TIKEHAU CAPITAL

EXPERT INSIGHT

‘Code red’ calls for systemic transformation to tackle the climate emergency

Pierre Abadie, Group Climate Director

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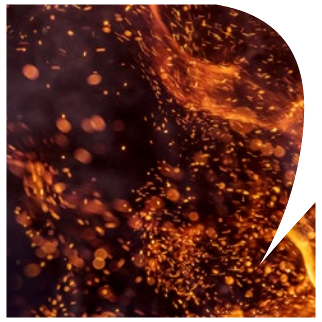
> Climate change is a race to zero. But the race is not between countries, the race is against time, and unless everybody finishes the race, nobody wins (...)
>
> DR FATIH BIROL, EXECUTIVE DIRECTOR, INTERNATIONAL ENERGY AGENCY



‘CODE RED’ CALLS FOR SYSTEMIC TRANSFORMATION TO TACKLE THE CLIMATE EMERGENCY

The publication of the UN’s latest report on climate change informed by the world’s top scientists and endorsed by global governments has been described as a massive ‘wake up call’ on the climate emergency. Following an IPCC (Intergovernmental Panel on Climate Change) review of more than 14,000 scientific papers concluding that human activities are ‘unequivocally’ causing climate change, the ‘code red’ warning for humanity could not be any clearer.

The report acts as a stark reminder that in just 3,000 days, carbon credit runs out. This means we have 3,000 days left to prevent climate catastrophe. 3,000 days might seem like a long way off, but global temperatures have now seriously increased by 1.1°C (as much as 4°C in some local areas) with irrevocable and terrifying consequences.

Nature is now in full blown rebellion against mankind. Greenland is melting. Sea levels have risen irreversibly. Raging forest fires, unfathomable floods, powerful hurricanes, storms and deadly landslides have swept across the globe. Regions close to the Equator are now virtually uninhabitable and billions have been displaced. Habitats destroyed, livelihoods shattered, and thousands killed. Apocalyptic scenes from all corners of the Earth that have become our living reality.

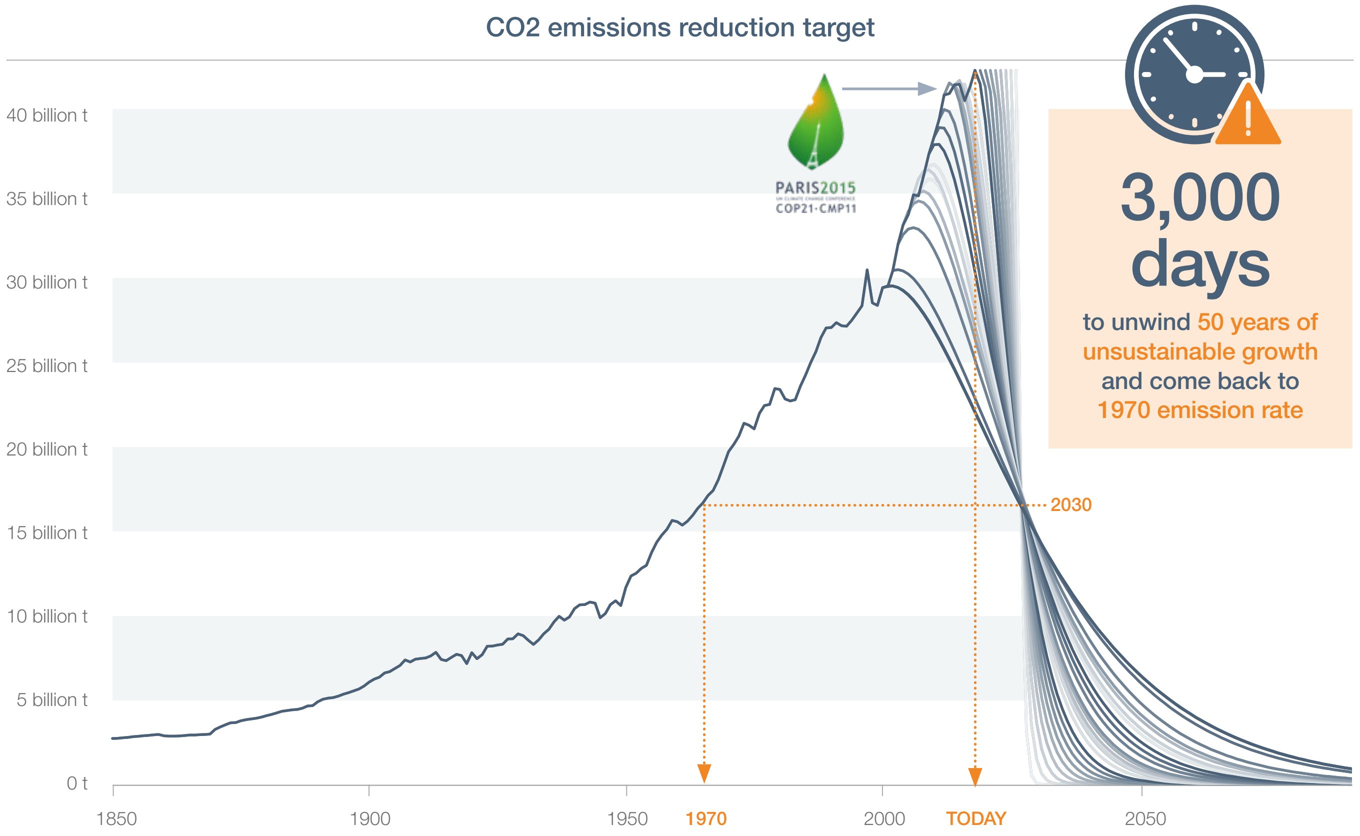
> We are racing against time, and we need to seriously collaborate or ultimately, we all lose.

Worryingly, these devastating consequences of a 1.1°C rise in global temperatures are merely a fatalistic warning of what is to come. The message from the natural world is clear: if we do nothing today, there will be no tomorrow. The clock is ticking louder than ever.

The bad news is that in almost all emissions scenarios, global warming is now expected to hit 1.5°C in the early 2030s. However, The IPCC confirms near-term emissions cuts can really reduce the rate of unprecedented warming. It is scientifically proven that net-zero does work for stabilising or even reducing surface temperatures.

The goal is, and always has been the reduction of our greenhouse gas emissions. To be on the net-zero path we must halve our emissions in the next 3,000 days (which means returning to the emission level of the 1970s). The race to net zero has started but we must remember we are not racing against each other, rather, we are racing against time, and we need to seriously collaborate or ultimately, we all lose. Now, more than any other moment in history, is the time for climate action and we believe that we should all ask ourselves what we can do to contribute.

The "CO2 clock" is ticking – 3,000 days to halve emissions



Source: Robbie Andrew (2019), based on Global Carbon Project & IPPC SR15

Are we on track to halving CO2 emissions by 2030?

The publication of the UN report has placed a sense of urgency on the commitment made by global leaders in the 2015 Paris Agreement to limit the increase in global temperatures to no more than 2°C above pre-industrial levels (with the intention to keep them below 1.5°C). This means creating a drastic reduction in emissions of 7.6% every year between 2019 and 2030.

Governments are expected to review and strengthen their critical pledges during Glasgow's COP26 summit, which will be focussed on the findings of the UN's recent report. This conference is widely regarded as the most critical inter-governmental meeting on the climate crisis since 2015. If all nations cannot agree on sufficient pledges, the likelihood of achieving the steeper rate of decarbonisation required to respect the 1.5°C threshold will drop substantially.

Although the outcome of COP26 is yet to be seen, global leaders will want to emphasise the small progress that has been made to lower emissions over the last three years. However, they must not lose sight of the fact that the current shape of the decarbonisation curve is still not steep enough to keep global warming below the Paris Agreement threshold. The reality is that the decarbonisation of our economy has not even really begun.

There is an estimate budget of c.660Gt of CO2 left to emit before the planet warms above 2°C. Shifting the curve, notably by scaling up investments into energy efficiency, is therefore critical to maintain reasonable levels of global warming.

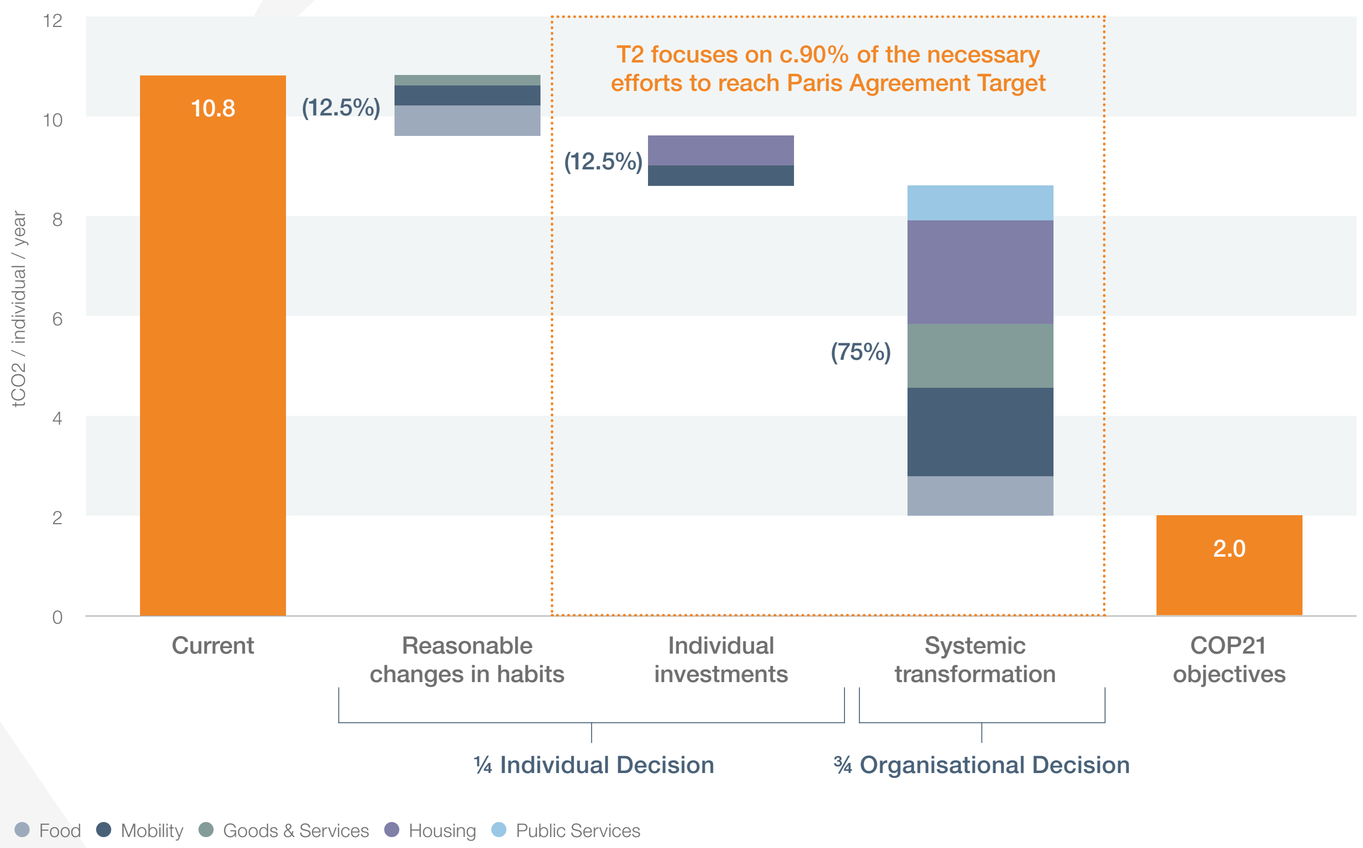
> The world has learnt many lessons from COVID-19 but there is one lesson that stands out above the rest.

What needs to change to reduce our carbon footprint?

The world has learnt many lessons from COVID-19 but there is one lesson that stands out above the rest. Over the last 18 months, we have collectively realised that even a drastic change in individual behaviour (living under lockdown) has very little tangible impact on reducing CO2 emissions (a drop of 5%).

Counterintuitively, we believe that substantial transformations in people's individual habits could be a strong driver to reduce emissions when it was estimated that they would only represent at best 25% of the necessary efforts required to reach the Paris Agreement Target. Indeed, individuals have very little influence over their own carbon footprint. In our society we all benefit from a system that offers a high quality of life; a system which relies on a high use of energy which is still mainly fossil fuels (80%). The issue is not only an issue of individual behaviour; it is mainly systemic. In other words, if we wish to maintain our way of life; we need to overhaul the entire corporate ecosystem that underpins it.

Contributors to average carbon footprint reduction

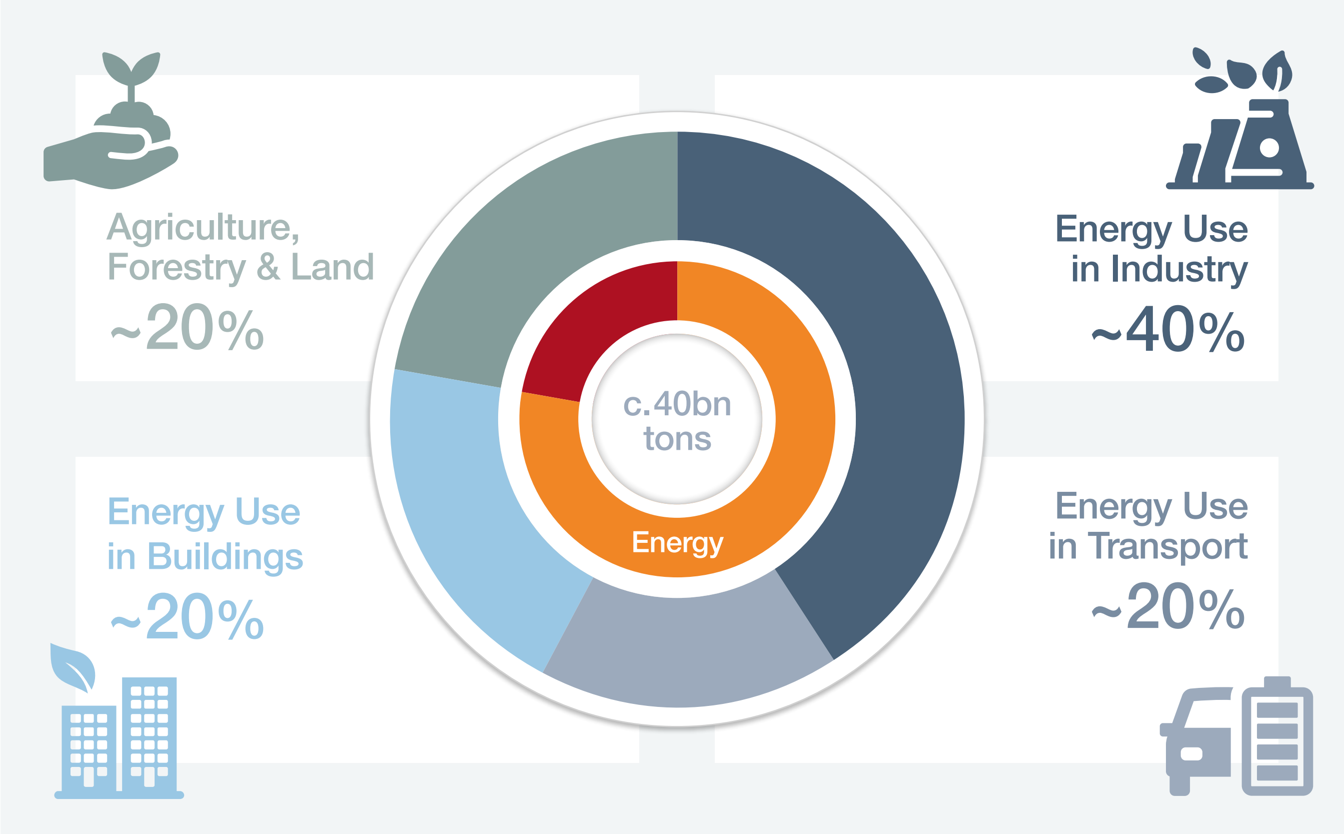


Source: Carbone 4, Do your part: responsibility of the individuals, companies and governments to act and solve the climate emergency, 2019

Three investment mega-trends to drive systemic change

The approach to effectively reducing our emissions on a global scale must be a systemic one. We must identify the main contributors to the problem quickly and tackle them at source. If we simplify the analysis, we can see that less than 40% of global emissions are coming from industry itself (transforming natural resources into a product), with a further 20% coming from transportation of goods and people, another 20% from building heating (and more cooling) and 20% from agriculture (to produce our food).

Cutting CO2 emissions by 2030: Be focused on 4 sectors



Source: IPCC Special Report on Global Warming of 1.5°C, The Global Carbon Project, Nature, 2016

This emissions snapshot from the IEA clearly depicts their net zero scenario and marks the pathway towards carbon neutrality by 2050. Interestingly, they also set a milestone in 2030 which provides some clarity on the type of investments required for the next 3,000 days and how to prepare for the 2030-2050 period.

Notably, and whilst innovation is critical to reaching our common goal, we believe the key to success lies in the massification of technologies that already exist. This can be achieved with a focus on energy efficiency, low carbon mobility and electrification of the end use.

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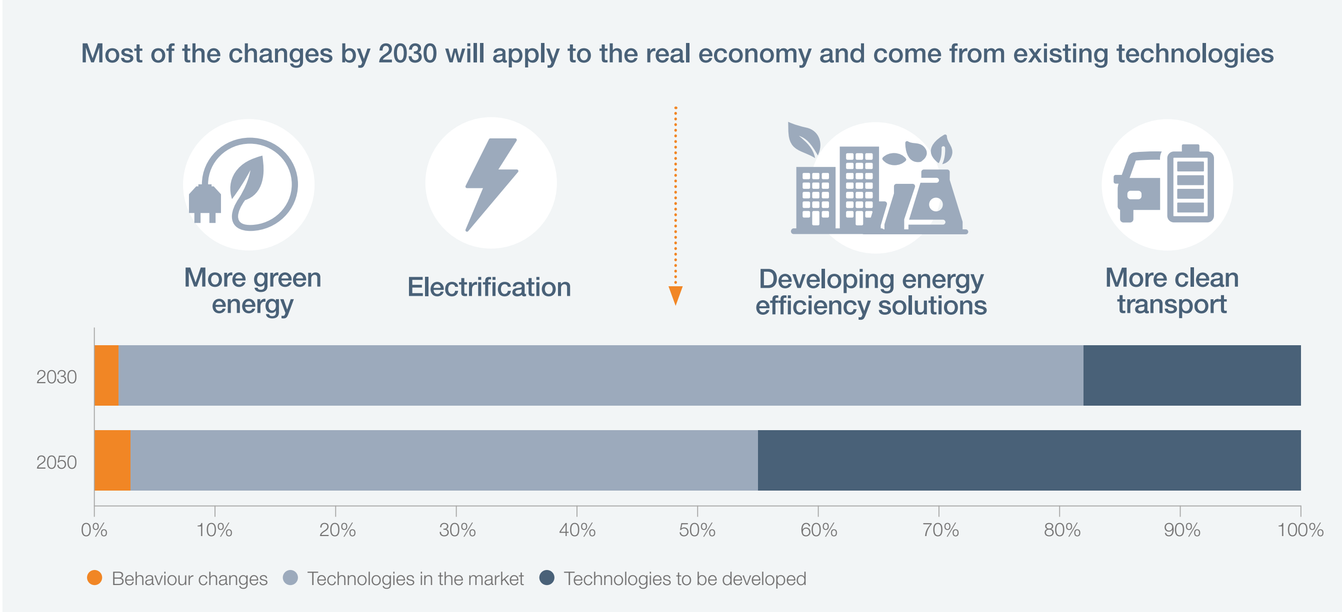
Annual CO2 emissions savings in the net zero pathway

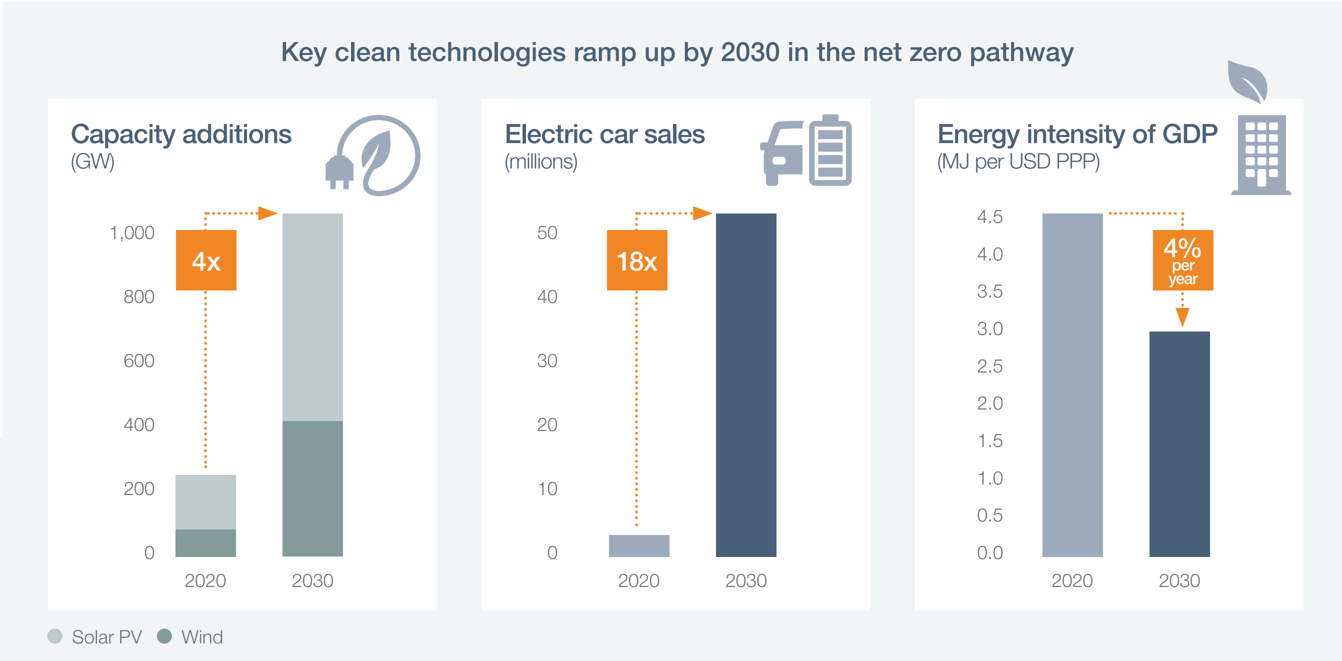


Source: International Energy Agency, 2021

To remain on track and halve our emissions in the next 3,000 days, we consider there are three systemic mega-trends which will require financing:

1. An improvement of 4% per year of the energy efficiency of our socio-economic system
2. A multiplication (over 20-fold) of the number of electric cars in circulation
3. A 4x multiplication of the renewable capacity installed.

Cutting CO2 emissions by 2030: 3 mega trends coupled with global electrification



Source: International Energy Agency, 2021

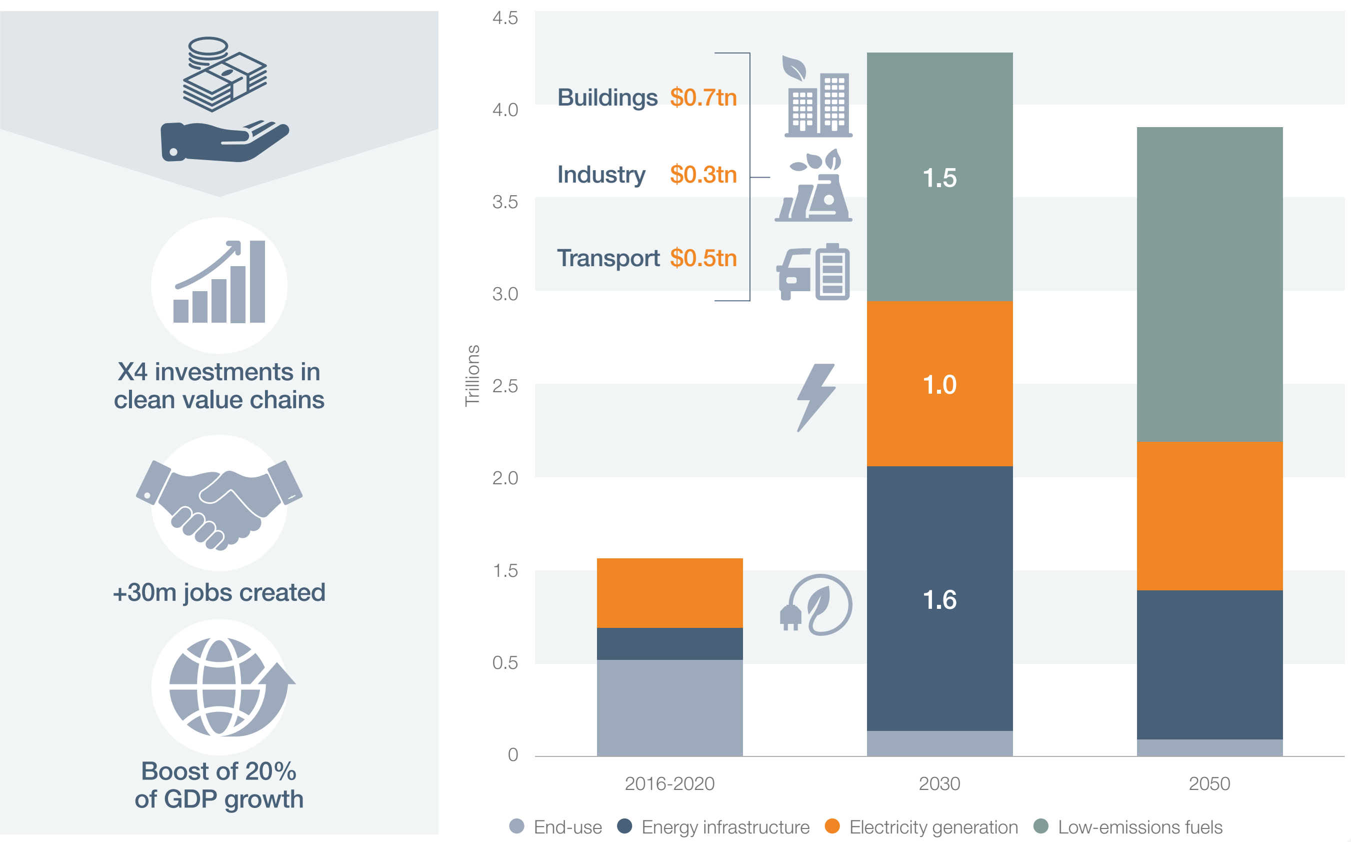
Cutting CO2 emissions by 2030: the biggest investment opportunity of all time

Historically, the climate crisis has been a solely philanthropic concern. The latest UN 'code-red' warning suggests this needs to change. Institutional investors have a responsibility to join global policymakers in their commitment to halving CO2 emissions by 2030 by setting 'net-zero' targets for their portfolios and acting on this today.

Clearly, institutionalising climate impact investing will play a crucial role in facilitating the road to net zero. However, what is not yet fully appreciated by investors is the sheer size of the opportunity. The IEA figures indicate that there is approximately €4 trillion per year required to create the seismic shift that is needed. Beyond generating 30 million jobs, the IMF has estimated that this will boost GDP growth by an additional 20% by 2030.

Based on the addressable market need, we anticipate the potential for sizeable and sustainable returns in both the medium and long-term future.

Clean energy investment in the net zero pathway



Source: International Energy Agency, 2021

We believe that investors who want to achieve this goal need to allocate to funds with the genuine capacity to form the bedrock of a more sustainable, decarbonised economy. At Tikehau Capital, we believe that the role of finance is critical in the race to net zero. As a responsible, global asset manager, our role is to redirect global savings towards the real economy with a specific focus on climate action. Fulfilling the $4 trillion investment pace required to meet net zero requires redirecting 3% of the 111 trillion of global "Asset Under Management" every year toward the decarbonisation of our economy, we firmly believe that this is not our sole responsibility, but the duty of our whole industry.

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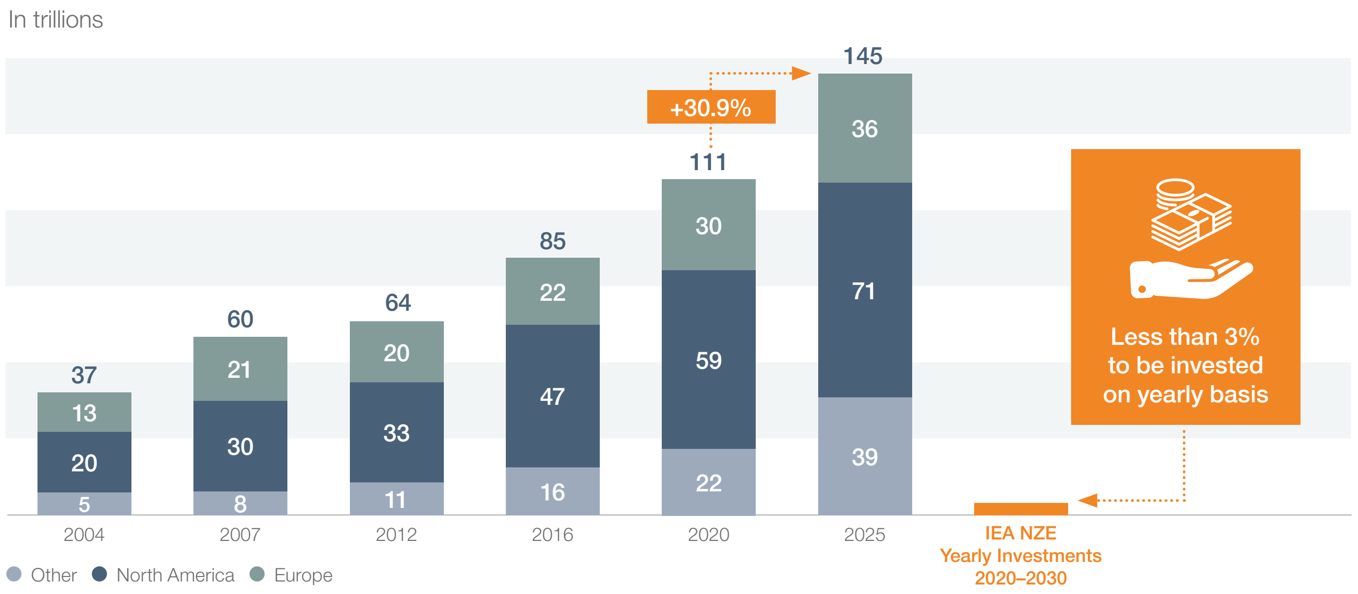
Cutting CO2 emissions by 2030: Institutionalising climate impact investing is key

Global Asset Management AuM



Source: PwC AWM Research Centre Analysis, IEA 2021

Tikehau Capital has a wide range of funds that pool both institutional capital and global savings into privately-held companies that support the ecosystems and infrastructure of millions of organisations all over the world. That is what makes us an ideal partner for investors setting 'net-zero' goals for their portfolios.

What is unique about our response to the climate emergency?

As part of our dedicated response to the climate emergency, we founded the Tikehau Climate Action Centre to help ensure our products and solutions are aligned with the principles and guidance of both the IEA and the IPCC. The activities of the Tikehau Climate Action Centre are underpinned by the UN SDG's (United Nations Sustainable Development Goals) and are based on the outcomes of scientific research. Armed with the benefit of scientific and sector-led insights, we aim to make fully informed investment decisions about how and where to allocate global savings to ensure they reach companies with real power to provoke systemic change.

Focus on energy efficiency

By redirecting global savings to strengthen the balance sheets of these profitable companies, we enable them to scale up their operations and help end-user businesses generate meaningful energy efficiencies on a mass scale. More efficient industrial systems and processes lead to significant energy savings. For this reason, we believe that energy efficiency is also at the heart of a post COVID recovery.

Indeed, to make our world more resilient to pandemics and climate related disasters, we need to focus now, more than ever, on investing in local, circular and more socially responsible and energy efficient economies.

We direct some of our investment focus on energy efficiency because it has gained support from governments and regulators globally to manage rising energy consumption. It has become one of the key levers in response to the climate emergency and bringing the world towards the Sustainable Development scenario.

Global energy intensity, a proxy measurement for the energy required to satisfy the energy services demanded, has been declining at a 2.2% average per year since 2010, well above the 1.3% annual average over the 1970-2010 period thanks to efficiency gains. Efficiency enables more output to be produced from a given level of energy, thus providing both energy and cash savings, limiting greenhouse emissions and bolstering energy security.

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According to the IEA, in 2019 the world would have used 12% more energy had it not been for energy efficiency improvements since 2000 – equivalent to adding another European Union to the global energy market.

Transformation beyond capital

In our impact-led strategies, we collaborate closely with our portfolio companies in a shared mission to make economies more energy efficient. We have dedicated teams with Energy Transition expertise totalling more than 100 years as well as over 70 expert senior level advisors with rich networks and deep sector knowledge. Furthermore, our expanding international footprint extends to cover 12 offices worldwide.

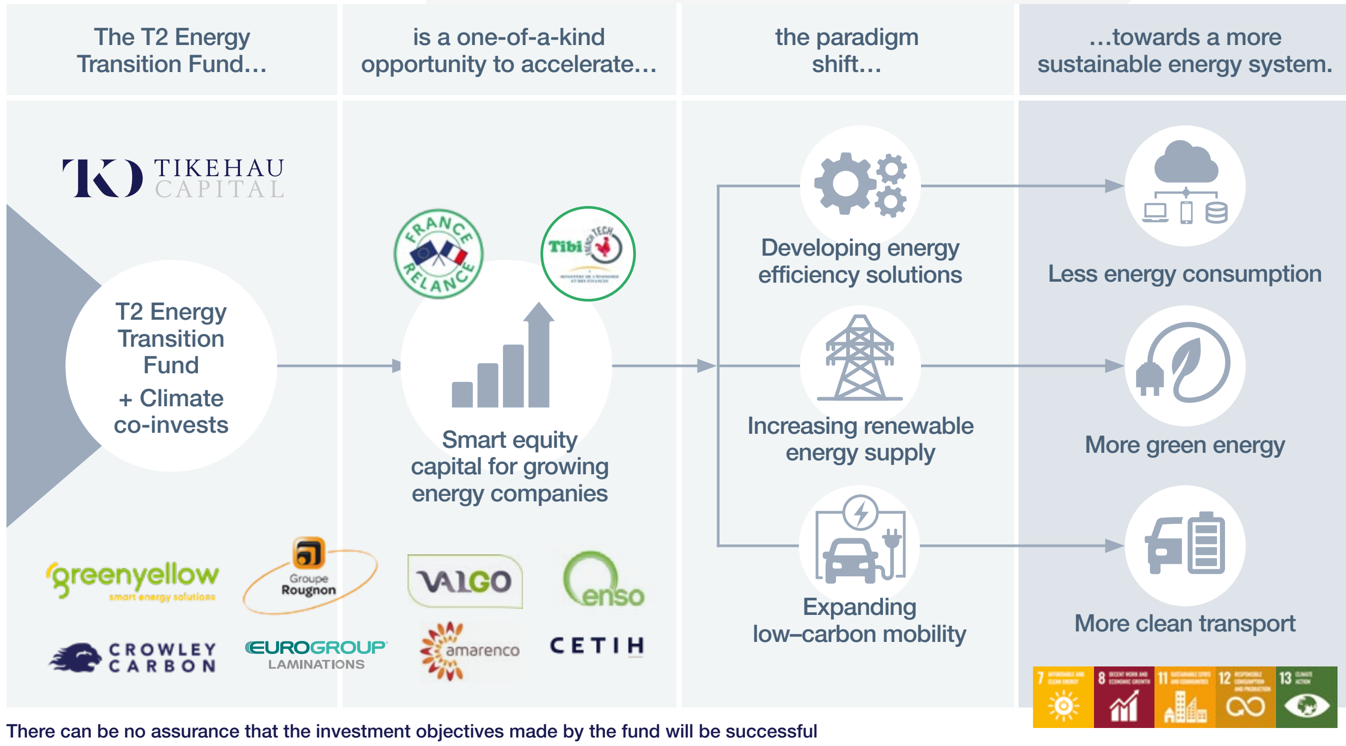
The businesses we partner with in this context are selected for their proven ability to reduce energy consumption whilst creating more green energy and clean transport. To achieve this, our capital investment in our portfolio companies is allocated towards three areas of focus, namely:

- Developing energy efficiency solutions
- Increasing renewable energy supply
- Expanding low –carbon mobility

In the case of our T2 Energy Transition Fund (T2), its portfolio companies were selected for their unique ability to meet all three areas of focus and accelerate the paradigm shift towards a more sustainable energy system. When we launched the opportunity to investors, it was therefore unsurprising that we significantly exceeded our original fundraising goal for T2 with a final close of almost €1bn earlier this year.

One of the crucial areas of value-add we provide for our portfolio companies in such strategies is the development of Group-level ESG strategies and ESG roadmaps

>€1bn raised to tackle climate change



There can be no assurance that the investment objectives made by the fund will be successful

Source: Tikehau Investment Management, July 2021

As part of our impact-led strategies such as T2, we are often asked how we partner with businesses beyond stand-alone capital investment. One of the crucial areas of value-add we provide for our portfolio companies in such strategies is the development of Group-level ESG strategies and ESG roadmaps where possible and applicable. To understand the significance of these initiatives in the context of facilitating systemic change, we explore examples from within our T2 portfolio.

GreenYellow

GreenYellow (GY) is a leading French developer of smart energy solutions that seeks to help its customers reduce their energy bills. It focuses on decentralised energy production (photovoltaic plants mainly), energy efficiency schemes guaranteeing reduction of power consumption and energy services (purchasing, consumption monitoring, B2C/B2B energy distribution)

Leveraging parent company Groupe Casino's footprint, GreenYellow now operates in 10 countries across Europe, Latin America, Asia and Africa with strong positions as a developer for commercial premises in France, Brazil, Colombia and the Indian Ocean.

As GreenYellow's investment partner, our mandate has a clear focus. Our priority has been to diversify the company's client and sector portfolio, enabling detachment from Casino. Simultaneously, we have prioritised geographical expansion and the enablement of stronger financing flexibility for asset management to maximise value of assets at disposal. We have increased GreenYellow's share of recurring high value-added services and leveraged our platform to make valuable introductions to new potential businesses partners in Southern Europe. Additionally, and following an initial carbon footprint analysis in early 2019 and with support from the TKO private equity team, GreenYellow defined its CSR policy, appointed a Head of CSR and published the first CSR report. These initiatives contribute to reinforce the Company's Sustainability Roadmap in the view of scaling-up positive impact and mitigating risks and adverse impacts (e.g. by defining a responsible procurement policy and process).

Through our journey together, we have achieved all this and our partnership remains fruitful. Some of the rich rewards we have realised together include a project pipeline which has doubled with 200MWp/€17.8m of energy efficiency contracts at beginning of 2019 to 797MWp/€17.8m as of May – 21. We have also facilitated the ongoing expansion of the business in South Africa and Asia (Thailand, Vietnam) and realised multiple commercial successes through the Tikehau platform including a collaboration with Enedis (Tikehau Real Estate assets) to connect their sites with power and help them generate considerable energy efficiencies.

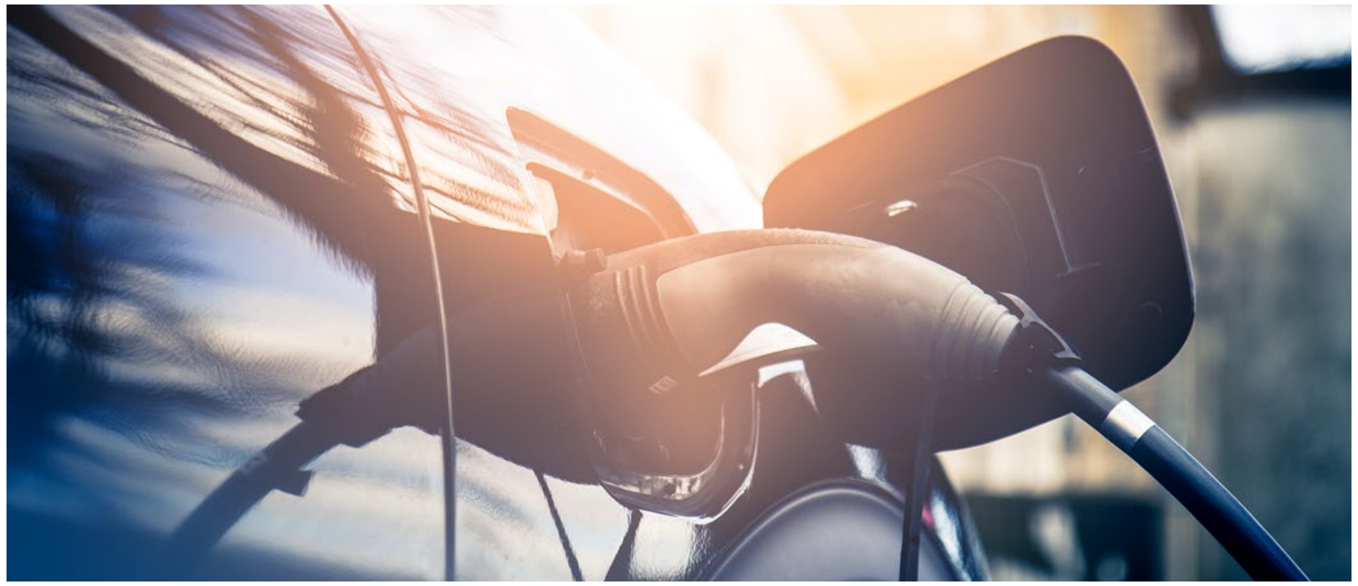
Crowley Carbon

Crowley Carbon is a leading independent energy services provider, which aims to achieve 20-30% energy savings for customers through use of its superior engineering expertise and proprietary SaaS technology which monitors the ongoing retention of those savings.

The company focuses on multinational corporations with large manufacturing bases and high energy consumption needs. In addition to this energy efficiency activity, the Group developed a number of ventures covering classic car electrification as well as self-directed online training on climate change.

As Crowley Carbon's investment partner, we have supported the company in its commercial efforts by leveraging our global network to provide access to key sales prospects. We have also helped drive the creation of a longer-term asset financing model through the team's experience and relationships with institutional investors. Finally, beyond our initial investment, we have provided additional capital to finalize the acquisition of a demand-response company that should complement the group's energy efficiency offering.

As a result of our partnership, Crowley Carbon has directly contributed to avoid 65,860tCO2e emissions at client facilities in 2019. With a total carbon payback of only 0.2 years, the projects will save up to 646,630tCO2e during their lifecycle. To achieve these savings, the company released 11,970tCO2e throughout its procurement activities and operations, mostly relating to the equipment purchased for energy efficiency solutions (56% of total emissions).



Alongside our T2 Private Equity strategy, our other climate focussed funds address each of these four sectors. Within our Real Assets strategy, our Tikehau Green Assets fund focusses on financing 'green' capital equipment and service contracts to industrial end users. It aims to achieve recurring income through an asset 'as a service model' and accelerate the distribution of green assets, contributing to the decarbonisation of the economy.

In our Capital Markets offering, our Impact Credit fund fosters a transition towards a net zero carbon economy by supporting companies from a wide array of sectors that contribute to reducing CO2 emissions and/or other highly material environmental externalities and have made advanced commitments towards climate change. The companies are involved in solutions for the transition through their financings or as a key part of their business.

Finally, as part of our Private Debt offering to investors, our Impact Lending Strategy enables SMEs and intermediate-sized companies to accelerate their transitions and effectively contribute to a more inclusive and sustainable economy by broadening their offer of sustainable goods and services and improving operations management (human capital, supply chain etc).

Key take-aways

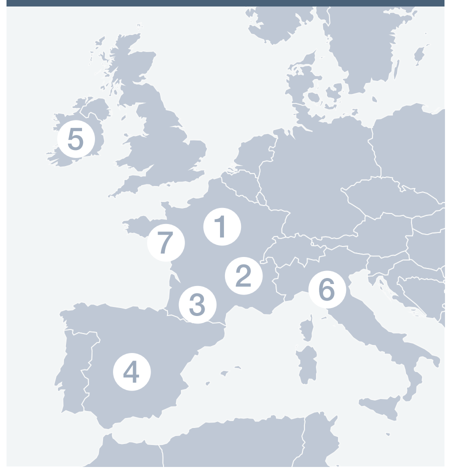
The UN's stark 'code red' warning reminds us that time is running out to prevent climate catastrophe. As a global, impact-led asset manager we recognise the vital role we play in financing more energy efficient economies. We need to redirect global savings and institutional capital to the private sector, which bears 75% of the responsibility to ensure we meet our common goal of halving carbon emissions before the 2030 deadline.

Our approach to investing in these businesses is based entirely on scientific evidence and research. Unlike some other responses to this underappreciated emergency, ours is one that takes its lead from the experts; the ones who are closest to the problem and truly comprehend the full scale of its complexity.

Through our impact portfolio investments, we managed to avoid 1m tons of CO2 emissions in 2019 and we aim to generate even steeper emission avoidance over the next 12 months.

>1 million ton of CO2 emmission avoided in 2019

T2's impact
Reducing CO2 > 1Mton in 2019



1 (Groupe Rougnon)
- **+1,050** FTEs
- **€34m** invested
- Thermal renovation
- **Equivalent of 300k Paris-NYC rounds trips avoided**

2 (greenyellow)
- **+400** FTEs
- **€150m** invested
- Energy efficiency
- **Paris equivalent electricity consumption avoided**

3 (amarenco)
- **+150** FTEs
- **€150m** invested
- Solar PV
- **Almost 2x the production of a nuclear plant**

4 (enso)
- **+150** FTEs
- **€34m** invested
- Biomass energy
- **First CO2 biomass capture power plant**

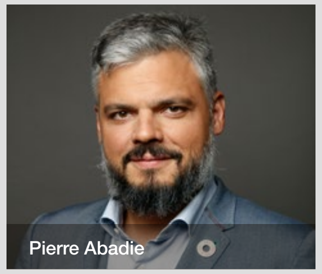
5 (Crowley Carbon)
- **+50** FTEs
- **€34m** invested
- Energy services
- **Equiv. of 1,115ha of rainforest, protected from deforestation**

6 (Eurogroup Laminations)
- **+2,000** FTEs
- **€75m** invested
- E-mobility
- **Million of EV engines in backlog contracts**

7 (CETIH)
- **+1,300** FTEs
- **€40m** invested
- Building renovation
- **Limiting emissions in the building sector**

Source: Tikehau Investment Management, July 2021

Following the successful closing of our T2 Energy Transition Fund, we plan to launch our Private Equity based North American Decarbonisation Fund in the next few months. Based on our previous fundraising success, investors are clearly beginning to understand the size of the opportunity, although we believe it is probably not yet fully appreciated. Investors suffering with so-called ‘green fatigue’ in search of an opportunity with capacity for impactful change can get in touch.



By Pierre Abadie, Group Climate Director, Tikehau Capital

Pierre is Group Climate Director at Tikehau Capital. He has over 20 years of experience in the energy sector and its transition. Pierre previously worked for 16 years at Total including in the Gas and Renewables division before launching the first Tikehau Energy Transition Fund in 2018 and subsequently the decarbonisation practice. This fund is the first fund to have raised more than €1 billion entirely dedicated to investing in SMEs that contribute to the decarbonisation of our economy.

Pierre is a board member of four energy transition companies: Greenyellow, Enso, Cool Planet Group and Amarenco. Pierre also sits on the Climate Committee of the board of BPI France and is the chair person of the Green Impact Group of France Invest Impact commission.

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