

ESG DATA MANAGEMENT IN THE REAL ESTATE FUND INDUSTRY

A VIEW ON TECHNOLOGY SOLUTIONS

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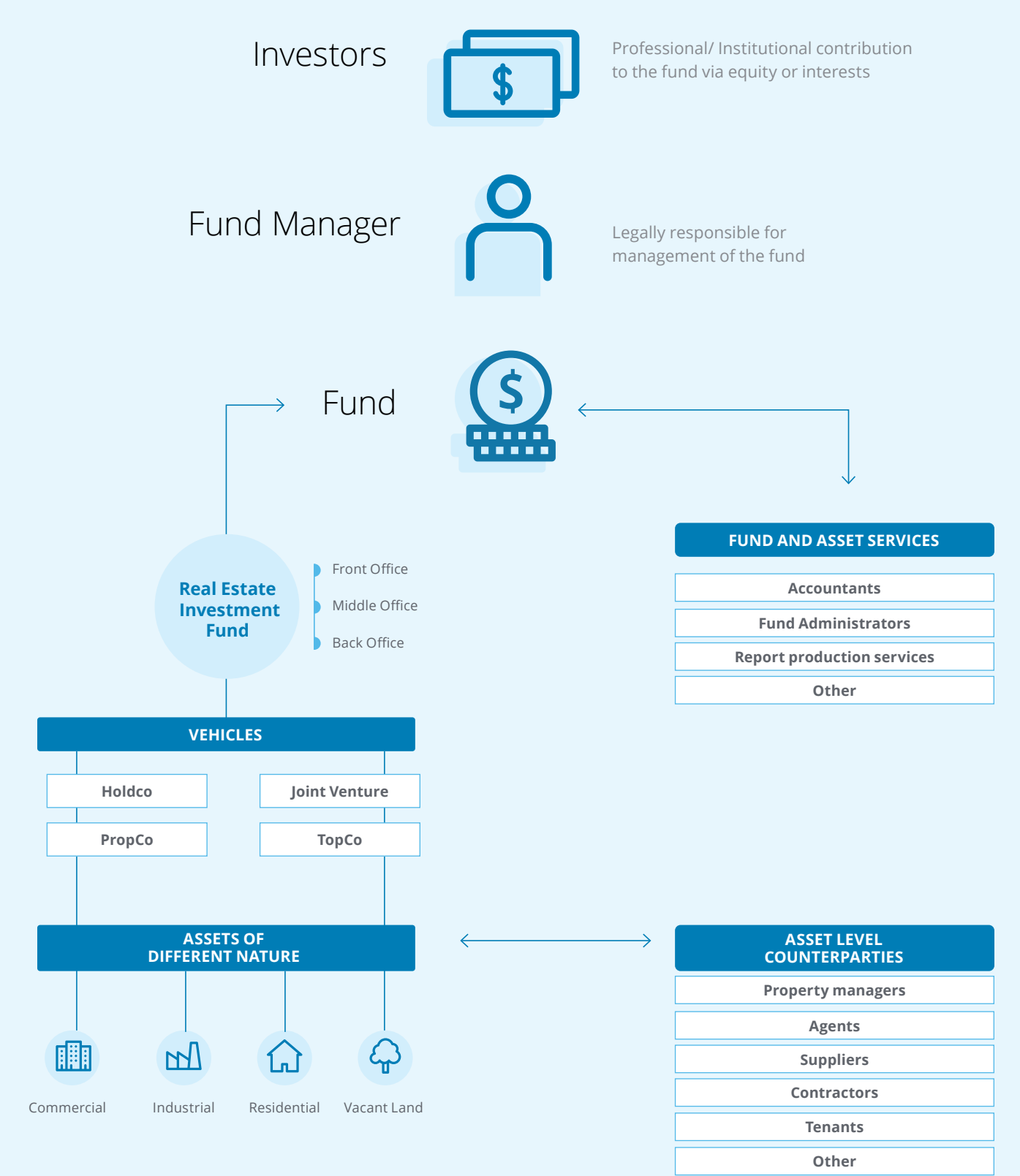
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Emerging ESG challenges are on priority action lists across the Real Estate sector. This highlights the importance of Data Management as an ESG priority for Fund Managers.

Figure 1: Real Estate Fund Industry Layers



CURRENT SITUATION

Why Data Management should be a key topic on Fund Managers' Agendas



Data management is becoming a hot topic in the Real Estate Fund industry. This is driven by a higher overall interest in ESG topics, a changing regulatory landscape and subsequent increased demand from investors and regulators for disclosure of sustainability metrics.

Fund Managers should focus on aligning data management practices to address challenges stemming from the complex nature of Real Estate investment funds and the limited maturity of current data management practices in order to address the increasing demand for ESG reporting. Technology has a role to play in assisting Fund Managers in this complex task, with more and more solutions entering the

market and existing solutions adapting their product offerings to align with the changing requirements.

In comparison with other alternative investment strategies such as Private Equity, which has leaner structures, Real Estate investment funds are more complex. These funds have various layers, jurisdictions and players to be considered, from Environmental, Social and Governance ("ESG") data retrieval to ESG data reporting, as represented in Figure 1. All of these various assets, players and vehicles reside in different jurisdictions and are subject to different regulations and standards.

This layering and diversity accentuate the challenges faced by Fund Managers, who are required to report on ESG factors. Fund Managers are facing challenges at different stages of the data management process, from data collection to data transformation and final data usage in reporting and KPI calculations.

KEY CHALLENGES

What is adding complexity in the RE Fund industry?

Data collection

The importance of high-quality data collection is not a new issue, since data collection is essentially the foundation supporting all activities that follow it. Within the Real Estate Fund industry, one difficulty for ESG data collection arises from the **variety of asset types**. Depending on the type of asset, there will be different levels of automation for collecting and reporting the data. For example, offices might be equipped with the Internet of Things (IoT) to monitor data such as energy consumption. Integrated with facility or building management software, this will enable automated measurement of structured ESG factors, especially environmental ones. On the other hand, other types of assets like vacant land (e.g. forests) will be managed by other software systems that may not be able to leverage the same level of technology to collect and centralise high-frequency ESG data. It is clear that the asset type will impact data collection, which can lead to unbalanced information between different asset classes.

The **level of granularity** of the data required to compute ESG Key Performance Indicators (KPIs) brings about additional challenges. For example, it will be more complex to collect data at unit level and for every single tenant than at asset level without considering the tenants. Data definition standards, like unit measurement formulas, will also require special attention.

A recent Deloitte study shows that of the data collected and disclosed by Fund Managers, 45% are environmental data, 37% social data and 18% governance data. This existing gap between E, S and G reporting highlights another data collection challenge stemming from the **type of data** used for reporting the different factors. For example, Environmental data such as energy consumption are quantitative and measurable at a very granular level, making them easier to capture. On the contrary, Social and Governance factors, e.g. freedom of association or exclusion principles, will be more complex to collect and monitor, as they represent more qualitative data types.

Homogeneity of data definition and access

is impacted by the country of origin and jurisdiction of the fund assets, related counterparties and vehicles. This affects the data collection process, as differences and discrepancies between countries regarding disclosure requirements, language barriers, regulations (e.g. authorisation to access and use data) and data security can restrict information access and prevent smooth information flows. This is especially true when personal data such as tenant-related information is required for ESG reporting.

It is crucial for Fund Managers to overcome these challenges. One step in the right direction would be to clearly define the data to be collected and align operations with the tools, templates and technologies

that can support them. This will help clarify and ease the process for data collection to build a strong foundation for final ESG and general reporting. Data standardisation is clearly a challenge of the RE IM industry. It remains to be seen whether the recent International Real Estate Data Exchange Council ("IREDEC") initiative will manage to harmonise data exchange standards – and therefore collection – by placing under the same umbrella the five leading international data standards organizations, namely, FIDJI (France), GIF (Germany), INREV (Europe), OSCRE International (UK, North America) and REDEX (Netherlands).

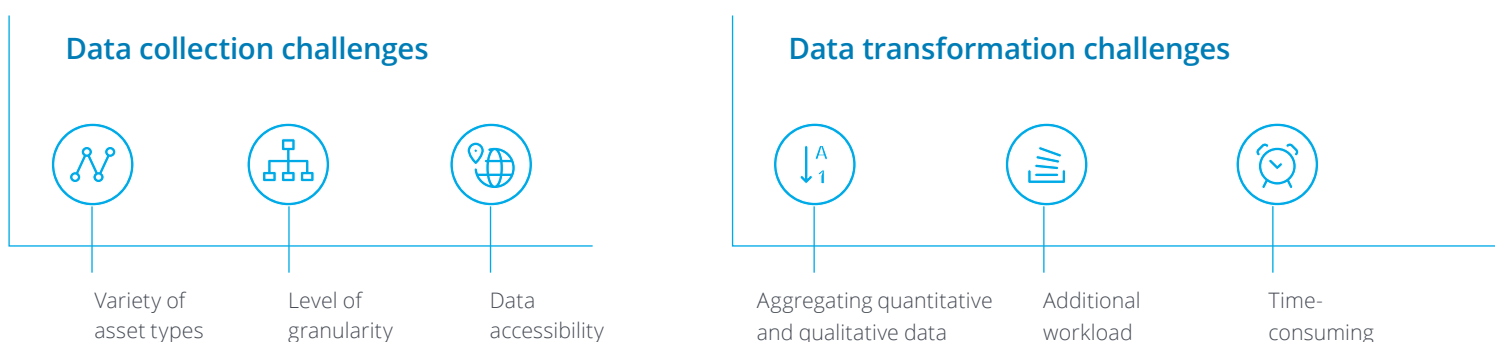
This will also be a key step to feeding quality data into the next phase of data transformation, where data harmonisation and aggregation bring about new challenges.

Data transformation

Once Fund Managers are able to collect and retrieve data from all the relevant layers of the Real Estate fund, they will face more challenges with regard to transformation, aggregation and harmonisation, taking into account all forms of data manipulation that must be performed before the data is ready to be reported, consumed and used for decision making.

From a general point of view, **aggregating qualitative and quantitative data** can give rise to complexities. ESG data are mostly

Figure 2: Key DM challenges and solutions



non-financial data and in some cases (especially for social and governance) will be more qualitative than quantitative. This means that the data would therefore be more **difficult to aggregate**. For example, data on indicators such as transparency and competitive behaviour for assessing general compliance with the law (e.g. corruption, bribery and anti-competitive conduct) are challenging to identify and aggregate as purely qualitative.

In addition, the different calculation methodologies, metrics and indicators used across jurisdictions imply an **additional workload** and an additional step of transformation to align the raw data from different assets, and possibly different countries, to one single data model. The ESG KPI derivation process can be a **time-consuming** and tedious task, adding yet another data set to transform for Fund Managers who already have their hands full with aligning, controlling and validating data for other monitoring and reporting purposes.

In order to compute ESG KPIs consistently, Fund Managers will have to deal with data captured at **different granularity** levels across the fund portfolio. Without the same unit, the same frequency, the same level and the same format, Fund managers will not be able to merge and compare data easily. A recent Deloitte internal analysis indicates that data collection

is not providing standard granularity levels, which can lead to high complexity for Fund Managers in aligning KPIs. For example, to compute CO2 emissions, over 25 different reported data points have been identified, using different units, calculation methodologies and scopes. This demonstrates that if data collection is not aligned to bring about more standardised inputs, data harmonisation will remain tedious.

Lastly, it will be important for Fund Managers to enable tracking of **different data sources and lineage**. By identifying data origin, the data transformation process and data evolution, we can enhance data visibility and the ability to trace potential errors and disruption in the data transformation process.

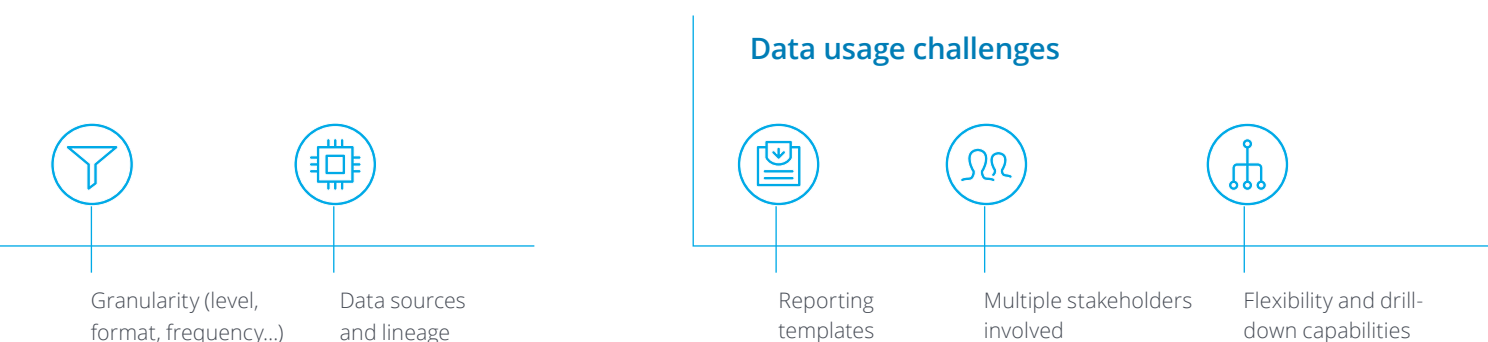
Data usage

Once the data has been collected and aggregated, data consumption brings the data to its end use. At this point, it will be possible to report various ESG metrics relevant to the Real Estate Fund industry. The data will be ready to inform decision making, allow monitoring and be reported. However, appropriate data consumption does not come without certain obstacles.

When it comes to data integration at portfolio and fund level, difficulties regarding the granularity of data and **reporting templates** will arise. This will

be aggravated by the complex layering of the investment structure and **multiple stakeholders involved** at each layer, which will impact ESG reporting through the various technology platforms used to collect, record and monitor data. It is crucial for Fund Managers to define the KPIs which they need to assess their ESG performance in comparison with the rest of the market or to respond to regulatory requirements (e.g. Sustainable Finance Disclosure Regulation -SFDR).

Fund Managers should ensure that the final output allows **flexibility and drill-down capabilities**. This would allow a view of ESG KPIs at the different levels of the Real Estate Investment Fund layers. In order to identify the impact/weight that each asset has at portfolio level, certain investors might request that the ESG ratings of a RE fund include a list of the performance of each asset per E, S and G criteria rather than a mere list of asset ratings. The capacity to track E, S and G performances at asset level will support Fund Managers and investors in their decision making (e.g. improving the insulation of a building) to reach their sustainability goals. This emphasizes the importance of being able to trace the raw factors of aggregated data points and provide users with the possibility of navigating up and down the investment structure at asset, portfolio and fund level.



SOLUTIONS

How can **technology** help you with Data Management?

In an era in which technology plays an increasingly prominent role in our day-to-day surroundings, Fund Managers can rely on different technology solutions to help address Real Estate ESG Data Management challenges.

Existing technology solutions can help Fund Managers address the different challenges separately, but there are also broader solutions that will support them throughout the Data Management chain, from data collection to data visualisation.

Technology integration for ESG Data Management is not a standard, single solution. Core system providers have the ability to develop and add ESG packages to their current program.





Cloud-based data collection software

HOT TECHNOLOGICAL SOLUTIONS

IN ESG DATA MANAGEMENT

The use of Cloud technologies can accelerate the adoption of new services in various ways, including scalability, agility and increased access. Cloud Services are easy to deploy and would not require additional infrastructure set-up. This makes certain cloud-based data collection services a very flexible solution that can be adapted according to companies' needs.

Within the Real Estate Fund industry, cloud-based software ("Software as a Service" or "SaaS") is emerging and targeting asset operators. There are solutions specifically designed to collect Real Estate ESG data at source. To overcome certain privacy concerns and increase data accessibility, some solution providers offer means of contacting all tenants directly and obtaining their agreement to launch automated data collection from the energy providers. Cloud-based automated data collection will allow Asset Managers easy access to a rich and automatically collected data pool on a centralised platform.

Furthermore, these cloud solutions **provide certain templates** specifically designed for data capture of Real Estate ESG information. There are

also basic **quality controls** and **normalisation of the data** which come embedded, based on a predefined data model. This is done through algorithms which automate data quality checks and assess missing data to ensure that metrics are reliable. Additionally, the **data can be automatically realigned** to link disparate pieces of data together.

It is clear that these cloud-based solutions can provide assistance to overcome many data collection and transformation challenges in order to achieve more reliable data usage. Cloud-based analytical tools can also contribute to data consumption by establishing KPIs that give Fund Managers insight on the performance of their assets and help them make more informed decisions.



PropTech

Beyond cloud-based data collection software solutions that can also be qualified as PropTechs, PropTech, in more global terms, refers to all applications of new technologies developed specifically for the Real Estate industry. This can typically include solutions based on Artificial Intelligence (AI), big data or IoT. For instance, these solutions can involve data from a wide range of public sources.

Over 400 PropTech companies are listed in the 2020 PropTech Map, showing that Real Estate technology solutions are booming. These solutions are classified into five categories: Invest and finance, building operations, asset management, market and smart city solutions.

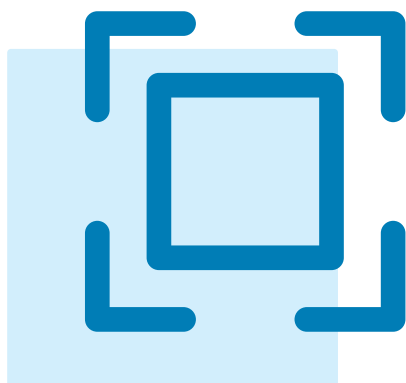
PropTechs aim to support managers, property owners and landlords to manage real assets with more flexibility and accuracy, e.g. by offering facial recognition to help increase the security of a building or offering help with energy consumption data capture. Having access to these types of data will help Fund Managers **comply with regulatory reporting requirements**.

As PropTechs are experts in the Real Estate sector, they are best suited to provide tailor-made solutions that will fit and answer industry-specific needs. PropTechs can therefore be key when it comes to smooth data management processes, as the offerings ease and **automate monitoring and reporting processes** for all Real Estate assets.

Core Real Estate Platform

Core real estate platform providers that are able to offer comprehensive solutions covering investor, fund, investment and property management are also looking at extending their solutions with specific products or modules that specifically address ESG data management and reporting.





FUTURE OPPORTUNITIES

How will **technology** be **integrated** in more standard offers?

Beyond technology solutions, we have also observed that asset servicers have begun to offer ESG data management services. In these emerging offerings, ranging from cloud-based data collection software to PropTech, RE IM Portfolio Monitoring Solutions and ESG-dedicated products of the Core Real Estate Platform, the challenge will be to choose the right solution that fits the strategic vision as well as the company's infrastructure. With some solutions focusing on core ESG data management processes and other offerings including additional wider usage and options, Real Estate Fund Managers should evaluate the tech solutions tailored to their needs and objectives.

However, technology integration for ESG Data Management is not a standard, single solution. Core system providers (e.g. software vendors in the Real Estate industry) have the ability to develop and add ESG packages to their current program. Fund Managers can also delegate their ESG data management to external and independent third-party service providers.

Technology solutions and data management services are still emerging and it is likely that the market will develop and propose further innovative solutions and services in the coming years. This will go hand-in-hand with the changing ESG reporting landscape, as technology providers and asset servicers seize opportunities to respond to growing demand from investors and Fund Managers for extended ESG reporting and further scrutiny on general transparency in the Real Estate Investment Management industry.

RE IM Portfolio Monitoring Solutions

There are also solutions that address broader needs, such as portfolio monitoring tools which offer ESG data management modules. These assist ESG data collection and reporting by proposing standard data sets and dashboards at portfolio level. For example, some templates offer automated **regulatory reports** that will comply with SASB, GRESB or even SFDR requirements. This **saves time** and allows Fund Managers to keep abreast of potential ESG regulatory changes.

This reporting function can be extended through **customisation**. Indeed, if access to different levels of data is needed (from raw data to portfolio performance), certain IT solutions offer **interactive drill-down** capabilities. By tracking the data, different levels of KPIs can be accessed, allowing Fund Managers to customise reports to suit their specific ESG needs.

Additionally, for Real Estate assets, tech solutions are able to build certain **risk reports** that assess the exposure of assets to natural disasters and climate change. These reports can provide Asset Managers

with an informed view on their assets from an ESG risk perspective. For example, risk reports would evaluate the exposure of a portfolio to rising sea levels, as research has indicated that Real Estate assets exposed to this risk are selling below the price of similar non-exposed assets.

Based on the support of these front-end reporting tools, certain technology providers specialised in ESG monitoring also propose working on an ESG plan to reduce portfolio impacts. These Providers define a **sustainable roadmap** with specific objectives, focusing on potential areas for improvement. They then monitor these objectives over time. In addition, analytics tools can complete those front-end solutions. For instance, some service providers offer the possibility of benchmarking and indexing companies based on their ESG performance in comparison with their peers.