7 emerging trends in ESG

An experts' report on the trends shaping the sustainability domain over the coming years

Algorable Consulting & Services

FORUM ODPOWIEDZIALNEGO BIZNESU

smart rdm

Foreword

Why this report: Trailblazing the journey to net zero

Aleksandra Trojanowska

Managing Director

Algorable

Over the past years, ESG has become the most important discussion point in nearly all industries. Chief Sustainability Officers, most frequently selected from within the organisation, have risen from operational to executive ranks.

Yet despite the hype, business still struggles to get to grips with sustainability requirements. The ESG regulatory ecosystem is complicated and unclear, which makes it challenging first to identify and then to fulfill regulations.

As a representative of an advisory boutique, I have noticed clients use to stick to the old ways of working and apply them to the ESG domain. Working on Excel sheet brings little transparency and traceability and impedes finding savings in a company's value chain. New ESG data platforms powered by GenerativeAI bring ESG management to the new level.

That is why we decided to prepare this report, which will be a trailblazer for all those who embark on the journey to net zero. It presents seven emerging trends shaping the ESG domain.

I hope you will find this report enriching and inspiring to turn ESG into a compelling task and a competitive advantage.

Aleksandra Trojanowska, FCCA

Co-Founder & Managing Director

Algorable

Foreword

How ESG will evolve over years to come?

Maria Krawczyńska–Kaczmarek

Management Board Member & General Director

Responsible Business Forum

We are witnessing a dynamic transformation of the social and economic system, in which the challenges of sustainable development play a key role.

The seven ESG trends perfectly illustrate the direction of a change in the companies, which is necessary to maintain a competitive advantage and develop business in a changing world.

The increasing ESG regulatory requirements aim to integrate ESG reporting into the corporate reporting process. It clearly positions integrated management as a strategy that merges ESG aspects into the business model and value-creation process. Mature and strategic management of the ESG area is only possible when the subject matter is in the purview of the top management, which is why the role of the Chief Sustainability Officer should be constituted at the board level.

Conscious leaders know that reducing the negative environmental impact creates an advantage, as environmental-related costs are already a real challenge for budget management (e.g. rising energy costs, diseases of civilization).

The ability to use technology to serve innovative solutions to improve the quality of life is a key to building a competitive advantage for business development. These 7 trends are an excellent signpost for the development of a healthy business that provides a license to operate and builds long-term value, which is the clue to sustainable development.

Maria Krawczyńska-Kaczmarek

Management Board Member & General Director

Responsible Business Forum

Foreword

How to leverage technology for sustainability goals?

Dawid Pilc

Chief Executive Officer

ConnectPoint

As a representative of ConnectPoint, a trusted technology partner working with energy, oil&gas and manufacturing clients from Europe, I see that more and more companies decide to turn the abundance of data they have into valuable insights.

Data-driven decision-making has become an overarching trend, especially when it comes to operational management. No one argues that finding the right parameters for a production set-up gives immense savings. Thanks to production optimisation companies succeed in reducing their energy consumption, feedstock and unwanted shortages.

Here, I see an analogy to ESG reporting. Automating reporting of ESG metrics gives greater visibility to executives, but most importantly, enables them to monitor and optimise each parameter almost in real time. Keeping pace with a company's performance in ESG domain enables to actively manage company's actions and cut down on carbon footprint.

We decided to prepare this report in order to show best practice when facing ESG challenges. I believe it will help companies seize full potential of new technologies and apply them to the ESG domain.

Dawid Pilc

Chief Executive Officer

ConnectPoint

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Executive Summary

Key takeaways from the Report

The ESG domain has been developing dynamically over the past years. Its growth has been stimulated partly by the influx of new regulations and partly by the push from external stakeholders: banks, insurers, investors and clients. Based upon our interviews with clients and domain experts, we see 7 important trends that would shape the ESG domain over the coming years.

7 emerging ESG trends

Trend 1. From competition to cooperation	As transition to green economy requires hefty capital expenditures and new investments bring inherent business risks, companies begin to build alliances around green investments with other market players, including their competitors.
Trend 2. More empowerment to Chief Sustainability Officers	The role of Chief Sustainability Officer gains on importance and advances from lower operational ranks to C-level, gaining more seniority, resources and strategic outlook.
Trend 3. Automating ESG reporting	While some companies still struggle to gather fragmented data in Excel sheets, ESG pioneers build automated reporting, getting more visibility and opportunity to track and reduce emissions whenever possible.
Trend 4. Turning ESG into a competitive advantage	More and more companies perceive ESG as a distinguishing factor. They understand it's a matter of retaining and winning their market share. Hence, they create new sustainable products and services, get easier access to green financing and more affordable insurance packages.
Trend 5. Capturing AI capabilities in ESG management	Artificial Intelligence has the potential to revolutionise ESG management. AI can act as an analyst and an advisor in a decarbonisation journey, forecasting emissions and suggesting actions to take to reduce them.
Trend 6. Beyond value chain mitigation	In order to keep global warming below 1.5°C companies need to concentrate not only on decarbonising their value chain, but also on activities that go beyond that.
Trend 7. Sustainable by design — a new approach to products & services	It's important to incorporate attributes of sustainability as early as possible, i.e. even in the product conceptualisation phase. It is also crucial to remember about the whole product lifecycle, 'from cradle to grave.'

Introduction

Rising importance of ESG factors

Green is the new black

ESG (Environmental, Social, and Governance) has become a top priority among executives in almost all industries. The reasons for that are threefold:

- **Regulatory obligations:** since adoption of the Paris Agreement in 2015, the number of ESG regulations has skyrocketed, embracing an ever larger group of companies. For example, Corporate Sustainability Reporting Directive (CSRD) will apply to 50.000 companies in EU. Experts expect that it will create a spillover effect and embrace whole value chains with all cooperating entities.

- **Social pressure:** Consumers expect that companies take responsibility for their impact on environment and society. Numerous studies confirm that buyers are willing to pay more if a company's activities are in line with ESG principles. Hence, companies feel pressured by consumers to become greener.

- **Expectations from banks, insurers and investors:** companies that follow ESG regulations and incorporate them in their operations have lower cost of capital and more resilient business models. Hence banks, insurers and investors expect their clients to meet certain, predefined ESG standards.

Introduction

ESG regulations will apply to a wide range of companies

Shrinking time to comply

Companies **have less and less time** to comply with binding regulations.
All large companies will have to comply with CSRD requirements and report figures for the 2025 financial year.

High costs of non-compliance

The costs of non-compliance are substantial:

- **Losing clients & markets**
- Being **excluded from procurement processes**
- **Difficult access to capital** (banks, investors)
- **Higher operating costs** (carbon taxes and operating inefficiencies).

CSRD application timeline

for 2024 — Large, public interest entities, with >500 employees

for 2025 — All large entities

for 2026 — Small and medium-sized public-interest entities

large entities ×

Large entities are those that fulfil at least 2 of 3 criteria:

a) balance sheet total: **EUR 20 m;**
b) net turnover: **EUR 40 m**;
c) employees: **250**.

Introduction

Challenges facing ESG reporting

Challenges ahead of ESG reporting

A fragmented regulatory landscape

There are already **34 regulatory bodies in 12 markets** undertaking official consultations on ESG standards and frameworks. According to CFA Institute **730 hard and soft policies have been enacted** that encourage investors to consider long-term value drivers, including ESG factors. The abundance of standards makes it really hard for companies to identify which directives and regulations they need to comply with. Moreover, every company **needs to choose their own set of ESG metrics**, which makes comparability of companies a real challenge.

More comprehensive regulations coming

New regulations at the EU level **bring a more rigorous approach to ESG disclosures**. One of the most recent, i.e. Corporate Sustainability Reporting Directive (CSRD) introduces comprehensive ESG requirements, such as:

- **a decarbonisation strategy** and projects underpinning it
- **GHG emission reduction target-setting** at least for 2030 and 2050,
- defining **resilience of the group's business model** and strategy in relation to risks related to sustainability topics,
- a **due diligence process** implemented with regard to sustainability topics.

Audits and digital reporting obligatory

According to CSRD, non-financial reporting would need to be **audited and prepared in a single electronic reporting format.** That should bring more transparency and credibility to ESG reporting, which until now has been mostly declarative and qualitative.

Introduction

Little visibility of ESG topics within organisations is still a challenge

Challenges ahead of ESG reporting (continued)

ESG knowledge asymmetry

Companies succeed in building ESG functions in their organisations, however, their **ESG expertise tends to be encapsulated in only one place**. This results in knowledge asymmetry and an uneven dynamics in ESG strategy implementation. Business areas frequently don't understand the specificity and importance of adapting operations to ESG targets. If not operationalised correctly, ESG strategies are doomed to failure.

Little visibility of ESG issues at C-level

Companies tend to report their ESG metrics in a manual way and on a yearly basis. As a result, the moment ESG reports get published, they are obsolete and not useful in day-to-day operations. **C-level executives struggle to strategise on manually gathered and obsolete ESG data.** This is stark contrast to how frequently and in what way financial metrics are reported. There are up-to-date performance reports and financial forecasts, based on which CFOs take decisions.

Treating ESG as a duty and a cost center

Building upon the previous challenge, we observe that **executives struggle to seize full potential of ESG domain**, treating it as a duty instead of an opportunity to get a competitive advantage and build new value pools. This is a consequence of a traditional approach to data gathering, which, as mentioned above, when gathered on a yearly basis, is already obsolete and presents limited value for decision-makers.

Emerging trends shaping ESG

7 emerging ESG trends

Based upon interviews with our clients and ESG experts, we see 7 trends which will shape the ESG agenda over the coming years.

Trend 1. From competition to cooperation

Soaring costs of energy transition

Keeping temperature growth below 1.5°C target will require massive investment across all sectors. According to International Renewable Energy Agency (IRENA) **a cumulative USD 150 trillion is required to realise this target by 2050,** averaging over USD 5 trillion in annual terms.

Although **global investment across all energy transition technologies reached a record high of USD 1.3 trillion in 2022**, annual investment must more than quadruple to remain on the 1.5°C pathway.

Cooperation instead of competition

That is why companies facing massive investment in green transition decide to share both the cost and the risk with other market players, including their suppliers and competitors. That approach is comparable to investment in upstream oil & gas, where companies used to minimise the geological and business risk by entering joint ventures with other sector players. This helps to diversity asset portfolio and enter investments which would have been otherwise impossible to incur.

Case studies

In 2020 BP, Eni, Equinor, National Grid, Shell and Total formed a partnership, called the **Northern Endurance Partnership,** to develop offshore carbon dioxide transport and storage infrastructure in the UK North Sea, with bp as operator. The infrastructure will serve the Net Zero Teesside and Zero Carbon Humber projects that aim to establish decarbonised industrial clusters. Both projects aim to be commissioned by 2026 and aim to decarbonise nearly 50% of the UK's industrial emissions.

Another example is **Shell's Supplier Energy Transition Hub**. Launched in 2021 the Hub allows Shell's partners in the supply chain to share their data and work together on lowering their carbon emissions. The hub's solutions help show potential areas for optimisation for platform's participants. The collaborative theme underpins the Hub's architecture and is at the heart of its operational core. It was influenced by a group of 50 Shell suppliers, who took part in a pilot and shared their thoughts and ideas on how to find decarbonisation solutions.

Trend 1. From competition to cooperation

Data for good

It's worth mentioning that cooperation will take place not only on an investment level, but also on a **data level**. The previously mentioned Shell's Supplier Energy Transition Hub allows to share anonymised emissions data, benchmark them against the market and find decarbonisation ideas shared by other participants. This shows that cooperation on a data level helps achieve carbon footprint reduction for all cooperating bodies.

Benefits of cooperation on a decarbonisation journey

- Sharing investment expenditure
- Reducing business and technological risk
- Finding innovative solutions to decarbonisation problems
- More data for analysis which equals better decision-making

Trend 2. More empowerment to Chief Sustainability Officers

Climbing up the corporate ladder

Thanks to the latest regulations, in particular NFRD and CSRD, **non-financial reporting has gained on importance**. It has become an element of annual reporting, on a par with financial reports and, like them, are subject to an audit procedure.

Consequently, **the role of Corporate Sustainability Officer (CSO) has gained a greater mandate**. It has been promoted from lower ranks in organisations and created on a basis of a CSR function, to a director's rank and even to the C-level.

Seniority means resources and mandate

Seniority is crucial as it **provides necessary recources and a mandate to effectively drive change**. CSOs having a direct reporting line to a management board are more successful in delivering an ESG transformation than lower ranked CSOs. Having the right position enables to **integrate ESG factors in the corporate strategy** and drive it across all business functions. Moreover, CSOs are getting better equipped with tools, both **organisational** like influence on remuneration KPIs (MBO), and **digital**, which will be described in more detail later in this report.

Trend 2. More empowerment to Chief Sustainability Officers

3 types of CSOs

There are 3 archetypes of a Chief Sustainability Officer function:

- **A stand-alone function.** Many companies create a dedicated ESG function. Such a function serves as a management board member or reports to the management board. A high position should, by definition, give authority to influence the organisation and implement an ESG transformation. An ESG function at C-level proves that a company is aware of ESG challenges and thinks seriously about changing the company's business model.

- **A function located in the main business area.** Some companies locate the CSO function in a key business area, e.g. manufacturing companies locate the CSO in the area responsible for operating activities. This gives a unique insight into the specifics of the company's operations and main emission levers. At the same time it can make it difficult to completely shift the company's business model, especially if the company's operations are inherently carbon-intensive.

- **CSO located in the support function** (finance, marketing and communication). The main purpose of such a structure is to meet the reporting obligations using proven communication channels and reporting tools. The downside of this structure is the risk of having limited impact on business operations.

To sum up, the CSO function design should be tailored to the specifics of a given company: its organisational structure, communication channels and industry characteristics.

One of the definitions of "sustainability" says that to achieve sustainable development, coherence of three key elements is necessary: economic growth, social inclusion and environmental protection.

The role of the CSO in the era of energy transformation is the mission to be a "driver" to achieve these goals. CSO is a strategic function whose competences allow setting medium and long-term company development goals in key areas, i.e. decarbonization, climate management and implementation of green investments. On the other hand, the CSO is responsible for coherent foundations of sustainable corporate governance, which are today necessary to obtain green financing, i.e. non-financial reporting, ESG ratings, climate risk management, due diligence procedures regarding compliance with human rights and responsibility in the supply chain.

The Director of Sustainability/ESG is still a new position, not fully structured, which needs to be employed by companies with a high level of maturity, whose management board recognizes the strategic role of the CSO in achieving business goals. CSO has huge potential because it allows companies to take advantage of the opportunities arising from the Green Deal and build competitive advantages. This is undoubtedly an interesting job with enormous power that can become a professional passion.

Monika Płońska

Director of Sustainable Development Department

Grupa Azoty Polyolefins S.A.

Trend 3. Automating ESG reporting

Traditional reporting not sufficent

ESG reporting becomes more and more comprehensive. It serves multiple business purposes and a wide range of internal & external stakeholders: strategy & financial officers, operational functions, procurement, communication, HR, clients & investors.

Complexity means that the **traditional process of manually gathering data** in Excel sheets **is no longer sufficient**. Stakeholders complain about the quality and frequency of the data they receive. What's more, **traditional reports give little visibility** to a company's progress towards environmental, governance and social goals.

Automated ESG reporting a new golden standard

As a result, **the new golden standard is automated ESG reporting.** Companies want to **integrate all ESG metrics into a single ESG platform**. They want to have instantaneous information on how they perform and whether they are in line with ESG goals.

Such an ESG platform enables to generate dashboards and give access to the relevant stakeholders. This creates vast **opportunities to optimise operations** and minimise carbon footprint as well as influence organisational behaviour (e.g. number of travels or energy efficiency in office facilities).

The comparison of traditional vs. automated approach to ESG reporting

	Traditional, manual reporting	Automated reporting
Time consumed to gather data	**app. 3-5 months**	**instantaneous, after integration with corporate systems**
Frequency of reporting	**once a year**	**full flexibility: daily, weekly, monthly, yearly**
Visibility to decision-makers	**low as it presents data for the past year**	**high: executives can regularly check ESG KPIs and their progress against targets**
Saving potential	**very limited as the effects are visible in next year's report**	**high - its enables to regularly check effect of ESG initiatives and adapt them to deliver change**

Trend 3. Automating ESG reporting

smart rdm

Success story: Smart RDM as an example of an integrated ESG platform

Smart RDM is a technological solution used to automate ESG reporting. It serves as a *single source of truth* for operational, environmental, social and governance metrics.

By integrating with all necessary systems such as data historians or entrerprise resource planning (ERP) **the system encapsulates corporate wisdom** which can be easily processed, analysed and **visualised in tailor-made dashboards**.

A company can **generate ESG dashboards** and send them to specific ESG stakeholders. Hence, a CSO or a CFO can have **immediate insight into how a company performs** in terms of specific metrics.

ESG reports delivered by Smart RDM can be **generated as frequently as necessary**, which means that an organisation can immediately check progress against the goals set.

Smart RDM also **enables advanced data analytics**. Thanks to this function it can signal where there is the biggest carbon reduction potential. Thanks to **GenerativeAI plug-ins** customers can get recommendations to their decarbonisation strategies.

Smart RDM is the trusted choice for a wide range of industrial companies, including manufacturers, energy producers (conventional and renewable), oil and gas firms, and utilities. Our platform's adaptability has earned the appreciation of these industry leaders, allowing them to utilize tailored, robust functionalities. In the ESG-focused era, Smart RDM equips industrial organizations to navigate sustainability reporting with confidence and agility.

Dawid Pilc

Chief Executive Officer

ConnectPoint

Trend 3. Automating ESG reporting

Smart RDM functionalities for ESG reporting

- **Instantaneous ESG metric visibility**
- **Flexibility in picking and choosing ESG metrics**
- **Comfortable access: Data from multiple systems gathered in one place**
- **ESG dashboards tailor-made to users**
- **Key emission sources identified**
- **Carbon footprint analyses & forecasts**
- **AI advisor in ESG optimisation**

In today's competitive business landscape, technology investments play a crucial role across all operational facets, including sustainability. At Smart RDM, we have a comprehensive understanding of environmental considerations and regulatory mandates, bolstered by our expertise in cutting-edge technology solutions like AI and complex big data analytics. This synergy enables us to develop functionalities that effortlessly adapt to the constantly evolving terrain of sustainable business practices, fulfilling the increasing demands of modern businesses.

Gabriela Gic- Grusza

Smart RDM Product Manager

ConnectPoint

Trend 4. Turning ESG into a competitive advantage

From an obligation to an opportunity

There are **two distinctive aproaches to ESG**:

- Some companies perceive ESG purely **as a regulatory obligation** and tend to fulfil it with minimal effort. Such companies often compare it to GDPR obligations and tend to apply a similar approach, outsourcing the duty outside of an organisation or delegate it to a function inside an organisation whose efforts have little impact on the company's strategy or activities.

- Other companies, on the other hand, **perceive ESG as a distinguishing factor**. They understand that ESG has become a matter of retaining their market share and winning new clients. At the same time they want to get an easier access to debt or equity financing and more affordable insurance packages, which is possible with strong ESG standing.

In this chapter we elaborate on the second aproach.

Trend 4. Turning ESG into a competitive advantage

Benefits of incorporating ESG into a company's operations

Better financial performance

Progress in achieving ESG targets means i.a.:

- **more diversified management boards** and employment structures which help in taking better business decisions;
- **lower impact on environment** achieved e.g. by more optimal production and logistics planning and more efficient processes, less energy consumed and less waste produced;
- **better understanding and cooperation with key stakeholders**, in particular local communities, which makes it easier to conduct new investments.

All abovementioned examples show that ESG factors help in achieving better financial performance.

Easier access to financing

More and more banks **create financial instruments dedicated to entities with strong ESG practices**. Debt financing for green investments (e.g. green bonds) is an attractive financing source for companies who want to develop their operations in line with ESG principles.

Cheaper insurance

Insurance companies believe that companies who manage their ESG activities well **have a lower risk profile** and are more 'antifragile.' Assessing impact of environmental and social factors on a company's operations help identify material business risks and prepare strategies to mitigate them, which is valued by insurers.

Access to investors' funds

More and more investors **set up funds for responsible investing, or more specifically, impact investing**. According to CFA Institute responsible investment is a practice to incorporate ESG factors into investment decisions and active ownership. Impact investing is a subcategory of responsbile investment, made with an intent to generate positive, measurable social or environmental impact alongside a financial return.

Opportunity to get new clients

Research shows that between half to two-thirds of US consumers **are willing to pay extra for more sustainable products**. For consumers aged 18 to 34, the percentage reaches 80%, according to a Business of Sustainability Index report. Similarly, 58% of Europeans **consider the climate impact** important when buying food and beverage items. That is why green products help reach new customers and retain their loyalty.

Trend 4. Turning ESG into a competitive advantage

Daniel Kiewra, PhD

Lead Expert on Climate and Energy

Responsible Business Forum

In today's rapidly changing business landscape, where environmental, social and governance issues take center stage, the importance of ESG data cannot be overstated. ESG data is becoming an indispensable tool in modern business, enabling companies to measure, track and report on sustainability efforts. ESG data enables companies to identify and manage risks and opportunities that may impact their financial performance.

By analyzing ESG data, companies can assess their exposure to these risks, develop mitigation strategies and adapt to changing market conditions. ESG data helps companies identify emerging opportunities and shift business models towards more sustainable ones. Without access to the right data, achieving successful results and staying competitive in the market can be much more difficult, regardless of how much time, budget and effort you put into it.

Unfortunately, today we are in a place where collecting, processing and analyzing data leaves much to be desired. The biggest ESG challenge is the lack of consistent and standardized ESG data across companies. This poses a challenge for investors, analysts and ESG data partners to accurately assess and compare company performance. Some hope is given by the evolution of the ESG reporting framework and the emergence of regulations in the form of the CSRD Directive and ESRS standards.

Another important challenge for companies in the context of ESG data is the transparency of the process of greening their business models towards investors and customers. To achieve this, companies should learn to share data effectively using trusted spaces, institutions and technologies established for this purpose. Companies should not be afraid to open ESG data to all stakeholders. Only by opening ESG data and confronting the market assessment of their activities will companies be able to use the maximum potential of this data.

Trend 5. Capturing AI capabilities in ESG management

AI for smart ESG management

- **Artificial Intelligence has the potential to revolutionise ESG management**. AI can act as an analyst and an advisor in a decarbonisation journey, forecasting emissions and suggesting actions to take to reduce them. By using the Generative AI capabilities (through e.g. Open AI's ChatGPT or Google's Bard) clients can get recommendations what are the biggest emission reduction pools and hints to decarbonisation initiatives.

- Based on our technological experience, we have identified **6 areas to utilise AI in ESG management**. These are the functionalities of an ESG reporting platform, called Smart RDM.

Ease of analysing unstructured data

Complexity makes it difficult for investors to identify the most relevant information and evaluate the potential impact of ESG factors on a company's financial performance. By harnessing machine learning algorithms and natural language processing techniques, **AI assists investors in processing massive amounts of data with greater efficiency and accuracy than ever before**. This enables them to uncover hidden patterns and trends.

Predicting emissions & trends in ESG factors

We use AI to predict energy, steam and water consumption. We predict the company's expenses and organisational behaviours (e.g. employee travels). This in turn can be easily transferred into **carbon emission forecasts**. Thanks to this functionality executives can **check whether they are on track to reach carbon footprint targets**.

Optimising emissions

Thanks to AI capabilities we can **generate energy and consumption forecasts** and **optimise production to achieve maximum capacity with lowest raw material and energy input**. AI can recommend which production line and production set-up to use to achieve two goals: maximisation of margins and **minimisation of carbon footprint.** AI can act as an advisor to production operators and recommend which production set-up to choose.

Trend 5. Capturing AI capabilities in emission reduction

Best practice for ESG management

By implementing **functionalities of Generative AI** into the Smart RDM platform, you can get recommendations **where to focus your decarbonisation efforts**. What are the biggest emission levers? What are ways to improve ESG performance? GenAI functionalities can propose best practice in ESG management which can be further analysed and acted upon by ESG professionals.

A smart ESG search

Managing ESG metrics and ESG reports can be easy when using **a smart search**. It helps you find necessary documents and figures which normally are scattered across an organisation. Thanks to GenAI capabilities, **a smart search can do analysis, forecasts and deliver advice on ESG-related subjects.**

Strategising on ESG

Thanks to abundance of ESG data, **GenAI can devise decarbonisation strategies** based on your company's reports. It can serve as an initial proposition which can be further adjusted and validated by internal stakeholders.

In today's data-driven landscape, natural language processing has emerged as a game-changing factor in transforming how we access and harness information. The integration of GenAI within our Smart RDM platform takes this transformation to a whole new level, enhancing its robustness and unlocking new possibilities for data analysis and insight generation.

Jakub Tomiczek

Chief Technology Officer

ConnectPoint

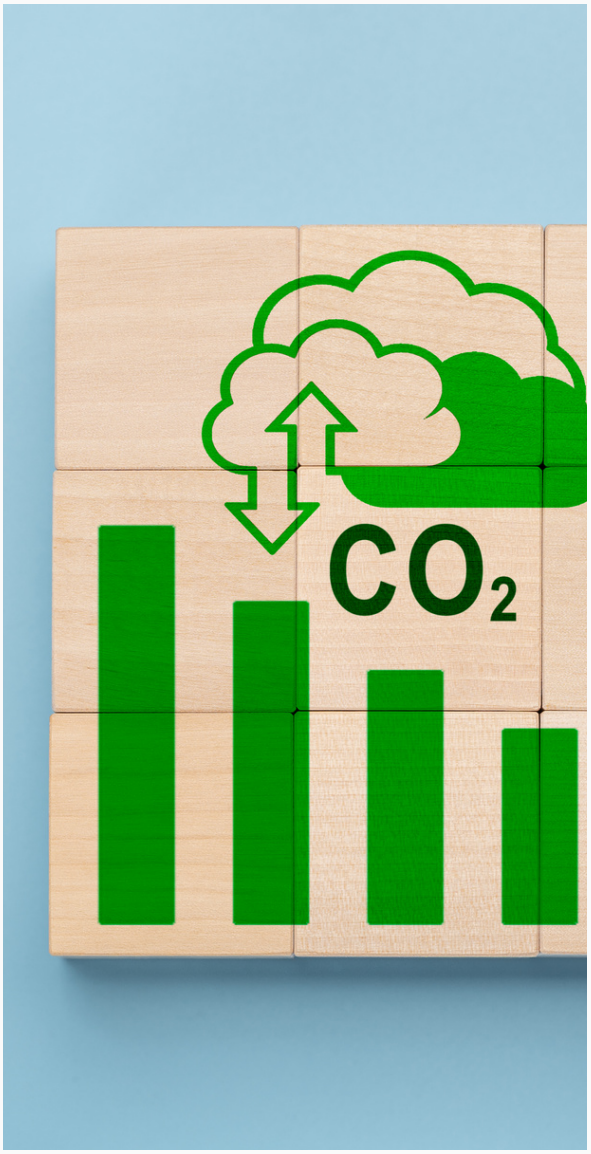
Trend 6. Beyond value chain mitigation

Good, but not good enough

Science-Based Targets initiative (SBTi) notices that:

- There is still a significant number of companies without declared emission reduction targets
- There are important sources of emissions outside corporate value chains, such as those linked to agriculture
- Government policies are not yet sufficiently ambitious to deliver a 1.5°C future.

Hence, SBTi has developed guidance on beyond value chain mitigation (BVCM).



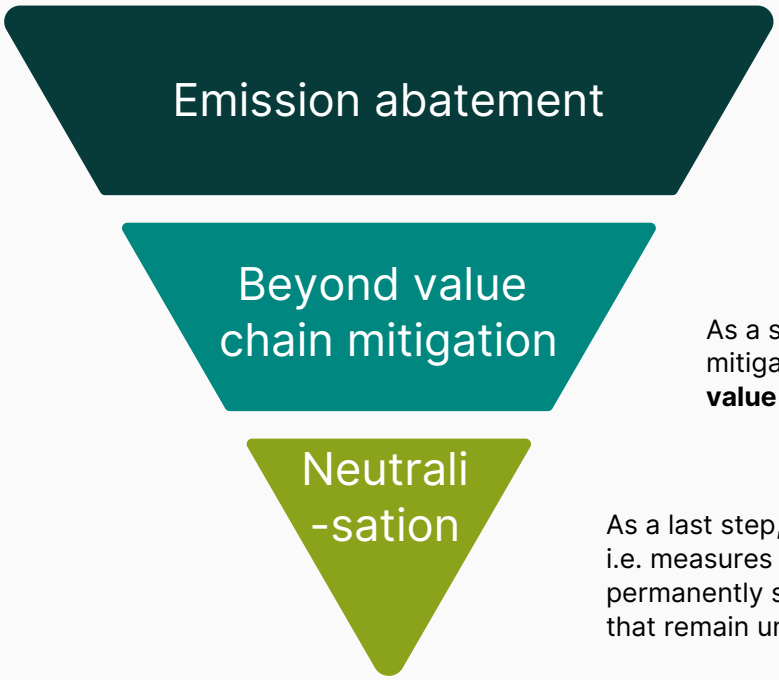
What is beyond value chain mitigation?

It is an *action or an investment that fall outside of a company's value chain. This includes activities that avoid or reduce emissions, and those that remove and store from the atmosphere.*

It is believed that only additional investments in emission mitigation can increase the likelihood that global community stays within a 1.5˚C carbon budget. At the same time **it cannot be a substitute for the rapid and deep reduction of a company's own value chain emissions.**

Trend 6. Beyond value chain mitigation

Emission mitigation hierarchy



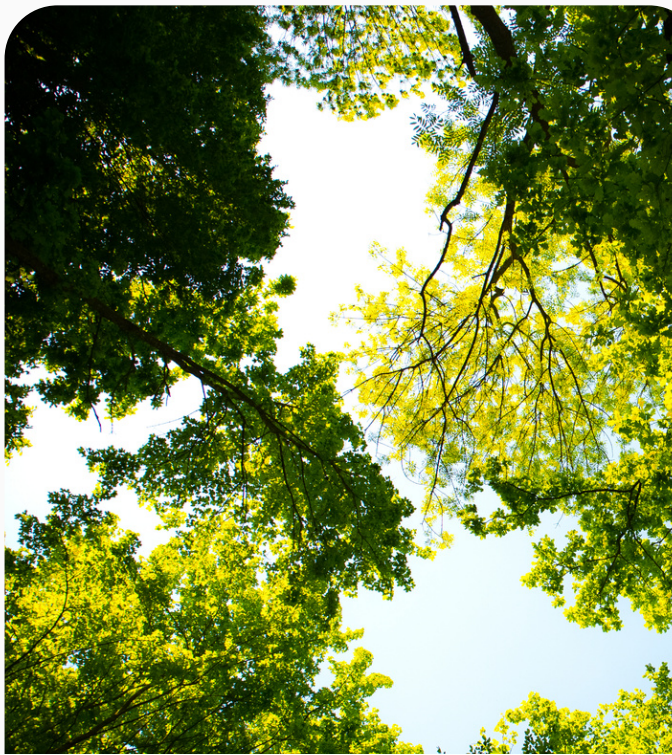
Companies should start decarbonisation with their own value chains. They should **prevent, reduce or eliminate sources of emissions** within their value chain. Examples include reducing energy use, switching to renewable energy and reducing chemical fertilizer use, less carbon-intensive technologies, processes and products.

As a second step, a company should look for emission mitigation actions or investments **outside of a company's value chain.**

As a last step, a company can resort to **neutralisation**, i.e. measures to remove carbon from the atmosphere and permanently store it to counterbalance the impact of emissions that remain unabated. This includes buying carbon credits.

Examples of beyond value chain mitigation

- Forestry, reducing emissions from deforestation and forest degradation (REDD+)
- Conservation projects, e.g. peatland or mangrove
- Energy efficiency projects outside of a company's value chain
- Methane destruction, e.g., landfill gas projects
- Renewable energy, e.g., solar/wind/biogas
- Industrial gases, e.g. N2O destruction at nitric acid facilities
- Scale-up of Carbon Dioxide Removal (CDR) technologies, e.g. Direct Air Capture (DAC).



Trend 7. Sustainable by design — a new approach to products & services

A sustainable product — what does it mean?

- A sustainable product is defined by the European Commission as such that is **designed to be more durable and energy- and resource efficient, reparable, recyclable, and with preference for recycled materials.**

- It's important to **incorporate attributes of sustainability as early as possible**, i.e. even in the conceptualisation phase. It is also crucial to remember about the **whole product lifecycle**, 'from cradle to grave.'

- An important aspect is designing a product's end of life. There is a concept called '**designed for disassembly**.' It is a design process that allows for easy recovery of products, parts and materials when a product is disassembled or renovated. The process is intended to maximise economic value and minimise environmental impacts through reuse, repair, remanufacture and recycling.

Digital Product Passport

An EU concept called 'Digital Product Passport' will provide information about products' environmental sustainability. This information will be easily accessible by scanning a data carrier and it will include attributes such as the durability and reparability, the recycled content or the availability of spare parts of a product. It will help consumers to take more informed buying decisions.

Trend 7. Sustainable by design — a new approach to products & services

A data-driven approach to a product's carbon footprint

- Thanks to advanced ESG reporting solutions it is now possible to provide a detailed calculation of a product's carbon footprint.
- It is possible to analyse **the exact amount of energy and materials used in producing a particular product batch.**
- This enables to deliver exact and verifiable information on a product's a carbon footprint.

Benefits from a data-driven approach

- A data-driven approach to calculating a product's carbon footprint enables to see **where and how emissions accrue over a product's lifecycle.** Hence, it gives clarity where to change the production process or a product's design. It is an essential insight for decision-makers.

3 types of sustainable design

	Sustainable design	Ecodesign	Circular design
Definition	**Design a product or a service in a way that minimises the environmental, social and governance impact.**	**Design focusing on reducing environmental impact in every step of a product's life cycle.**	**Design a product / a service that creates no waste and pollution and returns materials back to the loop.**
Examples	• Do you pay fair wages to your workers across the whole value chain? • Is your product or service accessible to all consumers? • How energy-intensive are your production processes?	• Reduce the weight, size and number of materials you use in your design. • Take full responsibility for you product's entire lifecycle.	• Move from products to services: shift from ownership to access, offer your product as a service. • Design for re-use of your materials.

Source: Ecochain

Summary: Bringing ESG to the next frontier

Key takeaways

- As ESG becomes central to business operations both in EU and worldwide, it is important to know not only the regulatory obligations, but also **benefits and opportunities flowing from ESG.** Changing your perspective will allow you to turn ESG from a cost-center to a value pool.
- More and more companies **perceive ESG as a competitive advantage.** They create new sustainable products, reach new market niches and loyalise customers.
- **Moving from a declarative- to a data — driven approach to ESG** helps to improve credibility and transparency. As Chief Sustainability Officers advance to more senior positions, they need digital tools to help them in executing on their ESG strategies.
- **Using automated ESG reporting** helps to track progress in fulfilling ESG targets and actively navigate organisations through green transitions. Full and instantaneous visibility of ESG metrics enables to act quickly in adapting a company's operations to targets.
- **Generative AI** (e.g. OpenAI's ChatGPT or Google's Bard) will play a role in ESG management by giving hints and recommendations to how to improve ESG metrics.

About the authors

Your partner on a journey to net zero

Algorable is an advisory boutique in the domain of green transition. We deliver comprehensive advisory and technological portfolio in the area of:

- **ESG & sustainability advisory**
- **Strategy & business transformation**
- **Digital tools supoorting green transition**

Our proposed approach

Stage 1. Sustainability Compass Report → **Stage 2. Sustainability Strategy** → **Stage 3. ESG Reporting**

We propose to start with a **Sustainability Compass Report:**

- **Phase 1. Regulatory analysis.** Which directives and standards a company needs to comply with? What are the targets, obligations and deadlines? What are the documents and procedures you need to prepare?
- **Phase 2. ESG gap analysis.** Mapping the company's as-is state with regard to fulfilling binding regulations based on the company's materials and interviews with employees. Identifying gaps to fill in. Proposing next steps and list of projects and documents to deliver.
- **Phase 3. Stakeholder mapping**. Identifying key internal and external stakeholders. Identifying their expectations and needs.
- **Phase 4. Preparing a Sustainability Compass Report** with key conclusions and recommendations**.**

There are no shortcuts in a green transition journey. Companies need to start first with eliminating sources of emissions in their own value chains. A profound as-is analysis and a sustainability strategy will be very helpful in these efforts. We are glad to be a partner to our clients in their ambitious journeys to net zero.

Aleksandra Trojanowska

Managing Director

Algorable

Algorable
Consulting & Services

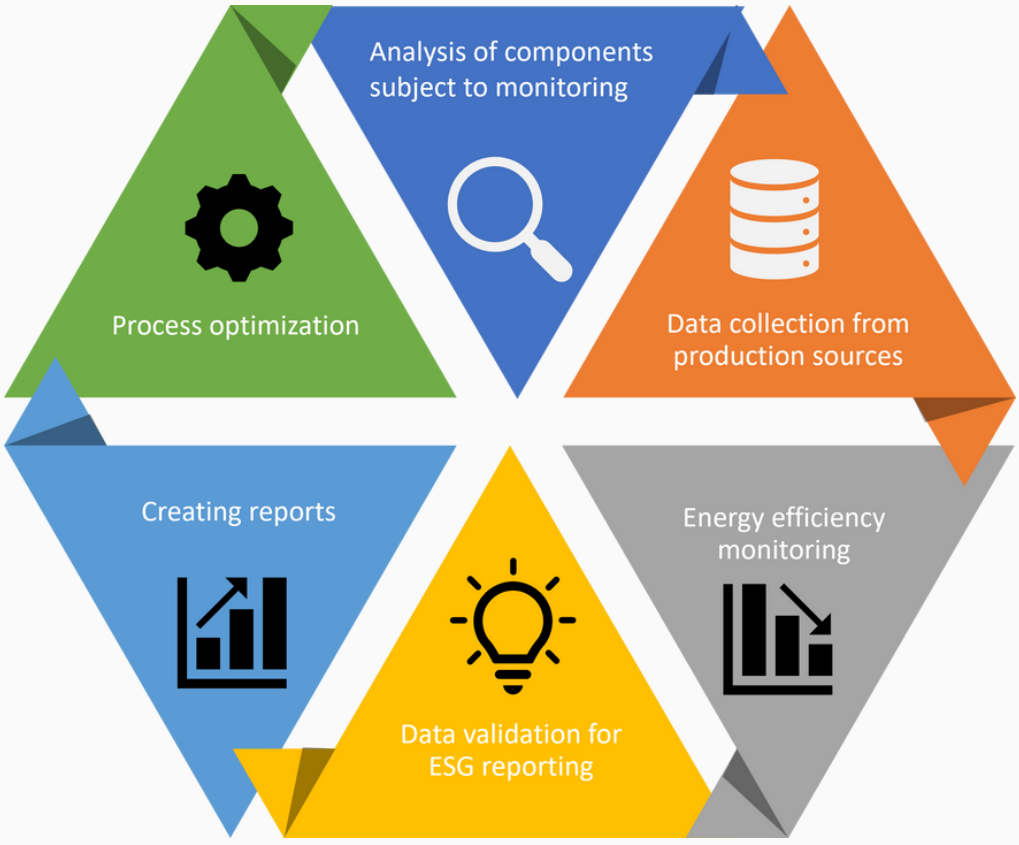
About the authors

smart rdm

Smart RDM — A system beyond divisions

System for flexible support of production processes in industries that effectively manage their carbon footprint. By analyzing all the elements that make up operational excellence, we can pay special attention to improving energy efficiency and ESG reporting based on the highest quality data. It provides support for the ESG reporting process.

A strong team of consultants supported by the appropriate tool guarantees the success of the project, quick results and the ability to take a better look at the entire production process.



More about how you can use the system to optimize production and meet regulatory requirements at: **www.smartrdm.com**

About the authors

FORUM ODPOWIEDZIALNEGO BIZNESU

The Responsible Business Forum is the largest and longest operating network of ESG and sustainability leaders in Poland.

The Responsible Business Forum is an expert organisation, an initiator and partner of key ESG activities in Poland. The flagship initiative of the Responsible Business Forum is the **Partnership Programme**, which brings together more than 60 companies. An important place in FOB's activities is taken by **international cooperation**. Since 2002, the organisation has been a national partner of CSR Europe. Since 2009, FOB has cooperated with the World Business Council for Sustainable Development and is the only representative of WBCSD in Poland. FOB is the **organiser of the Chapter Zero Poland programme** which is the Polish branch of the Climate Governance Initiative established by the World Economic Forum. The organisation also coordinates the Diversity Charter in Poland, an international initiative under the auspices of the European Commission addressing employers committed to DEI.

Our mission is to inspire and mobilize businesses to work towards sustainable development and create a community of companies that aspire to change the world through more responsible business practices. We connect people and organizations that have the courage and determination to bring positive social and environmental changes.

More information can be found here: https://odpowiedzialnybiznes.pl/

Editorial:

This report has been prepared by experts from **Algorable**, an advisory boutique, **Responsible Business Forum** and **ConnectPoint**, a technology company, a proprietor of Smart RDM brand.

Editorial lead: Aleksandra Trojanowska
Editorial team: Gabriela Grusza, Dawid Pilc
Marketing team: Jakub Ładyński, Miłosz Marchlewicz, Anna Sawicka

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- **Monika Płońska**, Director, Grupa Azoty Polyolefins
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- **Daniel Kiewra**, Lead Expert on Climate and Energy, Forum Odpowiedzialnego Biznesu

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