



# The first datacenter in France with an high environmental performance

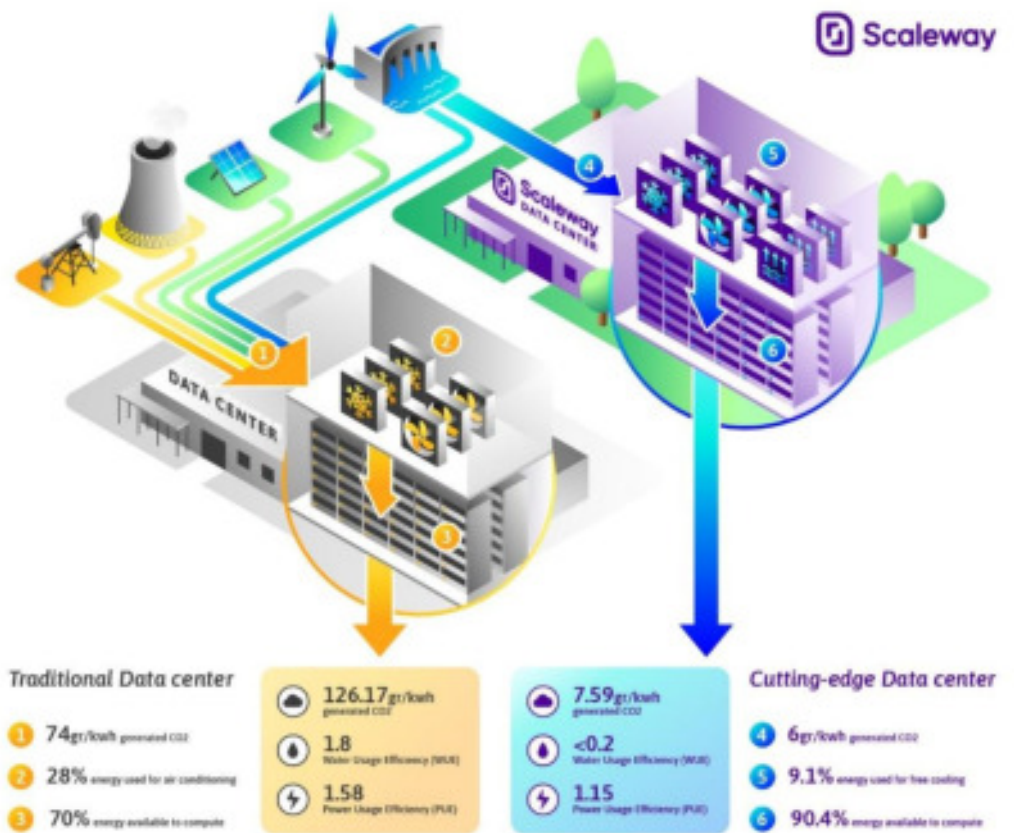


The latest Scaleway datacenter, a subsidiary of the Iliad Group, incorporates an adiabatic infrastructure cooling process that eliminates the need for energy-intensive air-conditioning or refrigerant gas systems with a high carbon impact.

<b>Starting date of the project</b>	April 2018								
<b>Project Localisation</b> Places of implementation of the project at this stage and targeted geography if replicable.	<b>Rehabilitation of a former postal logistic center in Saint-Ouen-l'Aumône, Val d'Oise (France)</b> This project can be reproduced everywhere, on any possible rehabilitation area, or a disused large area.								
<b>Project objectives</b> Type of climate innovation of the project with a description of the problem/issue addressed	Faced with the strong and continuous growth of digital uses, particularly in the supply of Cloud infrastructures to companies, and in a logic of national sovereignty, Iliad has made the dual choice : <ol style="list-style-type: none"> <li>To optimize the carbon footprint of its existing data centers</li> <li>To innovate in order to minimize the climate footprint of all its future data centers</li> </ol>								
<b>Detailed project description</b>	<p>The Scaleway's fifth datacenter project was set up on the site of a former postal logistic center in 2018. With a surface area of 16,000 square meters, the DC5 based in Saint-Ouen-l'Aumône (Val-d'Oise, France) looks like any industrial warehouse from the outside.</p> <p>The technology deployed in this data center is "unique in the world". Developed for two years, the adiabatic cooling system deployed by Scaleway has been patented, so that in the future it will be possible to convert other data centers in Paris, Amsterdam and Warsaw.</p> <p>Everything, including the architecture of the place, has been tailor-made to accommodate such a cooling system. It took four years of R&amp;D to resolve the many brakes that quickly imposed themselves on engineers: in particular the management of heat peaks, and especially regarding frequently summer heatwave waves.</p> <p>When the outside air temperature exceeds 30 ° C, the adiabatic cooling technology comes into play. The system uses the evaporation of water to lower the temperature inside the room where the servers are working, allowing the room to be cooled by 9 ° C with only 2 grams of water.</p> <p>"The main challenge was to learn from this simple physics principle to industrialize it", underlines Arnaud de Bermingham, Scaleway's president and founder.</p>								
<b>Main project's drivers for reducing the greenhouse gas emissions</b>	<b>Reduction levers</b>	<b>Details on the aspects of the project</b>							
	<input checked="" type="checkbox"/> Energy and resource efficiency (including behaviour)	- Energy use sobriety and high efficiency of infrastructure - Drastic reduction in water consumption (zero cooling towers)							
	<input checked="" type="checkbox"/> Energy Decarbonisation	- 100% renewable electricity sources (hydraulic)							
	<input checked="" type="checkbox"/> Energy efficiency improvements	- Innovative adiabatic cooling process (air from outside and a few grams of water only)							
	<input checked="" type="checkbox"/> Improving efficiency in non-energy resources	- Lifespan extension of the equipment up to 10 years (vs. an average of 5 years maximum for the sector)							
	<input type="checkbox"/> Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)								
	<input type="checkbox"/> Financing low-carbon producers or disinvestment from carbon assets								
<input type="checkbox"/> Reduction of other greenhouse gases emission									
<b>Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope</b>	<table border="1"> <tr> <td></td> <td><b>Aspects of the project contributing to the reduction of emissions by emission category</b></td> <td><b>Quantification of associated GHG emissions by emission category</b></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>				<b>Aspects of the project contributing to the reduction of emissions by emission category</b>	<b>Quantification of associated GHG emissions by emission category</b>			
	<b>Aspects of the project contributing to the reduction of emissions by emission category</b>	<b>Quantification of associated GHG emissions by emission category</b>							

		Please follow the quantification methodology used in <a href="#">the Afep guidelines</a> .
<b>Reduction of the company's carbon dependency</b>		
<b>Scope 1</b> <i>Direct emissions generated by the company's activity.</i>	Zero air conditioning (adiabatic process)	- Up to -40% energy consumption - Power Usage Effectiveness (PUE) of 1.15 (vs. an average of 2.5 for French data centers) - or the equivalent of - 511 tons of CO2
<b>Scope 2</b> <i>Indirect emissions associated with the company's electricity and heat consumption.</i>	A supply of 100% renewable electricity (from hydraulic sources)	47 tons of CO2eq or the equivalent of -392 tons of CO2eq on scope 2 (-89%)
<b>Scope 3</b> <i>Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.</i>	Extending the lifespan of the equipment	- A recovery rate and reuse of 74% towards a 2nd life - or the equivalent of - 8,880 tonnes of CO2 needed to remanufacture new equipment!
<b>Increase of carbon sinks</b>		
<b>Emissions Absorption</b> <i>Carbon sinks creation, (BECCS, CCU/S, ...)</i>		
<b>GHG emissions avoided by the company at third parties</b>		
<b>Avoided Emissions</b> <i>Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects.</i>		

Clarification on the calculation or other remarks: infography below



Modality of verification of the quantification.

Calculation standard used (ADEME base, GHG protocol, etc.): ADEME national carbon database

	<b>Verification of the calculation (internal or external):</b> Internal data verification combined with a quantitative and qualitative review of our extra-financial data disclosure by an external third party.
<b>Other environmental and social benefits of the project</b>	The Scaleway's DC5 datacenter equipped with the adiabatic cooling system contributes to the following SDGs: <ul style="list-style-type: none"> <li>• <b>SDG 6 Clean water and sanitation:</b> the adiabatic cooling system saves more than 90% of the global amount of water needed to cool a standard data center</li> <li>• <b>SDG 7 Clean and affordable energy:</b> the data center is supplied with 100% of renewable electricity</li> <li>• <b>SDG 8 Decent work and economic growth:</b> through the rehabilitation of a former postal logistic center, the project helps maintaining the local employment</li> <li>• <b>SDG 9 Industry, infrastructure and innovation:</b> the project aims to rehabilitate a former postal logistic center avoiding not to build a new data center area</li> <li>• <b>SDG 12 Responsible consumption and production:</b> the lifespan of the equipment is extended and the IT components are fully recyclable, an environmental label is also request on each product invoiced (energy, water, carbon);</li> <li>• <b>SDG 13 Measures relating to the fight against climate change:</b> the adiabatic cooling system fully eliminates any air conditioning uses which have the biggest impact on global warming.</li> <li>• <b>SDG 17 Partnerships for the achievement of objectives:</b> the project concretely contributes to the national strategy on digital sovereignty with a global French industrial economic partnership.</li> </ul>
<b>Project maturity level</b>	<input type="checkbox"/> Prototype laboratory test (TRL 7) <input type="checkbox"/> Real life testing (TRL 7-8) <input type="checkbox"/> Pre-commercial prototype (TRL 9) <input type="checkbox"/> Small-scale implementation <input checked="" type="checkbox"/> Medium to large scale implementation  <b>Remarks:</b> <a href="#">click here to enter the level of maturity of the project</a>
<b>Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential</b>	Not communicated
<b>Amount of investment made (in €)</b>	Not communicated
<b>Economic profitability of the project (ROI)</b>	<input type="checkbox"/> ST (0-3 years) <input type="checkbox"/> MT (4-10 years) <input type="checkbox"/> LT (> 10 years)  <b>Remarks:</b> Not communicated
<b>Engaged partnerships</b>	Several partnerships are engaged especially with: <ul style="list-style-type: none"> <li>• <b>Loxy:</b> a local company of the adapted sector which ensures the reuse and the recycling of computer components</li> <li>• <b>Planet tech care:</b> Planet Tech'Care is the first initiative bringing together a network of partners (professional organizations, schools, competitiveness clusters, associations, foundations, think tanks), which aims to support companies wishing to integrate digital responsible practices in their environmental trajectory and to support training players in their skills development for responsible digital future.</li> <li>• <b>Greentech Alliance:</b> The Greentech Alliance brings together green technology companies, who are fighting climate change with their products and services in the most responsible and planet-friendly way.</li> </ul>
<b>Open comments from the project owner</b>	<p>The digital sector is already responsible for 2% of the French greenhouse gas emissions (1). But it could lead to three times that proportion by 2040 if nothing is done by then. The concept of the digital climate footprint is also becoming widely understood in France but much remains to be done especially concerning the extent of the changes to be made in data center practices that are still weak.</p> <p>Worldwide, 205 billion kWh (2) are consumed by data centers (estimated in 2018), and the race for energy performance is pushing the most efficient data centers, hailed by the entire market, to shameful practices such as: reckless millions of cubic meters of water use and the waste of 30 to 40% of energy, just for unnecessary and avoidable needs of air conditioning.</p> <p><b>At Scaleway, our sustainable actions have real impact because we have innovated where it counts most – energy and water use at the source.</b></p> <p><small>1. According to work carried out at the request of the Senate 2. Masanet 2020</small></p>
<b>More about the project</b>	
<b>Contact the company carrying the project</b>	Laura Calmore // Head of Corporate Communications // <a href="mailto:lcalmore@scaleway.com">lcalmore@scaleway.com</a> Walter Delage // Head of CSR // <a href="mailto:wdelage@iliad.fr">wdelage@iliad.fr</a>
<b>Project URL links</b>	A short tour of our DC5 datacenter >>> <a href="https://youtu.be/jorNf-L5u9q">https://youtu.be/jorNf-L5u9q</a> Focus on our climate plan >>> <a href="https://vimeo.com/502213813">https://vimeo.com/502213813</a>

Illustrations of the project

