

Engineering a brand



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Executive Summary

How our cities and the technologies that we use every day are designed, truly shape our lives and that is why engineers and constructors have such an important role in economies across the globe. Many of our E&C clients reach out to us, expressing their desire to take control of their brand and communications. Too often, constructors and engineers struggle to communicate their unique value and as such fail to maximise their growth potential within their market. This is why we are passionate about partnering with businesses that are determined to achieve their ambitions. Through the marriage and integration of brand, marketing and technology, we build holistic experiences that maximise the engagement of your audience, regardless of your sector.

This report looks at how engineers and constructors can engineer their brands to be true market leaders, taking ownership of their ESG and sustainable growth for the future of their industries, our countries and our planet. In this piece, we will look at how business leaders can drive transformation in their industry, take ownership of their sustainability communications and ensure that their branding and design are befitting of a market leader.

Looking to the future of construction and engineering

According to Alexandre L'Heureux of WSP Global, climate change and other long-term issues should now inform the design and construction of skyscrapers [1] and our cities in general. Indeed this logic should be applied throughout the engineering and construction sectors, as such actors are responsible for the build and design of the infrastructure of our future. L'Heureux, in conversation with McKinsey, discusses how sustainability was at the top of the agenda pre COVID-19, but as the pandemic starts to recede, the time has come to push even harder, with the COVID crisis inadvertently providing an opportunity to take the steps necessary to evolve [1]. Thus, it is important that organisations within these sectors evolve in tandem with such market and institutional developments. Once futuristic dreams, such as; 3D printed houses, automatically designed hospitals and prefabricated skyscrapers are now a reality [2] and infrastructure planners and developers must adapt their processes accordingly. An interesting example of the industry's evolution is the growth of the Goldman Sachs funded, prefabricated home developer, Top Hat, that delivers design-led homes fit for 21st century living through a unique technology enabled approach. They are a fantastic example of a forward thinking organisation that deploy advanced technology and innovative processes to be cost and material efficient and fantastically sustainable. It is also worth noting that Top Hat's sustainability and design missions are communicated effectively throughout their website and general communications, something that can act as a key driver for businesses looking to disrupt sectors as climate innovators.

With this need to build for a more sustainable future, for engineers and constructors, there is a need to match closely the long-term interests that the industry has had around climate change with the future needs of the cities that they will be designing.

In conversation with McKinsey, L'Heureux encourages industry leaders to regard skyscrapers as the pyramids of the future. These enormous buildings are not going anywhere, so when one makes the effort to build something, to design something, it is imperative to think about future needs and future implications of the project. The building codes will change in London, for instance, in the next 30 or 40 years, with global warming. So as engineers and constructors, the long-term impact of climate change must be considered [1]. As we have discussed through many of our reports, it is vital for business leaders to regard that sustainability and financial goals have converged. L'Heureux, speaking to McKinsey, talked of how their investors are increasingly demanding the formulation of long term strategies in the realm of sustainability. Acting as a true market leader, WSP became the first professional services firm in the Americas to sign a sustainability linked credit facility, something that was very well received by their investors, who were increasingly demanding that WSP tie their financial performance to sustainability-linked criteria [1]. There is significant room for growth for ambitious actors in these markets as on the whole, these new

technologies have still not been widely adopted. As per BCG, the gap between the innovation leaders and laggards is widening [2]. As a business leader in construction and engineering, if you do not want to be left behind, now is the time to invest in a sustainable and agile future for your business. Through this report, we will look at how brands in these sectors can create transformative innovations, take control of one's branding and communications, make their companies fertile land for investor-led growth and leverage communication strategies for sustainable and ethical growth.

Driving
transformation
in one's industry

At Opportunus, we pride ourselves on building engaging brands and helping them stimulate growth going forward, activating their new and existing growth opportunities. There are many ways in which ambitious industry leaders can spearhead transformation within their industries and we are proud to support ambitious founders and businesses in activating new business models and avenues for growth across their industries. A key factor for driving transformative innovation within one's sector, is the stimulation of innovative ideas.

This may sound rather like common sense but we cannot understate the importance of fostering an innovative culture within one's organisation. Ambitious leaders must be bold and shield a degree of risk within their company, allowing new ideas to be tested and implemented.

To stimulate such innovative ideas, successful companies develop a vision and instil an innovative culture in their workforces; creating talented, multidisciplinary teams that bring in experiences from non construction industries and devise agile organisations; taking a customer centric approach, starting from the asset users' pain points [2]. This style of approach is a factor as to why we have had such successful relationships with our clients in engineering and construction, deploying our customer centric and experience focused processes with our clients' unique proficiencies within their respective markets. Next, we must turn these innovative ideas into reality. Businesses that boost

innovation in their ecosystem tend to establish product platforms instead of taking a traditional individual project perspective. Common success frameworks tend to launch pilot projects and develop prototypes to show proof of value, and nurture the broader ecosystem of suppliers and other partners to manage supply-side constraints and enable a broader adoption of the innovation [2]. If business leaders force exciting ideas to stay in, well exactly that, the idea stage, it may seem like new ideas are fruitless as they continue to trundle along with their existing products and processes. This is the value of testing and wireframing, it allows ideas to leave the conceptual stage and provides scope to test the value and applications of the innovation. There is also investor side excitement regarding construction technologies, with investment in the industry's tech doubling in the past decade [3]. Thus, for business leaders there is indeed fiscal support if you feel you have unearthed an exciting opportunity within your space. Thirdly, it is inevitably important that you succeed in your market as you harbour these innovations and bring them to implementation. Companies must embrace business model innovation alongside technological innovation, whilst advocating new ways of contracting that both reward innovation and life cycle performance and enable early collaboration. Larger firms can work with governments to shape regulatory environments, such as for 3D printing in construction [2] whereas SMEs can influence their industry through growth via new business models that force incumbents to innovate to keep pace.

Engineers and constructors play an important role in their nations' economies. Construction

is inherently pegged to economic factors and as such governments and subsequent planning bodies play an important role in driving both these industries and technologies in general, forward. Infrastructure is the backbone of a healthy economy. Done right, infrastructure stimulus investments can not only hasten recovery from the effects of the COVID-19 pandemic but also accelerate progress in addressing the effects of climate change. Two types of such investments stand out: those that entice private-sector participation and those that put green infrastructure at the forefront [4]. These innovations are top of the agenda for governments to support as global economies are stimulated in the wake of the COVID crisis. McKinsey discusses how public-debt levels have increased dramatically through the COVID-19 crisis and how it is important for governments to stretch stimulus dollars as far as possible. One way to do this is by deepening capital markets and developing incentives for the private sector to play a bigger role in infrastructure financing, for example, by creating an enabling environment for public-private partnership investment. On the whole, it seems that more than ever,

now is the time to firm up energy, transport, and digital infrastructure investments, as they will allow us to overcome today's challenges and prepare for tomorrow.

It is important for governments and investors to invest in such and to ensure that they are preparing lower carbon infrastructure for the future [4].

Thus, whilst industry transformation is and must be driven by the private sector, governments still have an important role to play by pursuing policies conducive to the adoption of innovation [2]. For instance, the United Kingdom is unusual among large economies in that significant parts of key national infrastructure, including energy production and distribution, water, and digital communications, are privately owned and managed. In such a context, Westminster can create the conditions for a market-led recovery by making firm commitments to large infrastructure-delivery projects in areas where the private sector is unlikely to move. These commitments send a strong signal about future opportunities [4]. Governments must contribute in a meaningful and effective manner, acting as a smart regulator.



This role involves making smart decisions about regulations, such as harmonising and updating building codes, as well as developing performance-based and forward-looking standards [2]. Central involvement should not stifle innovation or make such processes more cumbersome. Governments, constructors, engineers and leaders in general, should act as long-term strategic

planners and incubators for innovation. This involves defining a country-level, or company-wide, strategic innovation agenda for the industry, investing in flagship projects and research and development, and enabling startup financing [2]. Finally, and also important for both policy makers and business leaders, it is crucial to be forward looking project owners. This involves creating an innovation-friendly owner culture, introducing more flexible procurement and contracting models, and taking a life-cycle perspective to obtain innovative solutions that provide the highest total value of ownership and are not simply the cheapest [2]. These are examples of effective government activity, and industry leadership, and both construction and engineering firms should be poised to benefit from any such central involvement through inherent operating agility and an innovative culture.

Ambitious businesses in these sectors should innovate vigorously, to deal with the broader societal challenges,

including sustainability, affordability, and disaster resilience, and to serve the public good. By implementing the success factors and such policy recommendations, combined with effective government involvement, innovation can accelerate within the construction ecosystem and achieve higher productivity as well as social and environmental benefits [2]. In addition to this, for the construction value chain, the benefits of full-fledged digitalisation, arguably the most important holistic lever, are huge: within ten years, full-scale digitalization in nonresidential construction will

lead to annual global cost savings of \$0.7 trillion to \$1.2 trillion (13% to 21%) in the engineering and construction phases and \$0.3 trillion to \$0.5 trillion (10% to 17%) in the operations phase, according to BCG research [2]. This is the power of digitisation, something we have preached to our clients for years. At Opportunus, our mantra is to marry the integration of brand, marketing and technology to build holistic experiences that maximise the engagement of your audience. For constructors and engineers, it is crucial to implement digitisation and innovative technology across the entire organisation and value chain, to maximise and secure future growth.

Back in 2016, the engineering and construction (E&C) industry was a relatively conservative one, slow to adopt innovative materials, technologies, and processes, so much so that labour productivity in the US had actually fallen during the prior 40 years. This is concerning, given the central role that buildings and infrastructure assets play in daily life and the impact that the industry has on other industries, the environment, and the economy as a whole. Currently, the industry is the largest global consumer of raw materials, and about 30% of greenhouse gas emissions are attributable to buildings. Furthermore,

E&C accounts for 6% of global GDP.

Given the industry's size and weight, even a small improvement in performance would generate huge benefits worldwide [5]. This is partly why governments inherently maintain involvement in planning and investment into the E&C industries as it is a key driver of GDP and sustainability implications across nations and supply chains.

This lethargy regarding adoption of new technologies and materials was met in the early to mid 2010s with thousands of new market entrants offering point solutions that served existing use cases or, in some instances, created new ones. The first widely adopted construction point solutions addressed basic needs; for example, improving design capabilities or digitising paper-based information. By the second half of the decade, industry players, spurred by end-customer feedback about their difficulty integrating point solutions, began expanding their product portfolios to create suites of integrated solutions [6]. Now at the start of the 2020s, such adoption has come a long way from the incumbents' heel dragging that BCG bemoaned in 2016. Inevitably, the COVID-19 pandemic forced many construction players to digitise and use technology to ensure the safety of their workers whilst boosting productivity. This is a dynamic that is set to continue to accelerate. There are significant opportunities here to create value for both strategic and financial investors that are evaluating consolidation plays [6]. The nature of this opportunity, for instance a full-scale digitalisation of nonresidential construction would, is truly enormous, with BCG's research indicating that such a digitisation would, within ten years, produce annual global cost savings of between \$0.7 trillion to \$1.2 trillion (13% to 21%) on engineering and construction [5]. Whilst E&C firms can drive innovation and tech adoption within their own organisations, at the top level, governments are, in fact, key contributors to the industry's transformation. A government not only acts as the regulator but also is often the owner and a major client of infrastructure assets. By speeding up regulatory and environmental approvals, it can reduce project delays. By inviting foreign bidders to

tender, it can improve competitiveness. By supporting academic and corporate R&D, it can promote technological innovation. It can impose environmental standards and weed out corruption in procurement practices. In general, a government can create a fertile environment for the industry's transformation [5]. Interestingly, compared to other industries, E&C has been slow to adopt new technologies and has never undergone a major transformation. Consider, for example, the opportunity offered by lean process methodologies, take-up has been limited, and many companies that have adopted them have failed to apply them wholeheartedly [7]. If business leaders truly want to drive their industry forward, collaboration is key. As per BCG, all stakeholders need to take more coordinated and committed action to move the industry forward and make these technological transformations a reality [5].

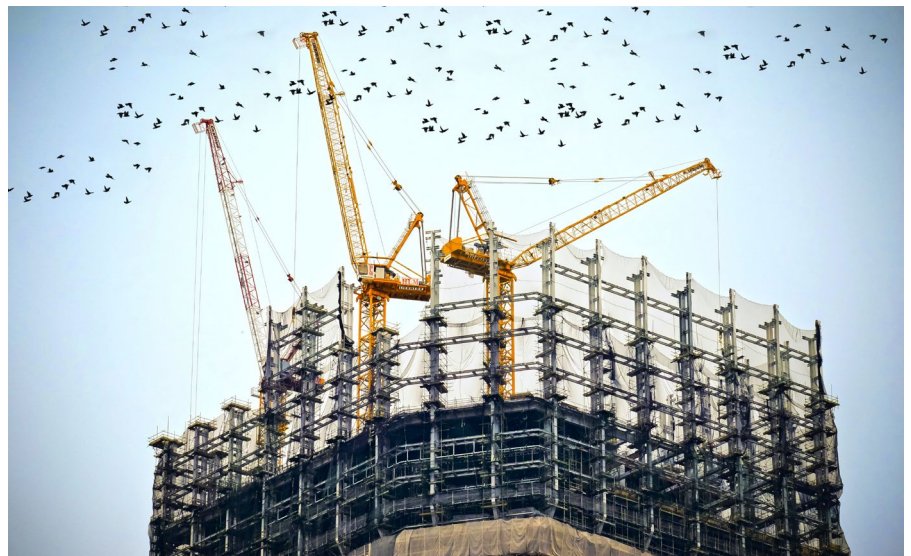


To close this section of the report we will look at five practices that McKinsey's research indicates can help E&C companies move beyond isolated pilots and unlock digital value across their enterprises.

Scenarios such as a large contractor nearly making the call to end its digital-transformation program as their attempts to streamline projects with digital solutions, such as 5D BIM, had failed to deliver. Whilst this particular case in point saw some success in pilot programs, adoption at scale struggled before staff abandoned the solutions and returned to their old ways of working. Scenarios such as this remain all too common in the engineering and construction sector, which, as per McKinsey, is one of the world's least digitised [8]. It is understandable why adoption of these technologies may not be so smooth. Considering the average construction project, there are a wide range of different responsibilities and facets, dealing with a variety of suppliers and materials and so on. Due to the nature of construction, projects differ significantly, so often firms in the sector struggle to develop tools that they can apply repeatedly [8]. Couple this with limited R&D budgets and construction work that so often takes place in remote or harsh environments and it does not require a great leap in judgement to see why so many firms have little to show for their investments into digitised solutions. This is why McKinsey put together these five practices they found in construction companies that successfully implemented digital technologies and ways of working, had in common. Firstly, leaders should focus on fixing pain points, not installing IT solutions. Companies can focus too much on IT, pursuing improvements to systems and software as ends in themselves. We often see E&C companies deploy cutting-edge technology tools before they have figured out whether and how those tools can improve their operations. This tech-first approach can lead to digital "organ rejection," whereby a solution fails to

deliver visible benefits, and the workforce, noticing this, does not adopt it [8]. Thus, it is more effective for business leaders to rationalise operational changes that will make the business more efficient first, before finding or developing such solutions that will amplify one's organisation. As per McKinsey, a good process-centred use case should specify three things: a process change, the required enablers (data and technology tools, capabilities, changes in mandates and responsibilities, legal and contractual requirements, and so on), and the expected benefit. Secondly, it is valuable to implement digital use cases that promote collaboration [8]. Collaboration as an inter organisational facet cannot be understated in terms of importance regarding industry shaping technologies and ambitious business leaders should look for collaborative opportunities and potentially fruitful adjacencies wherever they can. Furthermore, collaborative endeavours can see E&C firms find synergies and more efficient processes in an industry renowned for its fragmentation. An example of this is how historically, site workers hadn't sent feedback to a supplier on all defects in the elements that the supplier was making and when they did send feedback, it was anecdotal, unstructured, and difficult to act on. Defects persisted, so workers needed either to fix defective products or to wait for replacements. This unplanned rework increased labour costs and caused delays. The company then saw an opportunity to correct the problem by improving the mechanism for passing feedback between the site team and the supplier. The site team used a mobile app to tag defects against specific elements in the BIM model and store them in a common data environment (CDE), a single repository for information about the project.

The supplier monitored defect reports in the CDE, then ran root-cause analyses with its factory team to diagnose and reduce defects. The resulting improvement, a 12% reduction in rework hours at the contractor's job site, demonstrates the benefit of smoothing communication between these previously disconnected organisations [8].



Thirdly, it pays dividends to reskill and restructure engineering teams around new technologies. Such digital technologies have introduced profound changes to engineering design. For example, generative design tools, which automatically propose a range of design options in accordance with user-defined specifications, can radically reduce the time it takes to develop designs. Applying these new techniques requires designers not only to learn technical skills but also to design in new ways. E&C companies with internal design functions should equip themselves with new technical skills—for example, by hiring developers to build standard libraries of design elements and automate certain parts of the design process. They should also start to adopt digital ways of working, shifting from a

traditional, linear design process to a more agile approach that consists of faster iteration in short test-and-refine loops [8]. Implementing such processes can make organisations much more time and labour efficient and as such more profitable and effective. Fourthly, engineers and constructors can adjust project baselines to capture value. Many business leaders say that their companies have seen some productivity gains from digitisation but little impact on the bottom line because the savings from added productivity don't make up for the cost of implementing new software and systems. This can occur when productivity-boosting use cases create a float during the execution phase and managers neglect to remove this float from the project baseline. To realise the full bottom-line benefit from digital use cases, managers must adjust baselines to eliminate unproductive time. Furthermore, companies can also change contracts and incentives to share benefits and risks appropriately across the value chain [8]. A more efficient constructor or engineer means a more efficient link in the supply chain. Project managers should keep track of the benefits of such technologies and their implementations so further digitisation and innovations can be adopted and absorbed in a smoother manner. Finally, it is effective to connect projects to unlock impact across the enterprise. As per McKinsey, Common enterprise-wide use cases for E&C companies include the following; consolidating cost and schedule data from multiple projects and business units to increase the accuracy of bids for future tenders, thereby increasing the margin, gaining an enterprise-wide view of resources to optimise resource loading and respond quickly when project demands change and creating central repositories for designs at

the element, package, and project levels so those designs can be repurposed on future projects [8]. Thus, leaders must be brave and open to change and innovation in order to maximise the potential of their organisation. Seek solutions to highlighted issues instead of blindly implementing products. Companies that are bold and successfully adopt transformative digital products before their rivals can reap significant rewards. Those that are still lethargic in terms of tech adoption must double down and invest in digitised solutions and processes for their organisations, or risk being left behind, going forward.

Engineering a sustainable future

The pressing issue of our time is of course tackling our climate crisis and as such increasing regulatory, investor and consumer side pressure is forcing businesses to devise an actionable sustainability strategy for the future of their organisations. Inherently, engineers and constructors play vital roles in nations' sustainability drives as designers and builders of cities, containing the buildings and technologies that drive our civilisations forward. As decarbonisation initiatives gain momentum, construction players can benefit from this growing trend, but only if they view ESG as a strategic opportunity and collaborate with other stakeholders in the ecosystem [9]. Again, collaboration is vital for sustainable progress and development. One drawback in this regard is that the E&C industries remain extremely fragmented. To unlock all the potential, companies along the value chain will need to collaborate far more than they do currently and industry organisations will need to act more strongly in defining common goals and standards, engaging local communities and prospective employees, and advocating with governments [5]. This is how the wheels on the green economy start turning, with industry players in key developmental sectors such as construction and engineering collaborating to reduce carbon impact across their supply and value chains and work to adopt new technologies and materials. Despite the siloed nature of the industry the entire C&E ecosystem looks set to evolve. As one of the world's biggest economic ecosystems, these industries have a major part to play in achieving global sustainability goals. This "ecosystem" encompasses the full life cycle including; design, materials manufacturing, construction, usage, and demolition of all residential and commercial

buildings and infrastructure [9]. COVID-19 has acted as a catalyst for great change across industries, with businesses emerging as more digitally driven and sustainability focused entities. Considering this inflection point, given this context, it is critical that we now begin to integrate the thinking and planning required to foster much greater economic and environmental resilience to combat environmental risks. It seems that this view is shared by industry leaders as when McKinsey asked 100 senior construction executives what trends they expected to accelerate due to the COVID-19 crisis, 53% cited sustainability. Reasons could include increased corporate awareness and understanding, as well as growing pressure from investors and financiers [9].



In addition to this, sustainability is quickly becoming one of the most frequent issues clients reach out to us to express their concern. Whilst sustainability is not a difficult topic to grasp or be engaged with, it can be rather intimidating when considering formulating strategies and communications for one's own organisation. However leaders cannot afford to drag their heels when it comes to framing

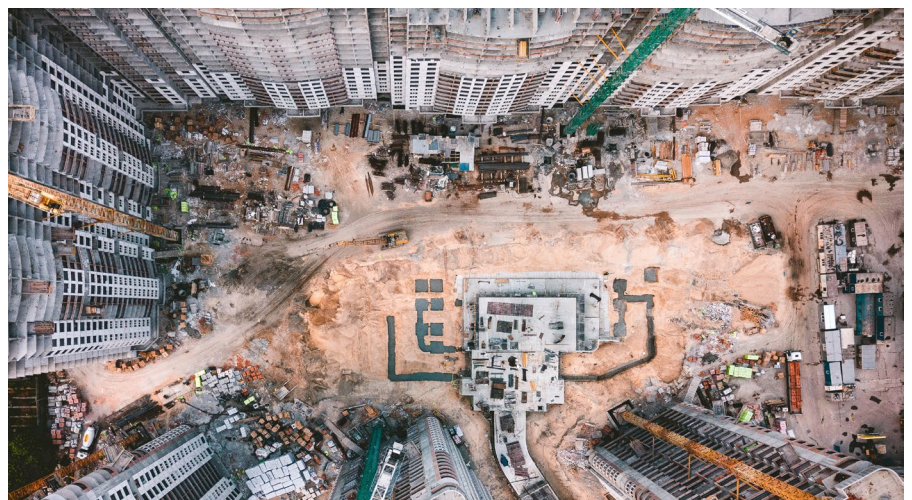
and formulating the sustainable endeavours of their business, as we mentioned before, L'Heureux of WSP, discussed how investors are increasingly demanding of businesses to push in the sustainability realm, with their investors, and many others, demanding that they tie their financial performance to sustainability-linked criteria [1]. Aside from investor side demand for the convergence of ethical and financial performance, business leaders should consider the potential for centralised involvement that can create fertile land for sustainable growth. If the lower interest rate environment persists and significant stimulus packages materialise, it could contribute to the deployment of new sustainable infrastructure, as well as adaptation and resilience infrastructure, investments that would support near-term job creation [9] that is sorely needed in our post COVID economies. Meanwhile, the need for global cooperation on this issue will likely become more apparent and more universally embraced as we have discussed [9]. Thus, engineers and constructors must look beyond their fragmented processes of old, to collaborate across their industry and value chains. This will be mutually beneficial, for businesses and for our planet. Further to this, for L'Heureux, the pandemic demonstrated that we are vulnerable and we need to place a more significant focus on planning for the future.

L'Heureux recommends the adoption of a risk-based life-cycle-cost approach, including maintenance and energy and an assessment of the climate risk associated with both operational projects and those in development [1]. The pandemic exposed supply chain and process based weaknesses and now, hopefully through collaboration, industries will work to patch such frailties and look to secure, localise

and curate more sustainable processes. As we have discussed in the previous section, all stakeholders need to take more coordinated and committed action to move the industry forward and make necessary transformations of these industries a reality.

L'Heureux's vision is in line with the Inter American Development Bank's vision of institutional sustainability. This institutional sustainability is sustainable infrastructure that is aligned with national and international commitments, including the Paris Agreement, and is based on transparent and consistent governance systems over the project cycle. Robust institutional capacity and clearly defined procedures for project planning, procurement, and operation are enablers for institutional sustainability. The development of local capacity, including mechanisms of knowledge transfer, promotion of innovative thinking, and project management, is critical to enhance sustainability and promote systemic change. Sustainable infrastructure must develop technical and engineering capacities as well as systems for data collection, monitoring, and evaluation, to generate empirical evidence and quantify impacts or benefits [10]. Thus, it is clear to see the crucial role engineers and constructors have in the greater sustainability plight and the need for collaboration among market players as we strive to develop this notion of truly institutionalised sustainability. The rise of ESG is contributing to this, with immense pressure placed on organisations to perform well ethically, as well financially. Delivering on this institutionalised sustainability means national and sectoral productivity growth strategies should establish the need for individual infrastructure projects to support sustainable and inclusive growth

[10]. This is especially pertinent for construction and engineering players as their growth strategies are very much part of such national infrastructure. When effective, these national and sectoral institutional frameworks should provide incentives to ensure institutional, social, and environmental returns from infrastructure and job creation must be factored into infrastructure investment strategies and plans [10]. Thus, some responsibility lies, for E&C market players, to hire for sustainable and digital proficiencies. Being bold and doing so is not only looking after the future prospects of one's business but is helping to build the foundations for true sustainability within an economy, regardless of the size of one's business, either hiring such talent, or outsourcing as many of our clients do with us, is helping push the first dominos on a sustainable infrastructure evolution. Furthermore, trade institutions should work to incentivise sustainability transformation, with taxation and pricing also incentivising sustainability whilst addressing perverse subsidies and price distortions. Procurement processes should ensure level playing fields for public and private enterprises and governments should develop and apply sustainability certification schemes for such infrastructure providers [10].



The construction industry, inevitably, has a rather significant impact on the environment with the sector being responsible for 600.33 million US tons of construction waste in the United States alone in 2018 and a high level of water usage, approximately 200 litres of water used for each cubic metre of concrete and as such this existing ecosystem is a key driver of global greenhouse gas emissions [9]. This is a solid impetus to overhaul existing processes, hedging against environmental impact and protecting one's supply chains. From a business perspective, infrastructure, supply chains, food systems, asset prices, land and labour productivity, and economic growth itself are increasingly at risk. Considering the construction ecosystem is mainly driven by two components; the processing of raw-materials for buildings and infrastructure, which is largely cement and steel, and general building operations concerning construction with typical asset lifetimes of 30 to 130 years, we cannot wait to replace products at the end of their life cycle if we are to meet climate change mitigation targets by 2050. With roughly 80% of the predicted building stock for 2050 already in existence today, there is a huge need, and opportunity, to retrofit existing assets [9]. Thus, organisations in E&C industries have enormous opportunities to lead sustainable growth through new business models such as this. Often decarbonising solutions are digitally driven and as we have discussed throughout this report, in many respects E&C lag in digital adoption. The construction industry also suffers from productivity growth, with an apparent lack of digital adoption leaving the industry without many tech lead games when compared to virtually every other industry on earth. Thus, there is significant room for growth for E&C players to

implement technology to help drive sustainability led growth. McKinsey's research indicates that this is good news for market actors, as there are clear actions each organisation can take to dramatically reduce its carbon footprint, and many of these actions will also deliver cost savings. However, a combined effort will be required across both existing and new building stock if the industry is to achieve its ultimate goal of net-zero emissions at an ecosystem level [9]. As we have discussed throughout this piece, there really is a need for collaboration across value chain actors if necessary work to decarbonise construction ecosystems does indeed take place. Demand side, this need is becoming more apparent. For real-estate players, sustainability has moved to the top of the agenda. Investors are making net-zero commitments, regulators are developing reporting standards, governments are passing laws targeting emissions, employees demand action, and tenants are demanding more sustainable buildings [11]. This is a future that those in E&C must adapt and prepare for. These aforementioned changes are bringing a sense of urgency to required sustainable transformations of these industries. From now until 2050, the world will feel both the physical effects of climate change and the economic, social, and regulatory changes necessary to decarbonize. The climate transition not only creates new responsibilities for real-estate players to both revalue and future-proof their portfolios but also brings opportunities to create fresh sources of value [11] and as such, it is imperative to invest in this new future for the benefit of our planet and our businesses today.

Engineering your brand

As we have outlined in this report, there is a wealth of opportunity for businesses in the engineering and construction industries to extract significant value from sustainable and digital transformations of their organisations. As such, capital flowing into these industries is set to proliferate. McKinsey estimates that by 2027, about \$130 trillion will flood into capital projects, yet few organisations today can deliver with the speed and operational efficiency the influx demands [12]. For investors and governments, their vision of the future is that economic prosperity will be driven by sustainability, inclusion, and growth. This agenda nurtures innovation while reducing environmental impact and improving people's quality of life worldwide and fulfilling these ambitions involves major private and public sector capital investments in climate transition infrastructure and in supporting economic recovery and growth [12]. Therefore, business leaders must be self reflexive and consider whether their businesses are well poised to either raise capital or expand in line with expected industry growth. As per McKinsey,

the world will see a once in a lifetime wave of capital spending on physical assets between now and 2027. This surge of investment, amounting to roughly \$130 trillion, will flood into projects to decarbonize and renew critical infrastructure [12].

Thus, as a leader of an E&C business, it would be irresponsible to not prepare one's organisation to be poised to extract value from this proliferation of capital. One can start the transformation of a

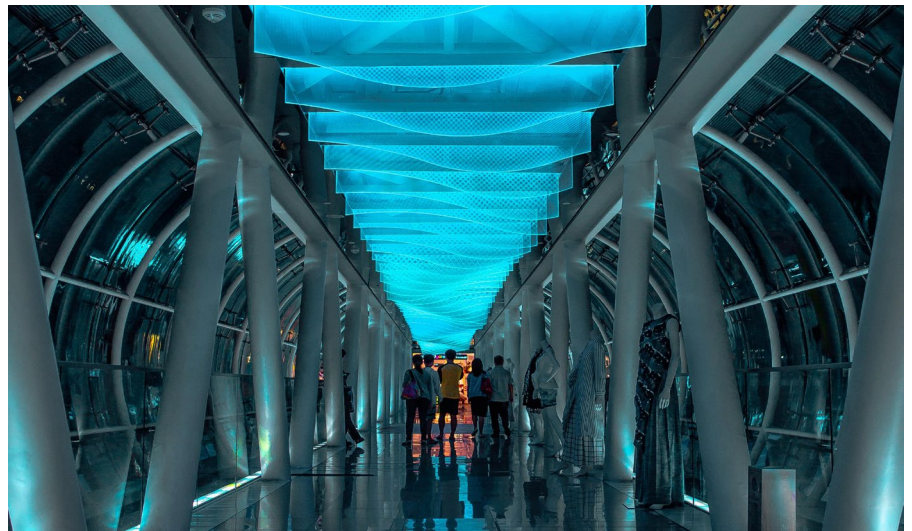
business by hiring for sustainable and technological proficiencies, investing in talent here can go some way to creating capacity for the value expansion that will occur as this enormous amount of capital continues to be injected into these sectors.

Furthermore, identifying carbon intensive links within one's supply or value chain and environmentally detrimental parts of the business' operating process can represent an important start to opening this sustainable growth capacity for a business, in turn making it more fertile for sustainable growth and consequently appealing for investors. Indeed the bulk of this investment will go to decarbonisation endeavours. McKinsey research indicates that 93% of CEOs say that sustainability issues are important for the future success of their business, and 54% expect sustainability to be embedded within the core business strategies [12] reinforcing the importance of investing in such proficiencies.

Despite economic turbulence throughout the COVID crisis and the price of building materials rising by more than 20% in the past year overall, according to official statistics, construction remains optimistic. Usamah Bhatti, an economist at IHS Markit, which compiles the Construction Index survey, said there was significant evidence that the UK construction sector began to feel the impact of ongoing supply chain disruption was widespread midway through the third quarter of 2021 [13]. This again reinforces the importance and value that resides in taking control of one's supply chain for E&C firms. Supply chain disruption is a continued threat for the UK construction sector, as demand for materials and logistics capacity outstrip supply and as per Bhatti, average vendor performance continued to deteriorate

at a near-survey record rate, as firms noted severe shortages of building materials, a lack of available transport capacity and long wait times for items from abroad due to port congestion [13]. These are core issues that investors looking to push capital into E&C industries will look to capitalise off fixing, whilst decarbonising, thus beginning to take action and formulate strategies to localise and protect supply chains will make one more appealing to investment and create capacity for exciting growth. Delving further into this future investment realm, it seems that mobility, power, and buildings will account for approximately 75% of the total spending on physical assets in this net-zero scenario. So when shaping the future of your business, consider that mobility would account for about 40% of the spending, including investments in electric vehicles (EVs) and charging infrastructure, energy would account for 20% and would include developing renewable energy infrastructure, upgrading transmission and distribution networks, and investments in carbon capture, utilisation, and storage technologies [12]. Supply chains are a hot topic in the wake of the semiconductor crisis and general geopolitical tensions, so investors will be keen to understand E&C business' strategies to secure, localise or decarbonise in this realm. American and European businesses can benefit from significant funding that has been allocated to infrastructure projects across numerous asset classes. In November 2021, the US Congress passed the Bipartisan Infrastructure Law, which appropriates \$1.2 trillion, including \$550 billion in new funding, to rebuild the country's road and rail infrastructure, deliver high-speed internet access to all Americans, provide greater access to clean water, invest in new clean-power technologies, and

improve the nation's overall resilience to the effects of climate change. In Europe, to deliver on the Green Deal's goal of climate neutrality by 2050 and emerge stronger from the pandemic, the European Union has launched the largest stimulus package ever: €807 billion labelled as NextGenerationE [12]. Further confirmation of the scale of this opportunity, just in case it was not already apparent. Therefore, it is vital that business leaders prime their organisations for this future growth.



At Opportunus, we are also boldly passionate about the role of branding and design within an overarching growth strategy for our clients' businesses. Often, leaders of non direct to consumer brands neglect design and branding endeavours however we believe this is completely wrong and means the organisation is not set up to maximise its potential. With strong branding, you're telling your clients who you are and what they can expect when they choose you [14] and can ensure that your organisation is memorable in the wider market. Investing in design and brand strategy is all the more important considering this impending influx of capital to develop impactful

new infrastructure for a new global, sustainable economy, therefore it is more important than ever to invest in your E&C brand in order to stand out for investors and potential partners within one's market. So, how does one begin to formulate a brand in the construction industry? Well, the strategy starts by understanding the customer needs and developing a mutual trust. So often, simply the term "marketing" in construction causes polemic. The construction industries through its direct influences create a growth rate of domestic product, however, if the construction industry as a moderator of economic activity has direct influence on the demand growth in industrial branches, why is marketing so slightly applied in construction? The nature of this relationship between construction and services often lumped into the category of marketing, is so puzzling because whilst the service is intangible, the edifice, the product, is not [15]. Image in construction can matter greatly to shareholders and planning bodies and so on. For instance, regenerating areas of cities such as the fabled case study of Ancoats, Manchester, UK, the sight of trendy brands and developments alongside vegan eateries and craft breweries litter the once downtrodden streets. Image matters when seeking capital and seeking growth. It is vital to build a brand representative of the company that you want to be, with strong foundations of the company that you are today. This is how we can help leaders prepare for the sector's growth, building capacity for the required future sustainable growth. Branding strategy in construction must consider the industry's rather unique marriage of service and product, the juxtaposition of the weightless and product economies in developed markets. Thus, as per research in The Academy

of Management Review, construction becomes a specific industry because by providing service, it starts from the consumer's trust. However, the trust itself presupposes high levels of employees' motivation and interaction, that is, it takes elements of cooperative branding. Since employee motivation is a facet of management studies and correlated within the brandsphere corporate image and brand management, thus the overarching brand analysis, is observed holistically [15][16]. Which is exactly how we, at Opportunus, approach our strategies for those in such industries. For engineers, brand exercises can be slightly more simple, with more spillover into consumer or product markets, however for those that blend service with product as constructors do, we operate a similar process. For both sectors, now is the time to invest in futureproofing one's growth prospects, preparing both brand and operations for the influx of capital and innovation that will disrupt businesses and economies for the next few decades.

Closing Words

We are at the cusp of an exciting transition for E&C industries and it is important to be prepared to grow accordingly. Thus, we encourage our clients to hire for proficiencies that will provide capacity for sustainable and technology driven growth going forward. Furthermore, to maximise one's potential for growth and the receiving of investment capital, we advise a investment into brand strategy that befits a true market disruptor. Investing here will elevate the standing of one's business both in the eyes of investors and one's market. In recent years we have worked with an increasing number of E&C firms, helping them shape their brands and activate growth opportunities in their respective sectors. At Opportunus, we partner with businesses that are determined to achieve their ambitions and through the marriage and integration of brand, marketing and technology we build holistic experiences that maximise the engagement of one's audience. This is our commitment and one that we have been working with engineers and constructors with for quite some time, with a great deal of success. Furthermore, market actors in these sectors are inherently exposed to a high degree of carbon emissions. Thus, such clients have, in an increasing manner, reached out to us, expressing their desire to take control of their sustainability strategies and the relevant communication endeavours that follow. With many of our clients raising these environmentally lead concerns, it became abundantly clear that we needed to define, design and articulate our mission and our processes, just as we do for theirs. Investing in fleshing out our proficiency here enables us to provide targeted support to our clients, helping them form and communicate effective and authentic sustainability strategies and subsequently leveraging

these for growth, whilst helping our troubled planet. Not only is this our duty as citizens of earth, indeed it is our duty to our business, our partners and our planet. This is why Opportunus is becoming a defined place for enterprising businesses to find support in formulating not only their sustainability and ESG communications strategies, but their brand communications in general, to do right by their organisation, their potential and our planet. Far too often, ambitious businesses have fantastic value that they struggle to communicate and therefore fail to maximise their growth potential. We also support businesses beyond the initial strategy, providing the subsequent world class design and execution that allows for the impactful implementation and leverage of authentic sustainability communications strategies for competitive advantage and growth. Our mantra is to build holistic experiences that maximise the engagement of our clients' audiences and we must do this across all facets of our partners' businesses, whether that is honing our client's sustainability communications or developing beautifully designed experiences across a business' consumer touch points. We are a new breed of consulting firm. We are strategically driven, creatively inspired, digitally enabled and experience focused. We are challenged on significant, big picture commercial objectives and are reshaping the value that a professional services firm brings to its client partners. In doing so we are transforming what are often considered intangibilities to create tangible and transparent opportunities for growth. If you want to take ownership of your organisation's future, please do get in touch.

Endnotes

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Opportunus is a new breed of consulting firm that partners with businesses determined to achieve their ambitions.

The most fundamental thing a business needs to do to be successful is engage its audiences. Through the marriage and integration of brand, marketing and technology we design and build holistic experiences that maximise the engagement of your audience at every point of contact.

Strategically driven, creatively inspired, digitally enabled, experience focused. We are challenged on significant, big picture commercial objectives and are reshaping the value that a professional services firm brings to its client partners. In doing so we are transforming what are often considered intangibilities to create tangible and transparent opportunities for growth.

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