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Integrating impact in infrastructure investment strategies and operations

Meridiam and ENEA Consulting have collaborated over the last 4 years, both on identifying and de-risking new investment opportunities - in the low carbon transition field - and on designing a unique "impact" framework for Meridiam that supports its investment thesis in sustainable infrastructure. Here is what we have learned about the complementary nature of impact and financial performance of investment in infrastructure.

Developing and investing in high impact infrastructure globally is one of the main challenges of the coming decades and a condition of a sustainable future. It is necessary and possible to act now. The market is ready for high impact infrastructure, specifically to provide an immediate but sustainable response to the current health and economic crisis.

SUSTAINABILITY AND INFRASTRUCTURE: INTERCONNECTED LONG-TERM VALUE

- **Infrastructure is a sustainability and resilience enabler**

Infrastructure is a priority to design a low carbon and inclusive economy as it allows most of the physical flows that support the "real" economy. Some examples are information being transmitted through datacentres and fibre networks; mobility relying on public transportation, roads, airports and highways; or international trade relying on harbours and global logistics.

Infrastructure should be considered and designed as an **enabler to sustainable activities**. To state the obvious, developing gas supply infrastructure in ports will be a pre-requisite to have ships switching from oil to (bio)gas. As another example, strengthening electricity transmission networks is essential to exploit the full potential of renewables. Also, developing high performance public transport infrastructure is key to alleviate congestion.

Infrastructure also encompasses social infrastructure which forms part of any country's ability to provide sustainable public service to its population in relation to health, education and access to a fair justice system amongst others. These are fundamental to address public expectations.

- **Locking in long-term choices**

Dealing with infrastructure is also a long game. Infrastructures are long-term assets and, in many cases, can lock-in choices for 50 years or more. We need to fully integrate long-term sustainability targets into infrastructure planning and development, and it has to be done systematically for all new projects.

Otherwise we will create long-term environmental and social debt. The environmental debt is obvious when we think of carbon emissions of, say, coal-fired power plants or the biodiversity impact of a road crossing a biodiversity-rich, natural habitat. But the social dimension cannot be neglected: if ill-planned and poorly developed, transport infrastructure can contribute to increased inequalities between territories over the long-term instead of playing its role of social inclusion enabler.

- **An opportunity to invest in more resilient assets**

To encourage a more sustainable economy we will need huge amounts of capital investment in new infrastructure, and revamping of existing ones, to support the emergence and deployment of sustainable solutions. According to the OECD, a $6.9 tn annual investment until 2030 will be required to meet the Paris Agreement target[1]. As these new investment needs are - by design - aligned with a long-term sustainability agenda, they represent promising opportunities assuming they can deliver attractive risk-adjusted returns.

We believe this is the case as sustainable considerations and risk management have a lot in common when it comes to infrastructure investment. Properly designing and assessing projects to meet sustainability goals means thinking far beyond current environmental, social and governance (ESG) practices and obligations. Rather, the full spectrum of long-term risks and opportunities should be anticipated. Considering both the impact that environmental and social changes can have on assets, and the impact generated by these assets on their environment and social context, throughout their life cycle, is critical.

Sustainability matters become extremely strategic for investors as they determine the long-term value of these assets. From a risk perspective, facing water shortages on power plants, which is already happening to Indian utilities[2], designing mobility infrastructures that are not adapted to future mobility uses, or not anticipating the carbon value when structuring an investment in airports will very likely affect long-term and total returns. This goes beyond the well-known concept of carbon-intensive stranded assets as even green assets can become stranded if for instance, they do not address adaptation considerations.

[1] https://www.oecd.org/environment/cc/climate-futures/policy-highlights-financing-climate-futures.pdf
[2] https://www.wri.org/blog/2018/02/water-shortages-cost-indian-energy-companies-billions

MEGATRENDS ARE REDEFINING MARKETS AND INVESTMENT STRATEGIES

Societal, market and technological shifts now offer a plethora of unprecedented opportunities for asset managers to achieve attractive returns, deploy investments and deliver higher impacts.

- **Citizens are demanding more action**

Society is pivoting as citizens are seeking a cleaner economy combined with a socially responsible transition and access to a resilient public service. Pertinent examples include transitioning coal workers to new jobs or citizens' willingness to pay for – or to vote for – green investments, even when it is not the most affordable option (this is already observed through residential storage penetration despite most markets still showing negative net present values and internal rates of return).

In addition, extreme natural events, such as wildfires in Australia, Brazil and California, and the climate change scientific consensus are also leading to a greater political push for better integration of sustainability within the economy. In a new Eurobarometer survey taken in October 2019, EU citizens said that the European Parliament's (EP) biggest priority should be "combating climate change and preserving our environment, oceans and biodiversity". 32% of Europeans point towards the fight against climate change and preserving the environment as the most important issue for MEPs to address[3]. In the wake of the Covid-19 crisis, citizens will certainly challenge governments in relation to the resilience of their national health services, posing again the question of social infrastructure.

- **New technologies and innovative business models are stepping up**

On the supply-side, the biggest change worth highlighting is that many technologies are now on the shelf, which was not the case 10 years ago. Combined with relevant business models, they represent opportunities to build sustainable and bankable infrastructure.

For instance, energy storage costs and PV modules have both been divided by more than 8 since 2008. Global investments in renewables capacities in 2018 was about three times the global investment in coal- and gas-fired generation capacity combined[4]. Over the last 10 years, China has been producing and commissioning more than 1 electric bus per minute. Many energy efficiency solutions - although highly fragmented - also show very interesting investment potential and can be implemented across all classes of infrastructure assets to optimise their environmental footprint.

As an alternative to individual ownership, "sharing" or "pay-per-use" type of business models also open significant infrastructure investment opportunities as the capital expenditure (CAPEX) required to deploy these assets will not be supported by consumers.

[3] https://www.europarl.europa.eu/news/en/press-room/20191129IPR67710/climate-change-should-be-parliament-s-first-priority-according-to-citizens

[4] https://www.unenvironment.org/news-and-stories/press-release/decade-renewable-energy-investment-led-solar-tops-usd-25-trillion

Allego is today one of the leading providers of reliable charging solutions for Electric Vehicles to cities, companies and consumers with a pan-European presence. With over 15,000 charging sockets in its network, Allego and its advanced EV cloud services are making electric travel a possibility for everyone.
The company delivers charging facilities that can be used by all electric cars and every EV driver, providing a seamless charging experience. Meridiam acquired Allego in 2018.
Meridiam's ambition is to develop Allego platform all over Europe and build a reliable charging infrastructure, acting as an enabler of the shift to electromobility and a strong actor of the climate action (United Nations Sustainable Development Goals 7 and 13).

- **Evolution of financial regulatory frameworks and initiatives from the finance industry**

This push has led to the evolution of new frameworks to incorporate the social, economic and environmental dimensions of our changing society. The United Nations, through the Sustainable Development Goals (SDGs), provides an international tool that embraces the full spectrum of such impacts. The European taxonomy is designed to include a more stringent integration of environmental and social aspects of business activities and investments called "sustainable", although technical criteria mainly focus on greenhouse gases.

Large asset owners' recent commitments to re-allocate capital to sustainable activities (e.g. GPIF, NZ Superfund, the UN-convened Net-Zero Asset Owner Alliance representing nearly USD 4 trillion[5]) are creating a large demand for sustainable assets. This has led to an oversubscription of green papers as investors anticipate an impact on the long-term value, the cost of capital as well as on the "licence to operate" of the underlying assets they invest in.

Initiatives to shift portfolios to more sustainable activities include green financing commitments and differentiated pricing. For example, Natixis' green weighting factor is an internal mechanism that adjusts analytical capital allocation based on the green scoring of each financing operation. New financial products have emerged too, such as climate or transition bonds or materiality-based sustainability-linked loans.

[5] https://www.unepfi.org/net-zero-alliance/

WHAT DID WE OBSERVE AND HOW DID WE DEVELOP A ROBUST IMPACT STRATEGY AND ASSESSMENT METHODOLOGY?

Collectively, we need to make sure that these developments are *moving* in the right direction from an environmental and social standpoint. This means having the adequate tool to measure and monitor impact.

On this front, the measurement of "impact" also showed recent progress thanks to new frameworks, tools and data allowing corporate and financial players to better understand risks and opportunities. Although imperfect, there is a growing amount of higher quality data available. This is either generated by *companies* (meters, geolocation technologies, artificial intelligence, apps providing real-time and/or visualisation tools), *regulation* (mandatory and standardised reporting) and better *scientific* approaches to anticipate and fully evaluate impacts (global and sectoral climate scenarios, lifecycle analysis, carbon and water footprints).

We believe this is just the beginning of a major evolution. After having designed a very sophisticated accounting and financial system, we now need to **develop a robust accounting system for environmental and social aspects for unlisted assets, starting with infrastructure. It is complex but innovation will keep accelerating as stakeholders are now truly looking for it.**

Considering the above megatrends, developing a profitable investment strategy that integrates sustainability into infrastructure investment, across asset classes, is fundamental. This is particularly challenging, but improvements upon current market practices can easily be achieved.

Here are some lessons we can share after two years of intense research, collaboration and implementation efforts to integrate "impact" in a concrete and ambitious way into the real life of Meridiam activities:

- Consider a **holistic framework to cover all type of impacts and avoid shortcuts. Be more granular on what is the most important** (concept of materiality). Adapting efforts to actual materiality is mandatory. For instance, greenhouse gas emissions should be monitored more precisely for power plants than for social infrastructure such as hospitals. Adopting a holistic approach before being granular avoids shortcuts and oversights: e.g. hospitals raise broader issues than social impacts, including energy consumption (a large part of hospitals are buildings) and management of biomedical waste (by incineration) and it must be taken into consideration.

- **Do not remain at the surface as the devil is often in the detail and outcomes may be counterintuitive**. Being granular and project specific on what truly matters (e.g. looking at behaviours, supply chain, externalities) is essential. Previous research from ENEA showed that solar home systems with batteries could, in some specific contexts, be more polluting than a genset (in this case, because of behavioural reasons which led to concrete actions on products' end of life). Meridiam's systematic carbon footprint assessment of its assets led to a few surprises with some urban roads having a better carbon footprint than some tramways. Therefore, we tend to be cautious when considering taxonomies if they do not allow for integration of actual field

experience.

- **Contextualize impacts depending on the type of geographies you invest in**. For example, supporting electric vehicles (EVs) through charging infrastructure in China, with an energy mix heavily dependent on coal, differs from investing in EVs in a Nordic European country, which mostly rely on hydro. The assessment of a road asset in Sub-Saharan Africa and in Europe cannot lead to the same conclusions. Road infrastructure is key to develop a country, offering access to proper health and educational services. On the contrary, these impacts are less material for similar projects in an OECD country. In OECD countries, waste and water management, availability of charging infrastructure and impact on the local ecosystem are considered to be material impacts to prioritise for analysis for such an asset.

- **Develop relevant and detailed KPIs at the asset level.** KPIs need to be correctly designed to become a real asset management tool. Designing specific KPIs, quantitative or qualitative, for each project company will allow Special Purpose Vehicle (SPVs) to monitor their real impacts and act on it, beyond simply reporting. Looking at positive impacts, the added value of a biogas plant is not only to produce green energy. It is also to contribute to a circular economy, to support rural farmers with long-term remuneration for their services and to improve soil quality. Capturing these added benefits and improving the SPV's impact requires detailed analysis and specific KPIs.

Meridiam is one of the European leaders (France, Germany, Spain, Poland, Belgium) in the recovery of organic household, industrial or agricultural waste into renewable energy (electricity, heat and green gas) and natural fertilizers.
The firm is now developing, financing and managing, together with its strategic partner Evergaz, 14 biogas plants in Europe. These will avoid more than 150,000 tons of CO2 per year, equivalent to the emissions of approximately 100,000 cars.
These projects demonstrate the company's commitment to energy transition and its contribution to reducing soil and air pollution by avoiding CO2 emissions. They are also a concrete contribution to the fight against climate change and to a circular economy (United Nations Sustainable Development Goals 7, 8, 12 and 13).

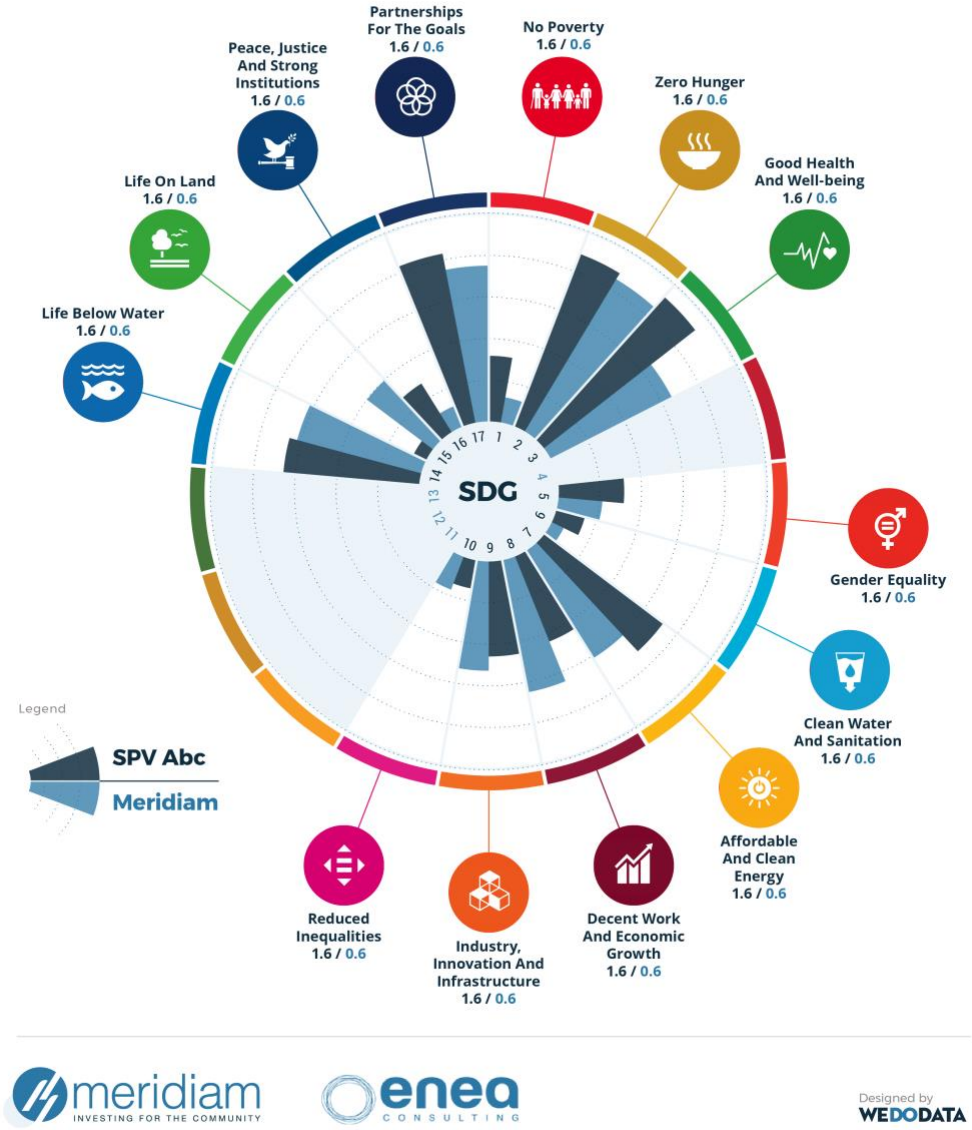
- **Set objectives and benchmark yourself.** Defining a baseline and a "target" on material impacts should be done whenever feasible. This is usually challenging, but it is also the only way to be serious about impact and asset management and to link financial and

extra-financial performance. There are many ways to set a target or an objective. These can be aligning impacts with a scenario (e.g. Paris Agreement or sectoral science-based targets), achieving a net contribution to national objectives, improving year-on-year performance (%), comparing your performance against best-in-class (on results, not on means). Comparing one's performance to others is not simple and involves finding benchmarks and establishing rating scales. Looking at players acting in the same geography also helps to contextualise performance and to specify ratings scales.

- **Design an "impact roadmap" to achieve these objectives and implement it**. Change can easily start with economically viable options, both at the portfolio level and at the asset level. Many levers can be used such as stopping or replacing some negative activities or practices, optimizing the business model and resource consumption of an asset, incentivizing positive impact activities, revenues and practices, or compensating for some negative impacts.

- **Adapt methodologies, tools and procedures to manage impact throughout the life of the fund.** At the portfolio level, one can for instance monitor overall portfolio impact performance and identify synergies between assets. At the asset level, tools need to be adapted to pre-assess impact risks and opportunities when considering an investment opportunity (due-diligence or pre-due diligence stage), to fix objectives with the management team, and to invest and implement change.

- **Make performance assessment and reporting tools user-friendly and visual – which does not mean "simple" nor "fully standardized" – for all your stakeholders.** This may seem to be an optional extra. But, as impact measurement and management are complex, developing a pragmatic and very visual interface is mandatory to make sure key challenges are well understood internally and externally, especially to promote the use of what has been designed and to value it.



- **Onboard stakeholders and make it part of your value proposition to align interests**. Relevance and robustness of your strategy, methodology and tools will help you onboard SPVs management teams and investment directors to achieve an impact performance. Then you can leverage your approach as a great way to differentiate yourself when raising funds or in your investor relationships with limited partners (LP's). Integrating impact returns or impact-related incentives (e.g. carried interest) can also be considered to align interests. Achievement of impact targets should also be fully integrated in remuneration policies for your employees to create incentives and alignment.

- **Be transparent and ready to be challenged**. Disclose both negative (with a mitigation strategy) and positive results (to value what you do well). Also, be fully transparent about what you know and what you do not know, on what you feel confident or not confident, in the way you complete the assessment. For example, to reflect

uncertainties about the quality of certain data, it is possible to incorporate a confidence indicator on the reported data to adjust their overall impact in the rating. Once again, since impact measurement is still a "work in progress", it must be stated and accepted. Being transparent on how you measure impact over time is a first step. A logical second step could be to surround yourselves with experts and trusted third parties' information sources such as external committees, experts, opensource data providers to challenge your methodologies or your data.

- **Once you have integrated impact at the right level, you can explore further synergies with your financial and investment strategy.** You will identify new investment opportunities within your portfolio (e.g. capital to deploy on asset retrofitting), new investment themes and sectors or even the potential to raise new funds on an impact thesis across asset classes (e.g. Meridiam launched an impact oriented to supporting the growth of SMEs contributing to the ecological transition in Europe). You can also analyse correlations between ESG risks and financial performance.

Of course, it takes time and requires top management support, energy, efforts and money to design such a strategy and to implement it properly. However, we believe players involved in infrastructure investing should consider it as a core business methodology, not a "nice to have." This is because infrastructure investing and sustainability are now inextricably linked.

WHAT STILL NEEDS TO BE PROGRESSED UNIVERSALLY? WHAT SHOULD WE STAND UP FOR?

With much momentum and progress to date there is inevitably more work ahead. Below are some considerations to keep moving things forward.

- **Push for the development of ambitious and robust methodologies and impact strategies, even if this represents an immediate investment**. Asset owners and asset managers can build upon what already exists. Investors cannot use the pretext of lack of standardization not to act.

- **Challenge, complete and improve existing data.** Developing more and more accurate data calls for joint efforts and programs from academics, publics institutions, civil society, start-ups, financial institutions and corporate organisations. Precise geographical data are needed to set proper baselines and to allow for contextualised assessments. Forward-looking data at global, national, and local levels, as well as sectoral and value chain activities level, are required to fix relevant targets. Although addressing carbon abatement is a great first step, biodiversity, water and social impacts should be better considered too. To build serious impact benchmarks, real and audited data should progressively be extracted from SPVs and asset managers on what matters the most for each asset-class.

- **Development of innovative financial mechanisms** would help to align the interests of stakeholders and share the delta value created or add value to strategies aimed at

optimizing long-term environmental and social impacts. Many initiatives currently tested on other financial products could be replicated or adapted. The political sphere and public authorities can also contribute by proposing incentive frameworks.

- **Accelerate research on the correlations between impact and "risk/return"**. We need more serious analysis and we must avoid the well-known effect of "garbage in, garbage out". Currently, the use of lower quality, limited, non-contextualized and usually unverified data limits the analysis of real correlations and distorts the results.

- **Train all stakeholders on impact.** We must recognize the need to develop more expertise on this crucial topic. Boards of directors, senior managers, employees, consultants, academics and other stakeholders should be trained intensively. We have been able to do this on the financial dimension, so why not on the environmental and social ones as well?

While much effort will be needed over time, we are convinced, based on our practitioners' experience, that new approaches and standards can be implemented to assess and monitor positive impacts of infrastructures that go beyond current practices. This is a demanding path, but we believe this journey will help our industrial community to frame more resilient investments to the benefit of all.

About Meridiam and ENEA Consulting

Meridiam was founded in 2005 by Thierry Déau, with the belief that the alignment of interests between the public and private sector can provide critical solutions to the collective needs of communities. Meridiam is an independent investment Benefit Corporation under French law and an asset manager. The firm specializes in the development, financing, and long-term management of sustainable public infrastructure in three core sectors: mobility, energy transition and environment and, social infrastructure. With offices in, Addis Ababa, Amman, Dakar, Istanbul, New York, Luxembourg, Paris, Toronto and Vienna, Meridiam currently manages US$8 billion and more than 80 projects and assets to date. Meridiam is certified ISO 9001: 2015, ISO 26000 "Advanced" by VigeoEiris and applies a proprietary methodology in relation to ESG and impact based on United Nations Sustainable Development Goals (SDGs). www.meridiam.com

ENEA Consulting is a boutique, strategy consultancy specializing in the energy and environmental transitions with deep expertise in sustainable finance. Created 13 years ago, it advises leading corporate organizations and financial institutions on investment and growth opportunities. ENEA is operating worldwide with offices in Paris, Melbourne, Hong Kong and Singapore. ENEA's value for clients includes providing cutting-edge expertise of markets, regulations, technologies and business models related to these sectors. To support its analysis and investment recommendations, ENEA has also developed expertise on the environmental and social impacts of projects, infrastructures and companies. www.enea-consulting.com

Contacts

- **Thierry Deau – Founder and CEO Meridiam - t.deau@meridiam.com**
- **Vincent Kientz – Founding Partner ENEA Consulting - vincent.kientz@enea-consulting.com**

Link to the article on Meridiam's website: https://www.meridiam.com/en/news/article/integrating-impact-in-infrastructure-investment-strategies-and-operations