



**Why we must
engineer a more
sustainable future.**

KEYIS



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90% of executives think sustainability is important, only 60% of companies have an articulated sustainability strategy.

1. The ill addressed issue of our time

It is abundantly clear that the need to become more sustainable as a planet is not an issue for the future, but an ill addressed issue of the present. There is also a growing expectation for firms to address this issue within their organisation. Furthermore, the methodology for the evaluation and measurement of sustainable performance, Environmental, Social, and Governance (ESG), is becoming increasingly prevalent and can even affect publicly traded businesses' share prices and the investment appeal of firms looking to raise capital. Sustainability can be articulated as "providing for the present needs without compromising the needs of the future generations to meet theirs." As per Talal Rafi, speaking for Forbes, whilst **90% of executives think sustainability is important, only 60% of companies have an articulated sustainability strategy**. Rafi also discusses how, often, companies that speak of being sustainable are lacking when it comes to implementation. One of the reasons Rafi believes this is happening is because CEOs and corporate boards are not as engaged as they should be with sustainability strategies. This disengagement is likely what breeds more disingenuous approaches to a sustainability strategy, resulting in what many dub as "greenwashing," a deceptive tactic that leads customers, investors and audiences into believing an organisation is more sustainable than they truly are.



1. The ill addressed issue of our time (continued)

Whilst there are no doubt some deceitful corporate approaches to sustainability, momentum is shifting and net-zero commitments are now the norm and represent a new core principle for businesses [3]. As per McKinsey, the conversations that they held at 2021's COP26 United Nations Climate Change Conference shed light on the fact that **net-zero commitments are outpacing the formation of supply chains, market mechanisms, financing models, and other solutions and structures needed to smooth the world's decarbonisation pathway.** Excitingly, for businesses, these conditions will create opportunities to innovate and to lead coordinated action by industry peers, value-chain partners, capital providers, and policy makers. They also introduce added risk that commodity prices will spike [3]. Thus for those that want to be true leaders in their sector, it is crucial that a coherent sustainability strategy is formulated. Leading by example is necessary to drive change within industries. As per a McKinsey report, the transformation of the global economy needed to achieve net-zero emissions by 2050 would be universal and significant, requiring \$9.2 trillion in annual average spending on physical assets, \$3.5 trillion more than in 2021. To put it in comparable terms, that increase is equivalent to half of global corporate profits and one-quarter of total tax revenue in 2020 [4].



There are of course risks to an accelerated path to net zero. Rushed or botched transitions can lead to supply shocks which are rather fresh in the minds of consumers, with the Russian invasion of Ukraine currently having an adverse impact on the price of oil, subsequently causing wholesale gas prices to double. However, McKinsey also acknowledges that these changes are also rich in opportunity. This sustainable transition would prevent the buildup of physical climate risks and reduce the odds of initiating the most catastrophic impacts of climate change. It would also bring growth opportunities, as decarbonisation creates efficiencies and opens markets for low-emissions products and services [4]. **Effective transitions will be achieved when businesses find an equilibrium between growth creation through sustainable initiatives and the reduction in emissions heavy operations and supply chain instances.** Research indicates that, across the board, job gains would be largely associated with the transition to low-emissions forms of production, such as renewable power generation, whereas job losses and fiscal contractions will particularly affect workers in fossil fuel intensive or otherwise emissions-intensive sectors [4].

Businesses must take a long hard look at themselves and their operating processes and outline areas in which they can reduce their carbon emissions. **Highlighting actionable measures that the business can take to improve sustainability can help drive organisations towards these positive goals and can foster a sense of purpose and achievement within an organisation.** Businesses can start by focusing on their head office and striving to make it carbon neutral, before switching their focus onto the rest of the business' operations before changing focus onto their supply chain and beyond. Looking at one's emissions can be a rather complex task. The WWF compartmentalises emissions into three Scopes. Scope 1 emissions are directly produced by your organisation such as fleet vehicles or on-site energy production, Scope 2 are emissions from purchased energy, and Scope 3 are indirect emissions you are responsible for such as staff travel. Making sure you account for Scopes 1 and 2 is essential and covering significant Scope 3 emissions is a great step to tackling climate change [14]. Once one's carbon footprint has been calculated, it is time to take action to reduce it. The WWF recommends the setting of ambitious but achievable targets and the reporting of such endeavours, publicly on one's website, as in turn, this will encourage other businesses within the same industry to follow suit. In this report, we will outline key cogitations for firms looking to engineer a sustainable future for their business, their sector and their planet.



2. Find significant value in effective sustainability planning

It seems that businesses are overly keen to articulate and communicate their willingness to work towards sustainable promises without much strategic foresight into how they will make good on these pledges.

Thus, many businesses that have communicated lofty environmental pledges are yet to outline clear, detailed plans for how they will achieve net zero. That must be what leaders focus on now and both investors and regulators expect them to do so [3]. UK chancellor of the exchequer Rishi Sunak reiterated at COP26 that the British Treasury would require UK-listed companies to release their net-zero plans by 2023. Thus, it is only a matter of time before regulators and supervisors elsewhere follow that example [3]. This means that there is scope for forward thinking businesses to find strategic value through the formulation of an effective sustainability strategy that includes the aforementioned equilibrium between a contraction of emissions heavy

processes and growth in new roles that drive the organisation forward in a climate positive way. It is no good if organisations are outlining their promises with little or no strategy behind the fulfilment of such targets. Business leaders and management teams must understand the uncertainties associated with decarbonisation, especially those exposed to significant emissions through operations or their supply chain, and double down on necessary change, or face an uphill battle versus more forward thinking entities in their market sector. This is all the more pertinent with a likely increase in regulatory requirements for businesses to present decarbonisation plans going forward, similar to the aforementioned requirement for UK listed companies to outline their net zero plans by 2023. **This fabled equilibrium between the reduction of emissions and growth in carbon reduction capacities is the key to a successful sustainable transition.**

McKinsey's executive editor, Roberta Fusaro, discusses how net zero goes beyond just decarbonisation, with the necessary transition having universal, significant, and uneven effects across sectors, geographies and communities. However, Fusaro reminds businesses that there are significant opportunities for growth depending on how companies approach their net zero strategy [5]. As per Boston Consulting Group, the role of business in society has evolved. Investors, customers, employees, policy makers, and society as a whole demand proof that a company is doing more than just conducting business in a sustainable way and abiding by ethical business practices. In addition to this, stakeholders expect companies to both have a purpose and contribute to the greater good [6]. Therefore, there is a premium on solid sustainability planning, with leaders that put convincing net-zero plans in place setting their organisation apart from that of their peers. Not only is there a premium on

sound planning, there is also a premium on sustainable execution. As per McKinsey, these solid, actionable plans will vary, but tend to encapsulate emissions targets for Scopes 1, 2, and 3, aligned with science-based mitigation trajectories or sector-specific trajectories from credible authorities. Impactful plans will also likely contain a strategic view of climate risks and opportunities for each part of the company's portfolio, covering both competitive dynamics and environmental exposures, an assessment on the spending of transition capital that will be required to reduce emissions, especially from existing emissions-intensive assets, coupled with a credible stance on the use of high-quality carbon credits and a program for building capabilities to monitor external conditions and make decisions about how to update the company's plan, and implement it [3].

3. The capital to facilitate and reward significant change exists and is growing

As per JP Morgan, the way companies manage their ESG affects not only their financial results but the long-term viability of our environment and way of life. They believe that sustainable investing funds enable investors to pursue their financial goals while supporting a better future for us all [7]. Mantras such as this are likely to be continuously adopted by businesses and represent the forming of a bottom line on climate change. Technology such as carbon credits and the rise of ESG investment funds are an actualisation of this bottom line and show the development of reward mechanisms within the open market for effective sustainable businesses. Furthermore, the Glasgow Financial Alliance for Net Zero, often referred to as GFANZ, brought together more than 450 institutions, representing \$130 trillion of financial assets (40 percent of the global total), that promised to align their portfolios with net-zero goals, showing how financial institutions are coming to the forefront of the drive towards net zero [3]. The establishment of GFANZ shows the proliferation of funds that will support effective transitions. ***Thus, organisations should feel, beyond the morality of helping save our planet, financially vindicated to put together an effective and rational sustainability strategy.***

If one is in need of further vindication, through a fiscal lens, for their pursuit of a more sustainable path for their organisation, JP Morgan highlight in their Sustainable and Inclusive Economies Framework, that sustainable investing has grown over the last decade to the point where sustainable assets now account for over one third of all investment strategies globally [8]. Outcome driven capital has an important role to play in moulding a new, more environmentally friendly, economy. JP Morgan outlines that their role, as investors, is to seek to efficiently deploy capital towards the most compelling investment opportunities, with the financial markets being the tool by which one drives forward the direction of the economy. This capital is funnelled towards attractive long-term opportunities while risks need to be appropriately mitigated [8]. Therefore, the power of outcome driven capital is that it can directly target and support the strategic direction of businesses to target a more sustainable operation. Through metrics such as ESG and mechanisms like carbon credits, plucky investors can reap fiscal rewards whilst doing right by their planet.

Technology such as carbon credits and the rise of ESG investment funds are an actualisation of a bottom line on sustainability.



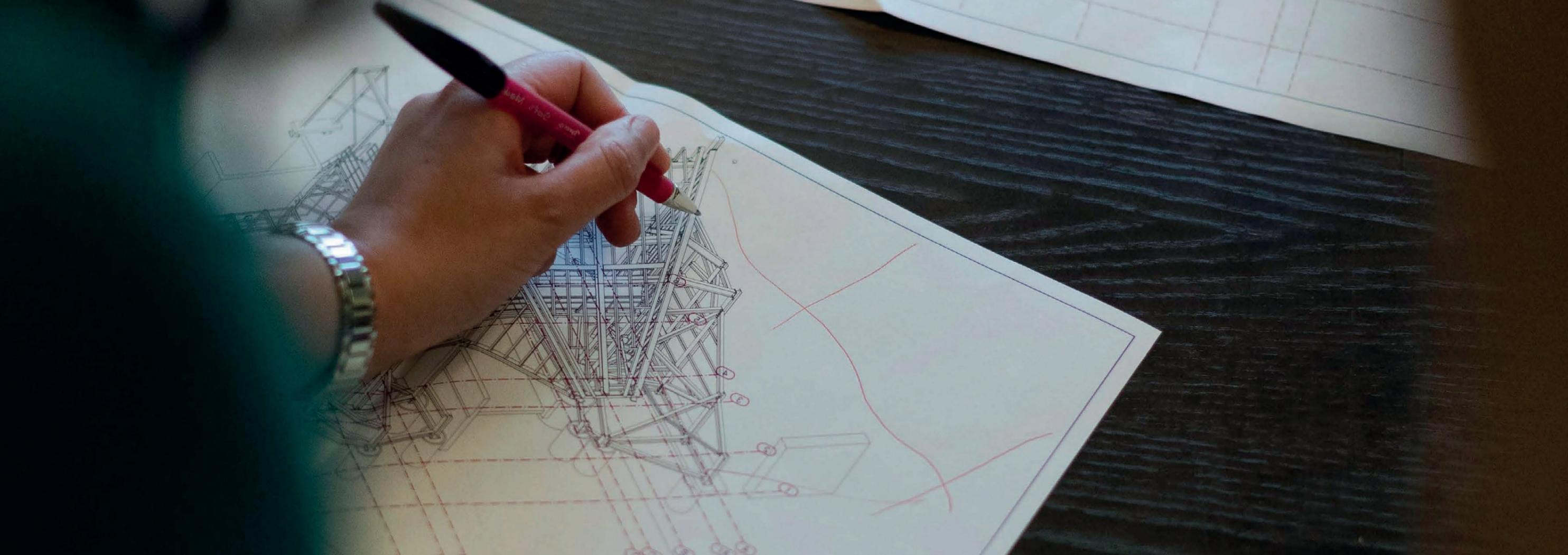


4. For Multinationals Net Zero is now an integral part of doing business

Multinationals of course operate in a sphere of their own, however, in the wake of COP26, there has been some significant alignment, with the aims of countries and companies converging, in regards to 1.5°C temperature increase targets. Furthermore, a net-zero imperative is no longer in question. For organisations, especially multinationals, it has become an organising principle for business [3]. Watching the trickle down effect of this is also pertinent, since in the West, the majority of businesses are small to medium in size, for instance, 99.9% of businesses in the United Kingdom are regarded as SMEs. Therefore, whilst the top .1% of firms are staunchly investing in world leading sustainability incentives, **there are exciting opportunities for the plethora of sizeable SMEs in the UK and around the world to shake up their operating models and to find fantastic growth opportunities plugging gaps in their market and offering sustainable alternatives in active supply chains.** It is also important to consider the various participants required within the global economy, if systemic problems are going to be solved. For example, the transition to clean shipping would require customers to request the service, shipping companies to invest in vessels that run on zero-emissions fuels, fuel producers to make more of those fuels, and banks to provide capital for these endeavours. When these activities are coordinated, they will shift the entire operating context for companies [3]. Transition will look very different across different nations and industries. All regions will need to decarbonise and all will face some exposure of their economies to the transition, and face a degree of risk. However, McKinsey also acknowledges that all regions will have potential for growth resulting from this transition. Again, finding this fabled equilibrium is the key to successful transition. Although, as discussed before, exposure to fiscal and

supply chain risk will be uneven. McKinsey's research suggests that regions with lower GDP per capita and those with greater fossil fuel resources would need to invest more than other regions, relative to GDP, to reduce emissions, build a low-emissions economy, and support economic development. They would also see a larger proportion of their economies exposed to the shifts under a net-zero transition. Sadly, this research indicates that it is lower-income households everywhere that will be most affected [9]. This is why it is interesting, and represents solid fiscal planning, when oil dependent nations such as Saudi Arabia look to diversify their economy beyond the exporting of fossil fuels. Whilst the Kingdom of Saudi Arabia is making headway in opening its economy, transitions are likely to be less smooth in other oil export dependent nations such as Algeria and Venezuela, especially the latter as the South American country has been in utter turmoil since 2010. Thus, international support is likely to be needed so as not to exacerbate existing issues for the poorest, if the world is to successfully wean itself off oil. To minimise the impact of these sustainable transitions, research and forecasts indicate that government and business will need to act together with singular unity, resolve, and ingenuity, and extend their planning and investment horizons even as they take immediate actions to manage risks and capture opportunities [9]. Furthermore, C Suite executives can get ahead of such shifts by joining coalitions that exist now, such as the Mission Possible Partnership [3]. The need for unity in this transition is visible through the emergence of groups such as GFANZ. **Coalition and collaboration truly is the way to engineer a more sustainable future across all industries and nations, in a way that protects the most financially vulnerable in unstable economies.**



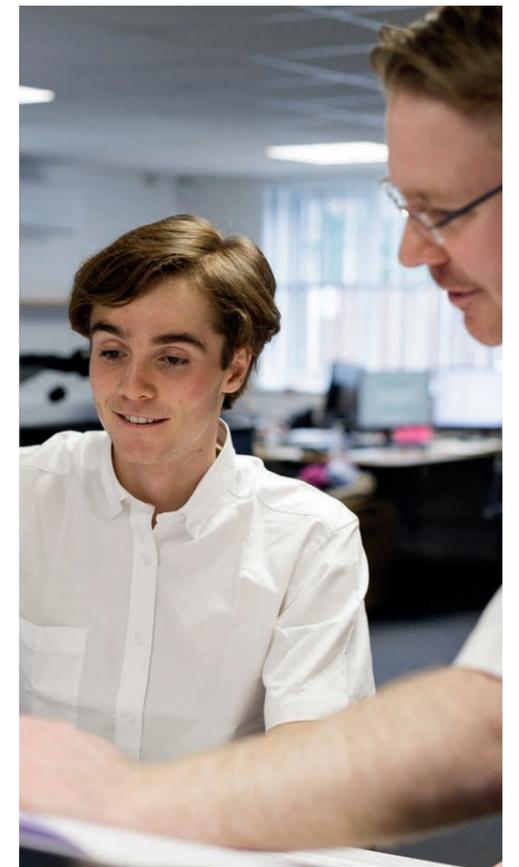


5. Securing greener supply chains can mitigate against price shocks

Since the COVID-19 crisis, it has been a rather torrid time for supply chains in various industries, with the semiconductor supply crisis particularly exacerbated by geopolitical factors and pandemic related disturbances. The movement of goods across the globe via ships that are powered by some of the most climate damaging fuel known on the planet, is of course not the greenest arrangement and is by its very nature vulnerable to disruption by a range of factors, such as; geopolitical tensions, further COVID disruption or weather. Research indicates that extreme weather won't be the only climate-related threat to supply chains in the years ahead. One consequence worries many: as demand increases for materials with low emissions intensity, such as green steel, production capacity may not expand quickly enough to keep pace, at least in the short term. For example, McKinsey analysis suggests that shortages of high-quality iron ore could constrain production of zero-emissions steel [3].

In addition to these problems, going forward, **it is now a responsibility for businesses to demand something of a sustainability plan for those in their supply chain.** Again, this will force actors within these supply chains to adapt or risk losing market share to plucky start-ups that are looking to beat slow moving players and fill underserved market niches, especially with the exponential rise in demand for sustainably sourced and fulfilled products and services. Indeed, one condition that can slow a company's growth is poor sustainability performance, as measured in environmental and social impact. To make and sell goods, consumer businesses need affordable, reliable supplies of energy and natural resources, as well as permission from consumers, investors, and regulators to do business. But companies can no longer take those enabling factors for granted. Indeed, scientific consensus, along with pledges by governments and business leaders, including the leaders of some of the largest consumer companies, calls for

dramatic improvements in sustainability performance [11]. Thus, businesses must brace themselves for price rises and supply shocks. **Firms must hedge against insecure supply chains by investing in more sustainable operations.** The emerging expectation for businesses to overhaul their carbon heavy processes, coupled with recent supply chain issues in the wake of the COVID-19 crisis, presents a perfect opportunity for businesses to improve their operations, with a focus on sustainability. For those exposed to significant amounts of carbon across their operations and/or supply chain, this transition will inevitably require more significant overhaul and deployment of capital. Thus, until these companies actually achieve net zero, they may perhaps pursue other ways of satisfying customers' demands for sustainable progress. A stopgap approach may involve effective offsetting through a Gold Standard carbon organisation or, as per McKinsey, the acquisition of high-integrity carbon credits from nature-based projects.



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6. Supply Chain Resilience

After the fall of the Soviet Union and the subsequent post Cold War world, the continued rise of globalisation led to relatively seamless global trade and made it seem as if we were hurtling towards McLuhan’s notion of a “Global Village.”

However, in the 2020s it seems that we are once again at a stage of ideological and economic competition, with the potential for another iron curtain falling across Europe increasing and the development of staunchly opposing “Western” and “Eastern” camps building over issues such as; Taiwan, US/China tensions and the proxy conflict between Saudi Arabia and Iran. Therefore, such political tension is making trade borders seem like significant barriers once again. These issues and supply chain struggles, such as the semiconductor chip crisis, highlight the importance of a resilient supply chain.

The accelerated demand and expectation of businesses to overhaul existing processes in favour of more environmentally friendly approaches provides the perfect opportunity for firms to establish new, greener, supply chains.

Sadly, continued global warming will have physical consequences of increasing occurrence. The Sixth Assessment Report of the Intergovernmental Panel on Climate Change concluded that further changes to the Earth’s systems are locked in, no matter how much more warming takes place [3]. Thus, businesses must brace more frequent interruptions as physical risks from climate hazards increase. However, by building greater resilience, they can improve their ability to maintain business continuity, which can be a source of competitive advantage. Failing to invest in sustainable and resilient supply chains can have major fiscal consequences. The McKinsey Global Institute estimates that downstream electronics companies could lose up to a third of annual revenue if their supplies of chips were disrupted for just five months [3]. **Beyond the environmental side to the definition of sustainability, businesses must also question whether the sourcing of parts and offshoring of labour to firms, housed in nations that may be in ideological conflict to their home country, is a sustainable approach**, especially at a time where the global dynamic sees the waging of economic and cyber warfare continue to become more prevalent and severe economic sanctions can be imposed on nations overnight.



7. To conclude. How firms can engineer our sustainable future

In the wake of the COP26 summit, there was a clear shift in momentum for businesses towards net zero and the affirmation that the pursuit of this status is now a core principle of doing business. This enshrining of net zero as a core organising principle for business will leave companies without serious plans to adapt to a low-carbon economy exposed, not only to their customers but with regards to various government regulations coming down the line. COP26 has sent a clear message to companies: measure your carbon footprint and instigate a plan to move towards net zero, or risk lagging behind competitors [12]. Thus, **these outlined reforms at COP26 act as something of a fiscal impetus for firms to create a more sustainable operation and subsequently pressure those in their supply chain to follow suit.** This should create a natural domino effect as incumbents will feel pressure from enterprising businesses who will rival those that drag their heels in terms of a sustainable transition. Furthermore, as per Institute of Directors, well-formed net zero plans will set ambitious targets for reducing scope one, two, and three emissions to meet not only short-term, government-mandated targets but long-term goals, based on scientifically informed mitigation trajectories. They will consider environmental risks and opportunities across the company's portfolio and will set out the capital required for reducing emissions and acquire any carbon credits that are deemed necessary [12]. Whilst carbon credits are something of a stopgap solution, they show an initial acknowledgement of a problem and the willingness to combat it. KPMG also acknowledges that...

...there has been an important shift from, “top down” reliance on governments taking the lead to ‘bottom up’ action by businesses, investors, NGOs and consumers.

This renewed engagement for businesses regarding the climate issue is visible through the aforementioned Glasgow Financial Alliance for Net Zero, or GFANZ, which has US\$130 trillion of assets under its control. Thus, clean finance can now play a critical role in driving, or stopping, activity irrespective of changes in government policy. In addition to this, KPMG acknowledges a definitive shift towards “bottom up” action driven by plucky businesses and individuals through a vast array of initiatives to help reduce greenhouse gas emissions, that will likely generate a momentum of their own, separate from the government-led COP gatherings [13]. This is where differences will be made. Whilst governments can set important climate agendas and large multinationals can lead by example, it is down to business leaders to begin their own firms’ transitions towards being more sustainable entities and then to look beyond to invest in greener and robust supply chains.

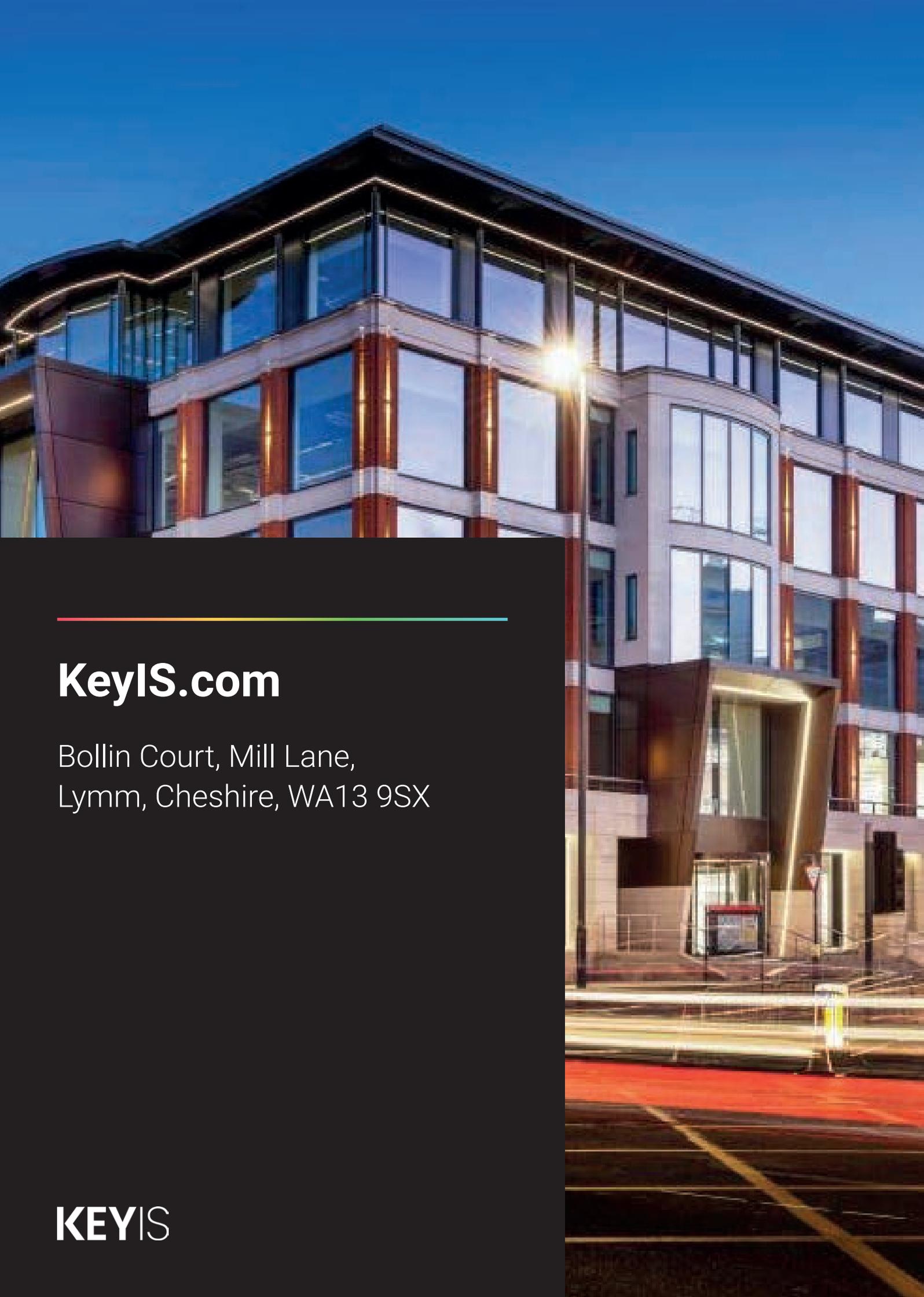


Courage in leadership can help businesses navigate these difficult transitions effectively and can foster an environment driven to transform operations in a positive light. **Even if a business has been rather rigid regarding its processes for decades, there is all the more reason to innovate one's operating model and invest in a more sustainable future for the organisation.** There is a cacophony of pledges and promises in the corporate space regarding sustainability and thus, business leaders must cut through this noise and articulate a North Star for their company's future, supported by a detailed plan to get there [3]. An actionable and achievable sustainability plan for a business can improve drive with a collective sense of progress and achievement as these targets are met. Explore greener options for your operations and your supply chain, explore Gold Standard nature based projects and carbon credits and begin engineering a more sustainable future for your organisation and your planet.

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