VansonBourne

ESG Reporting:

The Need for the ‘Right’ Data

aspentech DATAWORKS

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Introduction

Environmental, social, and corporate governance (ESG) is now on the agendas of the most senior stakeholders within businesses around the globe. Evolving and increasing legislation around reporting is forcing businesses to pivot on a number of initiatives and not all businesses are prepared.

Our report commissioned by AspenTech DataWorks finds that a large majority of organizations are leveraging their industrial/operational data for ESG reporting, which involves organizations disclosing their Environmental, Social and Governance progress against their sustainability goals. As sustainability becomes a key focus for organizational strategy, ESG reporting provides a base for organizations to record their achievements and progress.

Evolving regulations and legislations around ESG practices will continue to influence the amount and quality of data necessary for reporting. Respondents from organizations operating within Europe are citing they use more industrial/operational data and have better quality data - likely due to the stricter laws surrounding what is expected from organizations, versus respondents from North America. Although North America is slightly behind Europe, many organizations are still using data for ESG reporting and are willing to invest in technology to provide data for it.

Investing in both people and technology providing industrial/operational data for ESG reporting will help to overcome the barriers surrounding skills and data quality, which this report aims to examine.

Key Findings

Despite high demand for using industrial/operational data for ESG reporting, organizations need to invest in data analysis skills and technology to take full advantage of their data.

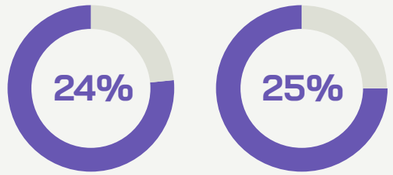
Nine in ten organizations (91%) are using their industrial data, for their ESG reporting but at varying degrees

However, around half of organizations face additional challenges on:

Data analysis (52%)

Aggregation of data (52%)

as they lack in-house skills to assimilate their data for ESG reporting



Only one in four organizations have fully sufficient (24%) and/ or reliable data (25%) for ESG reporting...

↑ **10%**

...so, it is promising to see that organizations are planning to increase investment in technology to provide industrial/operational data for ESG reporting by an average of 10% in the next 12 months

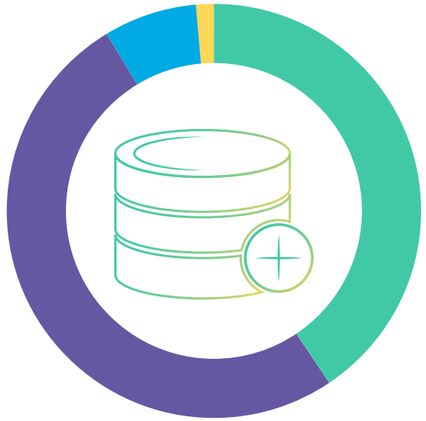
ESG Reporting:

Industrial/Operational Data Usage

Organizations are extending their usage of industrial/ operational data past operational efficiency and improving productivity. More specifically, this data is able to support organizations reach their sustainability goals in its ability to measure and log compliance on everchanging goalposts from water usage to carbon footprints and other ESG objectives. In fact, the vast majority of respondents' organizations surveyed (91%) are using their industrial/operational data to some degree for their ESG reporting. In particular, it's being utilized for the improvement in organizations' ESG compliance (23%). Among those who are using their data for ESG, on average, there is an 8% improvement in their ESG compliance.

One in four decision makers from organizations surveyed (25%) have formulated and executed a formal strategy for their industrial/operational data. These decision makers surveyed are more highly noting the benefit of reduced carbon emissions (36% vs 24% for those who don't). In addition, those with a data strategy in place are more likely to use significant amounts of their data for ESG reporting (72% vs 28% for those who don't) indicating the firm place ESG reporting has in organizational strategy.

91% **of organizations are leveraging their industrial/operational data to some extent for ESG reporting**



41% Yes, we use a significant amount of our industrial/ operational data

50% Yes, we use a limited amount of our industrial/ operational data

9% No, we don't use our industrial/ operational data, but we would like to

1% No, we don't use our industrial/ operational data because it's not necessary

Figure 1: Is your organization currently leveraging its industrial/operational data for ESG reporting? (Base: 200). Not showing all answer options

Organizations represented in this survey are already facing several challenges when it comes to being able to get the most out of their data. Organizations are reporting struggles such as lack of high-quality data (33%), too few employees with analytical skills (31%) and lack of data technology (28%). With vast amounts of this type of data created each day, it is likely this trend will only continue without proper interventions.

Moreover, when it comes to utilizing industrial/operational data specifically for ESG reporting, organizations' challenges intensify. ***Around one in two experience aggregation of data (52%), data analysis (52%) and data quality (49%) as key challenges for ESG reporting.*** When comparing the pre-existing challenges for general industrial/operational data use (mentioned in the paragraph above) to challenges with using the data specifically for ESG reporting, certain additional challenges magnify, such as data quality issues (rise from 33% to 52% respectively) and data analysis issues (rises from 31% to 52% respectively).

Ensuring the right technology and upskilling of people to report on this data will be critical as regulations for this will not be slowing down, and in fact, will be ever evolving. Despite the challenges surrounding industrial/operational data, a number of organizations (41%) are still managing to use a significant amount of this data for ESG reporting.

Top challenges for ESG reporting

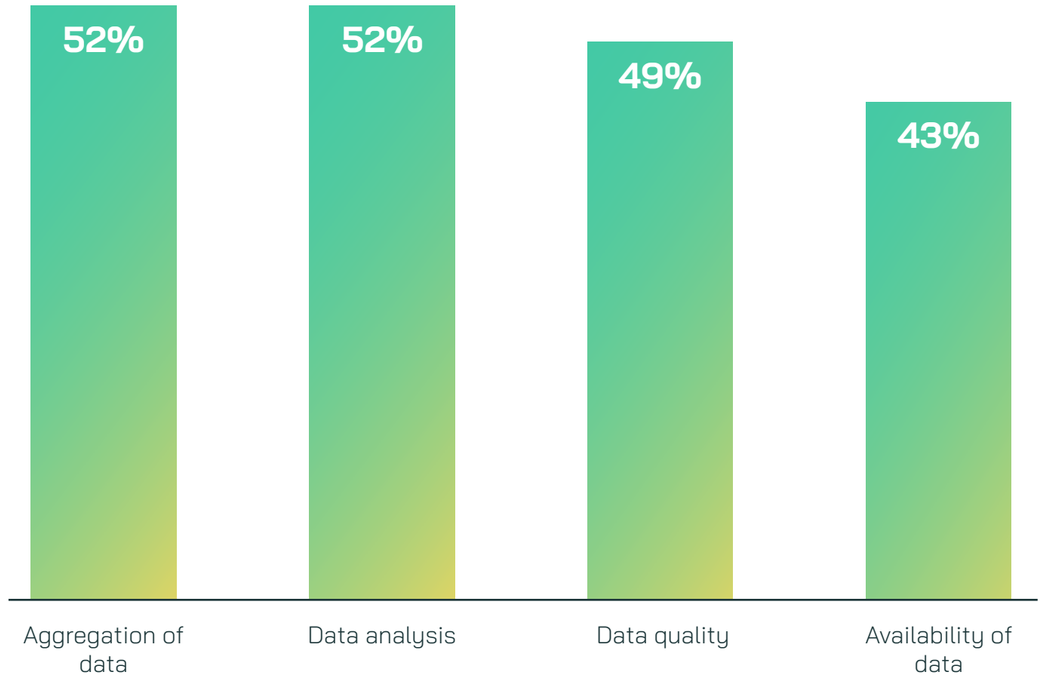


Figure 2: Which of the following are challenges with industrial/ operational data for your organization for ESG reporting? (Base:199) Excluding respondents who do not use industrial/ operational data for ESG reporting because it is not necessary. Not showing all answer options

Region

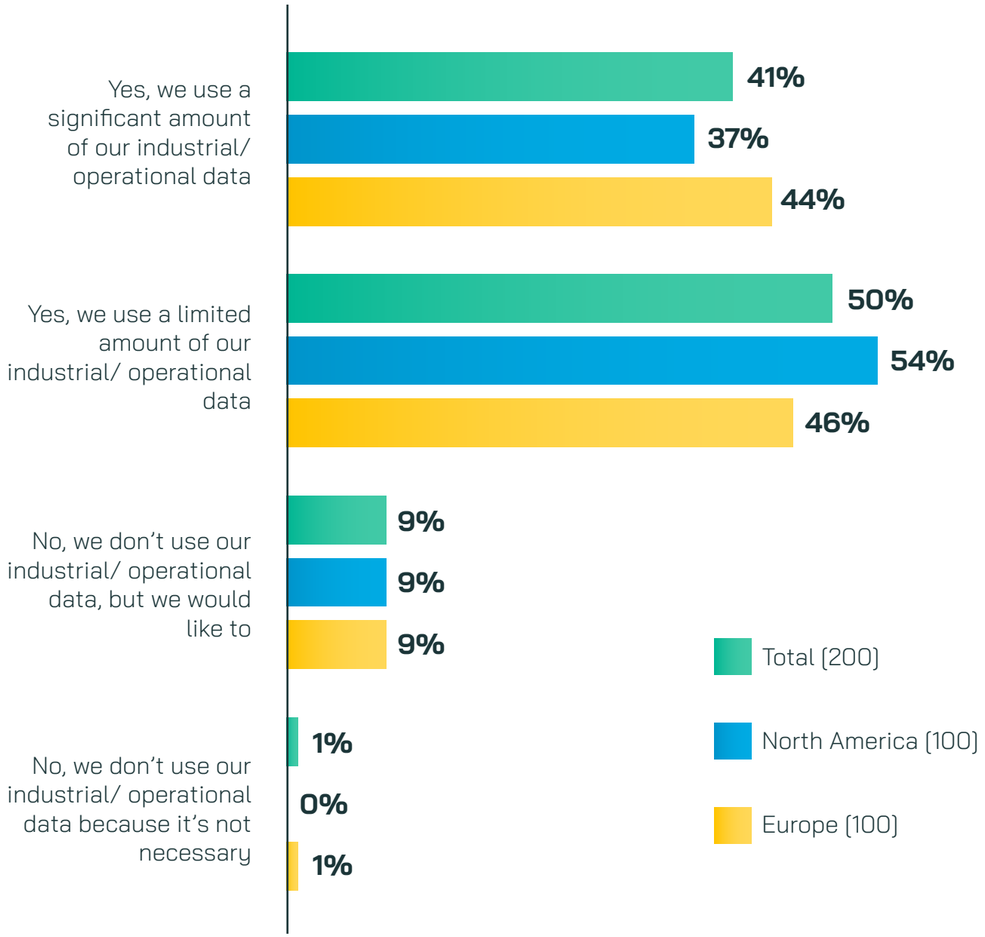


Figure 3: Is your organization currently leveraging its industrial/ operational data for ESG reporting? (Base sizes in chart). Split by region. Not showing all answer options

A vast majority of respondents from organizations surveyed (91%) are using a degree of their industrial/operational data for their ESG reporting. Although only four in ten (41%) are using a substantial amount for their ESG reporting, the geographic location of the organization may be driving this. In Europe for example, The European Council has set in place the Corporate Sustainability Reporting Directive (CSRD) requiring organizations to log their ESG actions on specific topic areas. This legislation around ESG reporting is pushing more organizations in this region to be using a higher amount of this sort of data versus their North American counterparts (44% in Europe vs 37% in North America).

While respondents from organizations surveyed in North America are using industrial/operational data for ESG reporting, they are more likely to report using a limited amount of data for this purpose (46% in Europe vs 54% in North America) as there is no legislation at a US Congressional level in place yet to hold organizations fully accountable[1]. However, legislation surrounding ESG reporting is making progress to be implemented in North America but is currently dependent on the specific sector or state, and organizations using this type of data for ESG reporting are trying to future-proof ahead of potential regulations.

[1] https://www.thomsonreuters.com/en-us/posts/investigation-fraud-and-risk/esg-gap-widens/

Organization sector

While the regulatory guidelines around specific industries and the degree of industrial/operational data used overall may be impacting the quantity of data used for ESG reporting, some industry sectors are committed to increasing sustainability or reducing their carbon footprint to improve their image.

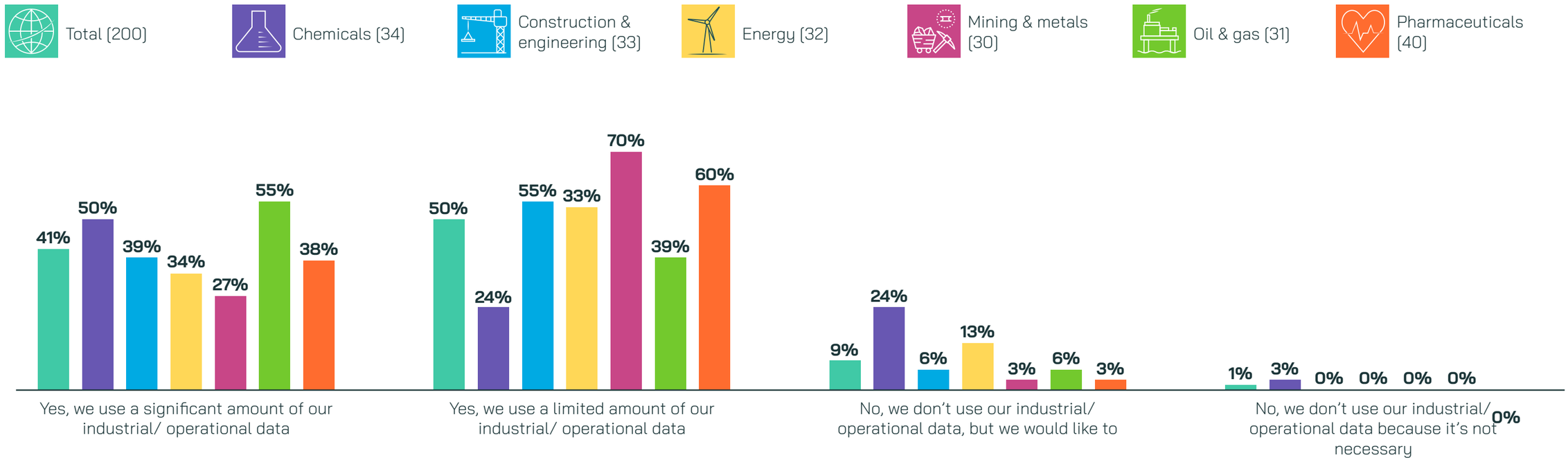


Figure 4: Is your organization currently leveraging its industrial/ operational data for ESG reporting? (Base sizes in chart). Split by sector. Not showing all answer options

The oil & gas (50%) sector is more likely to use significant amounts of their data to report on their sustainability targets, potentially as a defence to maintaining image as climate concerns grow, or in response to ongoing calls to limit financing the oil and gas industry[2].

While it appears decision makers from organizations operating within the chemicals sector (55%) are also likely to use significant amounts of their industrial/operational data for ESG reporting, they may be falling behind from lack of willingness to invest in technology to provide better data for this purpose. In fact, compared to other sectors, organizations operating within chemicals are the most likely to decrease their investment, despite being faced with the barrier of data quality (55%) for ESG reporting. Organizations operating within the chemicals sector are required to report on some operational areas for ESG however not all activity is a requirement, and organizations may not be willing to invest if they are already meeting the ESG data requirements.

Moreover, the mining & metals sector (70%) is using the least amount of industrial/operational data out of the sectors surveyed. However, eight in ten (83 %) surveyed mining and metals respondents report that their organizations are planning to increase investment into technology to extract data to do their ESG reporting. There are no industry specific standards for ESG reporting within the mining & metals sector yet, but organizations are still feeling the pressure to reduce their carbon footprints[3] to align with global sustainability initiatives.

Sectors may not be aligned when it comes to utilizing their industrial/operational data for ESG reporting, instead, the requirements are likely dictated by local governments as well as sector specific regulations surrounding sustainability expectations.

[2] - https://www.nortonrosefulbright.com/en/knowledge/publications/d4daa555/the-future-of-oil-and-gas-arbitration
[3] - https://www.daato.net/articles/esg-reporting-challenges-in-the-metals-and-mining-industry

Having The Right Data

Having high quality, fully sufficient and reliable industrial/operational data would, of course, enhance the accuracy of ESG reporting for organizations. While most respondents (78%) express that their organizations have good to excellent quality industrial/operational data, the technology currently in use to provide this information is falling short as only one in four organizations report having fully reliable (25%) and sufficient (24%) data. Insufficient and unreliable industrial/operational data may be restricting over half of organizations (59%) from using a significant amount of their data for ESG reporting. Meanwhile, one in two (49%) are also hampered by data quality.

Reliable and sufficient data

While people with the necessary analytical skills are fundamental, having the right technology to extrapolate industrial/operational data increases the benefits observed by organizations. There is an opportunity for this impact to be amplified if organizations source the technology and implement the infrastructure.

However, on a regional level, respondents from organizations in Europe are more likely to have fully reliable (34%) and fully sufficient (34%) data than those in North America (reliable = 16%, sufficient = 14%). Europe has introduced more regulations with strict consequences around ESG reporting to prevent 'greenwashing[4]' which has led organizations to improve the quality of the data they use. The risk of financial consequences ensures organizations are stressing the accuracy of data used for reporting. However, while North America is still in the process of implementing legislation around ESG reporting, more regulation may encourage organizations to look for ways to improve their industrial/operational data quality.

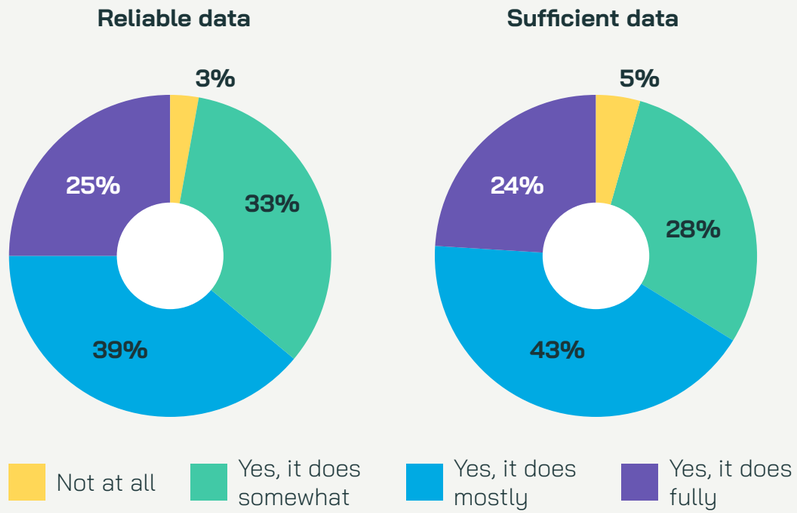


Figure 5: Is your current technology for industrial/ operational data able to provide sufficient and/ or reliable data for ESG reporting? (Base: 199) Excluding respondents who do not use industrial/ operational data for ESG reporting because it is not necessary. Not showing all answer options

[4] - https://www.reuters.com/business/sustainable-business/eu-agrees-deal-company-disclosures-combat-greenwashing-2022-06-21/

Quality and necessary data

Around a third of respondents' (37%) claim their organizations' industrial/operational data is excellent, and an additional 42% deem it as 'good'. Respondents from organizations operating in Europe are more likely to express they have excellent data in comparison to those in North America (46% vs 27%). With regulations on ESG differing according to country, it is a driving factor for organizations to be attuned to their data quality and therefore have better data available for it. However, data quality is still a key challenge (49%) reported by half of organizations, demonstrating a recognition that data quality needs to remain high to be able to cope with potentially changing disclosure requirements and regulatory demands.

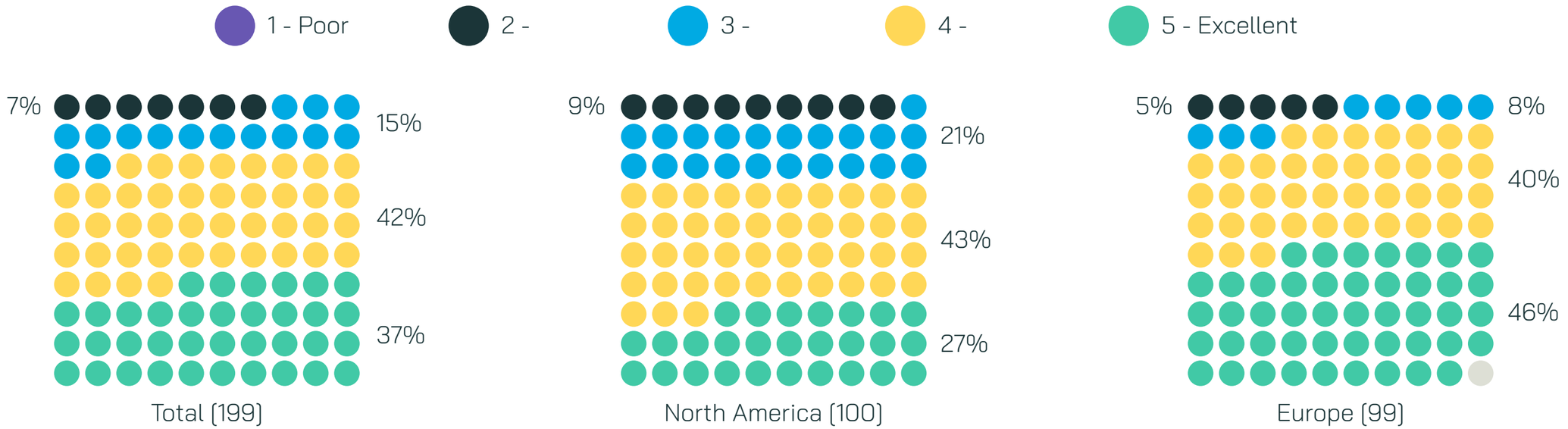


Figure 6: How would you rate the quality of the industrial/ operational data that supports the ESG reporting? (Base:199) Excluding respondents who do not use industrial/operational data for ESG reporting because it is not necessary. Split by region. Not showing all answer options

Three in ten (30%) respondents in North America rate the data quality that underpins their ESG reporting as less than good compared to 13% in Europe. Further, respondents from organizations in North America represented in this study are more likely to use limited amounts of industrial/operational data for ESG reporting than those in Europe – again likely driven by their lack of stringent disclosure requirements. However, data quality is not as widely recognized as a challenge in North America compared to Europe (44% vs 55% respectively). This suggests that although organizations are aware their data is not of the highest quality, it is not the top concern as there aren't legal or financial consequences for poor reporting - yet.

Respondents from organizations situated in Europe are ahead with their industrial/operational data in terms of reliability, sufficiency, and quality.

Organizations need the 'right' data for ESG reporting as nearly all the respondents surveyed (97%) expressed a level of concern over having the necessary data. Over half (55%) of respondents stated they had a higher level of concern, perhaps because ESG reporting is a growing priority for those organizations. The higher degree of concern is more prominent amongst those respondents from organizations in Europe (63%) as there are more legal and financial consequences for inaccurate reporting. The data needs to be accurate and of high quality to alleviate concerns for those in heavily regulated areas for ESG. However, this is likely to create an extra expense, and organizations are already planning to increase investment in technology to provide industrial/operational data for ESG reporting, by 10% over the next 12 months, on average.

Concern over having the necessary industrial/operational data

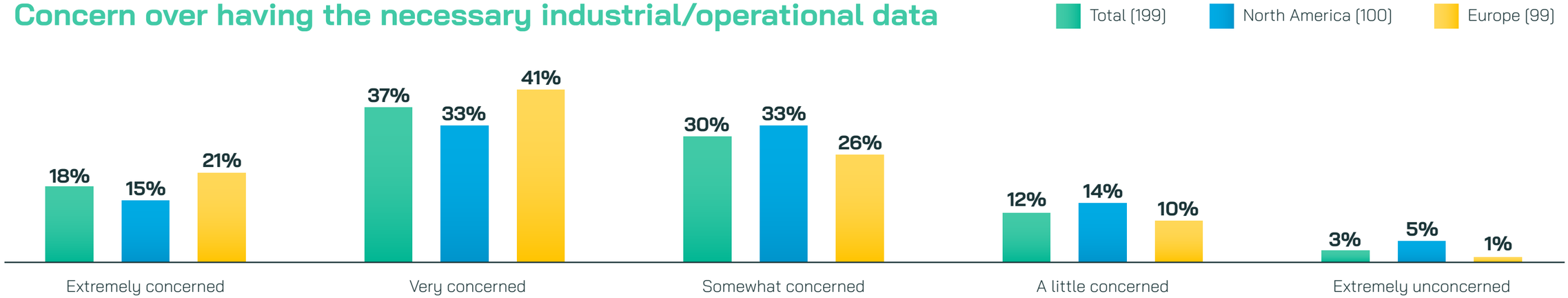


Figure 7: To what extent, if at all, is your organization concerned that it has the necessary industrial/ operational data for ESG reporting? (Base sizes in chart). Excluding respondents who do not use industrial/operational data for ESG reporting because it is not necessary. Split by region. Not showing all answer options

There is a lower level of concern felt by respondents from organizations in North America versus Europe; influenced by fewer consequences for not adhering to regulations. Nonetheless, it is still slightly under half (48%) in North America expressing a high level of concern about this. This shows an awareness of the increasing risk of using inaccurate data as regulations continue to be discussed in political spheres as well as boardrooms. Those 15% of decision makers in North America reporting that they are extremely concerned could be a result of their understanding of the benefits of ESG reporting, such as increased attraction for investors[5] and the possibility of an improved company image for other stakeholders.

[5] - https://www.economist.com/the-world-ahead/2022/11/18/europe-and-america-disagree-over-how-to-handle-esg

Willingness to Invest

Three quarters (76%) of respondents state their organizations are planning to increase investment in technology to provide industrial/ operational data for ESG reporting in the next 12 months. Technology providing this data needs to be upgraded to improve data output in terms of quality, reliability and sufficiency for ESG reporting, and the rising importance of having the 'right' industrial/operational data may be pushing up investment.

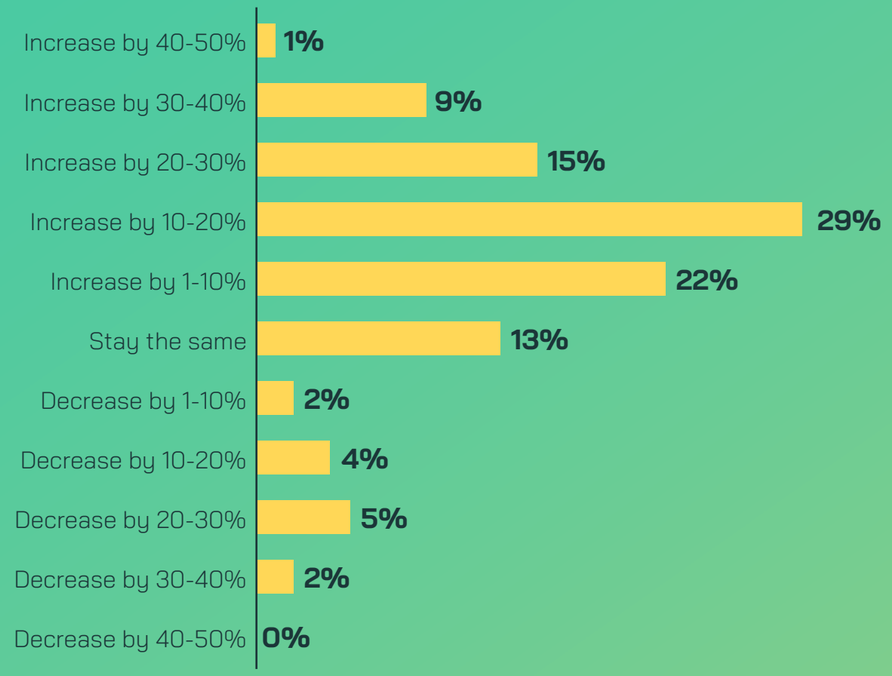


Figure 8: How do you anticipate your organization's investment in technology to provide industrial/ operational for ESG reporting to change in the next 12-months? [Base: 200] Not showing all answer options

Overall, the average increase in technology investment among those surveyed is 10%. But around three in ten respondents from (31%) claim that the problem is actually with the people, and cite having too few analytics skills is a barrier to deriving insights from their industrial/ operational data in general. Although organizations are increasing investment into technology to provide the data for ESG reporting, there will still be a skills gap to assimilate and analyze the data from the technology to input it towards ESG. Investing in technology to analyze data for ESG reporting may partially bridge the skills gap through automation, although investment in properly training people to analyze and contextualize the data through a proper infrastructure will be key to getting the most out of this data.

Upgraded technology may ease the hurdles currently faced when using industrial/operational data for ESG reporting such as aggregation of data (52%), data analysis (52%), data quality (49%), and availability of data (43%). Depending on the technology and its data capabilities, these challenges may get reduced and allow organizations to reap benefits from increased ESG reporting compliance, as well as a streamlined procedure to do so.

Region

Perhaps unsurprisingly given what's been discussed in this report so far, organizations situated in Europe are more likely to be increasing investment into technology to provide industrial/operational data for ESG reporting compared to their counterparts in North America. By investing in technology, it may increase data accuracy as a result if interpreted and handled by those with the correct skills. Furthermore, when abiding to stricter regulations, more granular data is required which will be easier to obtain from technology than manual records. Half of the global investment for ESG assets comes from organizations in Europe[6,7]and as the regulations become stricter, organizations' responses are to invest to stay within this evolving legislation.

Despite the undecided political environment surrounding North America relating to organizations and their potentially required ESG reporting[8], there are still seven in ten (72%) respondents from organizations planning to increase investment toward it in the next year. Many are investing toward ESG reporting without the legislative pressure in North America indicating that organizations have ESG on their radar and as part of their strategy by choice rather than necessity; this investment could future proof their organizations in anticipation of eventual necessary regulations and required reporting.

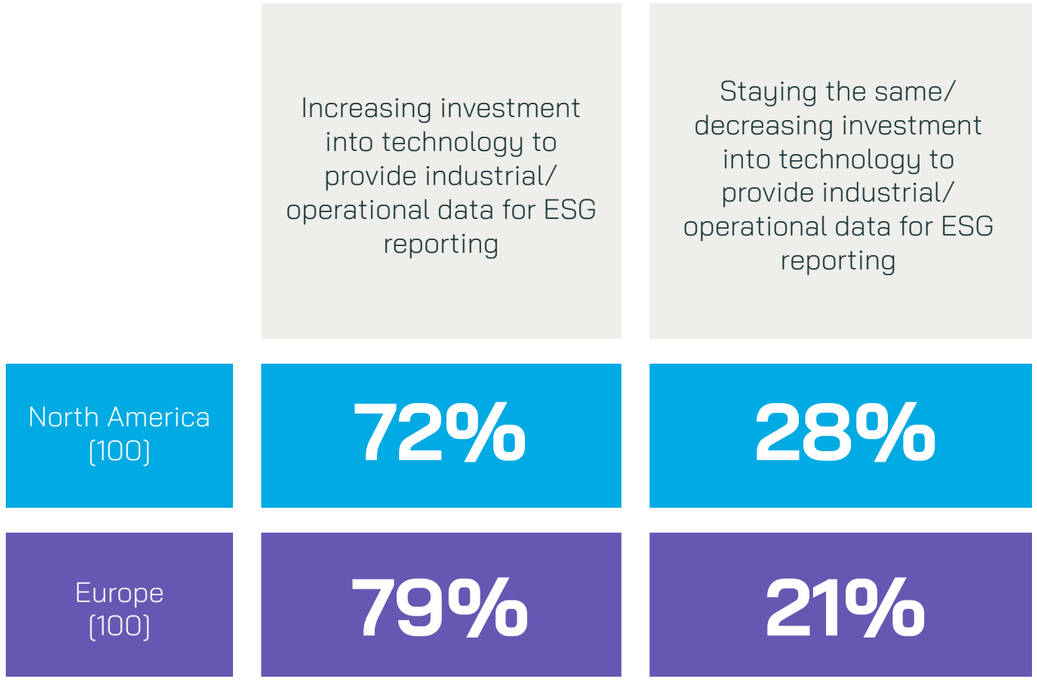


Figure 9: How do you anticipate your organization's investment in technology to provide industrial/ operational for ESG reporting to change in the next 12-months? (Base sizes in chart). Not showing all answer options

6 - https://www.forbes.com/sites/forbesfinancecouncil/2023/04/11/esg-headwinds-embraced-in-europe-under-fire-in-america/?sh=4aa7ea9571f2
7 - ESG assets may hit $53 trillion by 2025, a third of global AUM | Insights | Bloomberg Professional Services
8 - https://www.ft.com/content/3f064321-138c-4c65-bbb9-6abcc92adead

Organization Sector

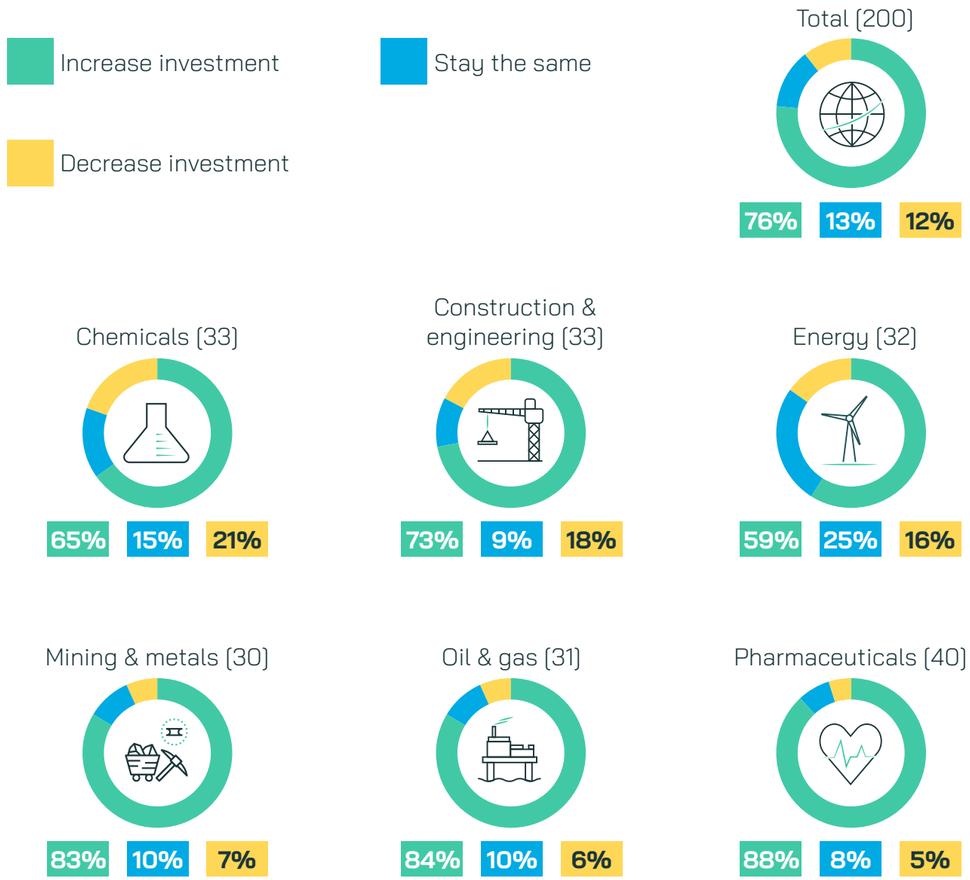


Figure 10: How do you anticipate your organization's investment in technology to provide industrial/ operational for ESG reporting to change in the next 12-months? (Base sizes in chart). Split by sector. Not showing all answer options

Pharmaceuticals (88%), oil & gas (84%) and mining & metals (83%) are the sectors most likely to be planning to increase investment in technology to provide industrial/operational data for ESG reporting. These sectors are generally perceived as non-environmentally friendly, which may be an influencing factor behind the investment. Technology may provide better volume and higher quality data which would make ESG reporting easier and more accurate. The large amounts of data needed for these sectors to do their ESG reporting would also be better managed by proper technology and infrastructure to back it.

Those operating in chemicals rank second lowest in terms of investment plans; however, this may be linked to half of those (50%) in chemicals using less of their industrial/operational data for ESG reporting. The lack of investment and lack of progress suggest they may have sufficient data to meet the requirements for their industry or are not futureproofing for potential new legislation.

Moreover, the energy sector (electricity/power generation) is not investing as much as others and it is the sector least willing to increase investment, as they may already have their own systems for ESG reporting; in fact, their operations likely produce the adequate types of data for ESG already.

Conclusion

Industrial/operational data has many organizational uses including supporting sustainability objectives and strategies and compliance with ESG regulation. Leveraging more of this data for ESG reporting, and investing in the technology to back it, will help organizations not only in maintaining their compliance but also in futureproofing in an ever-changing regulatory environment.

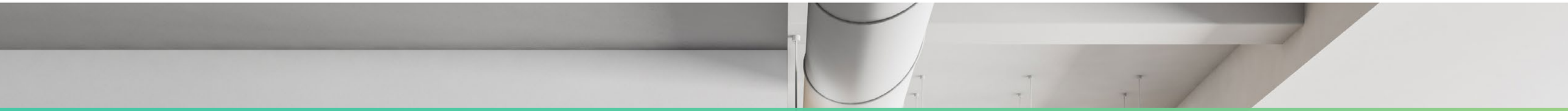
Where does your organization fall when it comes to sustainability objectives?

Achieving ESG targets for organizations may lead to increased attraction from investors but may also alleviate pressure felt from the government, consumers, and investors alike. However, investment in the 'right' data, technology, infrastructure, and the relevant skills are needed to fully utilize the ESG reporting compliance benefit of industrial/operational data.

Is your sustainability strategy future-proof?

As organizations formulate data strategies, align themselves to legislation and compliance, and improve their data – they may naturally shift into using more substantial amounts of industrial/operational data for their ESG reporting. However, decision makers need to remember that with the rising demands in regulatory ESG disclosures, the amounts of data needed will also require skills and technology to help support it. Therefore, with organizations planning to increase their investment into technology to support ESG reporting, they should not forget about investing in upskilling their employees to analyze and contextualize that data.

Are you investing in people, processes, and technology when you consider ESG within your organization? And if not, are you prepared to be left behind by the competition?



Methodology

To explore how organizations are using their industrial/operational data for ESG reporting, Vanson Bourne surveyed 200 senior IT and operations respondents across North America (US, Canada) and Europe (UK, France, Germany) working in a range of sectors (Energy, Oil and gas, Chemicals, Pharmaceuticals, Construction and engineering, Mining and Metals). Respondents were all from organizations with more than 1,000 employees, and the research was conducted in Spring 2023.

About Vanson Bourne

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