

PARIS
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Ardian publishes the third edition of the “Augmented Infrastructure” study, a report focused into ways of achieving Net Zero in the aviation industry

- To meet the Paris Agreement’s Net Zero target by 2050, the aviation sector must act now, rethink value and decarbonize through sustainable fuels including hydrogen, aircraft technology advancements, and improved airport and flight operations using data intelligence
- With airports at the center of the industry, “augmented airports”, the improved, Net Zero airports of the future, should be at the forefront of leading the transition of the aviation industry
- Ardian’s long standing approach to sustainability highlights the importance of going beyond the financial aspect to drive a positive impact through innovation and close collaboration with its portfolio companies and all stakeholders

Ardian, a world-leading private investment house, is today releasing the third installment of its work on ‘Augmented Infrastructure’, which focuses on how augmented airports can lead the path towards decarbonization of the aviation industry.

The report follows the two previous installments of the study, which examined how the infrastructure industry can enhance its operations and services to improve their environmental and social impact. This new study examines the levers required to reach a decarbonized aviation industry and outlines how the concept of an “augmented airport” can be a key driver to unlock these levers.

“To meet the targets of the Paris Agreement and reduce the impact of climate change, all industrial sectors must decarbonize quickly. The aviation industry is no exception. To achieve this, two ways of thinking have emerged in recent years. For some, the only viable option to limit the sector’s impact will be to limit air traffic. For others, it seems that salvation will only come from technological breakthroughs and sector innovation to make flying carbon free.

Ardian believes in a third approach, which combines these two ways of thinking and is informed by the findings of this report into the role that the “augmented airport” can play in the decarbonization of air travel. To reach Net Zero, airports need to accelerate their transformation to become “augmented”, by leveraging data and new technologies to reduce emissions, creating new, more sustainable revenue sources, becoming more independent and resilient to external shocks, and improving their impact on both local and global environments. Only by acting collectively across the whole aviation sector can the sector reach Net Zero by 2050.”

- MATHIAS BURGHARDT • HEAD OF INFRASTRUCTURE AND MEMBER OF THE EXECUTIVE COMMITTEE, ARDIAN.

Report summary:

To achieve Net-Zero, the aviation sector must change

Despite the unprecedented scale of disruption caused by the Covid-19 pandemic, it has not fundamentally changed air traffic growth patterns. Air traffic is recovering quickly and is expected to more than double from 2019 to 2050, when it is anticipated that annual passenger numbers could reach 10 billion.

In a scenario where the industry does not change in order to meet the target for decreasing emissions, as outlined in the Paris Agreement, air traffic could contribute to up to 22% of global CO2 emissions by 2050. At the same time, a decline of the sector would have serious economic consequences, meaning it is imperative that the aviation industry acts on existing sector-level commitments to further accelerate decarbonization.

What levers are available to accelerate the sector's transition?

As well as a more sober approach to air travel when and where possible, there are numerous other levers that are available to decarbonize the sector, including the deployment of sustainable aviation fuels at a large scale, aircraft technology advancements and optimization of airport and flight operations through enhanced data intelligence, and more cooperation between the industry stakeholders.

Carbon removal should also be considered but must always come in parallel, not replacement, to carbon reduction measures such as the above targeting scope 1, 2 and 3 emissions.

The augmented airport will be a key catalyst for the industry's decarbonisation

Airports are at the heart of the aviation industry and can have a structuring impact on the sector by focusing on their scope 3 emissions. To reach Net Zero, airports must accelerate their transformation to become "augmented"¹ airports, which are based on five key strategic pillars:

- **Open:** airports should embrace new technologies and be agnostic in positioning themselves as true enablers; guarantee supplies of decarbonized fuels; and ensure shared transportation to surrounding areas is available.
- **Intelligent:** they should engage in extensive data collection and use this for strategic purposes. Airport optimization tools, such as Ardian's Air Carbon platform, will have an important role to play in facilitating improvements, helping management teams to assess inputs such as takeoff and landing data, taxi durations and associated energy and carbon emission savings.
- **Resilient:** characterised by producing and storing energy on site, reducing dependency on external energy sources and vulnerability to energy disruption.
- **Impactful:** having a direct impact on emissions, both locally and globally.
- **Prolific:** the augmented airport is an energy and transport hub, selling energy produced to local consumers and providing freight and rail transport too.

¹ See The Augmented Infrastructure attributes [here](#)

The Infrastructure team at Ardian:

The team comprises more than 60 investment professionals who manage \$21 billion in assets. Ardian funds invest in a comprehensive range of infrastructure assets, focusing in particular on energy (gas, electricity and renewable energy), transport (rail, road and airports) and other public infrastructure (health, environmental). This offers investors a diversified portfolio generating consistent returns with measured risk. The team is actively engaged in the energy transition and believe in developing the hydrogen economy to reach net zero emissions. In 2021, Ardian, via its infrastructure business, announced a partnership with FiveT Hydrogen, to create Hy24, the world's largest investment platform focused on clean hydrogen. Ardian's infrastructure team works closely with major international industrial companies, institutional investors, industry groups and infrastructure operators. This network provides the team with privileged access to transactions, often through bilateral negotiations where the stakes are both financial and industrial.

ABOUT ARDIAN

Ardian is a world leading private investment house, managing or advising \$141 bn of assets on behalf of more than 1,300 clients globally. Our broad expertise, spanning Private Equity, Real Assets and Credit, enables us to offer a wide range of investment opportunities and respond flexibly to our clients' differing needs. Through Ardian Customized Solutions we create bespoke portfolios that allow institutional clients to specify the precise mix of assets they require and to gain access to funds managed by leading third-party sponsors. We also provide a specialist service for private clients through Ardian Private Wealth Solutions. Ardian is majority-owned by its employees and places great emphasis on developing its people and fostering a collaborative culture based on collective intelligence. Our 900+ employees, spread across 15 offices in Europe, the Americas and Asia, are strongly committed to the principles of Responsible Investment and are determined to make finance a force for good in society. Our goal is to deliver excellent investment performance combined with high ethical standards and social responsibility.

At Ardian we invest all of ourselves in building companies that last.

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