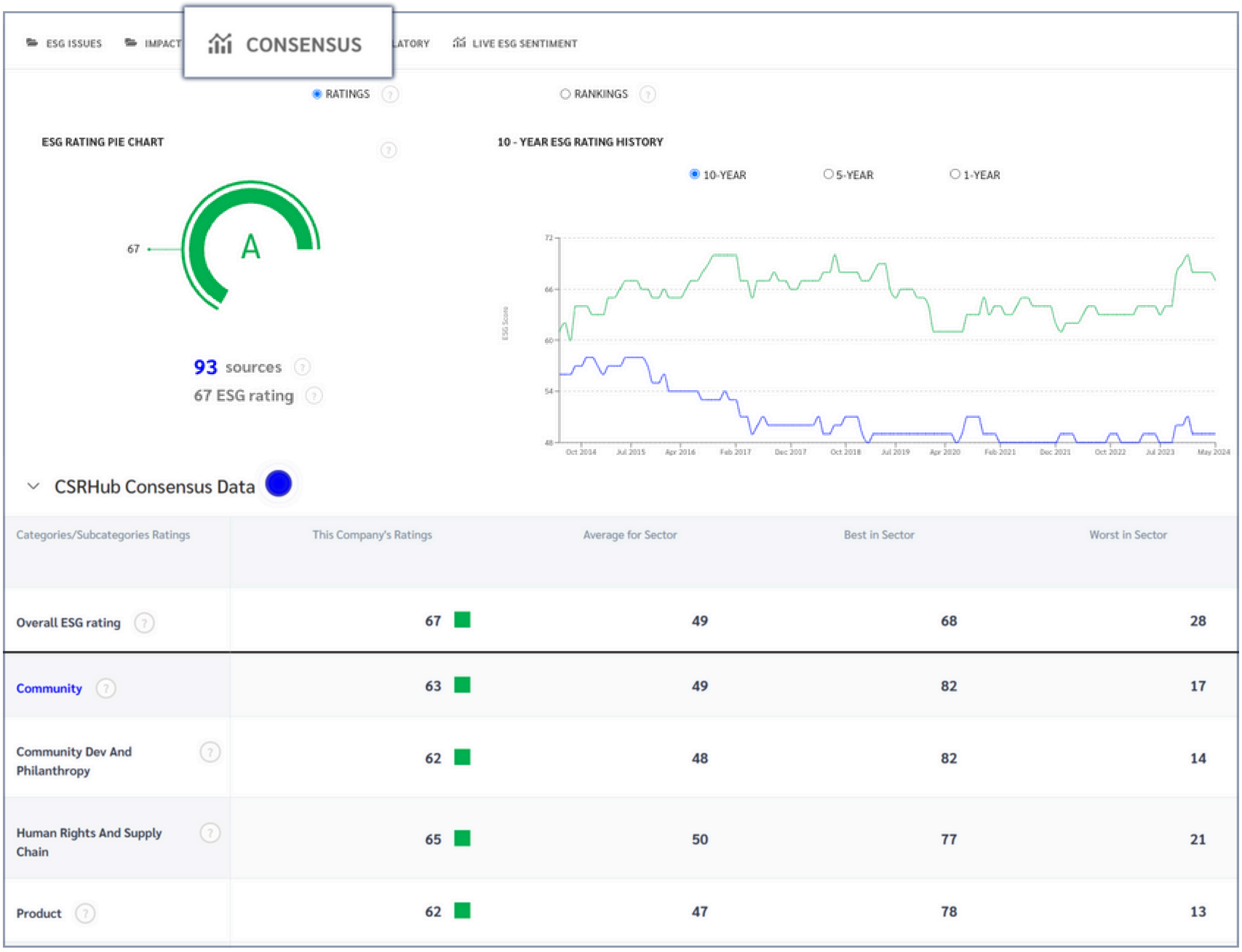
Consensus ESG Score Methodology

1. Introduction

Integrum ESG now offers its clients a consensus ESG score (both an absolute rating and a relative ranking), provided by the data specialists CSRHub. Please contact us directly to request access to our 'consensus tab'.



Categories/Subcategories Ratings	This Company's Ratings	Average for Sector	Best in Sector	Worst in Sector
Overall ESG rating	67	49	68	28
Community	63	49	82	17
Community Dev And Philanthropy	62	48	82	14
Human Rights And Supply Chain	65	50	77	21
Product	62	47	78	13

1.1 Brief overview of the methodology

This document explains the purpose, scope and methodology of the consensus score in detail. But for those wanting a short summary of the methodology:

- CSRHub, from whom we license the consensus score, collects ESG scores from a vast range of sources; from ESG ratings firms like MSCI and Sustainalytics, to specialist sources like CDP and Better World Companies

- For fully-rated companies, the score is drawn from an average of 13.5 different sources. For some large companies, there may be well over 50 sources, but most of these will only be assessing one aspect of the company's ESG performance, and will receive a lower weight as a result

- The metrics being scored are mapped, where possible, to one of 12 ESG subcategories

- After assessing the distribution of scores for that metric from that source, the scores are recalibrated to 0-100 scores. Any identified systematic biases from a particular source are also removed through recalibration

- Scores are excluded if there is an insufficient number of scores that map to the subcategory or an insufficient range of sources

- Scores from the 12 subcategories are then averaged and escalated to 4 categories (Environment, Community, Employees & Governance). In order to derive an overall consensus score, these 4 categories are weighted according to the consensus of CSRHub platform users – but the weightings are broadly equal for each

- The overall consensus score is expressed in two ways; as an absolute rating (0-100), and a relative percentile ranking (0-100) which expresses how the company is rated relative to peers. (A ranking of 100 means it has the best ESG rating within its industry and country.)

- We also express the 0-100 consensus scores as an A-E grade

1.2 Purpose of consensus tab

The objective of the Integrum ESG consensus tab is to offer an indicative 'consensus opinion' on how a wide range of ESG analysis and ratings firms currently assess any given company.

A) Many investors find the 'consensus earnings estimate' for a company a very valuable data point. It indicates what the capital markets have currently 'priced in' for a company's securities. Provided by CSRHub, this ESG Consensus Score (out of 100, and also calibrated to an A-E Grade) attempts to provide a similar datapoint for investors.

B) Moreover, it will give investors the opportunity to compare the Integrum ESG A-E Grade on a company against the ESG grade given to that company by a range of other ESG rating providers/organisations, that arguably influences the capital markets more than Integrum ESG currently does.

1.3 Coverage

CSRHub publishes data on over 50,000 entities (public and private companies and other organizations) across more than 150 countries and more than 130 industries. For some companies in the CSRHub system, there is only one source of data, or information on only a few of the subcategories. Such companies will not receive a Consensus Rating. Of the >50,000 companies which have published data, approximately half have achieved Full Ratings. For the rest of the companies in the system, we and CSRHub believe there is sufficient data to compute 'Partial Ratings' (data on one or more of the twelve subcategories), across some or all twelve subcategories for more than 10,000 companies. We explain later how the decision is made whether to publish partial ratings vs full ratings vs not publishing ratings at all.

CSRHub covers public companies, private companies, government organisations, and not-for-profit organisations.

CSRHub classifies companies into industries based loosely on the North American Industry Classification System (NAICS) with some additions. You can see these industry groupings here.

2. Data Structure

2.1 Twelve subcategories

CSRHub's framework contains 12 subcategories of ratings and rankings. Each of the 4 categories of Community, Employees, Governance, and Environment contains 3 subcategories. The 12 subcategories are:

Category/ Sub-category	Description
Community	**Covers human rights, supply chain, product quality & safety, product sustainability, community development, philanthropy**
Community Dev & Philanthropy	Topics: company community citizenship through charitable giving, donations of goods, volunteerism of staff time; protecting public health (e.g., avoidance of industrial accidents); managing the social impacts of its operations on local communities; land use and building design impact on the local economy and ecosystem.
Human Rights & Supply Chain	Topics: company commitment to respecting fundamental human rights convention; ability to maintain its licence to operate by supporting freedom of association and excluding child, forced or compulsory labour; transparency in overseas sourcing disclosure and monitoring; relationship with and respect for the human rights of indigenous peoples near its proposed or current operations.
Product	Topics: the responsibility of a company for the development, design, and management of its products and services and their impacts on customers and society at large; capacity to reduce environmental costs, create new market opportunities through new sustainable technologies or processes, and produce or market goods and services that enhance the health and quality of life for consumers; the integrity of a company's products and sales practices, including their labelling and marketing, social impacts and end-of-life disposition; product safety and quality and the company's response to problems with safety and quality.
Employees	**Covers diversity, labour rights, treatment of unions, compensation, benefits, training, health, worker safety**
Compensation & Benefits	Topics: a company's capacity to increase its workforce loyalty and productivity through rewarding, fair, and equal compensation and financial benefits; benefits that engage employees and improve worker development; long-term employment growth and stability by promotion practices, lay-off practices, and relations with retired employees.

Diversity & Labor Rights	Topics: workplace policies and practices covering fair and non-discriminatory treatment of employees, and its diversity policies; labour-management relations and participation by employees, National Labor Relations Board (NLRB) violations or patterns of anti-union practice, conformance to internationally recognized worker rights, as defined in the basic conventions of the International Labor Organization (ILO); ability to maintain diversity, provide equal opportunities regardless of gender, age, ethnicity, religion or sexual orientation, and promote work-life balance.
Training, Safety & Health	Topics: a company's effectiveness in providing a healthy and safe workplace; accident and safety performance, as well as job training, safety standards and training, and employee-management safety teams; programs to support the health, well-being and productivity of all employees; workplace policies and programs that boost employee morale, workplace productivity, company policies and practices to engage employees, and worker development.
Environment	**Covers environmental policy, environmental reporting, waste management, resource management, energy use, climate change policies & performance.**
Energy & Climate Change	Topics: a company's effectiveness in addressing climate change through appropriate policies and strategies, energy-efficient operations, and the development of renewable energy and other alternative environmental technologies; energy use, emissions to air of CO_2 and other Greenhouse Gas Emissions (GHG).
Environment Policy & Reporting	Topics: a company's policies and intention to reduce the environmental impact of a company and its value stream to levels that are healthy for the company and for the environment, now and in the future; environmental reporting performance, adherence to environmental reporting standards such as the Global Reporting Initiative, and compliance with investor, regulatory and stakeholders' requests for transparency; breaches of regulatory limits and accidental releases.
Resource Management	Topics: how efficiently resources are used in manufacturing and delivering products and services, including those of a company's suppliers; capacity to reduce the use of materials, energy or water, and to find more efficient solutions by improving its supply chain management; environmental performance relative to production size and is monitored by the production-related Eco Intensity Ratios (EIRs) for water and energy defined as resource consumption per produced or released unit; raw materials and packaging materials for production and related processes and packaging of products; waste and recycling performance; proportion of waste recycled of the total waste; management of operations to benefit the local airshed and watershed, and how the company impacts land use and local ecological stability; consumption of drinking water, industrial water and steam.

Governance	Covers leadership ethics, board composition, executive compensation, transparency & reporting, stakeholder treatment.
Board	Topics: a company's effectiveness in following best practices in corporate governance principles related to board membership, independent decision making through experienced, diverse and independent board members, effectiveness toward following best practices related to board activities and functions, and board committee structure and composition; provision of competitive and proportionate management compensation and its ability to incentivise executives and board members to achieve both financial and extra-financial targets.
Leadership Ethics	Topics: how a company manages its relationships with its various stakeholders, including investors, customers, communities, and regulators; effectiveness in treating its shareholders equitably; culture of ethical decision making; commitment and effectiveness toward the vision of integrating social and environmental aspects into the overall core strategy; whether sustainability principles are integrated from the top down into the day-to-day operations of the company.
Transparency & Reporting	Topics: alignment of corporate policies and practices with sustainability goals; management of the corporation transparency to stakeholders; engagement of employees in the management of the company; compliance of sustainability reports with standards such as the Global Reporting Initiative, AccountAbility (AA1000) and other standards, and are these reports made publicly available; whether the company provides a list of its major stakeholders and how it engages with them; whether the company is a signatory of the Global Compact and other leading global entities; assurance (3rd party audit) of the accuracy, completeness, and reliability of its Sustainability or Corporate Social Responsibility reports.

2.3 Data elements

CSRHub maps each element of data they gather from a source into one or more of the 12 subcategories. These data elements then provide entity-specific data values (or "element values").

For example, consider from the table below, the first data element for the 'Energy & Climate Change' subcategory for Walmart:

- Data source = Science Based Targets Initiative
- Data element = Net-Zero Commited
- Data value = Yes

Data source	Element name	Element value	Date
Science Based Targets Initiative	Net-Zero Committed	Yes	Apr 2023
Corporate Climate Action Transparency Index (CATI)	CATI Score	34.4	Nov 2023
Climate Action 100+ Assessments for 2020	TCFD Disclosure	Partial	Mar 2023

3. Data Collection and Sources

CSRHub has aggregated more than 600 million data values from 945 sources overall. These sources include SRI / ESG analysis and ratings firms, Non-Governmental Organizations (NGOs) such as foundations, associations, union groups, activist groups, government databases, research reports, and input from CSRHub users. For a detailed list of their data sources, you can view the data sources page here.

Their best-known ESG sources include S&P Global, Institutional Shareholder Services (ISS), MSCI (ESG Intangible Value Assessment, ESG Impact Monitor, and ESG Carbon Metrics), Sustainalytics, Trucost ESG Analysis, Integrum ESG, Ideal Ratings, Arabesque S-Ray, Covalence, and Moody's.

Some examples of their niche sources include Ethical Consumer Boycotts List, Global Union Burma List, EPA Transport Data, and Great Place to Work.

Of these 945 sources however, only 299 are currently 'Active' as of August 2024, and therefore being used for the current consensus sources. But while many sources are no longer actively tracking a company, they were historically used in the ratings of a company (and our consensus tab does show how a company's consensus ranking has changed over time). For instance, Walmart has a total of 324 sources used over its ratings history, but only 92 of these are used in the current ratings set, as of August 2024. Ratings are updated approximately once a month as data sources are changed or updated.

For the entities with either partial or full ratings, the average number of active sources used is 9.54 as of August 2024, albeit this number continues to gradually increase.

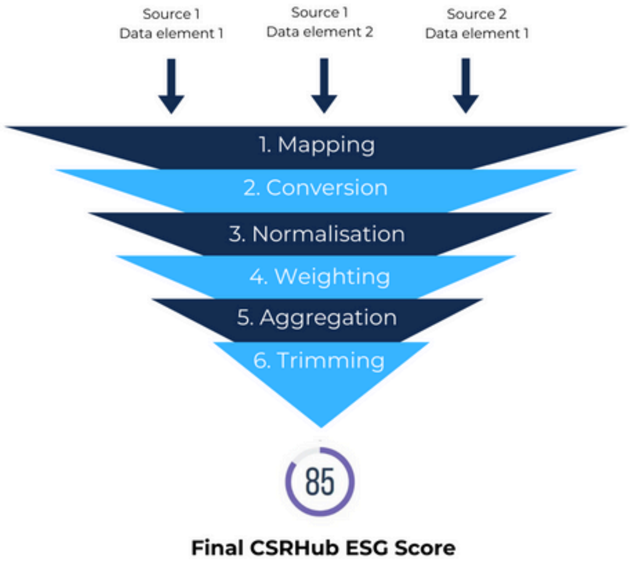
Below is an example of what the data sources look like using the 'Product' subcategory, for the company Walmart:

Data source	Element name	Element value	Date
3BL Media 100 Best Corporate Citizens 2022--Full Results	Stakeholders & Society	**	Nov 2022
Act Analytics	scores	**	Jun 2022
Barron's Top 100 Sustainable 2023	Rank	21	Jan 2023
Better World Companies	Better World product rating	F	Mar 2022
Brand Finance 2021-22	BSI	**	Apr 2022
Brand Finance 2021-22	Brand Rating	AAA-	Apr 2022
Brand Finance 2022-23	BSI	**	Jul 2023
Brand Finance 2022-23	Brand Rating	9	Mar 2023
CDP Scores 2022	2022 OVERALL SCORE - CATTLE PRODUCTS	**	May 2023
CDP Scores 2022	2022 OVERALL SCORE - PALM OIL	**	May 2023
CDP Scores 2022	2022 OVERALL SCORE - SOY	**	May 2023
CDP Scores 2022	2022 OVERALL SCORE - Timber	**	May 2023
CDP Scores 2022	2022 Overall Score Climate Change	**	May 2023
Corporate Human Rights Benchmark 2022	CHRD Rating	9.5	Oct 2022
Corporate Human Rights Benchmark 2023	CHRD Rating	18.5	Oct 2023

(** indicates that this source does not allow its original data to be shown to users who do not have a direct subscription to that source.)

Note that each source utilised by CSRHub tracks a different universe of companies, or different regions or industries, and so no single source provides data on more than 60% of CSRHub's universe of entities.

4. Data Processing



4.1 Mapping

Each data value gathered from a source is mapped to one or more of the 12 subcategories. Sources track different topics in different ways, e.g a company's charity and community performance can be measured by considering how much money it contributed to charities, or by considering the number of volunteering hours the company gave last year. Both are valid assessments of an ESG metric however, so both are mapped to the same subcategory. Of course, mapping such a spread of sources to 12 subcategories will usually require a 'best fit' rather than a 'perfect fit' approach.

4.2 Conversion

Each source is then converted into a rating, at the subcategory level, on a 0 to 100 scale (100 = maximum positive rating). This is multi-step and mathematically non-trivial problem, as different sources have their own measurement methodology and final rating. Some sources give companies a numerical score (e.g., between 0.0 and 1.0), others use "+" or "-" signs, and others only a relative ranking (e.g., "Top 50" or "Best Performing"). CSRHub therefore needs to convert each of these into a numerical value within a 0-100 rating scale, so that it can be combined with other data values.

To achieve this, CSRHub will take the source's score distribution and, on a company-by-company basis, will map it to a consistent score distribution by fitting to a Beta distribution. The beta distribution is a suitable model for the random behaviour of percentages and proportions, and is often used as a flexible way of dealing with uncertainty.

For binary values (such as 'Yes', 'No' answers), they are given an initial score (such as Yes=75, No=25), which is then compared to all the other data elements in that subcategory, and a final score is recalibrated as part of the weight optimization process conducted on those other data element scores.

4.3 Normalisation

CSRHub then compares the scores from different data sources for the same company. This helps to determine if a source has a rating bias that needs adjusting (because it is systematically harsh or lenient when rating companies).

4.4 Weighting

4.4.1 Source weight

CSRHub's weighting process gives higher importance to ratings that closely align with the consensus. Their system compares each metric score ('element value') from each source with the corresponding element values from all other sources across all rated entities to discover an optimum set of weightings.

Some sources tend to agree with the consensus of all other sources, whilst others more often diverge from consensus. MSCI's scores for example are consensual, whereas Sustainalytics' scores are idiosyncratic. CSRHub's model gives a higher weight to the sources that are closer to consensus. Moreover, some sources provide multiple data elements within a category, so these sources are given additional weight compared to those which only provide one data element.

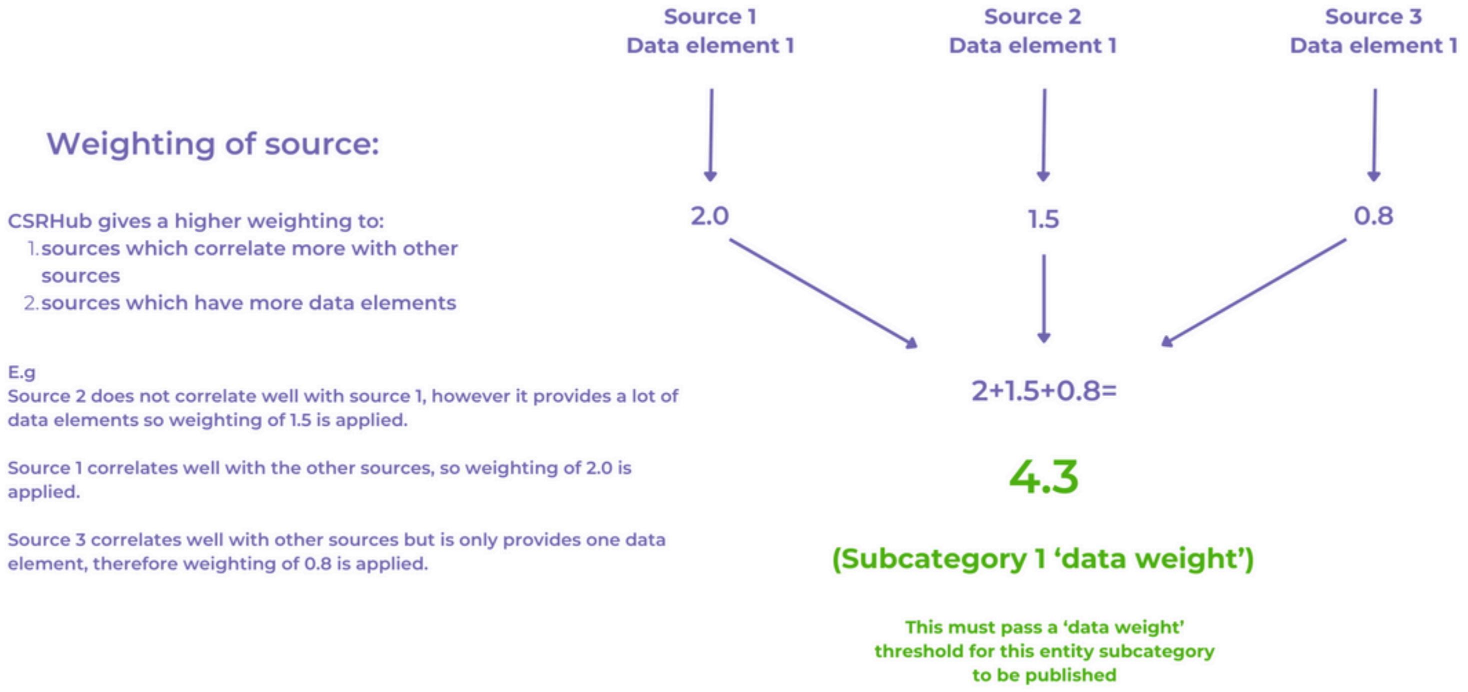
Some of CSRHub's major sources have double weight; other sources have one third weight. Major sources can be defined as those that have teams of analysts on their staff, a written methodology, a defined frequency of update, and are at least somewhat well known (have authority). CSRHub has found that sources such as MSCI, Ideal Ratings, B Corp, Sigwatch, ISS, and Integrum ESG have well defined data elements with regular distributions. Major sources may cover as few as 500 entities and may offer us as few as five data elements per entity.

A source's weight can change depending on the subcategory within which the data element is being used; for instance, CDP will have a higher weight in an Environmental subcategory than it will in a Governance subcategory.

4.4.2 Subcategory 'data weight'

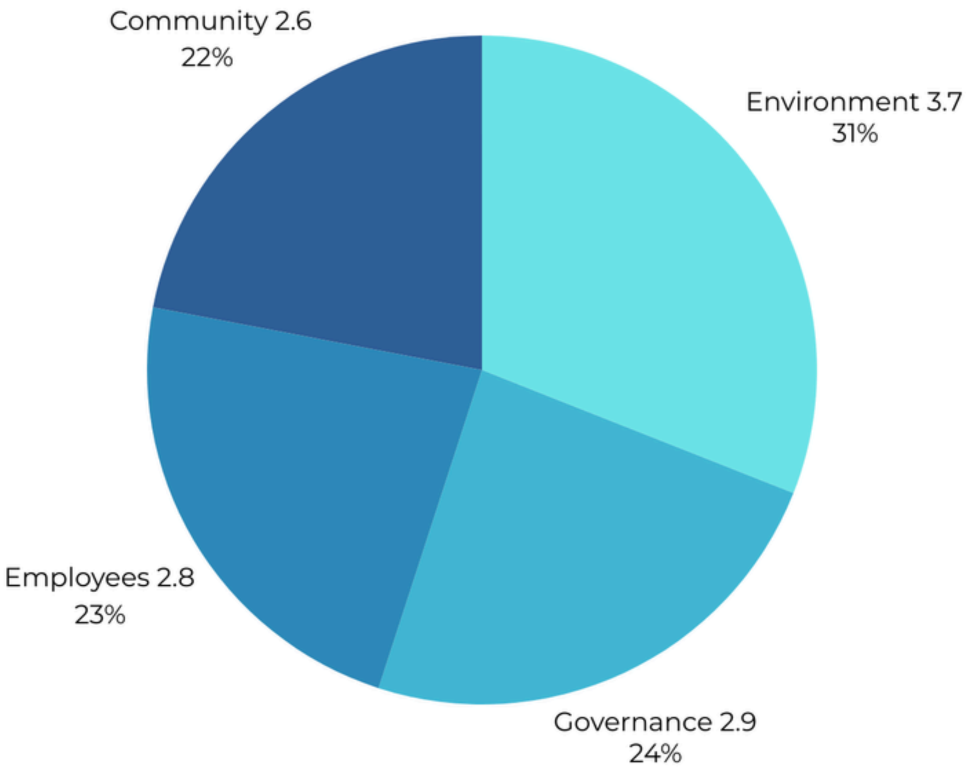
An entity subcategory is given a 'data weight' value. The exact total of data weight depends on:

1. How many sources CSRHub have contributing to the entity subcategory (more sources results in more weight)
2. How many data elements a source offers on the subcategory (some sources offer multiple data elements that CSRHub can map to a single subcategory, which results in more weight)
3. How the individual sources have been weighted by CSRHub (as mentioned in 4.4.1).



4.4.3 Category weights

The default weight for each of the four categories is based on 'consensus weightings', which are the weightings that best represent the weightings selected by users of the CSRHub platform. These weightings are:



4.5 Aggregation

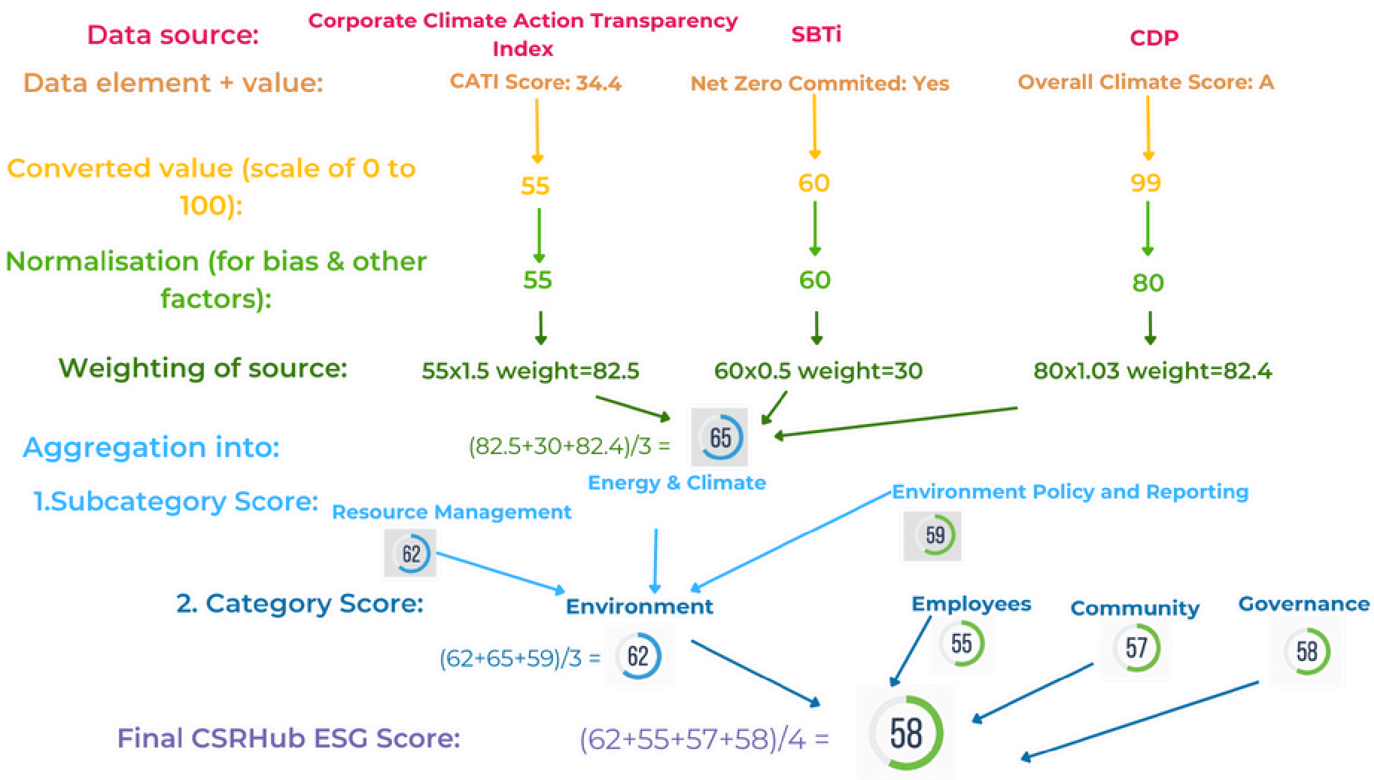
Once CSRHub has assigned weights to the sources, it then combines all the available data on a company and generates ratings. First the data elements and values are aggregated at the subcategory level, and then these subcategory ratings are aggregated to the overall company level, and also shown at the category level.

4.6 Trimming

Ratings are dropped when there is not enough information.

There are currently >19,000 companies where there is not enough information, called “not rated entities”. These companies do have data sources so CSRHub users can see that expert opinions are starting to be generated regarding their sustainability.

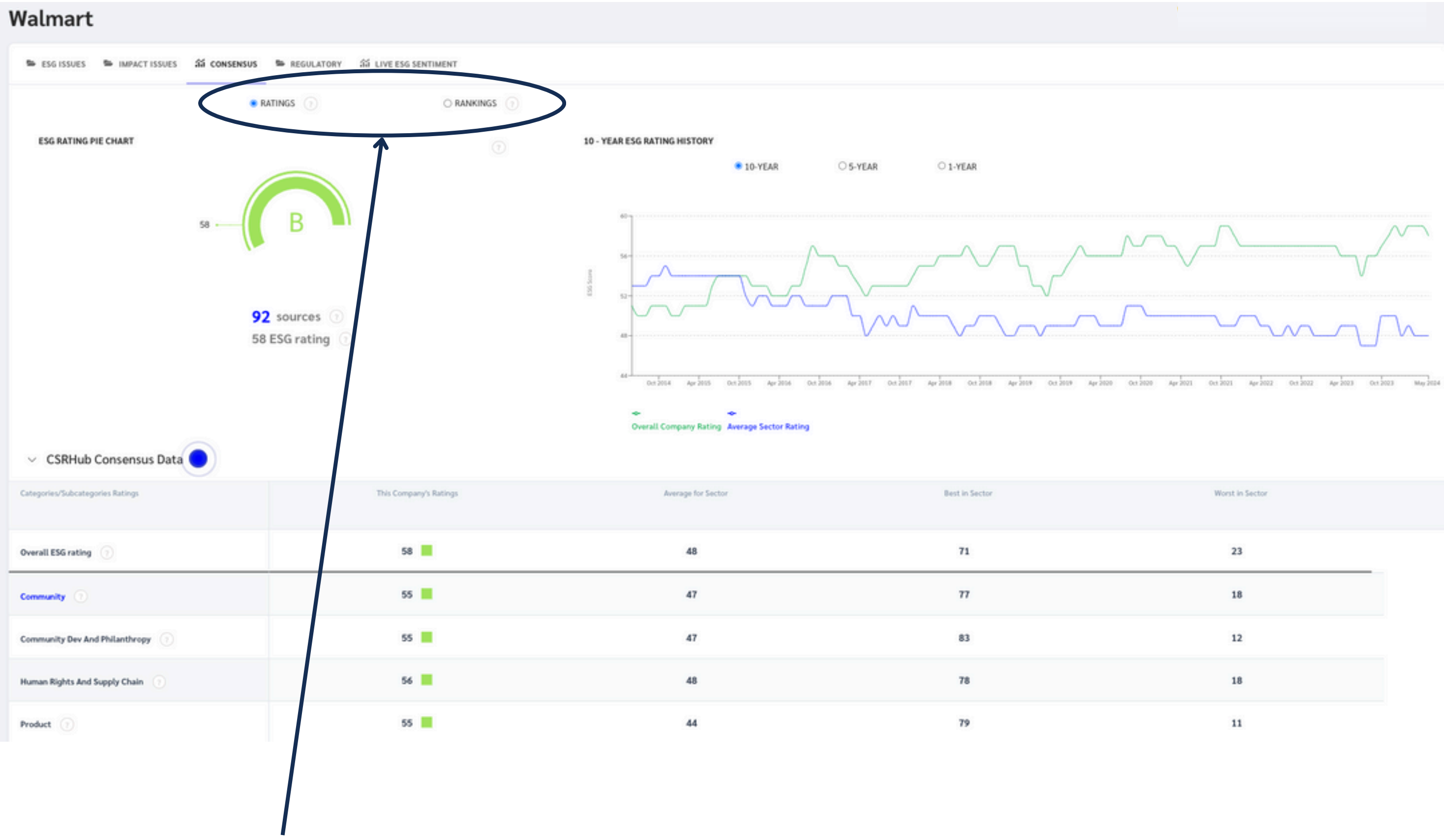
The below graphic illustrates an example of the steps to obtain the final CSRHub score from the initial data source. The example takes ‘Energy & Climate’ as the example subcategory and does not use actual values, it is merely illustrative and could not of course be used to reverse engineer the CSRHub product. Moreover, it is important to note that the conversion and normalisation algorithms, and the source weightings, are all dynamic – that is to say they are likely to alter over time as the model is continuously optimised.



4.7 Assigning of industry and country benchmarks

CSRHub gathers contact information, a description of the company’s business, and the location of its website to assign industry and country averages against which to benchmark the company. You can see how the industry benchmark rating has moved over time, alongside the movement in the company rating over time, on the Integrum ESG consensus tab.

4.8 Final rating example



‘Ratings’ show the absolute overall and category ratings for the company.

The ‘Percentile Rankings’ allow you to compare where a company’s ratings lie relative to other companies in the same industry and country. For example, if there were only 5 companies in the same industry with ratings 20, 25, 50, 55, and 80, the company with rating 20 is percentile ranking 0%, company with rating 25 has percentile ranking 25%, company with rating 50 has percentile ranking 50%, 55 has percentile ranking 75%, and 80 has percentile ranking 100.

Thus the consensus rating is absolute, and the ranking is relative to industry peers. The graphic below uses the company Walmart, from early 2024, as an example.

Here are the absolute 'ratings':

Walmart

Categories/Subcategories Ratings	This Company's Ratings
Overall ESG rating	58
Community	55
Community Dev And Philanthropy	56
Human Rights And Supply Chain	56
Product	54
Employees	57
Compensation And Benefits	56
Diversity And Labor Rights	55
Training, Health And Safety	59
Environment	61

Here are the relative 'percentile rankings':

Walmart

Categories/Subcategories Rankings	This Company's Rankings
Overall ESG ranking	88
Community	81
Community Dev And Philanthropy	81
Human Rights And Supply Chain	79
Product	80
Employees	75
Compensation And Benefits	74
Diversity And Labor Rights	70
Training, Health And Safety	81

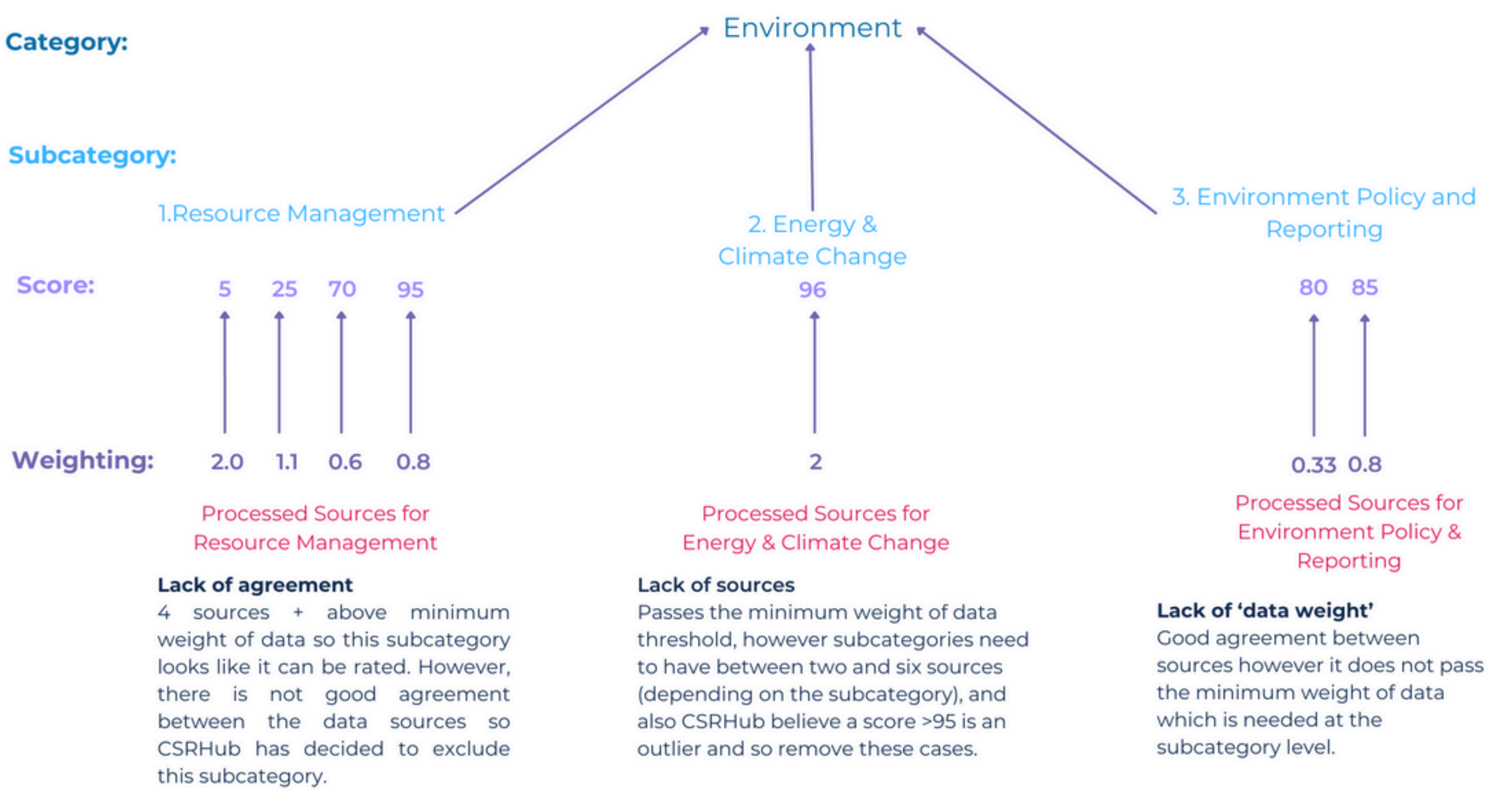
5. Rating Rules

5.1 Requirements to rate a subcategory

To rate a subcategory, CSRHub requires:

1. A minimum number of sources - between two and six sources for each subcategory (it ranges depending upon a variety of circumstances, but for instance CSRHub only requires 2 sources if they are major sources which provide many data elements, such as Ideal Ratings or Integrum ESG, but would need closer to 6 sources if they were not considered a major source).
2. A minimum amount of data - measured in terms of “data weight”.
3. An agreement between sources - if there is not good agreement between the data sources within a subcategory, or if the resulting score is extreme (e.g. 0 or 100), CSRHub may exclude the result. Extreme subcategory ratings above 95 or below 5will be filtered out, as CSRHub believe it is likely that such scores (near-perfect or completely bad) are underpinned by poor-quality data.

The graphic below illustrates three examples of where a subcategory score would be supressed on the grounds of insufficient overall data quality.



5.2 Requirements to rate a category

For a category to be rated, there must be an overall rating for at least one of the three subcategories within that category. CSRHub will suppress a category rating if it does not have enough weight in the subcategories underneath it to produce a reliable score.

A category must also not have an extreme score, as this is an indication of suspect assessments by the underlying sources. – The score thresholds at the category level are anything over 85 or below 15.

5.3 Requirements to achieve a full rating

To offer a full rating, CSRHub requires:

1. Ratings for all four categories
2. Ratings for at least 5 subcategories (so at least one category must have at least 2 rated subcategories within it)
3. Enough total 'data weight' across all subcategories
4. Enough total sources - the entity should have at least one broad, well-established source and at least three additional narrower sources, or at least seven narrow sources. Some sources report across several thousand companies, which enables CSRHub to normalise their input and remove any biases. By combining input from at least three other sources, CSRHub ensures that no single voice is the sole determinant of an entity's overall rating.

5.4 Requirements to achieve a partial weighting

Partial ratings exist when an entity does not have enough sources to receive a rating on every category, but there is sufficient data to publish ratings on some of the subcategories, or at least one category.

Companies will show as partially rated if they do not pass the requirements mentioned above to achieve a full rating but have some subcategories which can be rated. Partial ratings are included in CSRHub's average ratings for industries and countries, as well as the counts of the number of companies in a country or industry.

6. Conclusion

Integrum ESG chose to partner with CSRHub to provide clients with an ESG consensus rating, because it is confident that CSRHub has built the most comprehensive dataset and most scientific methodology for corporate ESG consensus signals.

Users of the Integrum ESG Platform with the appropriate subscription can see all this consensus data on the consensus tab of the company view. Users can toggle between the absolute ratings and relative rankings, change the time perjods, and review the subcategory scores to understand how consensus views a company's performance in each of the E,S and G categories. As is the case across the Integrum ESG Platform, a user can hover on any of the numerous 'tooltips' to see a simple explanation of the data point it refers to.

INTEGRUM ESG

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