Boletín de Estudios Económicos
Bulletin of Economic Studies

Haciendo realidad la revolución ASG
Making the ESG revolution a reality

Vol. LXXVII / Diciembre 2022 Núm. 233

DOI: https://doi.org/10.18543/bee772332022

AUTORES INVITADOS / GUEST CONTRIBUTORS

To be *digital* or not to be, that is the *ESG* question

Ser o no ser *digital*, esta es la cuestión *ESG*

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doi:https://doi.org/10.18543/bee.2638

Recibido: 22 de noviembre de 2022 • Aceptado: 7 de diciembre de 2022 • Publicado en línea: marzo de 2023

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ABSTRACT

Avoiding global warming and achieving ESG targets requires new vision and new solutions to old problems. Since we are humans, we have to solve challenges with creativity, science and technology. But now, science is not enough, technology is not enough, and creativity is not enough. We live in an interconnected world which has never seen before. And there is a tool to allow this connectivity among stakeholders, without barriers and at a fraction of the cost of any other solution: the digital technology. Cheap, flexible and without boundaries, it is pushing our creativity to the limit. Being open and digital is the only solution in an interconnected world that needs to be open and transparent. An organization intending to measure, improve or report its ESG impact, needs to be digital.

Digitalization needs to be introduced in the current and future processes of the industry, which will increasingly rely on digital technologies, allowing collection of data and its use across the company. There is unanimity concerning digitalization, and the need to increase the penetration of digital tools into the company processes so as to improve the organizations efficiency and for reporting purposes.

This paper summarises the contexts of ESG requirements, the associated indexes and the digital technologies that can be considered within the organizations. Then, we describe a proposed approach for mapping the status of digitalization of companies and summarise some examples on how digitalization has impacted the ESG impact of relevant organizations.

Keywords: ESG, digitalization, processes, indexes.

RESUMEN

Evitar el calentamiento global y alcanzar los objetivos ESG requiere una nueva visión y nuevas soluciones a viejos problemas. Como humanos tenemos que resolver retos con creatividad, ciencia y tecnología. Pero ante este reto, la ciencia, la tecnología y la creatividad no son suficientes. Vivimos en un mundo interconectado como no se había visto nunca con anterioridad y las tecnologías digitales nos permiten esta conectividad necesaria entre los grupos de interés, sin barreras y a una fracción del costo de cualquier otra alternativa. Barata, flexible y sin límites, las tecnologías digitales están llevando nuestra creatividad al límite. Ser abierto y digital es la única solución en un mundo tan sumamente interconectado que necesita ser abierto y transparente. Por lo tanto, una organización que tenga la intención de medir, mejorar o informar su impacto ESG debe ser digital.

La digitalización debe introducirse en los procesos actuales y futuros de la industria, que, a su vez, dependerá cada vez más de las tecnologías digitales, lo que permitirá la recopilación de datos y su uso en toda la empresa. Existe unanimidad sobre la necesidad de aumentar la penetración de herramientas digitales en los procesos de la empresa para mejorar la eficiencia de las organizaciones y para fines de información.

Este documento resume el contexto de los requisitos ESG, los índices asociados y las tecnologías digitales que se pueden considerar dentro de las organizaciones. Adicionalmente, describimos un enfoque propuesto para mapear el estado de la digitalización de las empresas y resumimos algunos ejemplos sobre cómo la digitalización ha repercutido en el impacto ESG de las organizaciones relevantes.

Palabras clave: ESG, digitalización, procesos, indicadores.

1. **Context**

1.1. *Regulation*

The current need for reducing the environmental footprint has been translated in new regulations, promoting or imposing countries to take legislative and fiscal actions that will transform the economy and business framework.

The first universal and binding climate protection agreement was established by all members of the United Nations in December 2015, during the COP21 celebrated in Paris. This Paris Agreement sets out a limitation of global warming to 1.5ºC. Later on, in 2019, the European Commission adopted a roadmap for a sustainable EU economy (so called EU Green Deal), with a large package of measures imposing the reduction of greenhouse gas emissions and fostering the research and innovation. This roadmap was translated into the 'Fit for 55' legislative package in 2021, targeting to at least 55% net reduction in greenhouse gas emissions by 2030.

In order to meet those targets, the EU has developed a classification system (EU taxonomy) for environmentally sustainable financial activities. The aim is to direct investment towards sustainable projects. This taxonomy, initially addressing the environmental factors, is currently extended to include social related issues.

The mandatory and even the voluntary non-financial data reporting has become one of the most time-consuming activities of any organization nowadays. Organizations need to report data related to environmental impact, which depend on information gathered at different departments and from many sources. In those companies, where processes are not digitalized, this reporting is requiring an enormous manual effort which, in addition to the lack of efficiency, brings non accurate data into the reports. For example, in many large organizations, the consumption of energy is

based on manual processing of paper invoices from the energy provider, where the only digital link is the wire transfer from bank to bank. Coming to another example, construction companies usually account for the CO_2 emission associated to the concrete used in their works on the basis of average costs of the concrete invoiced by the providers, instead of the actual data on each delivery note because of lack of digital processes. Considering that concrete represents the 6% of CO_2 emissions worldwide, and that those emissions depend on the aggregates and additives included, we can understand that the averaging approach may suppose a large error in the global CO_2 emissions computed. When we try to report that into ESG metrics, manually accounting for invoices and delivery notes requires hundreds of people hours and the accuracy is limited. Additionally, and probably, the most important aspect is that, even the simplest learning by comparison initiative, requires a big effort with average to low accuracy.

Beyond this simple application of data acquisition and processing for reporting, digital processes are seen as enabling a real green transition of economy and transformation of our organisations. A good summary of the challenges and opportunities coming from this regulatory framework is provided by Gómez (2021). In this paper, the author provides areas of action for sustainability strategies of heavy industries. Among those lines of action, digitalization of processes and data analysis are listed as two main aspects. Section below will provide some of the effects of those actions for a particular case of heavy industry, that of steel manufacturing.

This European framework supporting the sustainability efforts has been translated into two political priorities of the European Commission that will shape the future of the member states in the long-term. These two priorities are summarised into the so-called twin-transition: green and digital. Recognising the importance of the digital transformation of the economy for achieving the green objectives. Moreover, it is also recognized that successfully managing the green and digital 'twin' transitions will enable a fair, and competitive future (Muench et al.,2022), requesting interlink the digital and green transitions with the social dimension of the just transition and to ensure that 'no one is left behind'.

This link between the sustainability or ESG aspects and digitalization is already demonstrated in numerous cases within organizations. This paper intends to provide some examples of these cases and provide suggestions for implementation of digital strategies towards the green and social transformation.

1.2. *Indexes*

There is a significant number of ESG indexes at national and international level. This issue could not be a problem if there is a clear ratio preference from organizations and governments. It would be advisable that indexes, if addressing the same topic, would derive similar results, even if this is actually not the case.

We are currently in a situation in which many organizations see limited access to investor´s funding, even from their traditional financial partners, if they cannot demonstrate (through some of the ESG indexes within the financial sector) that they rank well. At this moment, this difficulty in accessing funding is related to environmental topics but it will be soon considering the social and governance aspects too. For example, the largest Fund in the world, Blackrock, already announced in 2020, through the CEO letter to clients, that they put sustainability at the center of their investment approach (Fink, 2020). This statement has continued in the equivalent letters in 2021 and 2022 and has been echoed by many other investors and funds.

Around those investors, a big number of ESG rating consultants has sprung up to assist them. Mike Zehetmayr, a specialist for Ernst and Young on financial service risk and compliance technology, says his firm identified about 100 providers in October 2022, twice the number just one year before (Berg et al., 2022). Academics at MIT Sloan School of Management say the lack of standardisation on ESG scoring sorely needs to be addressed, dubbing the problem "aggregate confusion" in a recent report (Berg et al., 2022), where the authors demonstrate that correlations between ESG ratings range from 0.38 to 0.71. This is based on ESG ratings from six different raters: KLD, Sustainalytics, Moody's ESG (previously Vigeo-Eiris), S&P Global (previously RobecoSAM), Refinitiv (previously Asset4), and MSCI. This disagreement has several important consequences. First, it makes difficult to evaluate the ESG performance of companies, funds, and portfolios, which is the primary purpose of ESG ratings. Second, ESG rating divergence decreases companies' incentives to improve their ESG performance. Companies receive mixed signals from rating agencies about which actions are expected and will be valued by the market. This might lead to underinvestment in ESG improvement activities ex ante. Third, markets are less likely to price firms' ESG performance ex post.

With such a variety of indexes, we need to take decisions. It is true that the number of indexes and the business of the ESG consultancies –legi-

tim but aligned to profit criteria– do not help. Although this is true, there are two things we can do. First one, select a reduced number of indexes that can track those ESG topics connected to our reality and for that, it is needed to pay attention to three dimensions: our business, our industry and our investors or financiers. Second issue to tackle is to benchmark ourselves through the years to track progress.

1.3. *Digital Technologies*

When we refer to digitalization, we are discussing a number of different technologies that use advanced information and communication technology to collect, store, analyse and share physical and market information in each link of the product value chain, providing important technical support for innovation (Yu et al., 2022).

There are many ways of defining and clustering those technologies. We chose the following layer approach, which is suitable if an organization wants to take a conservative approach (thinking in serial order).

1. New content and transactional core: cloud computing, big data, artificial intelligence, and cyber security.
2. New interface: Virtual reality, augmented reality and now metaverse as a direction to the new interface. Learning, analysing, and interacting, in general, will change dramatically.
3. Foundation for the distributed and de-centralized corporation: IoT, 5G, and Blockchain.
4. New era of computing: Quantum.

Starting from the core, one organization can add on top of it, new interfaces facilitating the access to information. Distribution of data, infrastructure and computation functionalities will bring new capabilities. These features will, in the future, be enhanced by quantum technology. An organization can use any other approach based on the vision or company strategy, or in cases where the company wants to be more disruptive.

A basic layer that habilitates the digitalization is the connectivity. Equinix (Equinix, n.d.) has created the Global Interconnection index as a result of bandwidth interconnection, cloud distributed services and number of digital partners a company interacts with to deliver their services.

Bandwidth has an unstoppable growth with a forecast of 40% compound annual growth rate (CAGR) in the 2021-2025 period. And three relevant trends that demonstrate the interconnection based on digital te-

chnology is here and will grow over the next years. By 2025, 85% of global companies will expand multi-cloud access across several regions. It is expected that by 2025, 90% of Fortune 500 companies will become digital providers, both selling and consuming digital services and by 2026 80% of G2000 companies will be digital leaders, interconnecting with more than four Hyperscale Providers and more than 30 SaaS/business partners, on average.

This is transforming the economy, the social relationships, and all organizations leverage on this. We can work to improve ESG initiatives based on these digital interconnections, and improve ESG impact, even faster than the growth on digital interconnection.

2. **The Proposed Approach**

2.1. *A model for understanding digitalization status within an organization*

We often talk about whether an organization is digitalized or not. There is not a clear definition of what digitalization means and to which extent the organization needs to be digitalized. First, 'operations' in an organization refers to a set of, manual or automatic, processes. Each of them can be digitalized up to a different extent, by including a) capture and generation of information, b) creation of data structures, c) interconnection and d) process of data. It is the digitalization of processes what allows organizations to improve reporting (for internal and external stakeholders), increase company intelligence on the processes and take better decisions to reduce emissions, extend social impact, ensure transparency and act more efficiently overall.

But the question is how to identify the status of each organization's processes concerning digitalization. This identification requires to be done when first approaching the digital transformation of a company, but also to track over time if the organization and its processes are progressing. Considering that we may face hundreds, if not thousands of processes to be tracked, we can use a method created by the Nobel prize (Kahneman, 2011) for assessing complex systems. The proposed methodology requires measuring variables associated with independent dimensions, which shall be easy to qualify based on basic questions. The method will deliver normalization among a large number of items and will limit the complexity of the evaluation effect produced by the experts' intuition.

The idea behind this algorithm is that a simple checklist is often good enough to compete with an optimally weighted formula and in many cases outperform expert judgement. This logic can be applied in many domains, ranging from the selection of stocks by portfolio managers to the choices of medical treatments by doctors.

A classic application of this approach is a simple algorithm that has saved the lives of thousands of infants (Kahneman, 2011). An infant who is not breathing normally within a few minutes of birth faces brain damage or death risk. Before 1952, medical personnel used their clinical judgement to determine whether a baby was in distress, focusing on different cues. Without a standardized procedure, many newborn infants died. To define a systematic assessment, Dr. Apgar defined (Apgar, 1966) five variables (heart rate, respiration, reflex, muscle tone, and colour) and three scores (0, 1, or 2, depending on the robustness of each sign). She began rating newborn babies by this rule, identifying that a kid with a score of 4 or below required immediate intervention. Since then, applying Apgar's score (actually, done in every delivery room), the staff members have consistent standards and can easily distinguish the babies' status. It allows devoting time to those in trouble instead of dedicating time to all kids (whether they need it or not). This simple approach has another advantage: a non-qualified person can apply a simple checklist. There is no need to be an experienced practitioner to identify a baby in distress.

Similarly, we are interested in identifying those variables that allow characterising the processes within our organizations and ranking them according to a standardized metric. Doing so, we can define a total score for each process as the sum of the individual scores of each criterion (as per the Apgar test).

Let us define the criteria set in the four variables listed above and summarised in Table 1. We can categorize a process as minimally digitalized if scores 2 in each of the topics, which sum up to a score equal to eight. A score equal to eight can be considered a bare minimum while improved processes can be ranked up to 20 in the score.

As per the example in the Apgar test, the beauty of the simplicity of this method is that it is not needed to have an expert on digitalization to measure the status of the organization. On the contrary, internal staff knowing the operational activities can identify those processes which require a broader digital scope, while capturing the essence of the details of the daily operations. Thus, companies can (1) identify and list the processes and (2) evaluate themselves based on that method. This internal knowledge is essential for identifying the process that can provide larger

Table 1

Digital Score of Processes based on four criteria

Criteria	Score = 1	Score = 2	Score 3	Score = 4	Score = 5
Capture / Generate Information	Indirect Non Digital Data	Basic Capture of Data	Large Capture of Data	Large Capture of Data and ESG oriented	Total Capture of Data for ESG
Create Data Structures	Non Data Structure	Small Data Structure	Large Data Structure	Large Data Structure, Partially Complex	Large Data Structure, Totally Complex
Interconnection of Processes or Data	None, or Manual Interconnection	Basic Interconnection	Large Interconnection	Large Interconnection and Small ESG Intelligent Aggregation	Large Interconnection and Large ESG Intelligent Aggregation
Process of Data	No Processing	Basic Process	Complex Process	Complex Process and Partial ESG Flexibility to Serve Multiple Scenarios	Complex Process and Large ESG Flexibility to Serve Multiple Scenarios

benefits if digitalized. These are the processes that may be considered first in the digitalization strategies, but cross benefits can be obtained when digitalizing process that seems not to be related at first hand. Some examples are provided below for the case of CELSA digitalization strategy. As seen on those examples, digitalization brings reduction in the CO_2 footprint of the company, but also economic positive impact.

This approach allows to measure each specific process at a particular instance, but also allows measuring the evolution of such process in our effort to introduce digitalization in the organization. Moreover, by considering the percentage of processess that reach a status (score interval) we can easily identify the status of the organization about its digital operations, and its evolution over the years as the organization invests in digital transformation. Depending on the initial status of a company, the investment capability or the ambition regarding ESG plan, the approach may differ. It may be possible to establish an objective of a large percentage of processes to reach the advanced status in digitalization (scoring 18-20) at a time window (two, three years ahead) or maybe focusing on most processes to reach the minimum digitalization status at that time frame.

2.2. *Other methods to assess the digital maturity of organisations*

Contrary to other approaches, the described methodology follows a bottom-up approach and intends to identify, from an operational perspective, those processes needed of attention (investment) regarding digitalization, allowing to focus on those which need to be improved. This method allows to take measures to act over the operational procedures of the organizations with the aim to improve the impact on ESG aspects.

There are some published methods to assess digital maturity of organizations. For example, European Union has defined a Digital Maturity Assessment method and tool (EU, 2022). The digital maturity in this context is measured in different dimensions: Digital Business Strategy (including Digital investment per business areas, and Enterprise Readiness for Digitalization), Digital Readiness (Digital Technologies and Solutions, Advanced Digital Technologies), Human-Centric Digitalization (Staff Training & Up-skilling and Staff Engagement & Empowerment), Data Management (Data Storage, Integration, Access & Analytics and Data Security), Automation & Intelligence and Green Digitalization (Environmental sustainability in Business areas –ICT for Green– and Environmental Aspects of Digital Choices –Green ICT–).

As observed, the approach is top-down, the assessment is built in a list of questions / checklist including overall status and readiness of the organization, its staff and the undertaken approaches. It is useful to assess the status, but hardly identifies which processes need special attention. Additionally, it has two specific sub-dimensions focused on green digitalization but lacks perspective on social and governance.

In any case, digital maturity shall not be a goal but a mean. With digital technologies, we can improve our operations, or increase our profit, or have a better understanding on how to retain our talent, how to reduce emissions, and have a more social interaction with a better governance.

3. **Examples**

In addition to providing some tips to facilitate changes in the organization, the authors in (Heath & Heath, 2010) suggest exploring what others are doing, to find bright spots that inspire us. With this philosophy, this section summarised some cases of organizations and their success in the use of digitalization with ESG impact. There are a large number of

examples, for the sake of reducing the length of this article, only a short number of cases are listed here.

3.1. *E for Environmental and Efficiency*

Big Heavy Industry Companies have a large environmental footprint, and thus, they can actually have a significant impact in the reduction of CO_2 emissions. That is the case of Steel manufacturing. Although it may be difficult to think of digital benefit in those heavy industries, CELSA group has undertaken a successful digital path to reduce emissions.

Steel is one of the most used materials in the world. With more than two million tons of this iron alloy manufactured annually, Steel manufacturing directly employs more than six million people worldwide (Iberdrola, 2022)., and it causes approximately 7% of global man-made CO_2 emissions. Can be recycled an infinite number of times in a completely electric process with low emissions. Recycling already covers 26% of the world's steel needs.

Spanish CELSA Group is one of the leading multinational companies in steel long products worldwide and the second-largest steel recycler in Europe. With an industrial presence in nine European countries (Denmark, Spain, Finland, France, Ireland, Norway, Poland, the United Kingdom and Sweden), with over 120 work centres. Revenue in 2021 was €5,283 M, employing 9,912 workers and selling 6,346 Mt[1]. (CELSA Group, 2022)

In Spain, CELSA is the largest industrial recycler (second in Europe) and the third-largest industrial consumer of electric power, with 0.99% of total Spanish consumption, and 1.02% of total natural gas consumption in 2021. The group moves 423,866 trucks per year (1,624 daily), representing 1% of total tons transported by truck in Spain and 1% of tons transported by ship in Spanish ports.

CELSA leads Europe's manufacturers in terms of savings on CO_2 emissions. Carbon steel manufacturing at CELSA Group in Spain generates 30% fewer scope 1 and 2 CO_2 emissions per ton of steel than the European Union's average for electric furnaces, thanks to the electric arc furnace (9 times less CO_2 emissions compared with blast furnaces). "The

[1] Mt, is a metric unit equivalent to 1 million (10^6) tonnes, or 1 billion (10^9) kilograms.

commitment of the group is to reduce this figure by 50% by 2025. Additionally, a second big goal is to completely eliminate waste by the same date", Mr. Rubiralta declares in personal communication.

CELSA Group has reduced electricity and natural gas consumption by 10% and 8% compared to the prior year. As already mentioned, CELSA is the third consumer of electricity in Spain, so a reduction of 10% of electricity consumption represents a large percentage of the national expenditure. This reduction has been accomplished by the continuous implementation of several techniques based on data analysis. That demonstrates that reducing emissions can be perfectly aligned with improving performance in the business.

More complex systems are also deployed. With machine learning, CELSA associates the type of scrap used and the way the furnace is operated optimizing its electrical consumption. With computation of cutting patterns which must be cut to the exact length requested by the customers reduce the waste material and the energy consumption and CO_2 emissions. For most of the big organisations, especially the heavy industries, the largest CO_2 emissions rely on the supply chain and downstream delivery to customers, like optimization of truck loading and delivery routes.

The approach of the company was very tactical, identifying the process which had larger consumptions and optimising them, by means of data acquisition and analysis of the obvious process that may impact in the CO_2 footprint, but considering also processes that indirectly impact in the environmental impact, and with an economic perspective altogether.

CELSA's efforts for sustainability started well before it was explicitly required by society and laws. It was initiated with clear decisions in the early industrial design choices. Since 2012, introducing digitalization in all processes through open innovation methodology. This approach resulted in the hybridization of traditional engineering with new digital technologies.

3.2. *S for Social*

In 2015, *Fundacion Cibervoluntarios*, created *Empodera.org*. A platform of collective intelligence that facilitates the creation of challenges and specific actions for the achievement of the SDGs. It is a digital platform for sustainability and social innovation are systems created to raise awareness of real problems and possible solutions that call for collective efforts, enabling new forms of social innovation.

The platform and methodology are recognized by the United Nations through UNITAR (United Nations Institute for Training and Research). In the last year alone, the platform has been used by more than 1,500 people, some 300 initiatives have been generated, and 100 organizations and entities have joined.

Yolanda Rueda is the President of *Fundación Cibervoluntarios*. After more than 20 years fighting the digital gap, she is now leading flexible ways to connect people and enterprises and organizations to build a most sustainable world together. In her words *"we must generate environments to work on the problems of society and the current challenges we face, in order to offer solutions. This is a perfect opportunity for enterprises and organizations, as they will have a structured way to connect to this world"*.

From an enterprise perspective it is difficult to engage with people that are not employees to work with the same goals in specific projects. Here is where a digital platform like *Empodera.org* plays a pivotal role. Empodera.org, as a digital tool, is digesting the complexity and the loose relationships of work from an open society and connecting with the structured world of enterprises. There is no traditional way to do this, unless the enterprise spends a large amount of money or lots of resources that might not be sustainable in the long term.

3.3. *G for Governance*

G for Governance is the last letter in the ESG trio. Unfortunately, in most of the cases it is last and least. Climate change is urging us to act in the E (Environment) reinforced by very strict laws in more and more countries. S (Social) is no longer a sole ethical positioning but also a positive need to survive as society. And we use to let G for the last because it seems to be important but not urgent.

ESG and Governance itself will demand a new way of doing things for board members and top management. They can reshape their values, think in the long term, with ESG in their mind instead of only quarterly results focus. They also need to understand how fast general shareholders and other investors and regulators are changing their minds towards ESG core values. Even more, when the economy could be in the edge of a recession just when finishing the pandemic years. In this unstable play-

ground digital is a good point to start from. Managing all the audiences is easier with digital technology.

Rosa García is President of Exolum, a company that manages Europe's largest network of refined products. Ranked first in Europe in terms of storage capacity and seventh in the world. She admits there are many challenges but also many steps that could be undertaken. *"There is a big opportunity to change internal relationships within the companies to avoid conflict of interest and abuse of power. It can easily be intermediated with digital software, making employees safer and company also safe from violating the laws."*

As a technology veteran, Mrs. García highlights that now that companies are becoming more and more digital, *"opening channels with customers cannot be done at an affordable price without digital channels in the middle. And ensuring that the relationships with partners are done following corporate governance is a main advantage of using digital technology. Training and guidance are other topics that gain from digital approaches."* she said. Additionally, in recent years, the number of data breaches has increased massively, outpacing the current level of expenditure on cyber security by a wide margin. "*Data protection is a governance issue*" as Mrs García states.

Many new things still need to be deployed. Most of the companies do not have a forecast on the impact it might have. Mrs. García finishes: *"Digital starts to solve issues and can be done now. We keep on working to have the whole picture and make it all actionable, but until this is possible, we can be actionable today inside our scope"*.

Although in this paper we have mainly reviewed industry cases, the digitalization supports the ESG strategy of any organization. Examples related to Governance in the public administration are published continuously by different actors. Lately, efforts by some individual persons (Gómez-Obregón, n.d.), show the exploitation of the public contracts data and technology can spot inconsistencies and inefficiencies of the national, regional and local administrations. To raise attention, their findings are made public through social media. Moreover, some of these persons are supported by a community of individuals that fund these efforts on the basis of crowdfunding platforms, (e.g. Patreon, n.d.), which also shows how the digital solutions enable the connexion of individuals pushing social solutions for governance and transparency.

4. **Conclusions and lessons learnt**

There is no ESG without digital. If we need intelligence, we need data and process learning. Without digital, the cost of gathering data and connecting it to other sources is impossible to manage.

Digital is the only way to connect systems, providers, partners, resources…, both internal and external, to understand and track real life environments. The only way to connect virtual corporations, either peer to peer (in size or authority) or in networks with big differences in the size of the nodes (like enterprises and SMEs), is through data and process interconnection and interchange. Otherwise, we will continue to measure isolated portions that could end in incremental emissions when accounted together.

Open innovation, together with a traditional problem approach based on the experience, delivers the speed we need to face those challenges. On one hand, you have the real problems identified, and on the other, you can have new technologies and solutions that you can either adapt or develop from scratch.

Digital technologies are the enablers for big changes in any organization, as they can provide the insights to the elephant to be motivated for improving operational processes and to the rider to understand which changes are to be done, monitoring and evaluating them. Digital tools also facilitate the changes to be executed that otherwise are not possible to occur.

We started this article with an adaptation of the first very well-known sentence of a poem in *Hamlet* (Shakespeare, 1599): *To be digital, or not to be, that is the ESG question*. We also want to finish this paper with the final sentences in that poem. The ending part may not be as well-known as its beginning, but it is also applicable for the changes that organizations need to execute in order to achieve the proper ESG impact. Those changes require digital approaches but also the courage to undertake them at full extent, not limiting to the collection and reporting of data and despite the reticence to incorporate innovative approaches that may be seen as a risk in the short term. Otherwise, the good wills will keep as such and no impact will be achieved.

> *Thus conscience doth make cowards of us all, /And thus the native hue of resolution / Is sicklied o'er with the pale cast of thought, / And enterprises of great pith and moment / With this regard their currents turn awry / And lose the name of action. Hamlet (Shakespeare, 1599).*

[Spanish versión] Esta previsión nos hace a todos cobardes, / así la natural tintura del valor se debilita / con los barnices pálidos de la prudencia, / las empresas de mayor importancia / por esta sola consideración mudan camino, /no se ejecutan y se reducen a designios vanos. Hamlet (Shakespeare, 1599).

Acknowledgements

The authors thank Mr. Francesc Rubiralta and Mr. Joel Montoy (CEO and solution provider for CELSA Group respectively), Yolanda Rueda (President of Fundación Cibervoluntarios) and Rosa García (President of Exolum), for their active collaboration to showcase the impact of digitalization into the ESG aspects of the organizations.

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