

Reduction of IT environmental footprint in France



Capgemini has engaged a sustainable IT transformation to drastically reduce the environmental impact of its digital activities and services.

Starting date of the project	November 2020	
Project Localisation Places of implementation of the project at this stage and targeted geography if replicable.	France	
Project objectives Type of climate innovation of the project with a description of the problem/issue addressed	<p>The project answers to a dual objective:</p> <ol style="list-style-type: none"> 1. Conducting a complete inventory and measuring the environmental footprint of Capgemini France IT capabilities 2. Deploying reduction levers until 2022 	
Detailed project description	<p>Capgemini started its sustainable digital transformation involving all French based entities by driving change in IT usage and operating models, and by onboarding all employees.</p> <p>Between November 2020 and March 2021, Capgemini realized:</p> <ul style="list-style-type: none"> • A qualitative maturity assessment on the 4 pillars of the sustainable IT methodology developed inhouse • A quantitative audit of CO2e emissions generated by the layers of its IT, resulting in the confirmation of its main sources: <ol style="list-style-type: none"> 1. IT hardware, essentially laptops and screens 2. Data centres, due to their energy consumption 3. Data transmission • The definition of its strategy and associated roadmap to reduce total emissions generated by its IT layers by 24% (hardware, data centres, network) before 2024, focusing on its main hotspots. The roadmap is based on 17 levers shared between CSR, IT department, Procurements, HR, and Business entities. • The initialization of the reduction roadmap 	
Main project's drivers for reducing the greenhouse gas emissions	Reduction levers	Details on the aspects of the project
	<input checked="" type="checkbox"/> Energy and resource efficiency (including behaviour)	<ul style="list-style-type: none"> • Optimizing IT equipment's life cycle, from purchase to end-of-life • Reducing number of applications • Optimizing standard parameters for data exchange and storage • Raising awareness among employees • Training employees • Adapting telephony offers for employees • Integrating suppliers into the sustainable IT transformation
	<input type="checkbox"/> Energy Decarbonisation	
	<input checked="" type="checkbox"/> Energy efficiency improvements	<ul style="list-style-type: none"> • Using less energy consuming applications • Selecting IT suppliers (Cloud, Datacentres, equipment...) according to environmental criteria
	<input type="checkbox"/> Improving efficiency in non-energy resources	
	<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		

Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope	Aspects of the project contributing to the reduction of emissions by emission category		Quantification of associated GHG emissions by emission category Please follow the quantification methodology used in the Afep guidelines .							
	Reduction of the company's carbon dependency									
	Scope 1 <i>Direct emissions generated by the company's activity.</i>									
	Scope 2 <i>Indirect emissions associated with the company's electricity and heat consumption.</i>	Reduction of energy consumption	50 tCO2 avoided per year							
	Scope 3 <i>Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.</i>	IT equipment all along their life cycle	1 150 tCO2 avoided per year							
	Increase of carbon sinks									
	Emissions Absorption <i>Carbon sinks creation, (BECCS, CCU/S, ...)</i>									
	GHG emissions avoided by the company at third parties									
	Avoided Emissions <i>Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects.</i>									
	<p>Clarification on the calculation or other remarks:</p> <ol style="list-style-type: none"> Calculation of the emissions Methodology developed by Quantis relying on Life Cycle Analysis (LCA) and based on Capgemini France's IT assets and parameters (example of indicators: PUE, storage technologies (SSD / HDD), renewal rate of hosts...). Identification of major sources of emissions ~70% GHG : Physical IT hardware unit (90 000+) : laptops, screens, printers, phones, accessories... ~20% GHG : Impacts of datacentres hosting applications, storing and processing data Energy consumed for data transmission Identification and prioritization of reduction levers Examples below: <table border="1" data-bbox="549 1375 1370 1480"> <thead> <tr> <th>Hypothesis</th> <th>Target differential by 2024</th> </tr> </thead> <tbody> <tr> <td>Decreasing number of equipment per employee</td> <td>-8%</td> </tr> <tr> <td>Extending computers' lifetime</td> <td>+33%</td> </tr> <tr> <td>Increasing computers' reconditioning rate</td> <td>+5%</td> </tr> </tbody> </table> Calculation of the total expected GHG reduction (-24%) and spreading reduction over time 			Hypothesis	Target differential by 2024	Decreasing number of equipment per employee	-8%	Extending computers' lifetime	+33%	Increasing computers' reconditioning rate
Hypothesis	Target differential by 2024									
Decreasing number of equipment per employee	-8%									
Extending computers' lifetime	+33%									
Increasing computers' reconditioning rate	+5%									
Modality of verification of the quantification.	Calculation standard used (ADEME base, GHG protocol, etc.): Ecolinvent									
Other environmental and social benefits of the project	Verification of the calculation (internal or external): Assessment performed with Quantis The project contributes to the following SDG: <ul style="list-style-type: none"> SDG 12 – Responsible consumption and production, by: <ul style="list-style-type: none"> Training employees on sustainable IT development and consumption modes, in link with the CSR strategy Onboarding suppliers in the sustainable IT journey 									
Project maturity level	<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 Remarks: Perimeter: French BU									

Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential	The opportunity of scaling the initiative at Capgemini Group level is currently under investigation. The approach would be to replicate the designed methodology to all other IT departments and consolidate levers deployment at international level.
Amount of investment made (in €)	250 k€ for the initial phase: assessment and roadmap definition
Economic profitability of the project (ROI)	<input checked="" type="checkbox"/> ST (0-3 years) <input type="checkbox"/> MT (4-10 years) <input type="checkbox"/> LT (> 10 years) Remarks: Assessment and roadmap: 4 months / Deployment: 2 years
Engaged partnerships	Quantis on the quantitative audit
Open comments from the project owner	
More about the project	
Contact the company carrying the project	Sandrine Fouillé – CSR Director France sandrine.fouille@capgemini.com Maud Paré – Sustainable IT Project manager maud.pare@capgemini.com
Project URL links	https://www.capgemini.com/fr-fr/service/numerique-ecoresponsable-pour-les-dsi/
Illustrations of the project	