and the Fatality Score (50% weight). The Lost Time Injury Score is determined by calculating the company's lost time injury rate (defined as the number of lost time incidents per 200,000 employee hours) and percent-ranking it against that of all same-industry group peers within the CK coverage universe. The Fatality Score is determined by calculating the company's fatality rate (defined as the number of fatalities divided by the total number of full-time equivalent employees) and percent-ranking it against that of all same-industry group peers within the CK coverage universe.
10	Employee Turnover	Each company's Employee Turnover is percent-ranked against that of all same industry group peers within the CK coverage universe. The lower the ratio, the higher the rank.
11	Leadership Diversity	Each company's Leadership Diversity is comprised of the Board Diversity Score (50% weight) and Executive Diversity Score (50% weight). The Board Diversity Score is calculated by determining the proportion of the Board of Directors that is comprised of female directors and percent-ranking it against that of all companies within the CK coverage universe. The Executive Diversity Score is calculated by determining the proportion of the senior executive team that is comprised of female executives and percent-ranking it against all companies within the CK coverage universe. The Leadership Diversity Score is then the sum of the Board Diversity Score and the Executive Diversity Score.
12	Clean Capitalism Pay Link	The Clean Capitalism Pay Link indicator is designed to reward companies that have set up mechanisms to link the remuneration of senior executives with the achievement of clean capitalism goals or targets. A score of 100% is given to companies that describe such a mechanism (e.g. the company specifies the proportion of a particular named executive's compensation that is linked to the achievement of a corporate clean capitalism target, such as reducing emissions, improving energy efficiency, or reducing health & safety accidents ). A score of 0% is given to companies that do not report any linking mechanisms. Unlike all other indicators, Clean Capitalism Pay Link does not use any percent-ranking.

## Appendix III: Detailed scoring methodology (continued)

13	Supplier Score	Each company's largest supplier is identified based on Bloomberg data. That supplier is then scored using the same present methodology, minus the Supplier Score KPI.
14	Clean Air Productivity	<p>The Clean Air Productivity consists of four sub-indicators, each worth 25% of the Clean Air Productivity indicator:</p> <ul style="list-style-type: none"> <li>a) VOC Productivity</li> <li>b) Nox Productivity</li> <li>c) Sox Productivity</li> <li>d) Particulate Matter Productivity.</li> </ul> <p>Each of the above four sub-indicators are calculated in the same way, as follows:</p> <p>In the first step, each company's sub-indicator Productivity is calculated by dividing Revenue (\$US PPP-converted) by the air pollutant. It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's sub-indicator Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.</p>



Appendix IV:  
Old rating methodology –  
discontinued effective 30<sup>th</sup>  
September 2016

# Companies can be scored on up to 12 KPIs

	KPI	Calculation	
Resource management	Energy Productivity	Revenue / energy use	<ul style="list-style-type: none"> <li>• Companies are scored on KPIs that are disclosed by at least 10% of companies in their industry group</li> <li>• Scoring methodology is based on a company's performance against its industry peers</li> </ul>
	Carbon Productivity	Revenue / GHG emissions (scope 1 & 2)	
	Water Productivity	Revenue / water withdrawal	
	Waste Productivity	Revenue / non-recycled/reused waste generated	
Financial management	Innovation Capacity	R&D expenses / revenue	
	Percentage Tax Paid	Cash tax / EBITDA	
	CEO-Average Employee Pay	CEO compensation / average employee compensation	
	Pension Fund Status	Unfunded liabilities / total assets	
Employee management	Safety Performance	Fatalities and lost time incidents	
	Employee Turnover	Number of departures / average total employees	
	Leadership Diversity	Female representation on board of directors and executive management team	
	Clean Capitalism Pay Link	Mechanisms that link senior executive pay to clean capitalism targets	

# Priority indicators are different for each GICS industry

GICS Industry	Energy Productivity	GHG Productivity	Water Productivity	Waste Productivity	Safety Performance	Employee Turnover	CEO – Average Employee Pay	Innovation Capacity
Aerospace & Defense	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Air Freight & Logistics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Airlines	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Auto Components	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Automobiles	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Banks	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Beverages	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Biotechnology	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Building Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Capital Markets	Yes	Yes	Yes	Yes	No	No	Yes	No
Chemicals	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Commercial Services & Supplies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Communications Equipment	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Construction & Engineering	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Construction Materials	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Consumer Finance	Yes	Yes	Yes	Yes	No	No	Yes	No
Containers & Packaging	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distributors	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Diversified Consumer Services	Yes	Yes	Yes	Yes	No	No	Yes	No
Diversified Financial Services	Yes	Yes	Yes	Yes	No	No	Yes	No
Diversified Telecommunication Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electric Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electrical Equipment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electronic Equipment, Instruments & Components	Yes	Yes	Yes	Yes	No	No	Yes	Yes

- Companies are scored on KPIs that are disclosed by at least 10% of companies in their industry group
- All companies are scored on Leadership Diversity, Clean Capitalism Pay Link, Pension Fund Status and Percentage Tax Paid since the required data points are part of mandatory disclosure

# Priority indicators are different for each GICS industry

GICS Industry	Energy Productivity	GHG Productivity	Water Productivity	Waste Productivity	Safety Performance	Employee Turnover	CEO – Average Employee Pay	Innovation Capacity
Energy Equipment & Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Equity Real Estate Investment Trusts (REITs)	Yes	Yes	Yes	Yes	No	No	Yes	No
Food & Staples Retailing	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Food Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gas Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Health Care Equipment & Supplies	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Health Care Providers & Services	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Health Care Technology	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Hotels, Restaurants & Leisure	Yes	Yes	Yes	Yes	No	No	Yes	No
Household Durables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household Products	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Independent Power and Renewable Electricity Producers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industrial Conglomerates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Insurance	Yes	Yes	Yes	Yes	No	Yes	No	No
Internet & Direct Marketing Retail	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Internet Software & Services	Yes	Yes	Yes	Yes	No	No	Yes	Yes
IT Services	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Leisure Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Life Sciences Tools & Services	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Machinery	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Media	Yes	Yes	Yes	Yes	No	No	Yes	No

- Companies are scored on KPIs that are disclosed by at least 10% of companies in their industry group
- All companies are scored on Leadership Diversity, Clean Capitalism Pay Link, Pension Fund Status and Percentage Tax Paid since the required data points are part of mandatory disclosure

# Priority indicators are different for each GICS industry

GICS Industry	Energy Productivity	GHG Productivity	Water Productivity	Waste Productivity	Safety Performance	Employee Turnover	CEO – Average Employee Pay	Innovation Capacity
Media	Yes	Yes	Yes	Yes	No	No	Yes	No
Metals & Mining	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mortgage Real Estate Investment Trusts (REITs)	Yes	Yes	Yes	Yes	No	No	Yes	No
Multiline Retail	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Multi-Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oil, Gas & Consumable Fuels	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Paper & Forest Products	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Personal Products	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Pharmaceuticals	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Professional Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Real Estate Management & Development	Yes	Yes	Yes	Yes	No	No	Yes	No
Road & Rail	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Semiconductors & Semiconductor Equipment	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Software	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Specialty Retail	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Technology Hardware, Storage & Peripherals	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Textiles, Apparel & Luxury Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Thrifts & Mortgage Finance	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Tobacco	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Trading Companies & Distributors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Transportation Infrastructure	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Water Utilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wireless Telecommunication Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

- Companies are scored on KPIs that are disclosed by at least 10% of companies in their industry group
- All companies are scored on Leadership Diversity, Clean Capitalism Pay Link, Pension Fund Status and Percentage Tax Paid since the required data points are part of mandatory disclosure