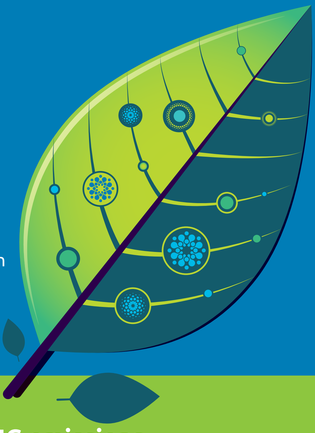
Capgemini RESEARCH INSTITUTE

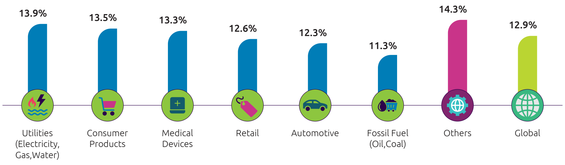
Climate AI

How artificial intelligence can power your climate action strategy



AI-enabled use cases are already reducing GHG emissions

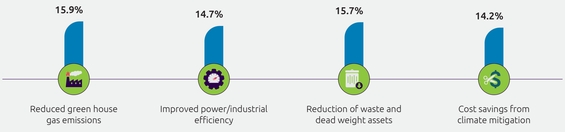
Average GHG emission reduction though AI-enabled use cases in the last two years-by sector (base year 2017)



Source: Capgemini Research Institute, AI in climate action survey, July-August 2020, N = 190 organizations that have been able to fully or partially scale AI projects for climate action. Others include process industry (cement, paper, petro-chemical, paper) and discrete industries (electrical and electronics, air and railway equipment etc.)

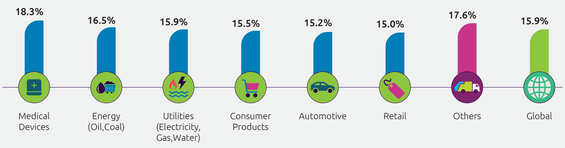
..and AI has the potential to significantly limit more GHG emissions

Average benefits expected from use of AI-enabled use cases climate action in the next three to five years



Source: Capgemini Research Institute, AI in climate action survey, July-August 2020, N= 190 organizations that have been able to fully scale or partially scale AI projects for climate action. Reduction of waste includes wastage in broader terms of utilization deadweight – empty trucks/facilities and in disuse/disposal of products before completion of useful life e.g. produce/vehicles.

Average future emission reduction using AI-enabled use cases for the next three to five years (base year 2019)



Source: Capgemini Research Institute, AI in climate action survey, July-August 2020, N = 190 organizations that have been able to scale AI projects fully or partially for climate. Others include process industry (cement, paper, petro-chemical, paper) and discrete industries (electrical and electronics, air and railway equipment etc.).

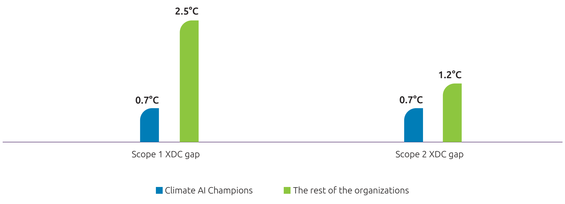
AI-enabled use cases has the potential to aid organizations to reach **11-45% of their Economic Emission Intensity(EEI) reduction targets**[1] by 2030

1. Economic Emission Intensity = Emissions (in tons of CO_2 equivalent)/GVA (in million Euros). GVA is Gross Value Added = EBITDA + Personnel Costs. EEI targets represent the net emission intensity sectors must achieve to achieve the 1.75°C temperature rise over pre-industrial levels

Organizations who effectively use AI in climate action are closer to their goals

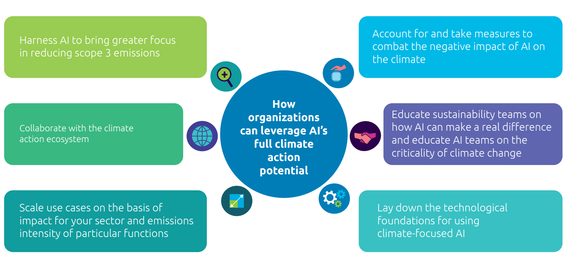
In our survey, We found a set of **Climate AI Champions** who have a mature climate change vision, strategy, and strong record of ccomplishment of AI implementation for climate action. They constitute **13% of all surveyed organizations.**

Portfolio XDC Gap for Climate AI Champions vs the rest of the organizations - the level of warming that must be reduced by these group of companies to be aligned with the Paris Agreement



Source: Capgemini Research Institute, AI in climate change survey, July-August 2020, N = 400 organizations; Right.basedonscience analysis. Temperature represents the number of degree Celsius organizations need to reduce their temperature by to meet the Paris agreement. Scope 1 accounts for emissions that are from internal emissions and Scope 2 accounts from electricity usage from local grids and utilities.

How can organizations leverage AI's full climate action potential



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