Growing the Seeds of ESG: Venture Capital, Start-Ups and the Need for Sustainability

BCG

KFW CAPITAL

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1. Executive Summary

The need to take action on a variety of environmental, economic, and social fronts is growing. Threats include climate change, biodiversity loss, income inequality, and poor living and working conditions. Governments and nongovernmental organizations are making substantial efforts to deal with many of these issues, and the global business community, including large corporations and asset managers, has made sustainability a central theme of their strategies and daily operations. It has been shown that sustainability has many benefits, including higher investment and share price performance, and better retention of key talent.

Venture capitalists (VCs), limited partners (LPs), and start-ups have an equal duty to fulfill their societal obligations. Together, they represent the cutting edge of innovation; their technologies, services and products can have a large and enduring impact on our efforts to solve the problems we face. Strategies including environmental, social, and governance (ESG) factors are therefore instrumental in assessing, measuring and monitoring their sustainability – and ensuring that investors reap the performance rewards that sustainable investing is having.

The results of a survey, conducted by KfW Capital and Boston Consulting Group, with the support of the German Start-ups Association, however, indicate that VCs and start-ups across the VC landscape have yet to fully incorporate the principles and procedures of ESG into their operations. Although two-thirds of VCs have integrated ESG into their investment processes, more than 60% of start-ups say their VCs never discuss ESG issues with them. As a result, just a third of start-ups have any policies and processes in place for systemically integrating ESG into their product offerings and business models.

A leading cause of poor ESG integration is the lack of a common language and a systematic and holistic way to assess and measure the value and level of **ESG integration at both VCs and start-ups**. In this report, KfW Capital and Boston Consulting Group offer an approach to changing this.

The approach consists of three main parts:

1. **ESG Capabilities House:** The Capabilities House is used to evaluate the current status of VCs' efforts to integrate ESG into their investment strategies and dealings with portfolio companies. It is based on a standardized questionnaire to be filled out by VCs.

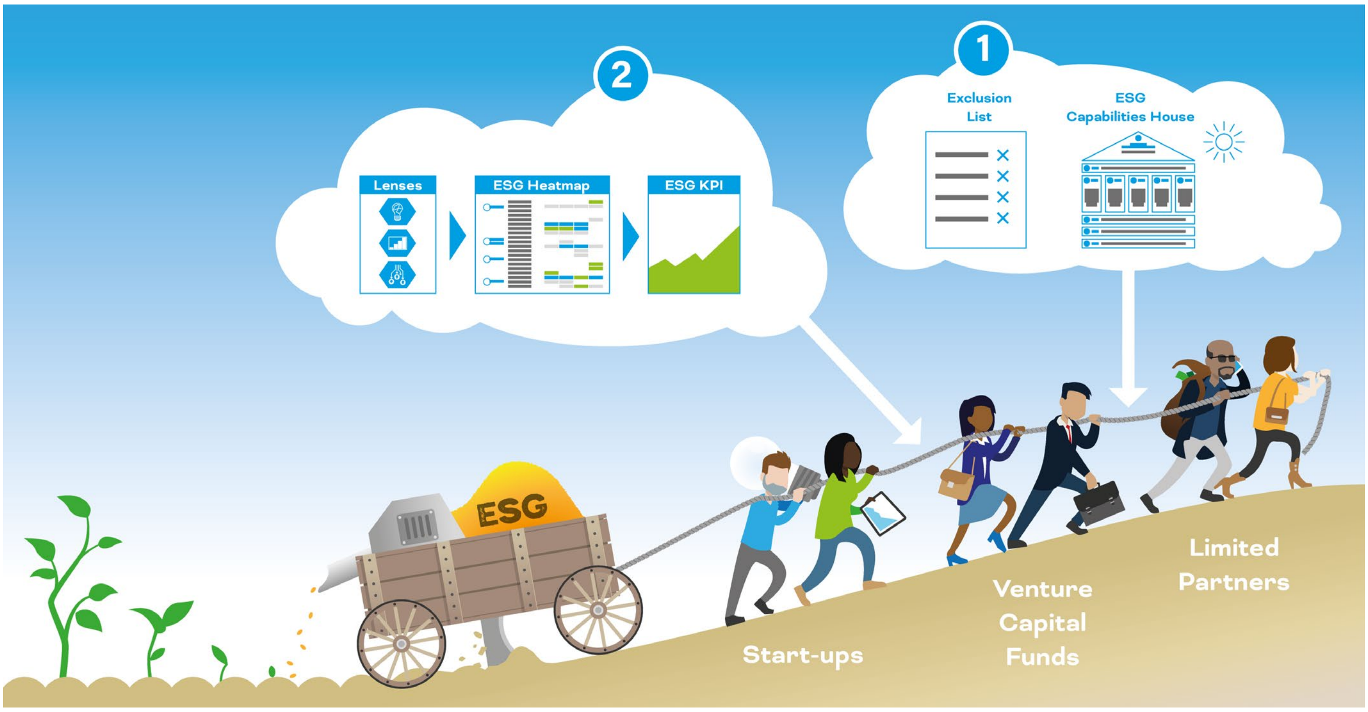
2. **ESG Heatmap:** Based on individual characteristics of start-ups, the ESG Heatmap identifies material ESG criteria that are reasonably likely to impact its financial condition and performance. Three lenses – the start-up's type of innovation, stage, and exit industry – provide the necessary information to identify material ESG criteria within the ESG Heatmap.

3. **ESG KPIs:** Using standardized ESG KPIs, VCs and start-ups can assess performance on the material ESG criteria identified in the ESG Heatmap. The KPIs can be assessed through answers to questions arising from the start-up's material ESG criteria.

This new approach enables the VC community to assess and benchmark their ongoing efforts to integrate ESG principles. A further step is required to determine the actual impact their efforts are having on the specific societal concerns they hope to help solve. This report highlights an approach for doing so, although the details are beyond its scope.

VCs, LPs, and start-ups need to start now to systematically integrate ESG principles into all their activities. We believe our approach will provide a clear, consistent, and practical methodology for carrying out this vital task (see Exhibit 1).

Exhibit 1: Growing the seeds of ESG across the VC landscape



Source: Boston Consulting Group

2. Introduction

Climate change, resource scarcity, biodiversity loss, oceans full of plastic, rising inequality, poor working conditions, corruption, and fraud – the world is full of environmental, social, and governance challenges. All kinds of organizations, from government agencies to nongovernmental organizations (NGOs), are working hard to find and implement solutions to these challenges, opening up opportunities for making a real difference. But they cannot do it alone. In recent years, the global business community has made many contributions to the effort, not just for charitable reasons, or to polish their public reputation but because there is a positive business case for doing so.[1] Investors, too, are incorporating these principles into their strategies, with the understanding that concepts like environmental, social, and governance (ESG) factors are critical to their success and that investment strategies that adhere to these concepts can outperform the overall market.[2]

In many ways, venture capital funds and the start-up companies they invest in are uniquely positioned to aid in the effort to solve these kinds of problems. By bringing fresh thinking, new technologies, and new business models to bear on these issues, they can contribute to positive change and reap the benefits of greater returns at the same time.

So far, however, their efforts have not kept up with the need. KfW Capital and Boston Consulting Group, with the support of the German Startups Association, conducted a survey of almost 200 VCs and start-ups – young companies at the seed, early, and growth stages. The results provide a clear call to action (see chapter 4 for detailed survey results). Respondents are aware that ESG can be a value creator, but many VCs have not yet truly integrated ESG into their investment processes. And few start-ups have the policies and processes in place needed to integrate ESG into their business models.[3]

These results make plain the need for VCs and the companies they invest in to fully incorporate ESG thinking into their strategies and business models, and for limited partners to assess the progress these funds have made. Greater efforts on the part of governmental policy makers and regulators to promote ESG across the business community will certainly help force the issue. But ultimately it is up to the VCs and start-ups.

In what follows, we offer a systematic approach to the process, from mapping VCs' overall ESG strategy to assessing the current ESG status of their portfolio companies to monitoring and managing these companies' progress toward full integration. Our belief is that this methodology will enable VCs, their portfolio companies, and their investors to incorporate ESG into their thinking and measure the positive benefits of doing so. As one venture capitalist who participated in our survey put it:

> "We believe the most valuable companies of the future will be the ones contributing solutions to global problems, making scalable impact with market returns."[4]

3. The Environment, Social, and Governance Context

The movement to incorporate ESG into business and investment strategies has been a hot topic for more than a decade.[5] Studies show that investors reward companies pursuing these concerns with valuation multiples as much as 19% higher than median performers.[6] Many large asset managers and capital market players have already included ESG considerations in their investment strategies and processes, and the results are impressive.

In most cases, efforts to pursue and measure societal impact are based on the concept of the UN's Sustainable Development Goals (SGDs),[7] given their specific value in serving as the basis for understanding how companies can put the concept into action (see the box "Defining Terms").

VCs and start-ups, too, have recognized the increasing importance of these issues. In a recent survey conducted by KfW Capital and Boston Consulting Group, and supported by the German Startups Association, 66% of the 76 VCs and 109 start-ups surveyed say ESG is a clear value creator, and over 77% agreed that ESG integration will become increasingly relevant over the next five years.[3]

The importance for VCs and start-ups of integrating ESG thinking is clear: For funds, ESG considerations have the potential to improve their overall risk-return profile, ensure their future compliance with regulatory requirements, and satisfy the expectations of their LPs. By helping them to avoid reputational damage, ESG will become a necessary prerequisite for attracting investments from LPs, and especially from institutional investors. In short, a comprehensive ESG strategy can positively drive performance and create a real competitive advantage.

For start-up companies, ESG integration can improve the retention of existing customers and attract new ones, thus increasing market share. And it can help them acquire and retain talent and comply with current and future regulatory standards. Start-ups also say that ESG offers considerable value in fulfilling their societal obligations and keeping their license to operate. Indeed, many new companies are launched and funded solely to meet such societal goals, which can become a key factor in motivating their teams and driving innovation.[3]

Start-ups have many advantages over large established companies in integrating ESG into their activities. They can implement sustainability best practices early in their corporate lives, and thus avoid the struggles faced by big companies, with their complex organizations and long, opaque supply chains. And they have the innovation skills and capacity to find groundbreaking solutions to society's challenges. VCs can support their portfolio companies' efforts by guiding and coaching them throughout the process and requiring the data needed to monitor progress.

Yet the gap between the perception of ESG's value in the VC community and how it is actually put into practice by funds and their portfolio companies is wide. While almost two-thirds of the VC funds we surveyed have begun integrating ESG into their investment processes, only 32% of the start-ups have policies and processes in place to systemically integrate ESG into their business models. The reasons aren't far to seek. Our results show that clear and consistent communication and expectation between VC funds and their start-ups regarding these issues is lacking. Most start-ups say their investors do not ask them to provide information about their ESG integration efforts.[3]

There are few standardized guidelines for helping VCs and start-ups turn ESG considerations into action, although several initiatives have arisen to begin to tackle these issues. A coalition of German VCs and industry consultants has devised the "Sustainability Playbooks," which summarize existing approaches.[8] The new DIN SPEC guidelines from the Borderstep Institute[9] provide start-ups with an initial orientation to implement sustainability considerations. The ROSE Framework, an initiative of START Global, offers, guides, and supports both VCs and start-ups on ESG improvement potential and impact KPIs.[10] And Leaders for Climate Action[11] is a community of VCs and start-up seeking to drive climate action forward.

Our approach goes further. **We seek to reduce the complexity inherent in putting ESG principles into action by systematically breaking down ESG implementation into its relevant parts and identifying best practices for VCs and start-ups alike.**

In what follows, we evaluate the status quo of ESG activities at VCs and start-ups and identify the challenges inherent in promoting its integration. We then present a first-of-its-kind industry approach for the process of managing the implementation of ESG, providing a common foundation and language. Finally, we offer a method for evaluating ESG integration at VCs and for identifying relevant ESG criteria for different types of start-ups and present a common set of performance indicators for gauging progress.

The methodology will enable both VCs and those who invest in them to "future-proof" their funds and portfolio companies, given the increasingly critical importance of ESG in their investment strategies. We believe that our results and recommendations will be applicable throughout the VC landscape – not just for VCs, their LPs, and portfolio companies but also for angel investors, family offices, and corporate venture capitalists.

Defining Terms

Terms like "sustainability," ESG, impact investing, and SDGs are often used interchangeably, but they are not the same. It is important to distinguish between them, and to understand why this report focuses on ESG.

Sustainability. This broad term implies a general focus on the long-term survival of our society. In a 1987 report from the UN, sustainable development was defined as "development that meets the need of the present without compromising the ability of future generations to meet their own needs."[12] Sustainability is commonly framed in terms of the triple bottom line for organizational performance, where the traditional economic bottom line is joined by social and environmental bottom lines.[13]

ESG. The acronym ESG stands for environmental, social, and governance, a phrase used to aid in translating sustainability for the corporate and financial world. The three categories allow companies to consider a range of nonfinancial factors that can reveal any potential risks and opportunities inherent in their business models, corporate structures, and management policies.

Environmental considerations refer to climate change mitigation and adaptation as well as the environment more broadly, including the preservation of biodiversity, the alleviation and prevention of pollution, and the circular economy.

Social considerations take into account issues of inequality, inclusiveness, labor relations, investment in human capital and communities, and human rights issues.

Governance considerations refer to corporate structures and policies such as tax strategy and bribery and corruption.

Impact investing and Sustainable Development Goals (SGDs): The term "impact investing" goes beyond ESG considerations to look at the societal value a company, product, or service provides. As such, it moves beyond the microeconomic perspective that is mainly considered within ESG toward a larger, macroeconomic view of potential societal benefits.

A first step in defining impact investing involves determining what companies contribute to solving our most pressing societal issues. The United Nations has defined 17 Sustainable Development Goals that summarize the critical societal problems that must be solved by 2030 (see Exhibit A). These goals include social and environmental factors, such as alleviating poverty, reducing inequalities, spurring climate action, and promoting responsible consumption and production.

Exhibit A: The UN's Sustainable Development Goals

Source: United Nations (https://sdgs.un.org/goals, accessed November 13, 2020)

4. Our Survey Results: Three Challenges

The current status of ESG integration differs significantly across the landscape of VCs and start-ups, and more work must be done to encourage them to commit fully to the concept. We surveyed 76 VCs, most of whom are part of the KfW Capital network, and 109 start-ups offering technologies and services or products, at different investment stages and in a range of industries. In general, the VCs surveyed say they have made progress internally, but our survey shows that they still lack the ability or willingness to translate their efforts into action. And most of the start-ups have yet to make much headway in either area.

We see three challenges, in particular that VCs and start-ups must overcome if they are to fully incorporate ESG into all their operations.

4.1 Slow Comprehensive Adoption

Overall, VC funds are well aware of the value of ESG. Three-quarters of the VCs surveyed believe that the principles of ESG can create long-lasting value, two-thirds confirm that ESG is already an important issue across the VC landscape, and **almost every VC – as full 94% – thinks that ESG will become even more important within the next five years**. Perhaps most importantly, almost 70% of respondents say their funds have already systemically integrated ESG into their processes and strategy through the application of a range of ESG policies and methodologies.

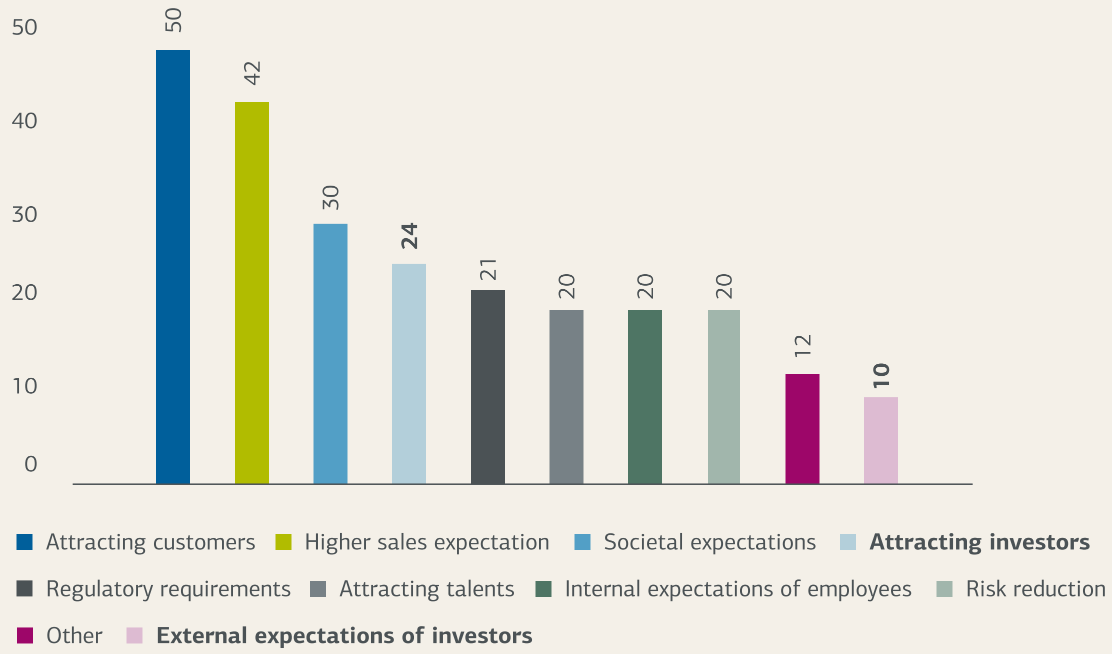
Unfortunately, the impact of ESG on VCs is primarily inward, focusing on internal policies and practices such as initial negative screening and risk analysis of potential investments. This is understandable, given their reasonable concerns about investor expectations and regulatory oversight. Their efforts to support ESG integration among their portfolio companies, however, is far more limited.

The effect of the gap in the degree to which VCs and their start-ups prioritize ESG is clear. More than 60% of the surveyed start-ups say their VCs never question them about any ESG criteria. Only 58% of the start-ups see the value of ESG, and just two-thirds believe ESG will ever become a significant issue for them. In fact, less than a third of the start-ups we surveyed have implemented any defined ESG policies at all.

We asked start-ups to rank the reasons that drive them to consider ESG. It is encouraging that half of the start-ups rank attracting new customers as a top three driver; after all, products provided by companies acting in a sustainable way are on the rise, and a BCG study shows that more than half of European consumers claim to shop green.[14, 15] Showing a commitment to ESG, they say, also helps them attract new employees and retain existing talent. But only a quarter of start-ups see ESG as important in attracting new investors, and just 10% say investor expectations affect their own thinking about the topic (see Exhibit 2).

Exhibit 2: What drives start-ups to consider ESG factors?

Share of start-ups ranking these drivers under the top three reasons for them to consider ESG, in %



Source: Results of the survey of KfW Capital and BCG with responses of 76 VCs and 109 start-ups

ESG topics, it seems, are useful when pitching to new investors, but **once an investment is secured, young companies don't expect their investors to monitor their performance on any ESG criteria** at all. Unwinding this contradiction will be critical to persuading start-ups to take ESG seriously.

Why have VCs been willing to limit their ESG activities to internal matters? VCs may believe that setting internal ESG policies and guidelines is the best way to satisfy the expectations of their investors and the requirements of regulator, and that no direct engagement with their portfolio companies is necessary. This perspective is short-sighted. VCs should be working with them to consider ESG in light of future regulations, risk reduction, and the potential for higher investment returns. And given their role in the present and future of the companies they fund, VCs can have a powerful influence on their strategies and operations. If VCs continue to restrict their ESG focus to internal matters, they will never succeed in maximizing their societal impact – or that of their portfolio companies.

4.2 Lack of Common Priorities

A further challenge lies in encouraging VCs to look beyond their current operations and help their start-up companies see ESG as a priority. Yet VCs and their portfolio companies also differ when it comes to which ESG priorities matter most. And priorities differ even among types of start-ups. This makes aligning on which ESG factors to focus on particularly difficult.

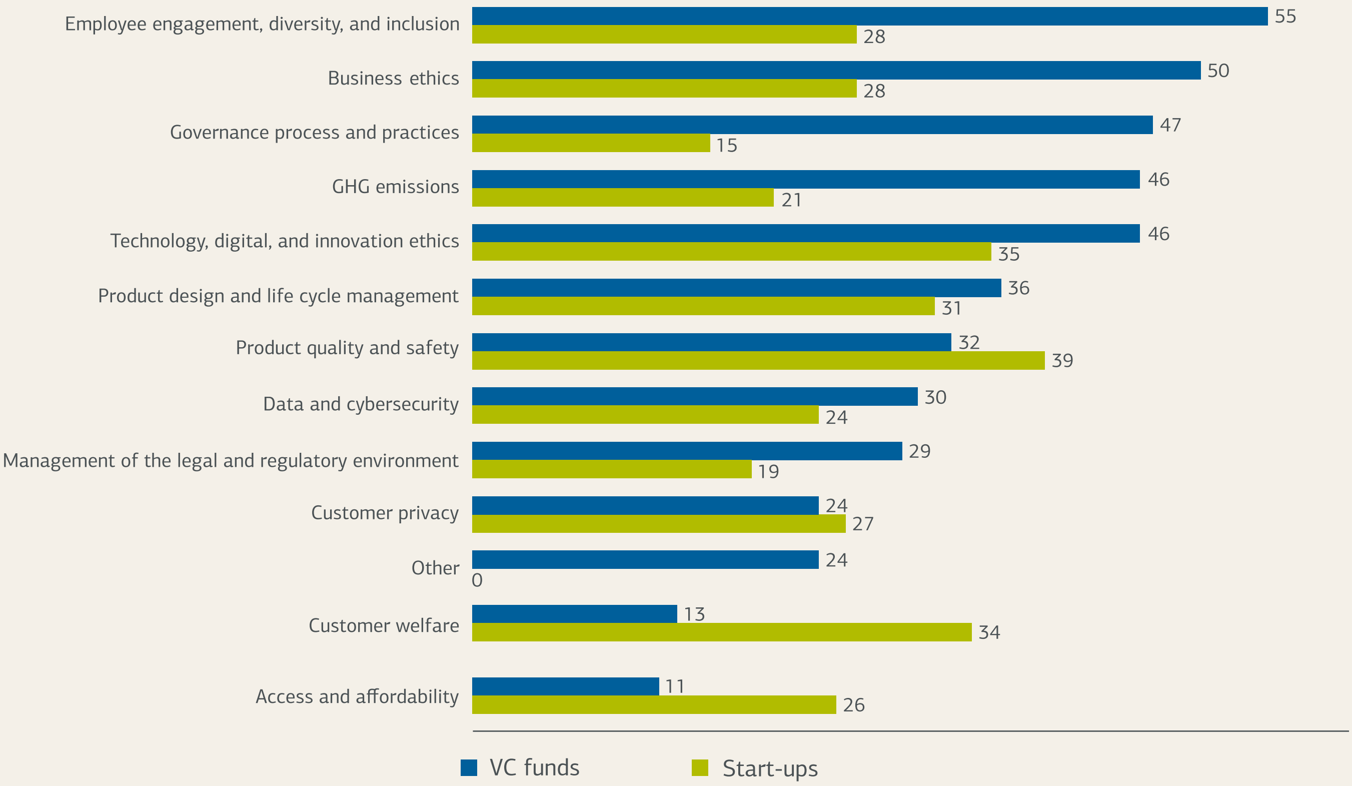
The results of the survey show that for the most part, VCs prioritize ESG criteria such as "business ethics", "governance," and "technology, digital and innovation ethics" – criteria that generally reduce their risk and boost their fund's reputation. Priorities among start-ups, in contrast, tend to involve product-related issues that can be potential business opportunities (see Exhibit 3). The survey shows that these priorities depend to a great extent on the start-up's innovation type, stage, and industry.

Start-ups at the seed stage, for example, ranked "product quality and safety" as the most important ESG criterion, in contrast to start-ups at the growth stage, which focus on "customer welfare and privacy." In addition, start-ups working on a physical product innovation say they prioritize "product safety and quality," while those offering a new technology or service see "technology, digital, and innovation ethics" as the most important ESG criterion.

This gap in expectations and priorities significantly complicates the critical dialogue between VC funds and start-ups that must take place if they are to agree on how best to promote their ESG activities. And it further highlights the need for a flexible tool that will allow both VCs and their portfolio companies to identify relevant ESG criteria on the basis of the companies' unique characteristics and cut through the complexity of the issues involved.

Exhibit 3: Few start-ups provide information on relevant ESG criteria to their VCs

Share of VCs and start-ups that mention this ESG criterion as relevant in %



Source: Results of the survey of KfW Capital and BCG with responses from 76 VCs and 109 start-ups

4.3 Poor Communication

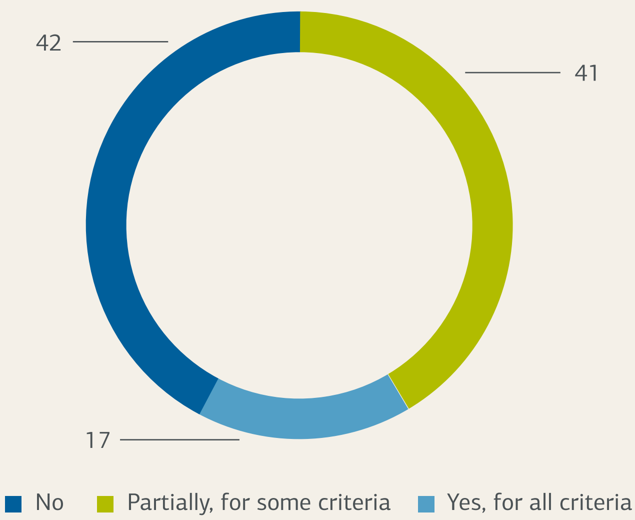
There is no doubt that the sheer complexity of ESG standards and criteria can be overwhelming for young companies. After all, it's likely that most start-ups lack the internal resources, capabilities, and data needed to determine which topics to focus on and how best to incorporate them into their activities and strategy. This in turn makes it very difficult for them to work with their VCs to put these issues into practice.

These concerns are reflected directly in the survey results. **Just 17% of start-ups confirmed that they would be able to report to their VCs on their three most important ESG criteria, and 42% said they would not be able to report at all** (see Exhibit 4). But that may be because less than half of all VC funds regularly require their portfolio companies to report the data needed to analyze their potential ESG risk and opportunities.

How can these results be improved upon? Consider the 22% of surveyed funds that focus on impact investing, using the Global Impact Investing Network (GIIN) standards (see the box, "GIIN Criteria for Impact Investing").

Exhibit 4: Few start-ups provide information on relevant ESG criteria to their VCs

Share of start-ups in %



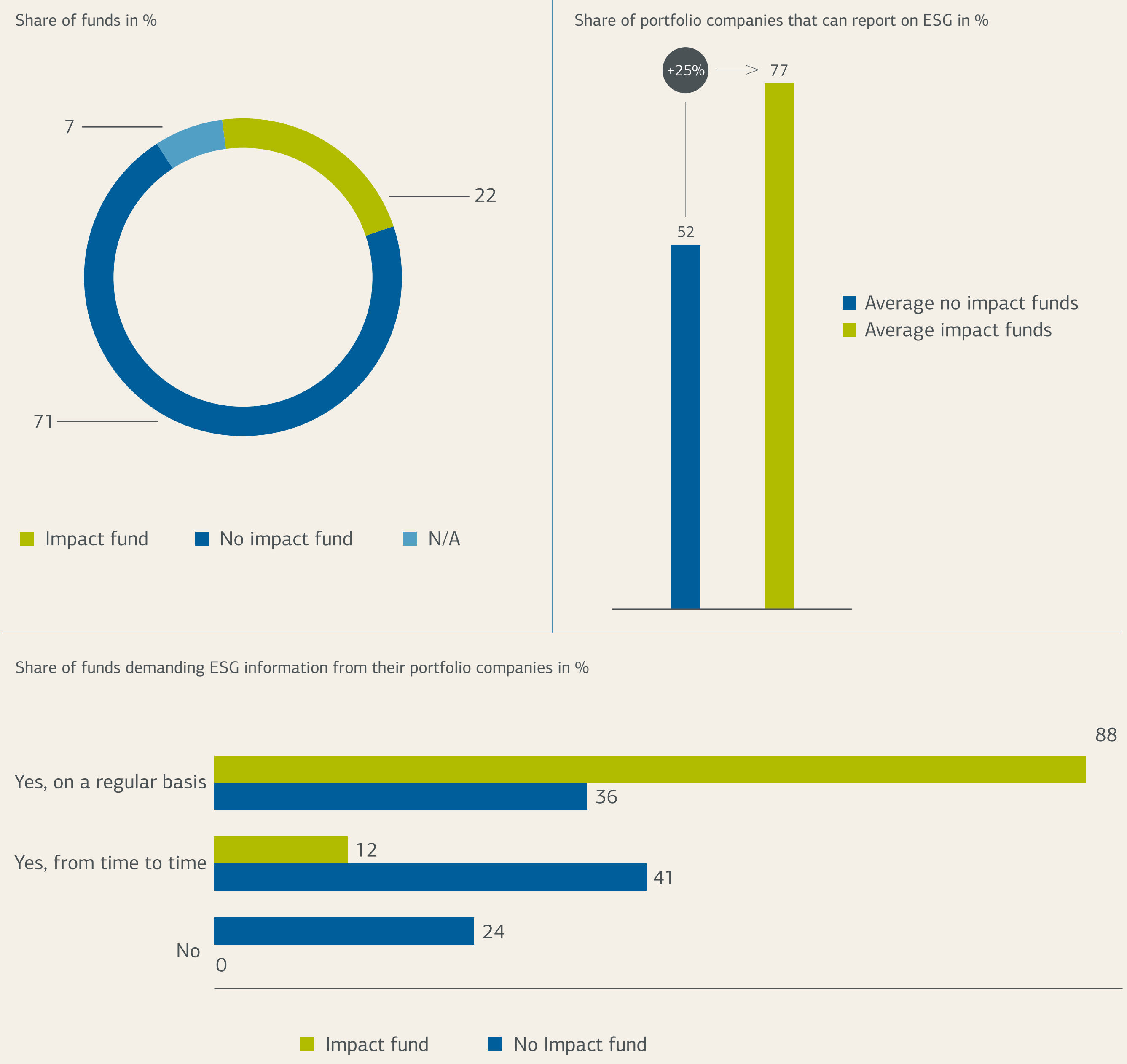
Source: Results of the survey of KfW Capital and BCG with responses of 76 VCs and 109 start-ups

Almost 90% of these funds say they regularly require their portfolio companies to report on ESG issues, and the rest say they require occasional reports.
The result: More than three-quarters of start-ups asked by impact investing funds to report on ESG criteria are able to do so (see Exhibit 5). Clearly, the demands of regular reporting can trigger the ability of start-ups to provide reports.

Taken together, these challenges make clear the need for regular, transparent dialogue between VC funds and start-ups on ESG opportunities and risks. Rather than limiting their ESG implementation to internal affairs, VCs must foster an open discussion on ESG throughout their investment ecosystem – not just with investors but more importantly with their companies. Doing so will encourage start-ups to report more often on ESG criteria. Agreeing on the nonfinancial criteria to be considered will also give them a common ESG language to communicate with.

Planting the seeds of ESG throughout the VC landscape, however, will require an overarching and standardized set of guidelines to work with. What should that look like? How our new approach will meet this demand is explained in detail in the following chapters.

Exhibit 5: When it comes to ESG, impact investing funds are far better at establishing dialogue than the average



Source: Results of the survey of KfW Capital and BCG with responses of 76 VCs and 109 start-ups

5. A New Approach to ESG Investing

If VCs, their investors, and portfolio companies are to generate the greatest impact from their societal contribution, they must comprehensively integrate ESG principles throughout their strategy and operations (see the box "Investing Sustainably").

Our approach is designed to plant the seeds by ensuring a full understanding of ESG's current level of integration and by enabling them to manage and monitor progress toward full incorporation.

Investing Sustainably

Investment strategies that consider issues of sustainability, ESG, or impact investing can take several different forms. They can be clustered into seven specific techniques, which can be categorized into three overarching focuses, ranging from risk mitigation to opportunity seeking to an impact focus (see Exhibit B).

Exhibit B: Sustainability can be integrated into investment practices to varying degrees

Risk mitigation

Norms screens/exclusion
Excluding specific companies that breach international conventions

Negative screens/exclusion
Excluding specific industries or companies with negative ESG impact (e.g., tobacco)

Opportunity seeking

ESG integration
Building in ESG factors and data into traditional investment analysis and decision-making for each security

Best-in-class ESG overlays
Selecting companies or tilting entire portfolios toward higher ESG perfomance

Active ownership/ engagement
Using dialogue, voting, and other shareholder actions to urge issuers to improve ESG practices

Impact focus

Impact investing
Investing in entities that have intention to generate ESG impact alongside a financial return

Thematic funds
Using sustainability themes (e.g., climate) as a basis for allocation to industry sectors or companies

Source: KfW Capital and Boston Consulting Group

Risk mitigation: These investors use negative and norms screening based on ESG principles to identify companies that the fund should not invest in.

Opportunity seeking: These investors consider the level of ESG integration, screen for top-performing companies, and assess the degree of ownership commitment to determine opportunities with the greatest potential for ESG and business sustainability.

Impactful investing/impact focus: This includes thematic funds whose investment strategies focus specifically on solutions to sustainability-related topics such as climate change; they see great potential for high returns by supporting such solutions. Their strategy overlaps with true impact funds whose goal is to create the greatest societal value. For them, maximizing financial returns is important, of course, but is not necessarily their highest priority.

While these strategies can be used by all investors, from large asset managers to individuals, venture capital funds are unique. They have an enormous influence over the start-ups they invest in very early in their development, depending on their relative stake in the start-up and the number of board seats they control. Due to their expertise and experience in growing new companies and helping them make critical management decisions, VC funds often act as a "coach" for start-ups throughout their growth phase. By insisting on regular communication about and reporting on issues involving ESG, VCs have a critical role to play in helping young companies integrate ESG thinking into all their activities.

Systematically and comprehensively implementing ESG considerations, at both VC funds and their portfolio companies, requires the creation of guidelines that are flexible enough to be applied to a wide range of fund strategies and characteristics. At the same time, they must be sufficiently straightforward, so that VCs and their portfolio companies can put them into practice to ensure that they become part of their overall strategy. If implemented properly, the guidelines can enable VCs and start-ups to align on ESG goals and carry on a fruitful dialogue.

The process we have developed consists of four key elements.

1. **Minimum requirements:** The first element, applicable to VCs, involves fulfilling the minimum requirements for carrying out any investment. These include an exclusion list of activities in which VCs are not allowed to invest and a checklist to ensure compliance with the latest Sustainable Finance Disclosure Regulation (SFDR) and the EU Taxonomy Regulations. This element is not explained in detail in this report.

The second element is intended to enable VCs to set up their ESG strategies and processes properly and to allow to assess those processes. The third and fourth elements are designed to enable start-ups and thereby also VCs to determine their ESG status and develop their ESG strategies.

2. **The ESG Capabilities House:** The ESG capabilities house provides VCs a structure for evaluating their ESG capabilities. VCs complete a standardized questionnaire; each question offers a choice of four answers describing the current state of ESG preparedness, from the least prepared to the best, and respondents choose the description that best fits their current level. The goal is to provide the VCs, their LPs, and other investors with a detailed picture of the fund's current efforts to integrate ESG into its investment processes and across the company. Prospective investors can also work with VCs to complete the questionnaire as part of their due diligence research into funds they might invest in (see Chapter 5.1).

   The questionnaire also includes questions designed to go beyond the specific ESG criteria to assess the overall impact generated by the fund and its portfolio companies.

3. **The ESG Heatmap:** The ESG Heatmap allows start-ups and VCs to identify material ESG criteria. Based on three "lenses" – the start-up's type of innovation, stage, and exit industry – the ESG Heatmap reveals material ESG that are reasonably likely to impact the start-up's financial condition and performance (see the box, "Mapping Material Issues"). This method provides the flexibility required to identify material issues across an entire portfolio of start-up companies (see Chapter 5.2.1).

4. **ESG KPIs:** The last element is a standardized set of KPIs for assessing each portfolio company's performance on the material ESG criteria identified in the ESG Heatmap. These KPIs can then be used to assess the level of risk among the start-ups and across the entire portfolio and identify potential ESG opportunities that could differentiate the start-ups from their peers. By allowing comparison of every start-up's ESG performance, investors can use the KPIs to assess the status of the entire portfolio and measure and monitor its progress against specific ESG criteria. This also allows funds to establish an average benchmark against which the progress of individual portfolio companies can be determined (see Chapter 5.2.3).

Mapping Material Issues

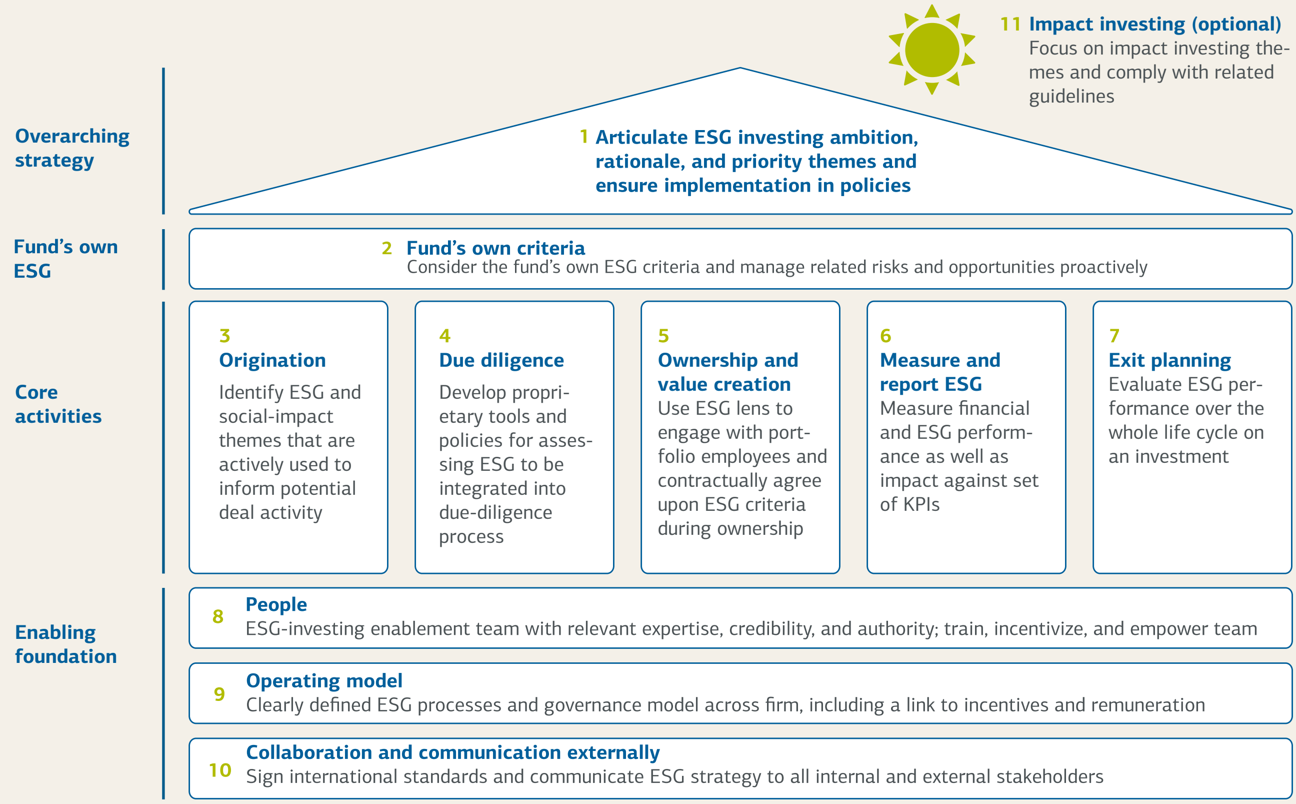
According to the Sustainability Accounting Standards Board (SASB), financially material factors are those that "are reasonably likely to impact the financial condition or operating performance of a company"[16] – such as carbon emissions, customer privacy, and business ethics.[17] After extensive research and discussions with professionals and experts in the field, the SASB has developed an industry map that lists a wide range of material topics for every industry and sector, and an initial set of guidelines that companies can use to determine whether any particular issue is material to their financial performance.

For more information and to view the SASB's publicly available materiality map, please visit **https://materiality.sasb.org/**.

5.1 Preparing the Soil: The ESG Capabilities House

The ESG Capabilities House, built from the results of the questionnaire, provides a framework for evaluating a VC's current level of ESG integration, and shows where improvements should be made. The house consists of four main parts, the roof, the outer walls, the supporting pillars, and the foundation. An optional part is the sun. (see Exhibit 6).

Exhibit 6: The Capabilities House assesses key ESG criteria across five dimensions



Source: KfW Capital and Boston Consulting Group

1 The roof. At the top of the house is the fund's overarching strategy, which defines the fund's strategic rationale, the level of its ambitions and its ESG investment priorities. Two questions are particularly relevant here: How do we as a fund plan to create value through ESG? And what guidance is needed to reach our investment ambitions?

To get started, a fund should ensure that it has implemented policies supporting them to consider ESG. If the fund plans to use ESG criteria primarily to identify high-risk companies that it should not invest in, it will probably follow a straightforward negative screening approach. In contrast, if the fund plans to use ESG opportunistically, to identify companies with significant growth potential, it should consider a best-in-class approach. This will require more guidance, in the form of specific and advanced ESG policies, tools, and formal procedures focusing on the entire investment process, as well as sector-specific ESG criteria.

The greater the fund's ambitions for incorporating ESG into its investment strategy, the more the benefits of ESG can be harvested: Only when ESG is implemented throughout the investment process can the fund gain a clear competitive advantage and ensure that the knowledge and experience it has gained will be transferred to its portfolio companies, helping them, too, to grow sustainably.

2 The outer walls. These allow the fund to assess VC's internal ESG performance in areas such as greenhouse gas emissions, working practices, and ethics. Here, the relevant questions include: Which ESG criteria are material for the fund as an investment vehicle, and how is the fund progressing with regard to these criteria? The level of ambition can vary significantly, from loose policies to concrete KPIs and quantitative goals.

3–7 The supporting pillars. These five areas represent the core activities the VC must carry out as it chooses and completes investments in its portfolio companies, from deal origination and due diligence to ownership and measurement through to planning the exit strategy. While ESG issues have a part to play in all these activities, the due diligence process is particularly important. It is this activity that determines the ESG ground rules that potential target companies need to comply with if the VC is to make an investment.

The questions asked with regard to the pillars are designed to evaluate how deeply the VC has integrated each of these activities and how strictly current and potential portfolio companies need to comply with the fund's ESG standards (see the box "Evaluating the Results").

8–10 The foundation. Embedded in the foundation are all the capabilities and structures needed to execute the fund's ESG strategy.

- People are the key resource and differentiating factor of every fund. They must be given the training, resources, and responsibilities needed to carry out their mission.
- The fund's operating model provides employees with the necessary structure and guidance to perform their tasks effectively.
- External collaboration and communication with stakeholders and the surrounding VC ecosystem is key to ensuring the regular infusion of new ideas, enabling the fund to stay up to date and to react to the latest findings and trends within the ESG field.

Evaluating the Results

The questionnaire asks a series of questions pertaining to each dimension in the ESG capabilities house and offers four possible answers reflecting the level of integration, from lowest (1) to highest (4). Respondents are rated on a scale from 0% to 100% in each dimension.

A score of 0% to 50% in any dimension means that the respondent selected answers at levels 1 or 2, on average, and that their ESG capabilities are immature and not well developed for this particular aspect. In this case, VCs should work to understand the reasons behind the low level of ESG integration and develop an action plan to improve it. LPs using the results could consider requesting a pre-contractual agreement to ensure progress. Weak performance in the strategy and due diligence dimensions is especially concerning.

A score from 51% to 75% in any dimension means that, on average, answers in levels 2 and 3 were selected. This indicates that ESG capabilities are beginning to be developed and the fund is gaining the initial benefits. VCs need to take steps to cement the benefits and devise potential improvements, while LPs should communicate to the fund the importance of ongoing progress and work with them to improve the scores.

A score from 76% to 100% (an average of levels 3 and 4) indicates that ESG is deeply integrated into this area, giving the fund a clear competitive advantage. No direct recommendation is required, and LPs can expect superior financial returns. But VCs and LPs should continue to track and monitor performance to ensure the fund maintains its high standard, especially as ESG integration is an evolving field and new standards and goals are arising regularly.

11 The ESG Capabilities House includes one final, optional dimension intended for funds looking to go beyond ESG to focus on impact investing: the impact investment assessment. Impact considerations are at the core of these funds' activities and play a central role from the roof to the foundation. To support such funds, the questionnaire evaluates a fund's compliance with the GIIN's four key criteria[18] (see the box "GIIN Criteria for Impact Investing").

GIIN Criteria for Impact Investing

The GIIN's goal is to support investors in their efforts to "accelerate the scale and effectiveness of impact investing," which it defines as "investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return." To that end, the GIIN has established four key practices for companies and investors to follow in their impact investing efforts:

1. Intentionality. This refers to the determination of impact investors to contribute to measurable social and environmental benefits.

2. Use of evidence and impact data in investment design. This refers to the need to use evidence and data to guide investment decisions.

3. Management of impact performance. This refers to the measurement and management of the desired impact.

4. Contributing to the growth of the industry. This in-volves advancing the industry as a whole through shared terms, conventions, and indicators.

5.2 Planting the Seed: The ESG Heatmap

5.2.1 Building the Heatmap

The next element – the ESG Heatmap – is designed to identify the material factors within a range of ESG criteria that could affect a start-up's financial performance and, as a result, that of the fund itself. The analysis if a topic is classified as material is based on existing industry standards and interviews with experts within the VC and start-up landscape.

There is a wide range of ESG criteria with the possibility to be classified as material. They fall into the following five categories in line with the SASB industry standard[19] (see Appendix A for the full list of material criteria):

- **Environment:** This dimension includes issues concerning the ecological impacts of a company, emissions, air quality, energy management, water, and waste.

- **Social capital:** In this dimension includes issues concerning the impact a company may have on customers and the community, such as human rights, customer privacy and product quality.

- **Human capital:** This dimension includes factors related to employment, such as labor practices, employee health and safety, and diversity.

- **Business model and innovation:** This dimension evaluates the potential longevity of the start-up's business model, including factors such as life cycle management, materials sourcing, ethical innovation practices, and physical impacts of climate change on the company.

- **Leadership and governance:** In this dimension, the overall corporate structure is evaluated along factors such as business ethics, governance processes, and technological geopolitics.

Determining the material criteria is no easy task. Large companies can depend on the industry in which they operate to define the material ESG risks and opportunities they face; for health-care companies, for example, such issues might include the ethics of client trials, pharmaceutical ingredients used, and regulatory requirements.

For start-ups the story is different. They often operate in ambiguous industry sectors; a new platform for carsharing, for example, could be in the automotive as well as in the technology industry. Moreover, start-ups typically work on new and innovative technologies and products for which the standard ESG considerations might not be sufficient and additional criteria may need to be considered.

The creation of the ESG Heatmap, and the assessment of the applicable material factors, depends on three lenses (see Exhibit 7).

1. **The type of innovation.** This lens differentiates between tangible products and intangible technologies or services. Tangible products such as a new antibody from a start-up health-care company involve certain ESG risks and opportunities related to their supply chains and the resources used to produce them. In contrast, intangible products, like a car-sharing app, face ESG risks and opportunities related to data security and privacy as well as potential ethical considerations of technology use and dependency.

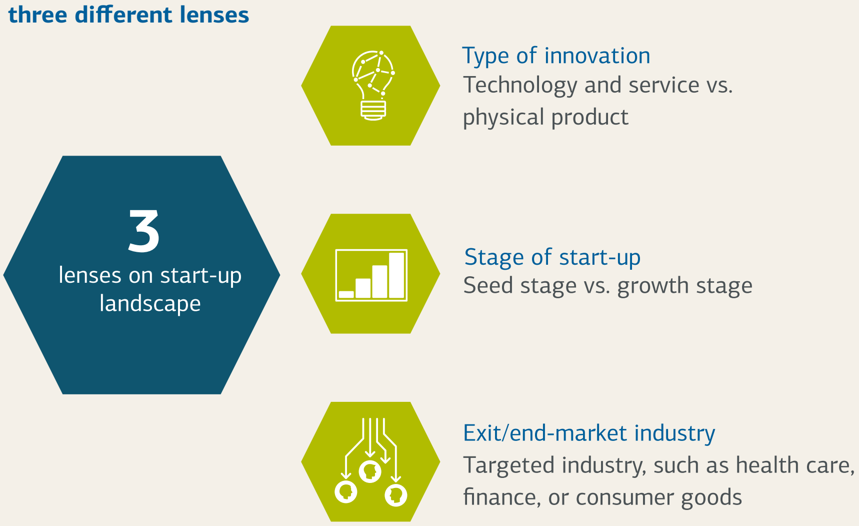
2. **The stage of the start-up.** This lens differentiates between three start-up stages: the seed, early, and growth stages. We define the seed stage as including companies in the pre-seed and seed investment phase. Early-stage companies have received series A or B investments. Growth-stage companies are at series C investment rounds or beyond. These investment phases are considered to be the best and simplest proxy for the stage of start-ups when considering their ESG characteristics.

   The ESG focus per stage can vary significantly. Start-ups at the seed and early stages need to focus primarily on developing a minimum viable product before they consider topics such as digital inclusion or technological geopolitics. Growth-stage companies should already be operating more like established corporations, with similar ESG criteria.

3. **The exit or end-market industry.** This lens evaluates a start-up's ESG factors as they pertain to its primary industry, or that of a potential buyer. A car-sharing platform, for example, would be considered to be operating in the automotive/mobility industry, and thus would face ESG risks and opportunities similar to established companies in this industry, including regulatory requirements and environmental considerations, such as the level of greenhouse gas emissions.

The ESG heatmap automatically generates a matrix showing which ESG criteria may be material to the start-up being considered, depending on the results of the lens analysis.

Exhibit 7: The ESG heatmap looks at start-ups through three different lenses

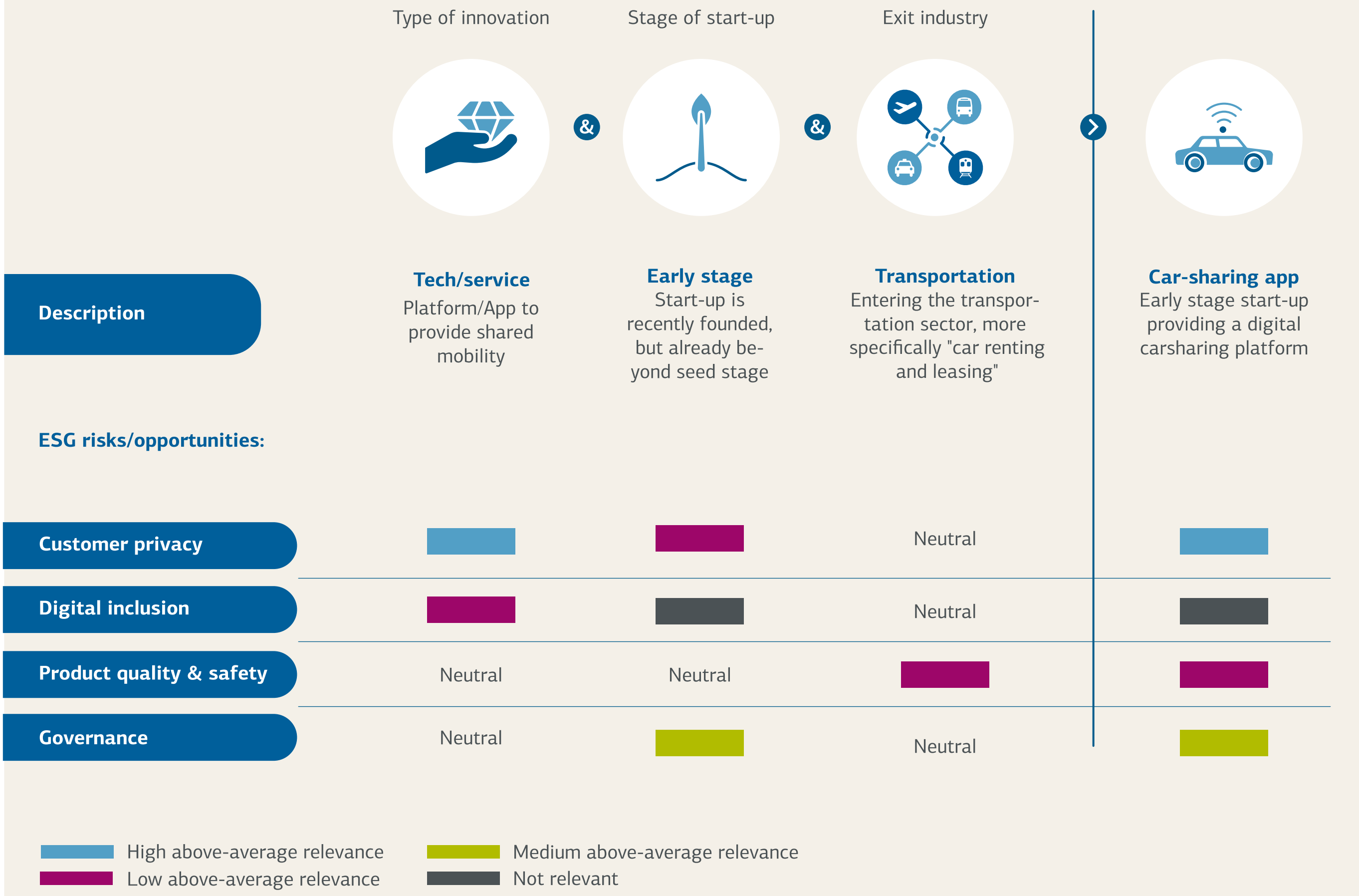


Source: KfW Capital and Boston Consulting Group

5.2.2 Using the Heatmap

Working with the ESG Heatmap is a relatively straightforward process. Each start-up under discussion is first examined under each of the lenses separately. Exhibit 8 shows how this works in the case of the car-sharing start-up mentioned above. The innovation is a technology/service and therefore, it falls into the first category within the "type of innovation" lens. The heatmap indicates that for such companies customer privacy criteria are the most pressing.

Exhibit 8: Aggregating the results of the ESG Heatmap



Source: KfW Capital and Boston Consulting Group

Since the start-up is still in the early stage and complexity surrounding ESG integration should be reduced at this stage, criteria involving digital inclusiveness* are not yet considered relevant, but concerns about its governance processes and practices are already important.

As a player in the automotive industry, the companies also face ESG risks related to product quality and safety.

In aggregating these results, the lens containing the ESG criterion with the highest relevance is given precedence. If any ESG criterion is considered as being not relevant within one of the lenses, that criterion is considered as being not relevant for this particular start-up. In the case of the car-sharing app, for example, "digital inclusion" is considered as being not relevant, because it is still in the early stage, so this issue doesn't yet matter for the company – until it moves into a more advanced stage, of course.

Exhibits 9 and 10 illustrate how the heatmap might be applied across a portfolio of four different kinds of start-ups: the car-sharing app, a financial planning tool, a company selling AI-based competitive analysis, and a start-up in the field of antibody development. Exhibit 9 shows the results of applying the three lenses to each company; Exhibit 10 shows relative relevance of the ESG criteria for all four. This analysis highlights several key differences between these start-ups. For example, customer privacy and data security are material factors for all three technology-based start-ups, and should be considered in greater detail. In contrast, issues surrounding product quality and customer welfare are more important for the biotech start-up, since it plans to offer an actual physical product in a sensitive area.

Several criteria, notably business ethics and governance processes, are relevant across all four start-ups, no matter what stage or industry they fall into. Clearly, every start-up should establish adequate processes for ethics and governance from the very beginning to lay a proper foundation for all behavior and processes to come.

* This criterion involves ensuring the provision of digital skills and training to ensure the broadest possible access to new technologies, products, and services.

Exhibit 9: Analysis of four start-ups through the heatmap lenses

	1	2	3	4
Example	**Car-sharing app**	**Financial planning tool**	**AI competitor analysis**	**Antibody development**
Type of innovation	Technology/service	Technology/service	Technology/service	Product
Stage of innovation	Early stage	Growth stage	Seed stage	Seed stage
End-market industry	Transportation – car rental and leasing	Consumer Finance	Technology – general	Biotech and pharma

Source: KfW Capital and Boston Consulting Group

Exhibit 10. Material ESG criteria differ across the start-up portfolio

Dimension	General issue category	1 Car-sharing	2 Fintech	3 AI	4 Biotech
Environment	GHG emissions	Low	Low	Medium	
	Air quality				
	Energy management	Low	Low	Low	
	Water & wastewater management				
	Waste & hazardous materials management				
	Ecological impacts				
Social capital	Human rights & community relations				Low
	Customer privacy	High	High	High	Low
	Data and cyber security	Medium	Medium	High	Low
	Digital rights and digital truth	Low	Low	Low	
	Access & affordability				
	Digital inclusion		Low		
	Product quality & safety	Low			Medium
	Customer welfare				Medium
	Selling practices & product labeling		Low		Low
Human capital	Labor Practices				
	Employee health & safety				
	Employee engagement, diversity & inclusion	Medium	High	High	Medium
Business model & innovation	Product design & life cycle management	Low		High	
	Ethical and safe research/innovation practice			Low	
	Business model resilience				
	Supply chain management				Low
	Materials sourcing & efficiency				Low
	Physical impacts of climate change				
Leadership & governance	Business ethics	Medium	Medium	Low	Low
	Technology/digital/innovation ethics	High	High	High	High
	Governance processes & practices	Medium	Medium	Medium	Medium
	Competitive behavior	Low	Low	Low	
	Management of the legal & regulatory env.				Medium
	Critical incident risk management				
	Systemic risk management		Low		
	Payment structure	Low	Low	Low	Low
	Technological geopolitics		Low		

Source: KfW Capital and Boston Consulting Group — High above-average — Medium above-average — Low above-average

5.3 Growing the Plant: ESG KPIs

Determining which material ESG criteria matter to portfolio companies is only the first step to ensuring they perform well in the relevant categories. Funds and their start-up companies must then develop strategies and clear goals for boosting performance and reducing potential risks. Performing well on important relevant criteria can even turn potential risks into differentiating opportunities, making them valuable factors in improving business performance.

The ESG Heatmap above shows greenhouse gas emissions (GHG) to be a material issue for the car-sharing start-up, for example. By using only electrical vehicles, the company could reduce its car emissions to zero and thus significantly decrease the potential impact on its business of regulatory changes regarding greenhouse gas emissions. And it would increase the appeal of its services among customers.

Ensuring progress along ESG criteria requires clear and carefully designed key performance indicators (KPIs) that can continuously measure and track performance. To fully assess progress, three levels of KPIs can be assessed for the ESG criteria:

1. The existence and maturity of internal policies, defined processes, and external reporting. This dimension rates how well the start-up is equipped to address the material ESG factor.

2. Quantified metrics to measure the start-up's actual performance and benchmark it against existing industry standards.

3. Assessment of the start-up's level of compliance with existing industry standards.

In the case of the car-sharing start-up, the first level of KPIs would track whether internal processes and policies are in place and the degree to which the company adheres to them. At best, the start-up has made public its position and policies on GHG emissions and offers details on its progress in terms of specific emission reduction targets. The second level would measure its scope 1, 2, and 3 emissions and compare them with industry benchmarks.[*] The third level would determine whether the start-up has set science-based targets to comply with a common industry standard.[20] (A more detailed list of example questions to be asked a car-sharing company can be found in Appendix B.)

Developing the necessary quantitative metrics for many of the ESG criteria may require relying on early or partial industry benchmarks based on publicly available data. To interpret the results and establish what "good" looks like, additional ESG benchmarks and research will likely be required. Note, too, that in some cases reliable KPIs will not be available for all the relevant ESG criteria, and thus some policies and industry standards will have to be evaluated on a qualitative basis.

Interpreting and acting on the results of the KPIs is straightforward. If a start-up is performing below average on any ESG criteria, the fund should intervene to create and implement a concrete action plan to improve performance and avoid potential risks. If its performance is clearly above the industry benchmark, this should be seen as a sign of potentially strong financial performance and considered positively when making follow-on investment decisions.

6. Harvesting the Fruits: Impact Investing

As we have seen, the need for VCs and their stakeholders to assess and track the progress toward ESG integration is great. But how much do they already contribute to the progress and solutions on the societal challenges we face? Determining this is the task of impact investing, which goes beyond ESG considerations to look at the broader macroeconomic context and the contributions of companies toward solving our most pressing societal issues. The UN's 17 SDGs provide insights into these impact issues and guidance on how to begin resolving them (see the box "Defining Terms").

A number of organizations, notably the Impact Management Project,[21] are making some headway in developing ways to assess societal impact. But the sheer amount of data and the level of detail required make it especially hard for VCs and start-ups to accurately measure it. This in turn makes the challenge of integrating impact goals into their strategy and operations that much harder.

KfW Capital and Boston Consulting Group have started to develop an impact measurement approach that allows for quantifying the contribution to societal impact based on selected KPIs. This approach is going to be tested and challenged with VCs to be improved further. The main advantage of the approach is the focus on a few selected KPIs that are able to be measured quantitatively based on current data availabilities while providing a good indication of the actual societal contribution of a company. As ESG integration is required as a foundation, this will be the first priority for transforming the VC landscape. Once addressed, KfW Capital and Boston Consulting Group will push the topic on impact assessments forward.

[*] The industry benchmark used for this approach was based on publicly available data on the average emissions per employee of European companies with less than 5,000 employees in the respective industry.

7. Conclusion

The need to counter the detrimental effects of climate change, biodiversity loss, income inequality, and other concerns are forcing us to act now. The sustainability agenda is already anchored in the business strategy of most large corporates, primarily because of the considerable potential underlying business opportunity. Large capital market players, too, are embedding sustainability in their processes and investment strategies, reasoning that helping meet the challenges we face will also lead to better performance.

Integrating and prioritizing ESG topics offers a great opportunity for first movers and early adopters to differentiate themselves from the competition. This holds true not just for start-ups hoping to attract new customers but also for VCs looking to meet their investors' expectations and secure investment opportunities. Now is the time for VCs to work with their start-ups to ensure that ESG issues are integrated into all their investment operations.

Start-ups can have an especially strong impact on the global challenges we face. Just as these companies led the charge to digitization, it is up to them to innovate the ideas, technologies, and products needed to find the solutions we need. VCs that support their start-ups in this transformation will also benefit from the considerable business value that sustainability investments are creating, including lower investment risks, higher expected returns, and business models ready to prosper long into the future.

VCs, LPs, and start-up companies are well aware of the need to incorporate the goals of ESG into their operations and investment activities, and they are making progress. But full integration won't be easy. VCs' efforts largely tend to be focused internally, and dialogue with their portfolio companies and solid data on the issues at hand are lacking, as are industry standards against which to compare their efforts.

By incorporating the comprehensive approach presented here into their investment strategies and operational goals, VCs, their investors, and portfolio companies can start now to assess the current status of their ESG effort, begin the ESG integration process, and measure their progress to ensure success. The industry is moving forward quickly, and laggards will be punished in the future. The holistic integration of ESG will also pave the way for real impact investing and ensure that the ecosystem makes the greatest possible contribution to solving our challenges.

After all, who is better positioned to find groundbreaking, sustainable solutions for our future than forward-thinking VC funds and the innovative start-ups they nurture?

Appendix A: Complete list of ESG criteria per dimension

Dimension	General issue category	Description
Environment	GHG emissions	Scope 1-3 emissions, carbon intensity of investments
	Air quality	Emissions especially from NOx, SOx, VOC,[1] heavy metals, among others
	Energy management	Management of energy efficiency and intensity, energy mix, grid reliance
	Water & wastewater management	Water use, water consumption, wastewater generation, incl. water efficiency, intensity and recycling, including exposure to high water-stress areas
	Waste & hazardous materials management	Hazardous and nonhazardous waste generation, incl. treatment, handling, storage and disposal; generation and handling of plastic waste
	Ecological impacts	Impact on ecosystems and biodiversity, e.g., biodiversity loss, habitat destruction, and deforestation
Social capital	Human rights & community relations	Socioeconomic community impacts, community engagement, environmental justice, cultivation of local workforce, impact on local businesses, license to operate, environmental/social impact assessment; including human rights policy, prevention of human trafficking, forced labor, child labor
	Customer privacy	Use of personally identifiable information, especially for third party use, e.g., marketing
	Data and cybersecurity	Collection, retention, and use of sensitive, confidential, and proprietary customer or user data, incl. cyber security, management of access to content, (online) child protection
	Digital rights and digital truth	Focusing on human and personal rights within the technological sphere, freedom of expression, fake news, deep fakes, (visual and audio) and potential spreading of these
	Access & affordability	Broad access to products and services, esp. of underserved markets and/or population groups
	Digital inclusion	Digital skills and training to ensure a broad possible access to new technologies, products, and services
	Product quality & safety	Health and safety risks of end users, especially including product testing, recalls, or market withdrawals
	Customer welfare	Examples such as health and nutrition of foods and beverages, antibiotic use in animal production, management of controlled substances
	Selling practices & product labeling	Issues that may arise from failure to manage transparency, accuracy, and comprehensibility of marketing statements, advertising, and labeling of products/services
Human capital	Labor practices	Commonly accepted labor standards, e.g., ILO, fair wages, overtime pay, basic worker's rights, minimum wage policies, provision of benefits as well as organized labor and freedom of association, collective bargaining, whistleblower protection
	Employee health & safety	Safe and healthy workplace, incl. no injuries, fatalities, illness, training of employees and physical and mental health of workforce, monitoring of employee absenteeism, wellness initiatives
	Employee engagement, diversity & inclusion	Diverse and inclusive workforce, no discriminatory practices on the bases of race, gender, ethnicity, religion, sexual orientation, and other factors, including gender pay gap, board gender diversity
Business model & innovation	Product design & life cycle management	Life cycle of products and services with focus on circular economy practices and innovation in this field, ability of companies to address customer and societal demand for more sustainable products and services
	Ethical and safe research/ innovation practices	Consideration of ethical and safety concerns during the innovation process, including testing during the innovation process, type of input materials (opioids in health care)
	Business model resilience	Management of risks and opportunities associated with incorporating social, environmental, and political transitions into long-term and financially sound business model planning, including expansion into new sustainable markets
	Supply chain management	Management of externalities of company's supply chain regarding ESG criteria
	Materials sourcing & efficiency	Resilience of materials supply chains to impacts of climate change and other external environmental and social factors
	Physical impacts of climate change	Management of risks and opportunities associated with direct exposure to actual or potential physical impacts of climate change, including social and environmental issues
Leadership & governance	Business ethics	Risks and opportunities around ethical conduct of business, including fraud, corruption, bribery, tax evasion, etc.
	Technology/digital/innovation ethics	Ethical questions regarding use of technology, human interaction with technologies and implications for humanity, including potential risks of media addiction and considerations regarding genetically modified organisms
	Governance processes & practices	Governance structure throughout the start-up as well as relationship management between fund and portfolio company, including salary agreements
	Competitive behavior	Issues around monopolies, excessive prices, poor quality of service protection of patents, and IP
	Management of the legal & regulatory environment	Engagement with regulators to manage regulations with long-term impacts on companies
	Critical incident risk management	Management and scenario planning to identify, understand, prevent or minimize low-probability, high-impact accidents with significant potential environmental and social externalities
	Systemic risk management	Management of risks related to systems changing, e.g., financial systems, natural resource systems, technological systems
	Payment structure	Payment structure within the company itself as well as payments from investors to the start-ups
	Technological geopolitics	Focus on AI geopolitics, for example security, social, economic, and political consequences of advances in technology, including a shift of power and final use of technology

Source: GRI; SASB; World Economic Forum; BCG MMAP; Boston Consulting Group

[1]Oxides of nitrogen, oxides of sulfur, volatile organic compounds

Appendix B: List of questions for medium or high above-average relevance criteria of car-sharing app

- Customer privacy
  - Does your company have a policy on data privacy in place?
  - Was your company accused and found guilty of concerns associated with customer privacy within the last reporting period?

- Data and cybersecurity
  - Does your company have an IT security management system or similar process in place to address data security risks, including use of third-party cybersecurity standards?
  - Did your company inadvertently release personal user data to third parties within the last reporting period?

- Employee engagement, diversity, and inclusion
  - Does your company have a policy in place on driving employee diversity (e.g., strategy on diversity management)?
  - Does your company have a female founder and/or cofounder?
  - How many male employees does your company have?
  - How many female employees does your company have?
  - How many diverse employees does your company have?
  - Does your company have any training policies for its employees in place (e.g., structured programs or defined hours of training intended for each employee)?
  - Was your company accused and found guilty of concerns associated with employment rights (e.g., discrimination) within the last reporting period?

- Business ethics
  - Does your company have a code of conduct on business ethics in place?
  - Does your company have policies on illegal practices (e.g., anticorruption and antibribery) in place?
  - Does your company have a processes in place to monitor early warning indicators that come up in case of unethical conduct (e.g., bribery, corruption, or money laundry)?
  - Was your company accused and found guilty of concerns associated with unethical conduct within the last reporting period?
  - Has your company signed the UN Global Compact?

- Technology/innovation ethics
  - Does your company have a process in place to assess possible ethical implication of its innovation?
  - Did your company perform a scenario analysis on adverse impacts of its innovation within the last reporting period?

- Governance processes and practices
  - Did your company have at least one business meeting on governance processes and practices with the VC fund(s)/investors/board, etc., within the last reporting period?
  - Do you have a supervisory board in place?
  - Do you have flexible governance principles in place depending on your current start-up stage?

8. About the Authors

KFW CAPITAL

KfW Capital promotes prospects for sustainable innovation and growth: As a fully owned subsidiary of KfW group, we invest in German and European venture capital and venture debt funds, thereby strengthening their capital base. Our aim is to improve access to capital for innovative technology-oriented growth companies in Germany through financially strong funds. Our commitment is long-term oriented and focussed.

Dr. Jörg Goschin is Co-CEO and Senior Managing Director at KfW Capital.

Alexander Thees is Co-CEO and Senior Managing Director at KfW Capital.

Lisa Schmitt is Investment & Sustainability Manager at KfW Capital.

Julia Seehausen is Product & Sustainability Manager at KfW Capital.

BCG

Boston Consulting Group partners with leaders in business and society to tackle their most important challenges and capture their greatest opportunities.
BCG was the pioneer in business strategy when it was founded in 1963. Today, we work closely with clients to embrace a transformational approach aimed at benefiting all stakeholders – empowering organizations to grow, build sustainable competitive advantage, and drive positive societal impact.

Dr. Oliver Dany is a Managing Director and Senior Partner in the Frankfurt office of Boston Consulting Group

Dr. Holger Rubel is a Managing Director and Senior Partner in the Frankfurt office of Boston Consulting Group

Dr. Thomas Schulte is a Managing Director and Partner in the Düsseldorf office of Boston Consulting Group

Alexander Baic is a Partner and Associate Director in the Munich office of Boston Consulting Group

Alexander Meyer zum Felde is a Partner and Associate Director in the Hamburg office of Boston Consulting Group

Marc Schalück is a Project Leader in the Düsseldorf office of Boston Consulting Group

Carolin Lanfer is a Consultant in the Cologne office of Boston Consulting Group

Dr. Mirjam Meissner is a Junior Consultant in the Cologne office of Boston Consulting Group

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KfW Capital

Bockenheimer Landstraße 98–100
60323 Frankfurt am Main
Germany

Phone: +49 69 7431 8880
Mail: info-kfw-capital@kfw.de
www.kfw-capital.de

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