EBOOK

Using AI for **ESG** Investing

ACCERN

Synopsis

This e-book discusses the applications of using Natural Language Processing (NLP) across ESG investing, the challenges financial teams face in identifying ESG scores, and how no-code AI enables a more efficient, cost-effective, and quicker solution for identifying corporate ESG practices.

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Introduction

For many people, investing is about more than growing wealth and preparing for their personal future. Today, investors are also looking to support companies with good business practices that make a positive impact on society and the world. Environmental, social and governance (ESG) investing, also known as sustainable investing, is a strategy that investors use to invest their money in companies that practice habits that make the world a better place. Research on the returns of socially responsible companies compared to their counterparts has shown that companies with strong ESG mandates are not only less volatile but also provide higher, long-term returns. Investors are increasingly interested in rewarding companies that value long-term gains and social impact over near-term profit at all costs.

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Understanding ESG Investments

ESG is an acronym that stands for Environment, Social and Governance. Investors are increasingly interested in these three factors as they can give a well-rounded perspective about a company's long term potential. For example, ESGs can tell whether a company is providing positive impact to society and the environment by how the company treats their shareholders, if they're making their products with sustainable materials, how they're addressing issues like climate change, gender pay gap, diversity and inclusion, and more. Investors who are interested in ESG investments will want to know:

- What is the company's stance on social issues?
- How does the company treat its employees?
- How diverse is the company's workforce?
- What impact does the company have on nature and the environment?
- Is the company run ethically?

While the practice of socially responsible investing gained popularity in the 1960s, negative screening or exclusionary investment strategies dates back to the 1900s. Investors excluded companies that practiced unethical behaviors such as tobacco production or involvement in the South African apartheid regime from their portfolios. Ethical investment approaches have transformed over time with globalization and technological innovation and as environmental, social, and governance changes took place across the world.

In 2004, former UN Secretary General Kofi Annan encouraged over 50 CEOs to incorporate ESG standards into capital markets. A group of institutional investors from 12 countries came together to create standards for responsible investing, resulting in the formation of the Principles for Responsible Investment (PRI). The PRI were adopted by the New York Stock Exchange as the Sustainable Stock Exchanges Initiative (SSE) in 2006 and are six criteria to promote responsible investing and guide companies towards better ESG mandates.

The Principles for Responsible Investments

1. We will incorporate ESG issues into investment analysis and decision-making processes.
2. We will be active owners and incorporate ESG issues into our ownership policies and practices.
3. We will seek appropriate disclosure on ESG issues by the entities in which we invest.
4. We will seek appropriate disclosure on ESG issues by the entities in which we invest.
5. We will work together to enhance our effectiveness in implementing the Principles.
6. We will each report on our activities and progress towards implementing the Principles.

— SOURCE: UNPRI

Ethical considerations and alignment with investor values continue as common motivations of ESG investment today, but ESG investments continue to grow and evolve rapidly. Many investors today place importance on incorporating ESG factors into their portfolios as much as they do on financial analysis.

Studies also show that companies that can prove strong ESG mandates are less volatile and provide higher, long-term gains. Deutsche Bank's Asset and Wealth Management division showed a 62.5 percent positive correlation between ESG and corporate financial performance, while only 10 percent of results were negative.

The COVID-19 pandemic has only propelled the topic and need for ESG investing by highlighting the importance of rewarding impact-driven companies that pursue sustainable goals. The pandemic has also shown that ESG stocks are actually more resilient during bear markets. According to a recent report by Morningstar, sustainable equity funds outperformed their peers during the initial phase of the COVID-19 pandemic in February and March of 2020. By mid-March, the returns of 66 percent of sustainable equity funds had ranked in the top 50 percent of their respective categories.

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The Shift to ESG and Sustainability

According to report by Coldwell Banker, by 2030, Millennials will inherit over $68 trillion from their Baby Boomer parents, making them the richest generation in American history. This will represent the largest intergenerational wealth transfer in history, and companies and investors are preparing for a growth in sustainable investments as part of the investing landscape.

In a 2017 report by Morgan Stanley's Institute for Sustainable Investing, a survey showed that 86 percent of Millennials are interested in sustainable investing. Companies or funds that aim to generate high returns, while pursuing positive social and/or environmental impact have twice as much likelihood to attract the overall investor population. Furthermore, 90 percent of Millennials have expressed interest in a sustainable investing option within their 401(k) plans.

So why are Millennials more attracted to sustainable investing than Baby Boomers?

Several factors impact Millennials' views of sustainability. For one, Millennials tend to be less connected with formal institutions, including a distrust of the media, large corporations, the government, and political and religious groups. Perhaps this skepticism plays a role in their desire to hold companies accountable to their public actions, rather than assuming corporations are acting inline with morals and values. Another factor is that Millennials will have a more well-rounded education and greater exposure to financial hardships than the previous generation, with student loans, credit card debts, climbing the corporate ladder, and so on.

Additionally, Millennials have experienced more social and climate issues than their Baby Boomer parents and believe they can influence positive change. Climate change, the gender pay disparity, diversity and inclusion within the workspace, carbon footprint, and supply chain issues are just a few of the issues that stand out amongst the Millennial generation. 75 percent of Millennials believe that their investments can influence climate change and 84 percent believe that their investment can help lift people out of poverty.

However, it's not just Millennials that are encouraging ESG investing. Corporate social responsibility and the belief that companies have an obligation to improve social and environmental issues is now a common theme that seems to be staying for good. According to a study by Cone Communications, 87 percent of Americans said they'd buy from a company that advocated for an issue they cared about, and 76 percent said they would boycott if they found out a company supported an issue contrary to their beliefs. Furthermore, another research report shows that 94 percent of the Generation Z population believe that companies should help address social and environmental issues.

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Criteria for ESG investing

ESGs serve as a framework to help investors identify companies with social and environmental values that match their own and to incorporate these companies into their portfolios. The screening process includes identifying companies that have built strong social responsibility tactics, sound environmental practices, and ethical governance initiatives into their everyday operations and corporate policies. The ESG criteria gives investors insight into a company's commitment (or lack of commitment) to ethical practices.

The three ESG components

Environment

This component focuses on a company's impact on nature and the environment and its ability to contribute positively to the environment while mitigating risks that could harm it. This can include a company's carbon footprint, energy efficiency, conservation of water and other natural resources, treatment of animals, and waste management. It can also include whether the company uses toxic chemicals in its manufacturing processes and supply chain.

Research has shown that companies that practice sustainability and "go green" can actually reduce operational costs. For example, according to a study by Energysage, commercial properties can reduce their electricity bill by 75 percent by installing solar panels.

A few things to look for to determine a company's **environmental** impact include:

- Carbon footprint
- Treatment of animals
- Waste management
- Water usage
- Energy efficiency
- Resources used in manufacturing processes
- Toxic chemical usage

Social

A company's impact on society within its organization and broader community resonates with large groups of people. There are various causes that make up social impact, but they all seek to improve the quality of life. Social factors include LGBTQ+ equality, racial diversity in the staff and within the executive suite, inclusion programs, hiring practices, company culture, and even how a company treats its customers, suppliers, employees, and the local community. Additionally, it looks at how a company promotes and supports social good beyond its sphere of business.

Since there are no laws forcing companies to disclose social impact performance, how can investors interested in ESG find out whether a company is really socially responsible? The Global Reporting Initiative and Principles for Responsible Investment provide a respected framework to evaluate whether companies have strong social mandates. ESG investors often look to sustainability reports by the GRI and PRI as both go beyond how a company addresses environmental issues to include information related to employees, suppliers, and the community.

Another way to identify which companies have good social standings is to keep up with respected lists and rankings by respected publications including Fortune's 100 Best Companies to Work For and Forbes' Just 100 Companies Leading the New Era of Responsible Capitalism. Media reports on companies' lobbying efforts related to social justice issues as well as how companies treat their employees are also relevant. Lastly, site likes Glassdoor provide first-hand insight into how a company and its management is viewed by its potential, current, and former employees.

A few things to look for to determine a company's **social** standings include:

- Employee turnover/churn and employee engagement
- Past performance on consumer protection such as lawsuits, product recalls, and regulatory penalties
- Employee training and development
- Friendly and responsive customer service
- Diversity and inclusion in hiring and in promotions
- Ethical supply chain sourcing
- Public stance on social justice issues

Governance

This component is focused on how a company is managed by top executives and their board of directors, including how they respond to the interests of the company's various stakeholders. Governance includes issues surrounding executive pay to diversity in leadership and how well that leadership responds and interacts with shareholders, employees, and customers. Many ESG investors consider executive compensation as a primary focus- whether executives favor multi-million-dollar bonuses while imposing a salary freeze in effect for other employees, etc. A company with good corporate governance is backed by a strong board of directors that relates well to various stakeholders. It runs its business effectively and the management aligns team's incentives with the company's success.

Good corporate governance consists of honest financial reporting "and financial accounting transparency", avoiding conflicts of interests, diverse board members and executives, and an inclusive work culture. Details can be found in sustainability reports by the GRI and PRI, but investors should also read annual proxy statements from the companies in which they own shares. Additionally, the SEC offers proxy statements, in which investors can search for filing type DEF 14S (definitive proxy statement), which is required under Section 14(a) of the Securities Exchange Act of 1934. These statements helps shareholders understand corporate governance practices.

To determine a company's Governance initiatives, a few things to look for include:

- Top executives' compensation and bonuses
- A diverse board of directors and executive management
- Potential for conflicts of interest for board members
- If a company's chairman and CEO roles are separate
- Transparency with shareholders and relationship between shareholders
- Relationship with U.S. Securities and Exchange Commission (SEC) and other regulatory bodies

According to a study by S&P Global, companies that rank below average on ESG factors are prone to mismanagement, risk, and have less opportunity to capitalize on business long-term. The criteria for ESG investing goes well beyond the three-letter acronym. Environmental, Social and Governance actions are evaluated to analyze how a company serves all its stakeholders including but not limited to employees, customers, shareholders, communities, and the environment.

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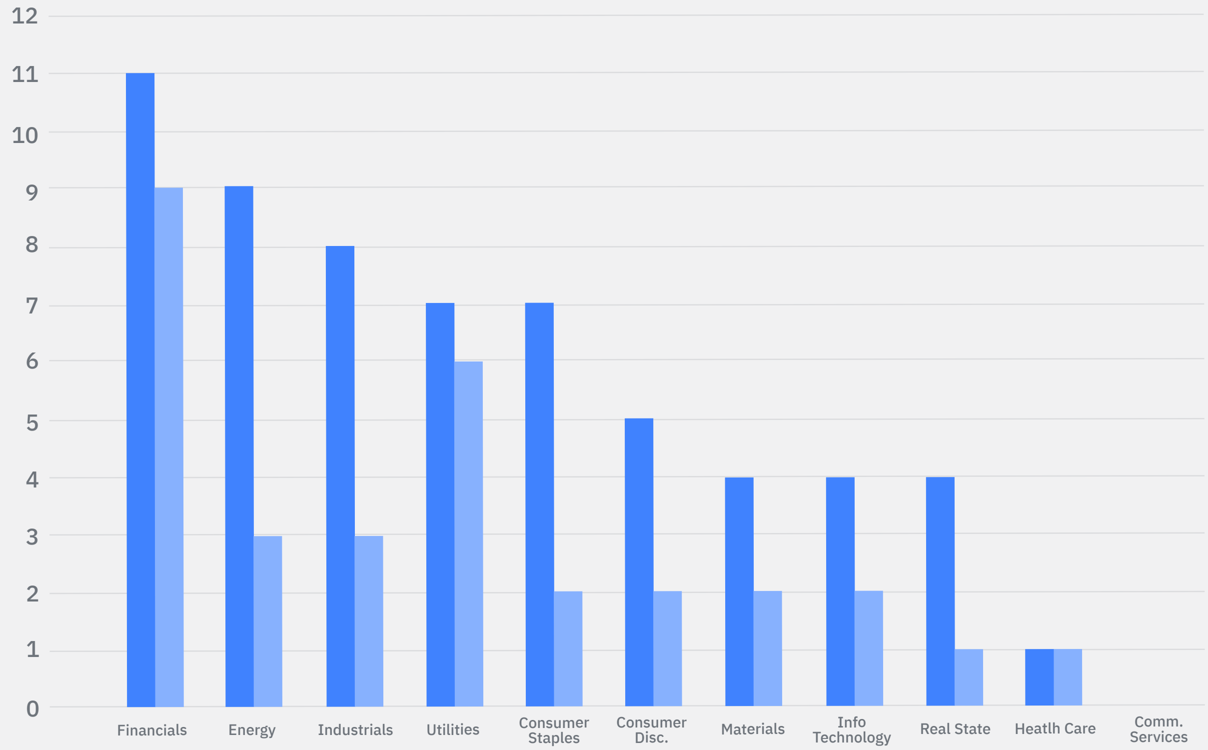
ESG Investing - The Future of Investing

Two decades ago when the Global Reporting Initiative launched its ESG guidelines, only a handful of companies disclosed their environmental performance. Now 93 percent of the world's largest corporations by revenue report ESG data. In Q3 2019, FactSet reported a 29 percent increase in S&P 500 companies reporting "ESG" on earnings calls. From Q1 to Q2 in 2020, FactSet reported a 100 percent increase in S&P 500 companies citing "ESG" on earnings calls. Companies are realizing the value of reporting ESG information, as investors and institutions are holding companies accountable with ESG criteria and scores.

"Companies in S&P 500 Citing ESG" on Earnings Calls: Q2 2020 VS Q1 2020



	Financials	Energy	Industrials	Utilities	Consumer Staples	Consumer Disc.	Materials	Info Technology	Real State	Heatlh Care	Comm. Services
Q2 2020	11	9	8	8	7	5	4	4	4	1	0
Q1 2020	9	3	3	3	6	2	2	1	1	1	0

Up until recent years, business leaders have held a misleading perception that one can have profits or sustainability, but not both. Historically, "environmental" products failed in the market as it provided low quality, expensive products which delivered low returns for companies. Today, this thought process has been reversed as analysis consistently shows that environmental sustainability-related operations improves resource efficiency, unlocks opportunities for process and logistics savings, and provides significantly higher financial returns. For example, a hospital report shows that reducing energy consumption and waste produced could save hospitals nearly $15 billion over a decade.

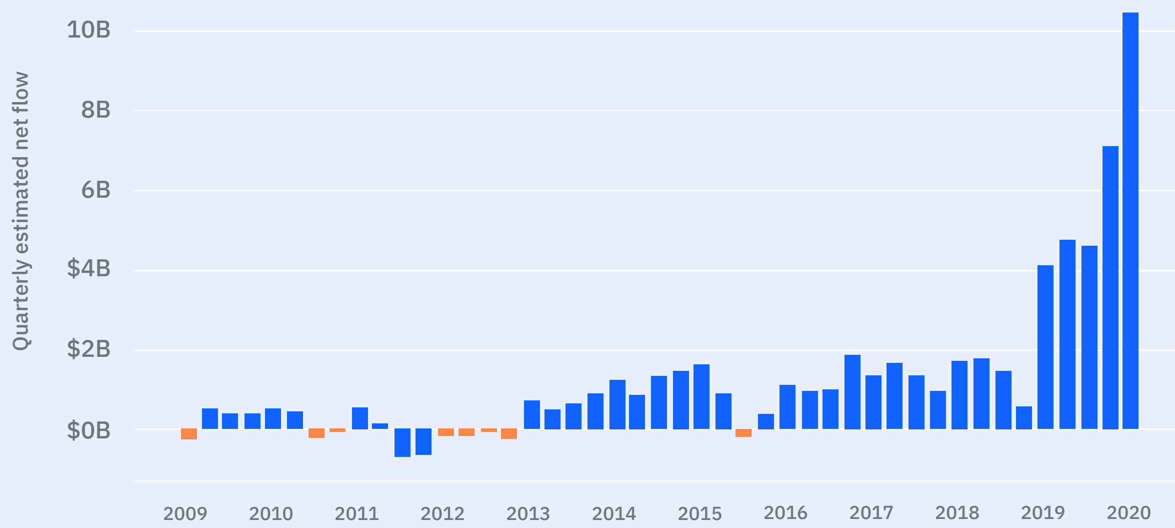
With the Global Reporting Initiative, investors are now able to track high ESG performers. Besides ESG showing a company's commitment to doing good for society, recent analysis shows that ESG investing can yield equal or higher returns than traditional investments. Furthermore, improving operations through better management of natural resources like energy and water, as well as minimizing waste can result in significant cost reductions. ESG investing can also provide stable and sometimes even higher returns and can even reduce volatility within investors' portfolios. For example, according to study done by J.P. Morgan, companies with a higher gender diversity had slightly better equity returns and lower volatility.

Some of the largest and most influential institutional investors and asset managers are leading the powerful movement towards adding ESG standards to their investment criteria. As leaders in capital, these financial institutions recognize the need to consider whether the companies they invest in today will maintain a strong relationship with customers and extended communities as environmental and social challenges increasingly impact the way we live and work. They also recognize that companies that commit to addressing social and/or environmental issues will experience greater business opportunities in the future, and will therefore achieve higher returns for long-term shareholders.

How ESGs are outperforming conventional funds:

Morningstar's 2020 analysis, *"Sustainable Funds Outperform Traditional Peers in 2020"* found that 11 of 12 sustainable funds beat the S&P 500 index fund, led by IQ Candriam ESG US Equity ETF (IQSU) and Calvert US Large-Cap Core Responsible Index (CISIX), both of which are based on proprietary ESG indexes. Throughout 2020, despite the global pandemic, sustainable index funds had a positive yield.

Sustainable funds see record inflows in first quarter



SOURCE: Morningstar Direct, as of 3/31/2020. (ESG Integration, Impact, and Sustainaible Sector funds es defined in Sustainable Funds U.S. Landscape Report,2018. Includes liquidated funds; U.S. Landscape Report, 2018. Includes liquidated funds; does not include funds of funds.

The relatively better performance of ESG funds is tied to their focus on companies with better ESG scores and their low-carbon alignment. In 2020, sustainable funds revealed that investing with an emphasis on positive ESG criteria can produce good returns even in an uncertain economic environment.

Like any investment strategy, ESG investments will not always outperform over the short-term period. However, ESG insights can help investors construct a complete picture of a company, which can prove substantial in the long-term. ESG analysis can provide insights to early warnings on environmental or social risk before they affect a company's stock value. It can also help evaluate how sustainable a firm's long-term business model is and how well a firm treats its stakeholders.

As a growing portion of investors' portfolios are including sustainable investments, companies are influenced to turn away from short-term profits and adopt long-term perspectives that focus on creating value for all stakeholders, with better impact on society and the environment. 2020 was the year that indicated that ESG investments performed better for all stakeholders during a global pandemic.

ESG investing isn't just a trend brought on by Millennials. In a recent report by Allianz, 1,000 people in the U.S. over the age of 18 were surveyed. Results shows that 15 percent of Americans recognize the actual term "ESG," but 79 percent like the idea of investing in a company that takes a stance on global issues. The young generation may be influencing sustainable investment with 64 percent investing in ESG funds. However, even the older generation are getting on-board with 42 percent of Baby Boomers is now investing in sustainable funds. While some investors may like the idea of rewarding companies with higher ESG scores due to the positive impact on society and the planet, many believe that ESG-mandated companies have a better chance at long-term success.

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The Challenges Investors Face with ESG Investing

The shift towards more ESGs, the increase in data, and the lack of regulations around ESGs has made it easier for companies to greenwash or give a false impression of their products and services and provide misleading information about the ethics of their services or products. One of the main challenges investors face in including companies with positive ESG actions, is determining which companies are actually committed to their corporate statements and sustainability initiatives.

Until recently, ESG regulations were nonexistent around the world. The European Commission was the first to break through the lack of regulations by implementing *the Sustainable Finance Disclosure Regulation (SFDR)*, which went into effect in March, 2021. The SFDR applies broadly to all asset managers and financial advisors who conduct business in or with Europe and was created to prevent greenwashing and establish a framework to facilitate sustainable investments. Although it does not apply directly to the U.S., the SFDR is a game changer for sustainable investing and raises the bar for sustainable investing regulations in the U.S.

The lack of regulations combined with increase in data, makes it difficult for investors and financial advisors to obtain accurate ESG insights. Unstructured data continues to grow and analysts and investors face challenges in researching large data sets and extracting relevant information to identify accurate ESG information. Investor calls, corporate filings, surveys, and annual reports may provide some insight into ESGs, but these are often not enough to get a complete view of a company's ESG practices.

The main challenges of calculating accurate ESG scores include:

- **Lack of real-time data -** Data is constantly generated with every company tweet, news headline, announcement, and even reviews from stakeholders. The frequency of data generated often makes it hard for investors and analysts to keep up with the latest news on a company's ESG practices.
- **Lack of transparency -** Two decades ago when the Global Reporting Initiative launched its ESG guidelines, only a handful of companies disclosed their environmental performance. Although the world's largest corporations by revenue are leading the way in reporting ESG data, there are still many companies that have not detailed ESG practices in formal filings. This lack of transparency makes it difficult to calculate accurate ESG scores.
- **Ability to miss critical details -** With the volume of data and the speed at which new data is constantly generated, important details critical to investment decisions can be missed.
- **Limited coverage of ESG factors -** There are several ESG factors that are listed under each environment, social, and governance criteria. A well-rounded view on a company's ESG practices includes multiple ESG factors and take into account recent events around a company's ESG impact.

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Is No-Code AI the Solution to Accurate ESG Insights?

When it comes to selecting sustainable investments, investors may track financial results, annual reports, and other statements to evaluate a corporation's ESG practices. Although many companies have great marketing strategies and mission statements, they are often not transparent about actual hiring standards, the diversity of their workforce, the behind the scenes of supply chain operations, and so on. Furthermore, the lack of U.S. regulation around ESGs provides another challenge.

Investment firms are increasingly looking to artificial intelligence to gather useful data on companies with strong ESG practices.

If an investor only relied on earnings calls, financial results, diversity and inclusion reports, and annual reports, a volume of useful information would be missed. AI can reveal hidden information to bring investors more insights into a company's ESG practices. Analysts can also monitor the ESG practices of more than one company in real-time, find useful, hidden information, and share the insights gained from the information. AI can also help analyze the data pulled by attaching a sentiment score to the content, so that investors will know what to do with the information that is found.

The variety and inconsistency in ESG data, how ESG is measured, and how companies report them also make it challenging for investors to analyze a company's true ESG practices. Furthermore, there is a lack of transparency on ESG metrics by data providers, which creates inconsistencies and multiple standards of ESG reporting that don't always line up. In addition to enhancing investors' insights on various companies, AI enables investors to analyze structured and unstructured data and uncover valuable insights into ESG practices.

As AI becomes more user friendly through no-code tools, investment firms, financial advisors and even retail investors are able to find and apply accurate ESG information to investment decisions. Whether tracking how companies perform long-term or looking at short-term controversies, alternative data is critical in calculating ESG scores and informing ESG-driven investment decisions. ESG scores provide transparent and objective insights on a company's relative sustainability commitment, performance, and effectiveness across various themes (human rights, shareholders, emissions, supply chain, sustainability, etc) based on various data sources. Companies are then scored on a scale of 0 to 100 which are divided into four quartiles.

The components of a strong NLP model include Content, Taxonomy, and Analytics.

DESCRIPTION AND WORK FLOW

Data input	Taxonomy	Model	Output
A large volume and diverse set of global data from news, corporate filings, transcripts, investor reports, press releases, trade journals, social media posts, and the like must be analyzed to get a well-rounded view on a company's ESG practices.	A taxonomy is a set of events for a specific insight that captures different aspects of the event. It is also known as classifying or tagging. A variety of taxonomies gives analysts more options and a broader range of content to cover. Taxonomies include companies and ESG events/factors. For example, a taxonomy could be the company Apple and/or the ESG event "diversity."	Lastly, the content needs to be analyzed. Analytics can tie back identified topics to specific companies and identify sentiment and quantify the relevance and impact. Analytics include entity and event extraction, sentiment analysis on the information, document classification, and relevance analysis.	Once the content is analyzed, ESG events can be identified in real-time. A display dashboard makes it easier to visualize ESG alerts.
• **Overview** - Real-Time - Historical Data • **Global Public News for Web** • **Public Blogs** • **Factset** • **Naviga** • **Morningstar** • **Dow Jones Newswires** • **Internal Content**	• **Companies** Public US and International • **ESG Taxonomy** - 26 Principles - Environment - Social - Governance - Industry Standard ESG Taxonomy - Custom ESG Taxonomy per client	• **Entity & Event Extraction** Extract passages of mentions of a company and theme. • **Entity & Event Level Analytics** Calculate views by company and theme, and compute aggregate metrics: - Relevancy Scores, sentiment, Volume - Passage, Event Topics, Entity Variations etc. • **Document Level Analytics** Among the documents retrieved, compute the following metrics: - Document Clustering - Article / Story Sentiment	• **Analysis & Insights** - Real-time identification of new events by analyzing spikes in mentions. - Identification of entities involved in the events and their response to the event (positive/negative) using sentiment analysis. - Tracking the evolution of identified ESG events by tracking updates to the events from mentions. - Historical & momentum analysis for themes and companies over location, time. • **Display** Dashboard will Alerts and Emails

Identifying a company's social practices with AI

Many ESG analysts today face a lack of access to real-time data and transparency into the drivers of overall ESG scores. This is especially the case with social issues where many companies do not disclose their social practices publicly because it may be unflattering or they are not tracking this data internally.

The example below demonstrates how organizations have used Accern's AI Platform to identify which industries and companies have product quality safety issues. The model was run on the SEC 10-K Filings for all companies in the Russell 3000 over the period from January 1999 - July 2021.

The results were based on the model identifying negative key passages related to product safety and quality issues. The model revealed several issues related to product safety, quality control, quality assurance, and customer product safety that could indicate a hidden trend among certain industries or companies.

Russell 3000 10-k ESG V4 Event hits Word Cloud-Event

Russell 3000 10-k ESG V4 Event hits by Mentions - Event

Events Hits	Signals
Product Safety	2,159
Consumer Product Safety	292
Quality Control	785
Quality Assurance	597
Flammable Fabrics Act	58
Hazarodous Substances Act	53
Consumer Product safety Act	65
Good Manufacturing practice	208
Risk	271

Furthermore, the insights reveal the top sectors with product safety issues were in the consumer goods and manufacturing industries. Insights gained from the Accern ESG use case, which focused on the social aspect of product quality and safety, assists investors in assessing the social risks of a company. With Accern's AI analytics, analysts have a real-time view of a company's social practices and transparency into what drives the overall ESG social scores. Investors can access the results of the ESG model through an API, visual dashboard, or in a Jupyter Notebook, and then come up with next action steps.

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Is no-code AI right for you?

The challenges that come from implementing traditional AI prevent financial firms to fully invest in AI and ML. There is a solution to the problem, though: democratize AI so end-users with some technical experience can create their own AI models, quickly and efficiently, bypassing IT. Data scientists are then free to work on highly sophisticated projects, and business users are able to be far more efficient. As no-code AI helps bridge the gap between data scientists and business analysts, non-technical users are one step closer in building and deploying AI models without code.

While end-users are now more familiar with the concept of AI and Auto ML thanks to tools like Alexa, Siri, and Erica, they are not technologists who can write code to create new AI use cases specific for finance. On the other hand, technologists spend hours manually coding their own AI models and then backtesting and validating them. For financial services organizations to truly reap the benefits AI can bring to efficiency and ROI, they need to empower business and tech users with tools that will benefit both. They can do that through a no-code environment.

A no-code environment allows technical and non-technical end users to implement AI in their processes quickly and easily. Through simple commands and an easy-to-understand user interface, end-users can realize the benefits of automation without time delays or manpower requirements. A no-code environment can advance the use of AI through the front, middle, and back office operations by improving efficiency, freeing up technology teams’ time, improving business functions’ ROI and providing companies with a competitive advantage.

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A Place to Get Started With Your AI Transformation

The use and value of AI is growing within the financial services industry. According to MIT Sloan Management Review and Boston Consulting Group, 84 percent of financial executives are confident that AI can create a competitive business advantage (Sam Ransbotham). So what type of questions should financial firms consider when looking to build a new AI use case ?

Five key questions Accern often asks its customers to consider are:

1. Is there a business process that can be enhanced with automation?
2. What type of data is connected to the use case?
3. Is the data located in a place where an AI process can see it?
4. What type of existing and new insights are you looking to draw from the data?
5. How do you intend to consume the insights (e.g. through API, Dashboard etc)?

These five questions are important to consider for firms to understand and create a strategy around how AI and ML can be used to maximize work efficiency and growth. Clean data is an integral component of a successful AI solution. The more data that AI is given, the better the solution becomes. Similarly, organizations that have more data can understand their customers better. On the other hand, without software to analyze big data, it is simply useless.

Many ML algorithms create predictions using large amounts of consistent data and training the data. The larger the architecture, the more data is needed to produce results. For accurate predictions, companies must ensure that new data is generated and fed to the AI system to be processed. AI can locate data from CRM systems, Google Analytics, content management systems, imported documents, and news sites, among others. Reusing data or not having an excess amount of it will not provide the same results.

The manual processes of ensuring that data is constantly monitored and up-to-date can become tedious and take time away from business and data analysts and data scientists. No-code AI platforms enable business users without coding skills to quickly build AI models and gain quick and accurate insights on data at scale. As a result, business users are empowered with automated processes and predictive analytics. Additionally, no-code technology relieves the burden from technology teams.

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Conclusion

As investors continue to emphasize the importance of ESG scores, how companies handle diversity and inclusion, the gender pay gap, climate change, and more, ESG is now paramount to future investment decisions. As demand grows for sustainable investment, AI is becoming an attractive tool to help investment firms gather useful data on companies with strong ESG practices.

Without AI, analysts may use information like investor calls or corporate social responsibility reports to track specific company practices. But with the amount of unstructured data available today and the speed at which it is generated, details that are critical to investment decisions can be missed. Information is vital, but deciphering the noise from relevant data remains a challenge.

Companies often lack transparency about actual hiring standards, the diversity of their workforce, the behind the scenes of supply chain operations, and so on.

Additionally, the variety and inconsistency of ESG data, how ESG is measured, and how companies report them, makes it difficult for investors to analyze a company's true ESG impact. Furthermore, data providers even lack transparency on ESG metrics, which creates inconsistencies and multiple standards of ESG reporting that don't always line up. In addition to enhancing investors' insights on various companies, AI can help investors analyze structured and unstructured data to reveal the hidden information around ESGs for more transparency on a company's ESG impact.

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ESG Solutions

To build a strong NLP model for ESG insights, content, taxonomy, and analytics are necessary components. A large volume of data from diverse sources is necessary to obtain a well-rounded view on a company's ESG practices. Additionally, having specific events or taxonomies can capture a specific ESG event that is relevant to an investor's interests. Lastly, analytics are needed to analyze the content and gather insights from the data.

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To learn more about how to get started with AI for better ESG Investing, follow the links below:

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SPEAK WITH OUR TEAM

ESG WEBINAR ON DEMAND

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Glossary

Artificial Intelligence (AI)
Also known as machine intelligence, is the ability of computer systems to perform human tasks, such as speech recognition, text recognition, decision-making, and translation between languages.

AutoML
Automated machine learning is the end-to-end process of applying machine learning to real-world problems.

Environmental, social, and governance (ESG) behaviors
A set of standards for a company's operations that align with impact investing and corporate social responsibility that investors use to screen potential investments.

Greenwashing
Greenwashing is a form of marketing spin in which marketing and PR are deceptively used to persuade the public that an organization's products, aims and policies are environmentally friendly and/or sustainable.

Historical data
Data collected from past events and circumstances on a specific company or subject.

Natural language processing (NLP)
Is a branch of artificial intelligence that helps computers understand, interpret and manipulate all human language by analyzing text to resolve ambiguity in language.

No-code development platform
Allows programmers and non-programmers to create applications within a software through the front-end user interface, instead of using traditional computer programming and coding techniques.

Structured Data / Is easily searchable as it has clearly defined data types and patterns such as phone numbers, zip codes, social security numbers, and data imported from CRM databases.

Taxonomy
A set of events for a specific insight that captures different aspects of the event. Also known as a classification or tagging.

Unstructured Data
Data that is not easily searchable. Formats include text files, emails, mobile data, business communications, audio, video, and social media postings ("Structured vs. Unstructured Data").

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