

Ardian

Ardian hones its carbon-reduction tools

Reducing carbon emissions is central to the firm's overall sustainability agenda — but it believes this approach will also protect and enhance the long-term value of its infrastructure investments

The global drive to address the threats posed by climate change is gaining momentum. As an investor with interests in critically important infrastructure sectors, such as energy and transport, Ardian believes it has a social responsibility to support and promote efforts to address global warming — both within its own business and through helping its portfolio companies transition to lower carbon-intensity ways of operating.

From Ardian's viewpoint, addressing the impact of climate change is very much part of its social responsibility as a business. Ardian has demonstrated this through its investments, with more than \$1.3 billion (€1.5 billion) invested in 3.5 gigawatts of green-energy capacity. Ardian works with management teams to co-construct ESG roadmaps for portfolio companies and, in particular ways, to identify levers to reduce carbon footprints.

This focus on the impact of climate change also illustrates its practical approach to addressing the major threat facing the world today. Ardian firmly believes that tomorrow's winners will be the companies that take the lead in reducing carbon emissions and find ways to grow that are much less carbon intensive. Those that lag behind will struggle to attract investment and will see their value impaired.

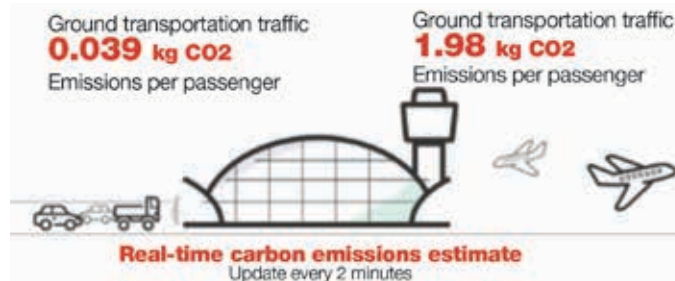
To further its priorities in this area, Ardian's infrastructure team collaborated with Fabernovel around how to reduce the carbon intensity of assets, notably detailed in its latest report, *The Augmented Infrastructure: Digital for climate?* It is also continually developing and refining tools to measure and reduce carbon emissions from its various investment portfolio companies, including one initiative, AirCarbon, specifically focused on airport carbon emissions.

AirCarbon

AirCarbon is a data-analysis tool that provides real-time estimates of airports' carbon emissions from all sources — both direct, such as ground operations and energy consumed by the infrastructure itself, and indirect, such as aircraft movements and passenger travel to and from the airport. Ardian designed AirCarbon in collaboration with university students from HEC, Ecole Polytechnique and Ecole 42 to create a tool kit and methodology for airport management teams to quantify the impact of their existing activities and proposed investments, and collaborate more effectively with other stakeholders, such as public transport authorities, to reduce emissions. The ultimate goal for AirCarbon is to create an emission model that will enable airports to better understand and predict the impact of their future initiatives. AirCarbon includes granular data on road travel, as well as aircraft movements, and can be used to create a holistic model that encompasses all of the carbon inputs in the airport ecosystem.

How tools like AirCarbon can help airport assets

To put AirCarbon's data-analysis tools to work, Ardian plans to apply the tool to its portfolio airport holdings in 2020. To date, three portfolio companies, the Naples International Airport (NIA),



SEA Milan Airport and Turin Airport, are already using some digital tools to automate and optimize the management of their different operations and terminals. The analysis conducted by NIA to date has identified a number of opportunities to reduce carbon emissions. Examples include limiting taxi time of aircrafts during their departure procedure, real-time monitoring of external conditions and airport attendance, and implementing sensors on terminal buildings to automatically manage lighting and air conditioning.

With this foundational analysis already in place, by applying the more predictive capabilities of a more sophisticated tool such as AirCarbon, NIA should be even better positioned to monitor, measure and anticipate the airport's carbon emissions, build out trajectory scenarios and, ultimately, establish more refined strategies for reducing its carbon footprint.

Taking a long-term view

The NIA case study shows that by using carbon-reduction tools, it is possible to model emissions accurately in real time, unlocking essential information to find more sustainable infrastructure solutions for the future. Although it is currently being developed for use with Ardian's airport investments, the longer-term goal is to apply tools such as AirCarbon across all of Ardian's investment activities, multiplying the impact of innovations like this as far as possible.

Using data analysis tools such as AirCarbon, Ardian intends to transform the way it analyzes portfolio companies across all sectors and, in turn, help them accelerate their respective transitions to less carbon-intensive ways of operating.

CORPORATE OVERVIEW AND CONTACT

Ardian is a world-leading private investment house with assets of \$96 billion managed or advised in Europe, the Americas and Asia. The company is majority-owned by its employees. It keeps entrepreneurship at its heart and focuses on delivering excellent investment performance to its global investor base. Through its commitment to shared outcomes for all stakeholders, Ardian's activities fuel individual, corporate and economic growth around the world.

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