

EUROPE'S ESG REPUTATION WINNERS

March 2023



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1. Introduction

Reputation has always been an important factor in business.

In recent years the importance of accurately measuring reputational risk has received greater attention as companies have sought a more scientific, informed approach. Environmental, Social and Governance (ESG) factors have been largely at the heart of that increased attention.

While no business was prepared for the ESG challenges that COVID-19 would pose, most might have expected 2022 to represent a return to 'normality' in some shape or form. But 2022 demonstrated that normality continued to be elusive, and European business reputation proved subject to volatility in the face of renewed political, popular and stakeholder scrutiny.

Consequently, the science and evolved understanding around reputation risk analysis is more important than ever.

BOLDT's 2023 ESG Reputation Winners Report is a snapshot of how European companies' ESG reputation fared in 2022. It illustrates how ESG has been challenged as both a set of business goals and as a concept in the previous year.

The report, which draws heavily on data generated by BOLDT's RISKR reputation risk analytics platform, applies rigorous techniques and data sets that make rapid, actionable and cost-effective reputation risk analysis practical for the first time.

While no analysis can ever give 100% of the picture, we believe **this report is the broadest and most rigorous analysis yet of reputation risk facing Europe's largest businesses today.**

2. Executive summary

2022 was a reality check for ESG in Europe.

The wisdom of attaching the pursuit of stakeholder value and investment decisions to overly-subjective definitions of ESG has become a political and divisive issue. This report attempts to bring objectivity and rigour to examining the implications of ESG for corporate reputation. By scrutinising every piece of content that has appeared in the public domain about each company, and tagging them by defined and commonly-accepted dimensions of ESG, we have built a picture of how sentiment around each topic is changing, and so how reputations are being impacted.

BOLDT has undertaken two previous reports into reputation strength and risk across UK companies. This year we expanded that focus across Europe and zoned in on ESG.

Companies that saw their reputations gain ground in 2021 across multiple aspects of ESG then saw that picture reversed in 2022, in what proved an exceptionally tumultuous year. Of the 1,080 companies we analysed, 600 saw their reputation for ESG suffer. 19 out of 20 of 2021's top-performing companies for ESG saw dramatic reversals in their sentiment performance.

Some sectors, many of which saw lower sentiment after a difficult 2021 as the pandemic continued to afflict business and society, were unable to rally effectively in 2022. 66% of infrastructure companies we assessed suffered deterioration to their ESG-related reputations. If you lost out, you lost out big - with an average deterioration of -15%.

Those in the healthcare sector - many of them companies that had assisted in providing relief from the pandemic - which improved their ESG reputations did so incredibly effectively: at a rate of 12.7% on average.

This report utilises data from our partner, Mettle Capital. Mettle uses artificial intelligence to mine enormous amounts of data on companies. This zeroes in on the ESG model - which assesses companies' reputations across standardised environmental, social and governance issues. The paper assesses sentiment performance across 2022, outlining the top 10 performers and improvers.

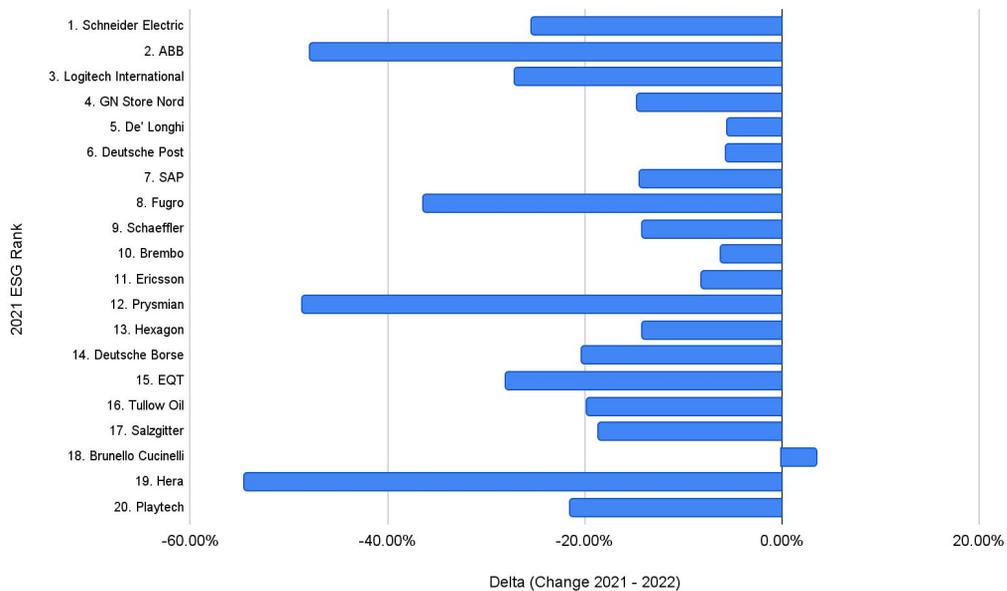
Big data offers a chance of understanding how corporate reputation changes over time. It also offers hypothesis testing, enabling companies to plan and act on relevant issues. Ultimately, corporate reputation is not built overnight. This report aims to demonstrate ways that big data can enable strategic, long-term corporate reputation development.



FINDINGS

3. How 2021's best performers fared in 2022

First we looked at overall combined sentiment levels across all ESG dimensions. This enabled us to see a broad assessment of how companies' reputations fared across all aspects of ESG over last year. Specifically, we looked at how the companies that had the highest combined ESG sentiment¹ in 2021 fared in 2022.



Only 1 top 20 companies from 2021 improved their ESG performance in 2022. Those that ended 2021 at the top went on to have a more difficult time in 2022. This graph depicts the top 20 performing companies across ESG at the end of 2021. The X axis represents how their ESG sentiment changed throughout 2022. All but 1 of 2021's top performers have a negative sentiment delta.

Be mindful that this graph shows the delta, not the final sentiment score. Despite a negative delta, all of these companies would finish 2022 with a positive ESG score. Yet a reversal of this scale across the board of the top 20, across a diverse set of sectors, suggests a broader shift in ESG reputation in 2022.

1 - WHAT IS SENTIMENT? The net sentiment score can be thought of as a ratio of positive to negative comment (after 'neutral' has been removed). So, a score of +33% indicates that there are twice as many positive to negative, and 50% = 3x, 60% = 4x. Sentiment is 'awarded' based on a specific comment, not an entire article or report. In other words, if an article quotes three people positively, but two negatively this is recorded as five data components. Many data providers simply record this as a single net-positive article, making for very uneven sentiment analysis. In the chart here the data shows net sentiment as a 180-day trailing average to smooth out day-to-day fluctuations and better show trends.

4. Top 10 improvers 2022

Our top 10 ESG improvers list shows the European companies that have seen the largest sentiment rise across ESG dimensions through 2022. For this list, we imposed a volume threshold to our sample size. This ensured there was enough content and conversation to make analysis meaningful and comparable.

The improvement percentage is an aggregate sentiment score of all 26 ESG drivers, with each weighted according to volume to ensure a truly representative value. We have also rounded values to allow easier information intake. Of 350 companies across Europe, the top 10 improvers across 2022 were:

1. Prudential – Financials (Insurance) – 54%

Prudential plc is a British multinational insurance company headquartered in London.

Prudential's sentiment improvement across ESG is impressive, beginning the year at 11% and ending it at 65%.

2. AstraZeneca – Health Care (Biotechnology & Pharmaceuticals) – 41%

AstraZeneca plc is a British-Swedish multinational pharmaceutical and biotechnology company.

Of all the top 10 improvers, AstraZeneca began the year with the lowest sentiment score at -40%. At the close of 2022, AstraZeneca's sentiment score had risen to 1%, an impressive performance that will be analysed in more detail in the case study section.

3. Evolution – Services (Casinos & Gaming) – 39%

Evolution Gaming is a Swedish-registered B2B solution provider. It develops, produces, markets and licences fully-integrated B2B online casino solutions to gaming operators.

Evolution began the year with 13% sentiment across its ESG profile, ending it at 52%.

4. Rolls Royce – Resources transformation (Aerospace & Defence) – 35%

Rolls-Royce Holdings plc is a British multinational aerospace and defence company. The company owns Rolls-Royce, a business established in 1904 that today designs, manufactures and distributes power systems for aviation and other industries.

Rolls Royce began the year with 13%. Ending at 48%.

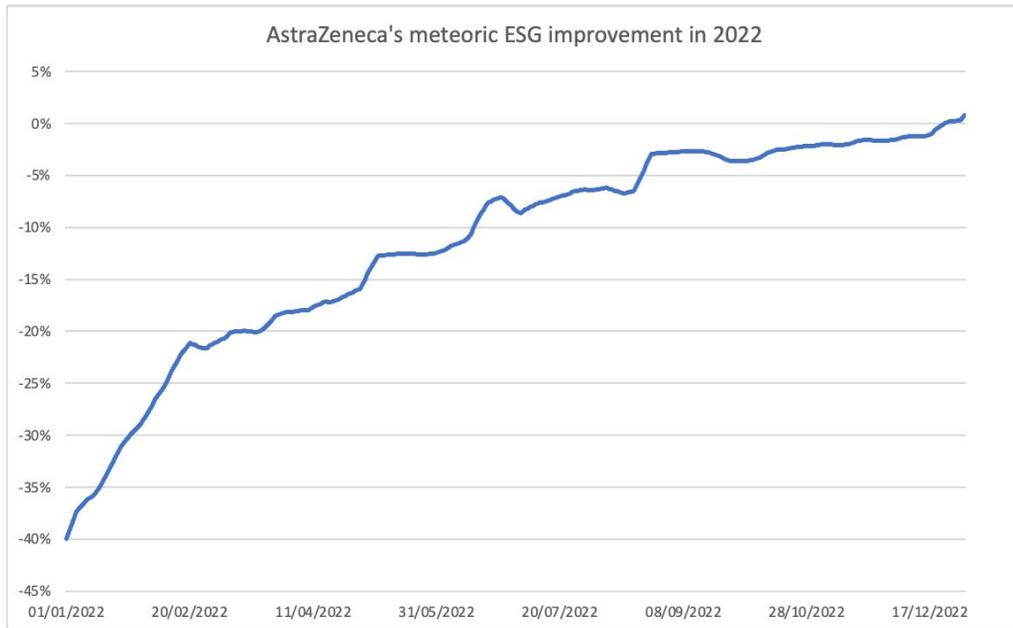
Top 10 improvers 2022 cont.

- 5. SKF – Infrastructure (Engineering & Construction Services) – 35%**
AB SKF is a Swedish bearing and seal manufacturing company. The company manufactures and supplies bearings, seals, lubrication and lubrication systems, maintenance products, mechatronics products, power transmission products, condition monitoring systems and related services globally.
SKF began the year at 21%, ending it at 55%.
- 6. Solvay – Resources transformation (Chemicals) – 34%**
Solvay is a Belgian multinational chemical company established in 1863, with its headquarters located in Neder-Over-Heembeek, Brussels.
Solvay began the year at -9%, ending it at 26%.
- 7. Unibail-Rodamco-Westfield – Infrastructure (Real Estate) – 34%**
Unibail-Rodamco-Westfield SE is a European multinational commercial real estate company headquartered in Paris. Its portfolio consists of retail property, office buildings, and convention centres within Europe and North America.
Unibail-Rodamco-Westfield began the year at 1%, ending it at 35%.
- 8. Euronext NV – Financials (Security & Commodity Exchanges) – 33%**
Euronext N.V. is a pan-European exchange. Traded assets include regulated equities, exchange-traded funds, warrants and certificates, bonds, derivatives, commodities, foreign exchange as well as indices.
Euronext NV began the year at 35%, ending it at 68%, the highest score of our improvers. This earns it the number 3 spot on the highest performers list.
- 9. Sartorius – Health Care (Biotechnology & Pharmaceuticals) – 32%**
Sartorius AG is an international pharmaceutical and laboratory equipment supplier, based in Germany, covering the segments of Bioprocess Solutions and Lab Products & Services.
Sartorius began the year at -1%, ending it at 31%.
- 10. Renault – Transportation (Automobiles) – 32%**
Groupe Renault is a French multinational automobile manufacturer established in 1899. The company produces a range of cars and vans, and in the past has manufactured trucks, tractors, tanks, buses/coaches, aircraft and aircraft engines, and autorail vehicles.
Renault began the year at 15%, ending it at 47%.

5. Case study: AstraZeneca

Introduction

We have included a case study on AstraZeneca here as the company demonstrated 'meteoric' improvement in reputation against the SASB's² ESG dimensions during 2022.



AstraZeneca earns a position in the top 10 improvers' section with a remarkable improvement from -40% ESG sentiment at the beginning of 2022 to around +1% by the end. While that may be only just net-positive, the scale of improvement is notable on account of the dramatic sentiment turnaround.

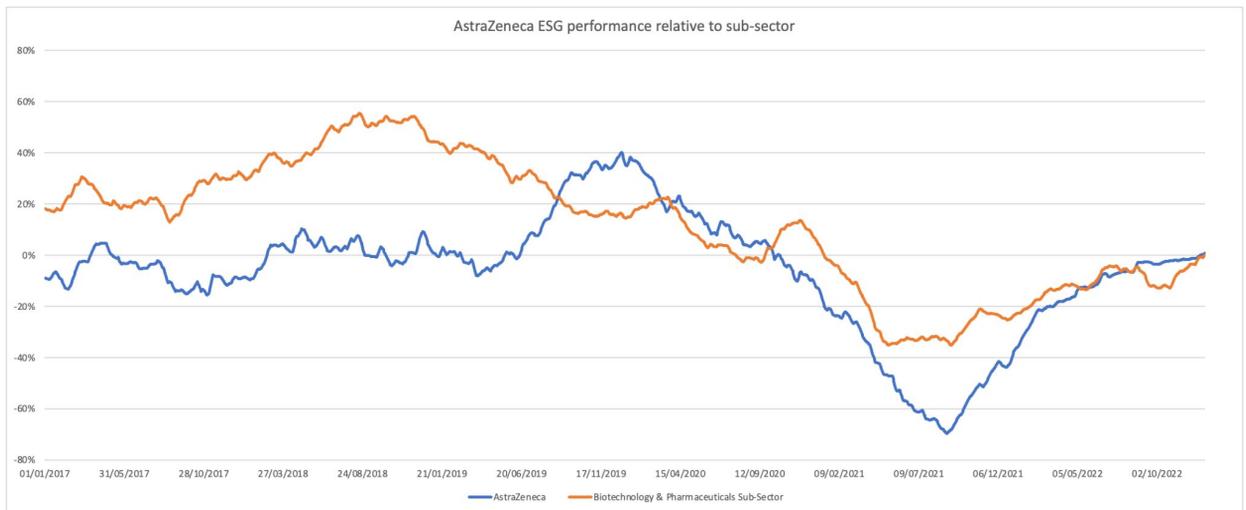
This case study seeks to provide some broader context as well as shed some light and offer potential explanations as to AstraZeneca's 2022 ESG sentiment improvement.

2 – SASB is the Sustainable Accounting Standards Board is a non-profit organisation, founded in 2011 to develop sustainability accounting standards. SASB standards are used by companies around the world in a variety of disclosure channels, including their annual reports, financial filings, company websites and sustainability reports.

Just as the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) have established International Financial Reporting Standards and Generally Accepted Accounting Principles (GAAP), respectively, which are currently used in the financial statements, SASB's stated mission "is to establish industry-specific disclosure standards across ESG topics that facilitate communication between companies and investors about financially material, decision-useful information.

SASB, and its framework and methodology, is at the core of the International Sustainability Standards Board (ISSB), launched in 2021.

The great blip of 2021-2022



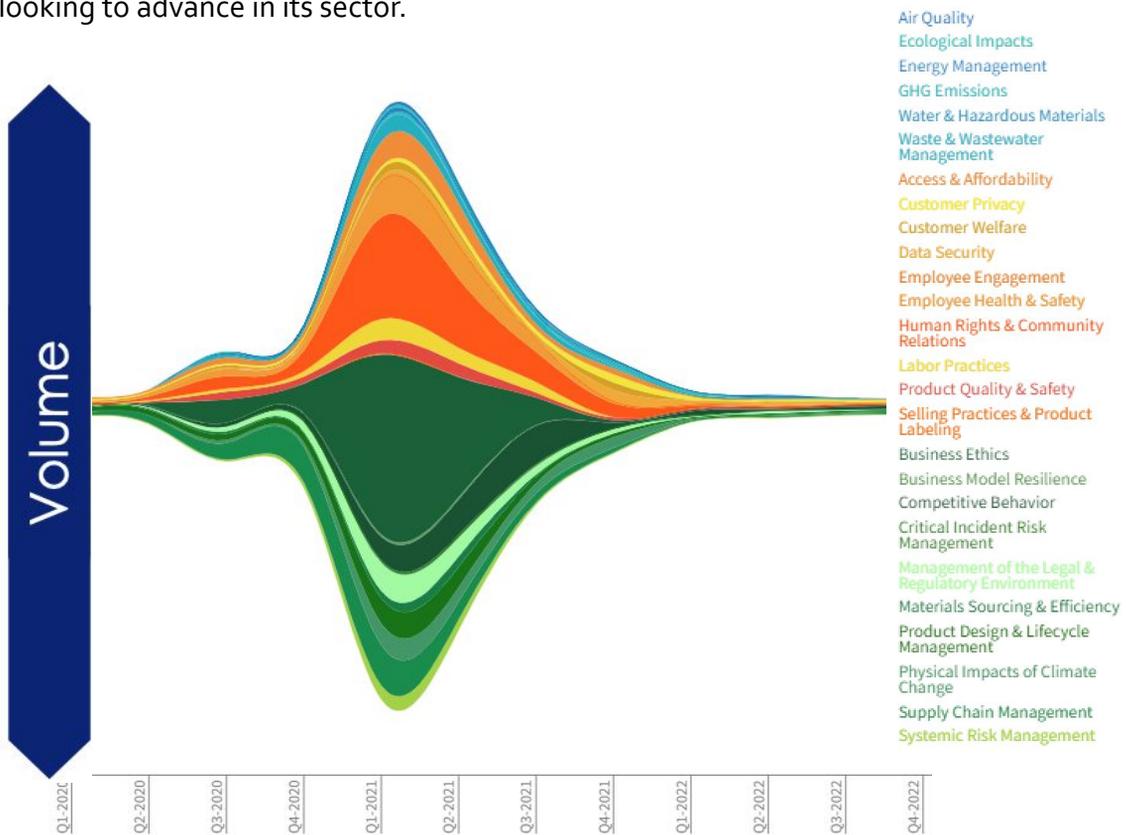
This graph shows AstraZeneca’s ESG sentiment performance alongside the broader biotechnology and pharmaceuticals ‘sub-sector’, extending back to the beginning of 2017. Five years of context demonstrates the way that AstraZeneca had broadly tracked sentiment with the sub-sector until the summer of 2021. A decline in sentiment beginning around the start of the pandemic is arrested by the sub-sector, whilst AstraZeneca continued to plummet to almost -70%.

Controversy regarding its COVID-19 vaccine and the debate about vaccination more broadly likely explains the dip in sentiment. AstraZeneca began 2022 at -40%, sharing low sentiment scores with Johnson & Johnson and Moderna at -50% and -56% respectively.

AstraZeneca and its peers both recovered in 2022. Contextualising AstraZeneca amongst the broader sector - as shown in this graph - allows one to see corporate reputation as both a long-term phenomenon as well as deeply entwined with broader sectoral shifts.

What matters most to AstraZeneca’s reputation

The data also highlights how important talking about the right things at the right time is for the development of corporate reputation. Understanding what these topics are and what the conversations about these topics look like is absolutely critical for any company looking to advance in its sector.



This streamgraph chart offers a look at material drivers over the last two years. The size of the streams indicates volume - in this case how much this company is featuring in conversations regarding this particular issue. Each lens of ESG is represented by a different shade: with E in blue, S in orange, G in green.

AstraZeneca’s streamgraph illustrates the sheer scale of conversation it featured in throughout most of 2021. As discussed in BOLDT’S 2021 report, business ethics was by far the most dominant and material driver throughout that year. The enormous reduction in volume across the board moving into 2022 is representative of the conversation ‘moving on’ from AstraZeneca, as vaccine debates evolved and COVID-19 faded. Such is the reduction in conversation that current volume for AstraZeneca is totally dwarfed in comparison.

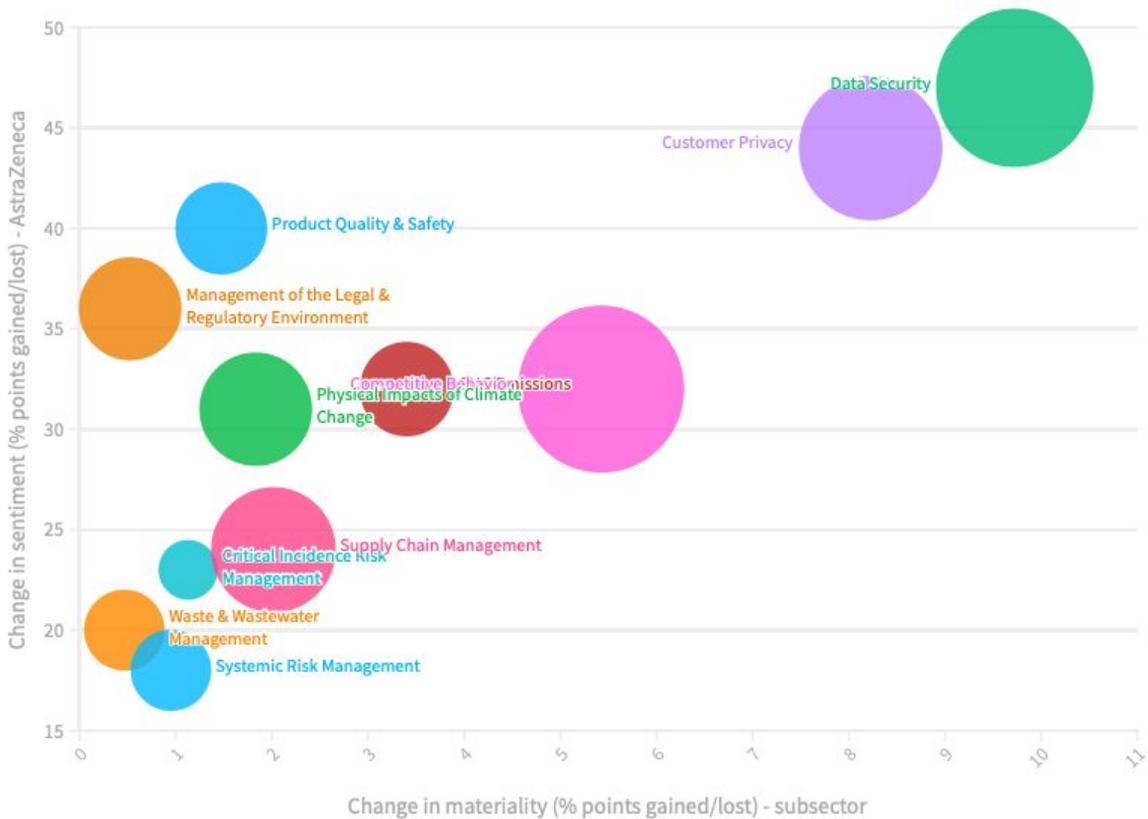
Visualising materiality in this way is a helpful tool in guiding what issues are most consequential to reputation and for how long.

Explaining AstraZeneca's recovery

So how might we go about explaining AstraZeneca's recovery from the Q3 2021 - Q3 2022 blip? Data-led capabilities enable us to develop a methodology which can explain changes in ESG sentiment based on relevant, or 'material' conversation.

What a company is talking about and how a company is *being* talked about, indicate why its sentiment score may be improving or declining. Whether a company is in the 'right' conversations will be conducive to sentiment performance.

The hypothesis is that if a company makes sentiment improvement on the most material drivers, its overall ESG reputation performance will improve.



This graph represents this dynamic for AstraZeneca versus the sub-sector, showing change in materiality across the sub-sector versus the change in 'sentiment' for AstraZeneca as a company. It helps to explain AstraZeneca's impressive 2022 performance across ESG.

The bubbles are drivers (or conversations) and their size indicates the volume of discussion involving AstraZeneca around the subject. This illustrates that the most material drivers to the sub-sector - data security, customer privacy, competitive behaviour and supply chain management - have all seen significant volume at high sentiment improvement.

Essentially, AstraZeneca has performed well on the issues most material to its sub-sector. It has been talking about the right things and is being talked about in the right way.

6. Top 10 performers 2022

Those companies that emerged from 2022 with the highest overall sentiment across all ESG dimensions were:

1. ATOS - Technology & Communication (Software & IT Services) - 73%

Atos is a European multinational information technology service and consulting company headquartered in Bezons, France and offices worldwide. It specialises in hi-tech transactional services, unified communications, cloud, big data and cybersecurity services. ATOS started the year at 42%, ending the year at an impressive 73%. At a 31% sentiment rise, it narrowly missed out on our top 10 improvers.

2. Michelin - Transportation (Auto Parts) - 69%

Michelin is a French multinational tyre manufacturing company based in Clermont-Ferrand. It is the second largest tyre manufacturer in the world behind Bridgestone and larger than both Goodyear and Continental. Michelin started the year at 44%, ending at 69%.

3. Euronext NV - Financials (Security & Commodity Exchanges) - 68%

Euronext N.V. is a pan-European bourse that offers various trading and post-trade services. Traded assets include regulated equities, exchange-traded funds, warrants and certificates, bonds, derivatives, commodities, foreign exchange as well as indices. Euronext NV started the year at 35%, with a 33% sentiment rise earning it eighth on the improvers' list.

4. DeLonghi - Consumer Goods (Appliance Manufacturing) - 67%

De'Longhi S.p.A. is an Italian small appliance manufacturer based in Treviso, Italy. DeLonghi started the year at 72%, making it the best performer of 2022 to have lost ESG sentiment (-6%).

5. Mondi - Resources Transformation (Containers and Packaging) - 66%

Mondi plc is a multinational packaging and paper group employing around 21,000 people with around 100 production sites across more than 30 countries, predominantly in Europe, Russia, North America and South Africa. Mondi started the year at 50%, rising 16% to 66% at the year's end.

Top 10 performers 2022

cont.

6. Deutsche Post - Transportation (Air freight and Logistics) - 66%

Deutsche Post AG, trading as Deutsche Post DHL Group, is a German multinational package delivery and supply chain management company headquartered in Bonn, Germany. It is one of the world's largest courier companies. Deutsche Post started the year at 71%, the other top performer to have lost ground in 2022.

7. Vertical Aerospace - Resources Transformation (Aerospace & Defence) - 65%

Vertical Aerospace is an aerospace manufacturer based in Bristol, England. It designs and builds zero emission, electric vertical take-off and landing electrically powered aircraft. Vertical Aerospace started the year at 53%.

8. Prudential - Financials (Insurance) - 65%

Prudential plc is a British multinational insurance company headquartered in London. Our top improver for 2022 began the year at 11%.

9. Lindt & Sprüngli - Food & Beverage (Meat, Poultry & Dairy) - 64%

Chocoladefabriken Lindt & Sprüngli AG, doing business as Lindt, is a Swiss chocolatier and confectionery company founded in 1845 and known for its chocolate truffles and chocolate bars, among other sweets. It is based in Kilchberg, where its main factory and museum are located. Lindt & Sprüngli began the year at 54%.

10. Volvo - Transportation (Automobiles) - 63%

The Volvo Group is a Swedish multinational manufacturing corporation headquartered in Gothenburg. While its core activity is the production, distribution and sale of trucks, buses and construction equipment, Volvo also supplies marine and industrial drive systems and financial services. Volvo began the year at 54%.

7. The most important conversations in 2022

The top 10 performers saw the greatest growth in their ESG sentiment across three key dimensions, namely:

- **Human rights & community relations** - the management of the relationship between businesses and the communities in which they operate, including, but not limited to, management of direct and indirect impacts on core human rights and the treatment of indigenous peoples.
- **Business ethics** - the company's approach to managing risks and opportunities surrounding ethical conduct of business, including fraud, corruption, bribery and facilitation payments, fiduciary responsibilities, and other behaviour that may have an ethical component.
- **Product quality & safety** - Issues involving unintended characteristics of products sold or services provided that may create health or safety risks to end-users.

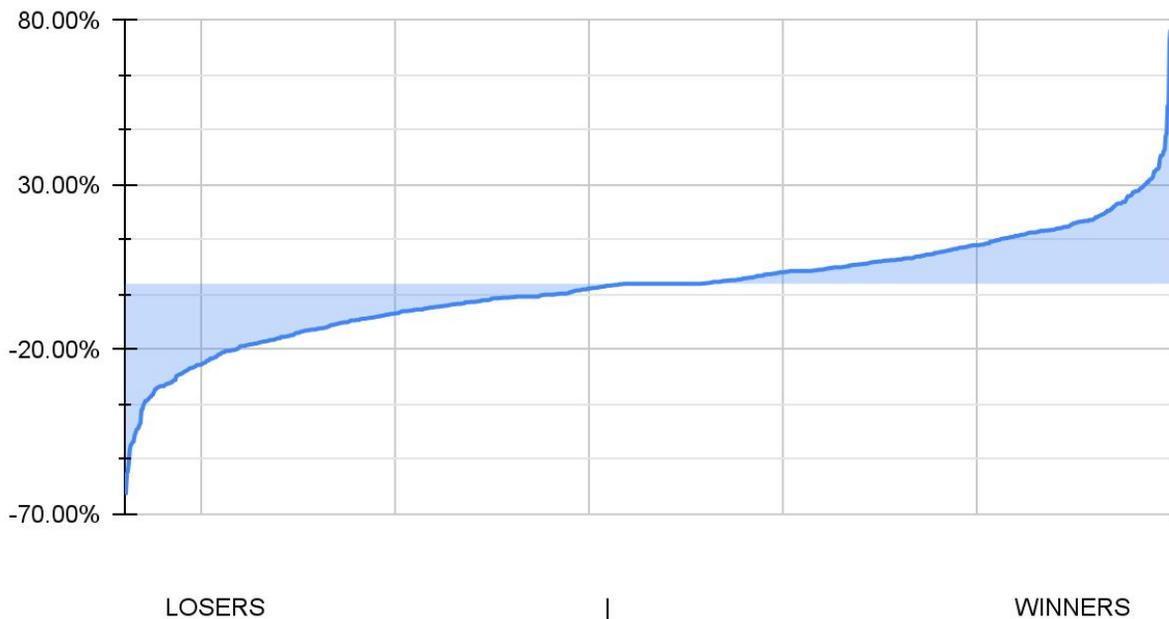
Despite performing best across all 26 ESG dimensions in 2022, three dimensions in which the top 10 trailed were:

- **Competitive behaviour** - Social issues associated with existence of monopolies, which may include, but are not limited to, excessive prices, poor quality of service, and inefficiencies.
- **Employee health and safety** - A company's ability to create and maintain a safe and healthy workplace environment that is free of injuries, fatalities, and illness (both chronic and acute).
- **Management of the legal and regulatory environment** - A company's approach to engaging with regulators in cases where conflicting corporate and public interests may have the potential for long-term adverse direct or indirect environmental and social impacts.

8. Performance across sectors in 2022

This section offers visualisations and brief explanations as to which sectors in 2022 saw the greatest growth to their ESG reputation versus those that saw the greatest recession. It also offers comment on how these shifts affected positive versus negative ESG reputation for sectors at the years' end.

Winners and losers - European ESG in 2022



The graph above plots all 1,080 sampled companies, irrespective of sector, on the X axis with their sentiment delta plotted on the Y axis. The graph looks balanced, but shows a 60/40 split of companies which lost ESG sentiment (shown on the left, below the line) versus those that built it (shown on the right, above the line).

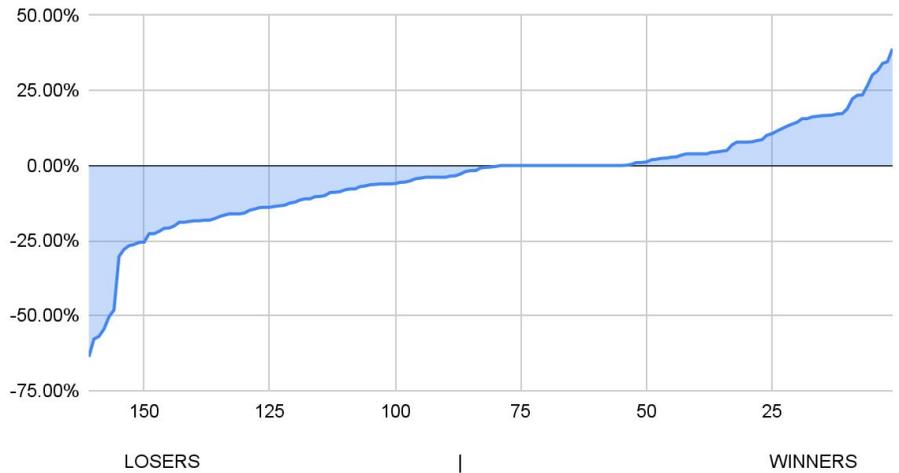
While more than half of companies lost out, and generally at a higher rate, than those who built sentiment, the graph also hides interesting nuances between different sectors. Sector performance in ESG sentiment varied exceptionally in 2022, and this section will cover those which fared best versus least.

Performance across sectors in 2022

cont.

Infrastructure - the biggest losing sector

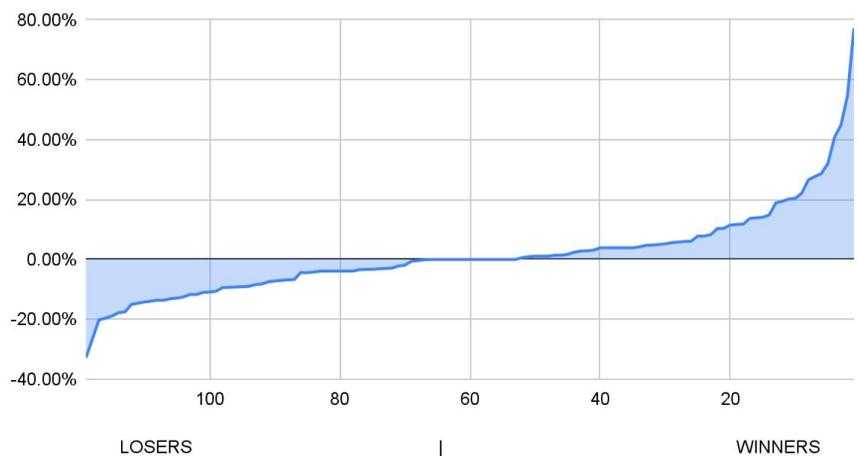
Our data set included 161 companies in the infrastructure sector that offer a range of services, from gas, electric and water utilities, distributors, real estate, engineering and construction and waste management.



This graph plots all of these companies on the X axis, with their sentiment change from 2021 to 2022 (delta) on the Y. It illustrates a reversal in fortunes for the majority of companies. While 63% of companies began the year with a positive ESG sentiment, the year would close with this number falling to 55%. Perhaps unsurprisingly given energy controversy in Europe, the Gas Utilities & Distributors sub-sector within infrastructure lost out the most (an average of -18%).

Healthcare - the biggest winning sector

This graph plots 119 health care companies on the X-axis, with their sentiment delta on the Y. It illustrates that those who built a positive ESG reputation in 2022 did so effectively. If you won, you were likely to win big.



Furthermore, the sector as a whole did improve. While 40% of these companies began 2022 with a below-zero ESG sentiment rating, by the end of the year this would reduce by 10%. Greatly bolstered by the end of the pandemic and swift response to the situation in Ukraine, the Medical Equipment & Supplies sub-sector would greatly improve their ESG sentiment in 2022 at an average of 21.7% improvement.

WHAT TO CONCLUDE

Evaluating reputation and understanding the risks around it is critical in making decisions. Here are some thoughts about using data to improve that understanding of reputation risk and inform action.

9. 2022 has been a reality check for ESG-related reputation

ESG in 2022 faced challenges both as a corporate 'valuation' concept and as a set of business goals.

The expectation that post-COVID could represent a return to some form of normality for business was shattered at the beginning of the year, with social and governance aspects of ESG coming directly under scrutiny as a result of Russia's invasion of Ukraine.

Furthermore, the concept of ESG has come under increasing interrogation in the West, politicised and critiqued across the political spectrum be it as a 'greenwash' or 'woke' agenda. Coming to terms with this sort of paradigm shift has presented new challenges for business - challenges which have required new methods to adapt to.

European businesses in 2022 have not so much failed to deliver on ESG goals as they have simply been unprepared for the drastic changes in expectations from stakeholders as to what an ESG agenda entails. Data can demonstrate how conversations move exceptionally quickly, and issues once well-understood by business prior to the pandemic have transformed dramatically. The dramatic reversal of reputation fortunes for 2021's most successful ESG performers are testament to this fact.

As some companies suffered, however, others found their feet and demonstrated remarkable comebacks in their ESG sentiment improvement. We focused on AstraZeneca in this report as an example of a company with a high profile, who had received highly publicised exposure in 2021 and came off worse from it. AstraZeneca matched much of the healthcare sector in experiencing a serious 'blip' that year yet recovered enormously thanks to messaging on issues most material to the market.

The use of data can not only illustrate how reputation has developed in the past, but also how it might be developed going forward. Planning corporate reputation is difficult and far from an exact science, but big data offers the chance to mine and 'listen' to an enormous amount of information, and decipher exactly what the issues are that are consequential for your business.

10. How can you improve ESG reputation risk understanding?



REVIEW

1. **What measures, if any, you have in place to monitor and measure reputation risk and performance**



IDENTIFY

2. **The potential strengths and vulnerabilities of the company**

3. **Your key pressure points** (internal and external issues, promises, behaviours) on which the perceptions of these stakeholders are formed

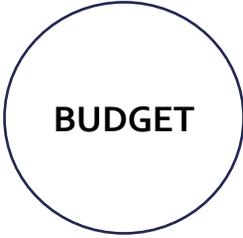
4. **Emerging trends** that demand attention, and conversely issues that can be deprioritised

5. **Your key stakeholders** (the owners of your reputation), and better understand their perceptions and how those perceptions are made



ANALYSE

6. **Analyse and evaluate specific risks** – internal and external, to include horizon scanning for potential/upcoming flashpoints. Considering the creation of bespoke 'drivers' that enable big data machines to identify issues which go beyond standard ESG models



BUDGET

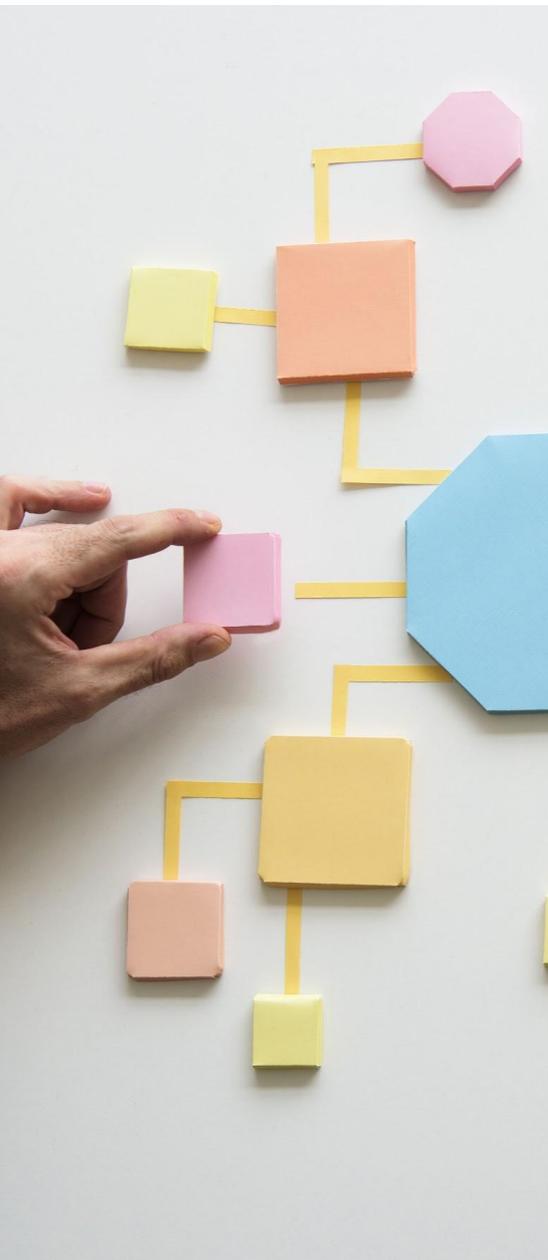
7. **Establish best practice for understanding risk across a business, or sector,** in charting reputation as part of an industry change initiative or commitment
8. **Use evidence-based insight into the reputational impact of corporate communications** to inform decisions on PR campaigns, change programmes and communications budgets during and beyond the COVID-19 crisis



REPORT

9. **Create new, detailed and intelligent management information** that can monitor and measure these risks. Standard, robust and actionable data supports corporate boards and business units with developing evidence-based strategy and decision making – and in turn will enable/ encourage board level discussion of risks and mitigation strategies
10. **Systematic competitor and industry analysis** covering brand, corporate and purpose-led communication, will be more important than ever
11. **Consider where responsibility for risk should sit** within the company e.g. systems, committees, individuals
12. **Consolidate multiple and sometimes overlapping reporting and data feeds** covering reputation and risk across different functions and geographies

11. Methodology and acknowledgements



For this report we worked closely with our partners at Mettle Capital, who supplied us with sentiment and materiality data on over 1000 European companies. We sought to identify the top 10 companies by improvement (those with highest sentiment delta) in 2022, as well as the general top 10 by performance (those who closed 2022 with the highest sentiment score).

We also assessed the volume of conversations around each driver in order to learn which were most material to reputational change throughout the year. Looking beyond the top 10 lists, we split the 1080 companies by sector and analysed how sentiment performance varied. We also looked at how materiality changed by sector: which conversations were more salient to reputational change. With this information, we were able to narrow down which drivers had been most consequential to reputation change irrespective of sector.

While we sampled 1080 companies for our big data look, we chose to impose a 'volume threshold' on our top 10 lists in order to generate the most relevant results - in other words, there needed to be enough content and conversation around them to make analysis meaningful and comparable.

As with any analysis performed with sets of curated data and what in the analysts' view are optimal techniques, we acknowledge that other analysis performed in different conditions and with different methods may yield different results. We believe the data sets used are definitive and methodology is meaningful, but no analysis of reputation can ever be utterly conclusive.

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Report data analyst:

Andrew Tucker PhD, Chief Data Officer, Mettle Capital

Andrew is an ESG, reputation & trust research expert. He pioneered the use of machine learning to structure and analyse large unstructured public conversations around enterprise risk management.

Appendix: about the data

Our data set

The RISKR data set used by BOLDT dates back to 1st January 2010 and is scored daily for sentiment across all the drivers where relevant conversation is found. Unlike many other providers of ESG analysis, we do not calculate proxy scores to fill gaps in coverage.

Data is updated daily. The data set currently comprises 5,300 companies, 11 sector benchmarks, 77 sub-sector benchmarks, and 15 country benchmarks - with more being added every month. 1.7 trillion 'articles' have been analysed, resulting in 1.2 billion 'conversations' referring to at least one company in the database, and 400 million 'conversations' relevant to the ESG, Trust and/or Reputation models.

Data sources include traditional, social, and trade media in local language. Essentially, everything on the public Internet.

Sentiment analysis

Each conversation is scored for sentiment – positive, neutral, negative. Sentiment analysis is performed at a fragment level to ensure accuracy and entity recognition. Sentiment is applied using Natural Language Processing (a form of Artificial Intelligence).

The key number, 'net polarised sentiment', is calculated as the sum of positive conversation minus the sum of negative conversation, divided by the sum of positive and negative conversation. Alternative sentiment calculations can be performed as required e.g. isolating positive and/or negative, or negative comment as a proportion of all conversations.

Weighting media sources

We do not subjectively weigh media sources but instead use 'discovered weighting' of relevant volume. If a story appears on the front page of the Financial Times, it will be commented on and referred to much more than a single blog post from the same journalist. By capturing and curating all the relevant conversation, the volume of the Financial Times article will 'weigh' more than the blog post in the net sentiment score.

Data quality

Weekly data collection is reviewed by human analysts for quality control, with regular reviews of emerging conversational trends at subsector level that are then fed back to improve searches.

Third party data

Data from third-parties can be incorporated either through an API feed, or as a simple CSV file. The former can include sources such as Glassdoor. The latter might be the results of a regular stakeholder survey or an in-house employee sentiment analysis.

Appendix cont.

Our data partner

Mettle Capital was founded by Dr Andrew Tucker, a sustainability data scientist, and Rufus Grantham, a capital markets and sustainable finance specialist, in 2019. BOLDT and Mettle Capital partner closely on client engagements, and work together as a team so that clients get the full benefit of our shared expertise.

Unlike a market research-centric approach RISKR doesn't just provide a platform that can assess the situation today. RISKR offers an historical data set that enables patterns to be seen clearly over time, and which also brings a predictive element to its insights capabilities.

This means that reputation data can be interrogated. We can ask questions. And rather than having to go away and research the answer, or acquire more data, the information that will answer those questions will already reside within the platform.

Breadth | 'Trend is our friend'

With a data set dating back to 2010 we can run trailing averages for 'polarised' sentiment and volume, which means we can highlight and 'predict' where deviations from the mean indicate upside and downside risks.

This provides a far more valid and ultimately accurate approach than 'one-off analysis' typically offered by market research providers, which relies on often subjective prior risk identification to highlight what you're looking for. And it can only look backwards over time.

Depth | 'From bird's eye to worm's eye'

We can identify patterns in the data and then drill down to individual drivers and individual content sources, through cross-indexing and specific searches. We can compare your reputation against your industry peers, against individual competitors or indeed any other company or sector where there may be valuable lessons to learn. In short, market research-led approaches can give you a 'worm's eye', but can't explain which worm to focus on or why.

Precision | 'There's a difference between a model and a collage'

With RISKR's 3 proven models, we know that our analytical approach applied to the underlying data sets works. Other providers build ad-hoc analytical 'models' on a project by project basis, based on which of their services you chose to buy. We have a standard platform-centric approach to definitive data analysis, and then tailor the stakeholder set and information provision by client.

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