



ESG Investing

Operational excellence in real assets – Part 2 –the ownership phase

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Introduction

In this series, Operational Excellence in Real Assets, we focus on the environmental, social and governance challenges encountered during the lifecycle of a real asset. We aim to enable investors and asset managers to achieve a higher level of operational excellence when assessing and managing real assets.

In Part One of the series we explored the factors that need to be considered in the planning and development phase of a real asset. The most important operational considerations in the acquisition phase of a real asset include land governance, corruption, labour rights and environmental issues. Adequately considering ESG risks at the planning and development stage of a real asset project can avoid complications later in the process, potentially avoiding hazards and unforeseen costs in the later stages of the project and asset lifecycle.

In this, Part Two of the series, we will explore the key ESG factors in the next stage of the lifecycle of an asset, the Ownership phase. We will examine the important considerations during the construction phase of an asset, which include the use of construction materials and safety standards. We will then explore the factors that are relevant during the usage phase of the asset. Issues such as transparency, money laundering and data protection, environmental aspects, labour rights and community engagement are all pertinent factors during this phase.

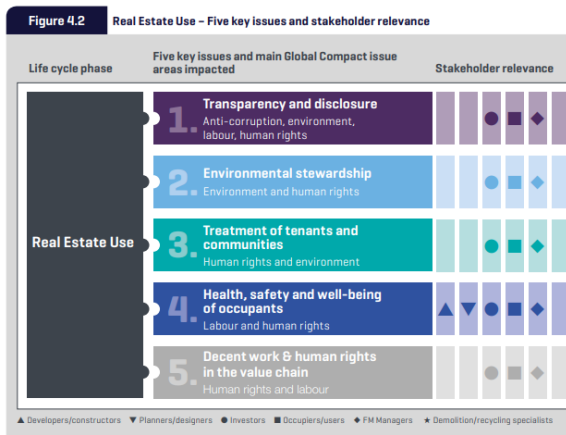
Construction

Enforcing high standards of worker and building safety during the construction phase is paramount. Additionally, investors should ensure that no corners are cut with respect to building materials and construction processes to avoid potential life-threatening disasters once a building, a road, or any other infrastructure asset has been finished. The use of cheap or even illegal building materials can threaten the static integrity of an asset and may endanger the lives of inhabitants and users of the asset. For example, on 15 March 2018, a 53m long pedestrian bridge in front of the campus of Florida International University in Miami collapsed as construction was about to be finished. The bridge collapsed on a road underneath that had already been opened to traffic, killing six and injuring nine people.

Similarly, toxic building materials (e.g. asbestos or lead paint) can lead to adverse health outcomes and expose the owner of the asset to legal and operational risks that can, in the worst case, force a total shutdown of the asset.

Poorly designed construction can also result in the devaluation of an asset and an increase in stranded asset risk. An example of this can be found in a Sydney residential building, Opal Tower, which was evacuated in December 2018 when cracks started to appear in the building. Construction had only been completed four months earlier. Over 500 defects in total were found in the building. While the apartment has been approved for habitation many of the owners of the apartments have had their assets devalued significantly in some cases to zero.

A well-designed construction, on the other hand, can reduce the costs for waste recycling and waste disposal, the costs of heating and air conditioning for the asset throughout its use phase and reduce insurance costs. High construction standards that reduce the energy usage of buildings are associated with higher market prices for the properties and lower vacancy rates, creating a direct economic benefit from incorporating ESG related criteria in the construction phase of a project.



- Work closely with stakeholders to ensure that construction standards are maintained (e.g. by working with unions) and protect whistle-blowers.

Source: UN Global Compact, Advancing Responsible Business Practices in Land, Construction and Real Estate Use and Investment.”

Investors and construction companies can ensure high construction standards through the following steps:

- Only hire experienced professional construction companies with a proven track record of safety and know-how in the construction project at hand. Ensure that these construction companies follow local, and ideally international, construction standards, such as ISO 9001 (Quality Management System) and ISO 14001 (Environmental Management System).
- Ensure that buildings and infrastructure assets can safely sustain foreseeable loads and impacts and that climate risks are adequately considered as part of the process. This includes potential hazards from wind, flooding, fire, seismic shifts and rising sea levels due to climate change.
- Ensure that only high-quality materials are used. They should be free from toxic ingredients, fire resistant wherever possible and not so fragile that they could pose a danger to future users.
- Ideally, the construction of a project should reflect potential future changes of use to the asset and whereby changes can be made with minimum effort in the future (e.g. through modular construction of buildings and airplanes).

Case study: Modular building in Singapore¹

In 2014, Singapore-based BBR Holdings pioneered the use of the Prefabricated Prefinished Volumetric Construction (PPVC) method to build an apartment complex with 638 flats. Adopting this technology helped in several respects. First, worksite safety was increased as the building modules were prefabricated in a factory and assembled on site. It also reduced waste during the construction of the building and enhanced construction quality as individual modules could be tested in the factory before use in the construction. The use of prefabricated bathroom units allowed productivity gains of up to 80% and led to significant cost reductions. The company estimates that productivity gains amounted to 40% for the entire project and saved about 55,000-man days. Today, the Singaporean government requires PPVC based construction methods in almost half of new land sales.



¹ Adapted from RICS (2015). "Advancing Responsible Business Practices in Land, Construction and Real Estate Use and Investment."

Usage

Investors face similar ESG-related challenges during the use phase of a project as in the planning and development stage.

Transparency and anti-corruption measures, labour rights and environmental risks must be managed. Yet, the issues arising during the usage phase of the project can also be distinctively different.

Key issues in transparency centre around money laundering, ineffective decision-making, and maintenance neglect. In terms of labour rights, issues like excessive working hours, worker discrimination and minimum wage standards are the most relevant. Finally, environmental issues typically focus on energy consumption, waste management and carbon emissions.

In Part One of the series we outlined some of the steps investors can take to ensure that these issues are properly addressed in the planning and development stages but it is important to note that these issues are also applicable to the usage stage. In Part Two of the series we want to focus on additional issues and challenges unique to the usage of real assets.

Transparency, money laundering and data protection

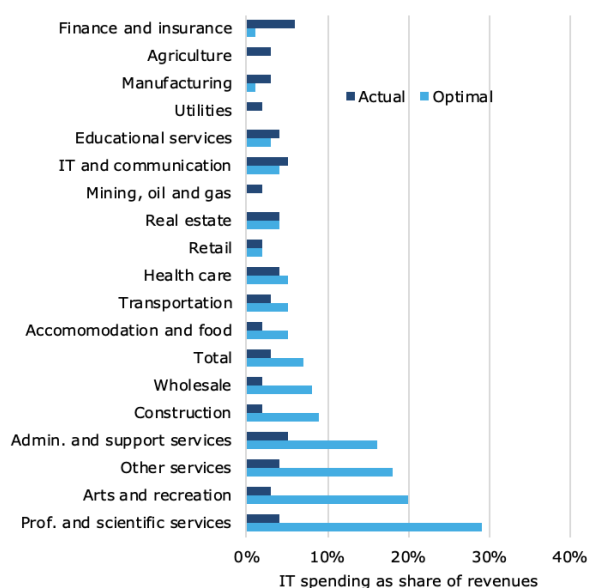
Money laundering is particularly prevalent in real estate projects. In the UK, property can be purchased via anonymous companies and trusts, making it difficult to identify who the true owners are and determine whether they pose money laundering risks. In order to reduce the risk of money laundering activities, investors should establish robust internal compliance programmes, including employee training and whistle-blower policies, and ensure proper oversight of transactions.

Another area of special concern is data protection and cybersecurity. Because different infrastructure projects may require the storage of sensitive data, data protection policies and safeguards against hacking and data theft need to be put in place to prevent unauthorised access to sensitive data.

In this way, crucial infrastructure projects like airports, power plants and electric grids may be taken over by rogue actors which could lead to significant damage to the asset

wreaking economic havoc and endangering lives in the process. In 2020 the National Cyber Security Centre in the UK has seen a 31% increase in cybersecurity attacks, which has been influenced largely by the coronavirus pandemic.

Heightened level of activity in this area means that investors need to protect themselves since prevention remains the best defence. This includes ensuring that investors are adequately investing in cyber security resources. On average companies spend around 3% of revenue on IT. However, to minimize serious cyber risks companies should spend around 7% of revenue on IT and on average construction falls short of this optimal level of spending. Please see the table below which demonstrates the optimal level of spending.

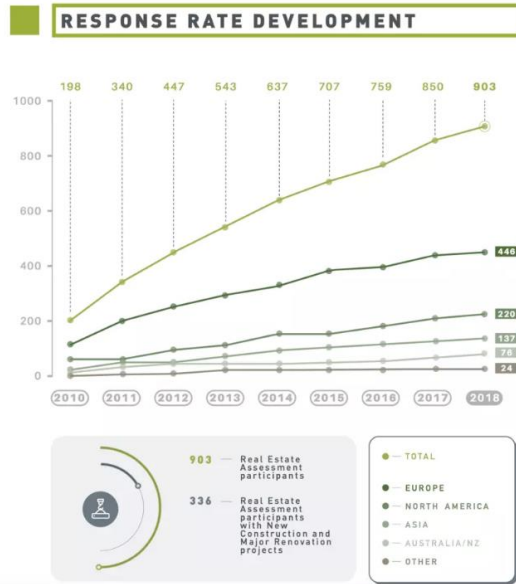


Source: Aldasorio et al (2020)

A third area of concern is reporting transparency. Because infrastructure, property and natural resources are famously opaque with regards to performance metrics, it is often difficult for investors to benchmark the performance of their investments in economic and ESG-related dimensions.

Standards like the ones defined by the Global Reporting Initiative (GRI) or the Global Real Estate Sustainability Benchmark (GRESB) help increase transparency and enable investors to improve investment outcomes. Participation in the GRESB Standard has

increased substantially over time illustrating a greater acceptance by the industry to be held to a higher standard of transparency.



Source: World Economic Forum 'Here's why Real Estate Finance needs to build in Sustainability.' 2020

Environmental aspects

The main focus of environmental risk management during the use phase of an asset is on the amount of energy consumed running the asset and the amount of greenhouse gases produced. Efficient water management and waste disposal/recycling are the other dominant environmental dimensions to focus on.

As a result, investors and the management companies running the assets should make resource efficiency a focus of their daily operations:

- Adopt ISO 50001 for energy efficiency in operation or ISO 14001 for resource management in operation, which help to provide internationally accepted standards for resource efficiency.
- Consider reducing energy needs through the installation of solar panels,

wind turbines or other renewable energy infrastructure on the premises. This will assist in the transition plan of the asset to a net zero pathway. Similarly, consider introducing wastewater regeneration units and separate brown water usage.

- Consider the requirements of the regulation in the jurisdiction in which the asset is situated. For example, in 2019 the UK became the first major economy to pass a net zero emission law mandating greenhouse gas emissions reach net zero by 2050. These regulations are directly impacting the UK commercial property market, particularly in London.
- Monitor resource consumption of the asset during the use phase (e.g. through meters or digitised smart meters) and introduce energy and resource efficient technologies during the maintenance of the asset. These efficiency measures can result in significant cost savings over time. For example, Hilton Hotels Corp. cut carbon emissions by 30%, waste by 32% and energy and water usage by 22% over the course of a 10-year period to 2018. The firm reduced energy consumption by 18% at the Cosmopolitan Hotel in Las Vegas, yielding \$1.8 million in savings over the past six years.
- When sourcing suppliers and tenants, consider including environmental clauses in the contracts that provide clear standards for resource efficiency that are regularly monitored.
- For both infrastructure and property projects ensure that greenspaces are designed to enhance biodiversity and adapted to the local climatic conditions. Exotic plants may look pretty but tend to consume a lot of extra water.

Case study: Welsh Water RainScape²

Most sewage systems are single pipe constructions that have to carry both wastewater and rainwater. This means that in times of heavy rainfall the sewage system may not be able to cope with the amount of water and sewage may spill out of the sewage system, polluting land or houses. Instead of building expensive overflow tanks and installing additional pipes, Welsh Water learned from peers in Malmö, Sweden and Portland, Oregon how to use surface water schemes to reduce the risk of pollution.

Shallow planters and basins were installed in cities and villages. These basins capture rainwater, store it and filter it as it passes through the root systems of the plants. Long, shallow channels of surface water collect runoff and are constructed so that the water infiltrates the soil only gradually. Grass channels and filter strips were installed on side streets and back alleys. Through these strips, surface water can soak into the ground instead of running into the sewage system.

These measures make the environment more attractive and create new habitats for wildlife. Additionally, Welsh Water initiated a community outreach programme, where customers who live near existing or future sites can meet company representatives to provide feedback and help Welsh Water develop the scheme further.



² Adapted from RICS (2015). "Advancing Responsible Business Practices in Land, Construction and Real Estate Use and Investment."

Treatment of communities

Infrastructure and natural resource projects tend to be ugly, noisy and potentially smelly. Many properties are mostly functional first and unlikely to win any architecture prizes – and even the ones that do may have a look that only an architect could love.

Additionally, during the use phase, workers, tenants and the local communities have to live with the different kinds of emissions an asset produces.

In order to reduce tensions with local residents, the operator of an asset should ensure that proper dispute resolution mechanisms are in place that are accepted by all parties. Regular community outreach projects and “townhalls”, where local residents can voice their concerns, are also helpful. As outlined in Part One, special interests (e.g. from indigenous people) need to be accommodated, and this process should commence during the planning phase.

Investors should also engage with public policy makers, including local councils, to ensure that the project is appropriate for the future plans for the local area.

While the aforementioned issues are relevant to all real asset projects, investments in real estate create additional challenges simply because people not only have to live with the asset, but in it. The following measures are recommended to investors and managers of property in order to treat tenants fairly:

- Ensure that no tenants or potential tenants are discriminated against or harassed. Rental contracts for tenants should be fair and rents should conform to local rent standards. Also, ensure tenants are treated fairly when in arrears with their rents or evicted.
- Ensure that the building is maintained regularly, and problems are fixed quickly. Any serious health and safety issues need to be addressed immediately.
- Ensure that the building is safe and that legal requirements for health and safety are adhered to by both the company manager, as well as any sub-contractors. Sanitation facilities should be maintained regularly and provide for the special needs of women and

disabled people.

Labour and human rights

Labour rights of workers who work on the site, as well as sub-contractors who carry out project-specific work on site, need to be enforced. This means that:

- Investors need to enforce the standards of the International Labour Organisation in contracts with workers and sub-contractors.
 - Investors need to ensure that there is no child labour, slave labour or illegal employment in the supply chain of the project. Minimum wage regulations and other local labour regulations need to be enforced. Ideally, employers should adopt an individual policy which lays out what constitutes a living wage (which often is higher than the legal minimum wage) and commit themselves to paying at least this living wage.
 - Investors need to ensure that all legal requirements in the relevant jurisdiction are met e.g. Modern Slavery Act (UK and Australia).
 - Investors and employers need to understand the risk factors and vulnerability that lead to exploitation so that they can identify the warning signs of modern slavery.
 - Employers running the project need to ensure that safety equipment is available at all times and employees are regularly trained on health and safety issues. Employers should also ensure regular monitoring and reporting on health and safety issues.
 - Employers should introduce diversity programmes to promote diversity and gender equality within the workforce.
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Source: Chartered Institute of Building Construction and the Modern Slavery Act, Tackling Exploitation in the UK.

Conclusion

In Part Two of the series we have explored the key ESG and operational factors that should be considered during the ownership phase of the lifecycle of an asset. The most important operational considerations in the construction phase of the asset include the use of high-quality building materials, adherence to high quality building standards and a consideration of climate risks. Of equal importance are the operational factors in the usage phase of an asset including transparency, money laundering and data protection, environmental considerations, community engagement and labour standards.

The pertinent factor in the ownership phase is to ensure actions are taken to protect the longevity of the asset. This includes the strength of the asset value over time, the robustness of the mitigants in place to protect the asset from the physical and transition risks of climate change and the endurance of the asset in maintaining its social licence to operate within the local and regional communities.

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