



ADDRESSING THE AI CHALLENGES WITH SUSTAINABLE SOLUTIONS

How can we solve the environmental and economic challenges of AI computing?

AI is a rapidly growing field, with potential to revolutionize industries and businesses, as well as our lives – in many good ways. But AI also poses a number of challenges that can jeopardize the continued development and possible benefits; from processor power shortage to legislative limitations, affecting both capacity, costs and environmental sustainability. This white paper aims to shed light on these challenges, and how they can be solved.

AI vs CO2

It's not sustainable to let global digital activities make up more than 15% of the global CO2 footprint – BUT that's where we're heading (estimated in 2040) unless we come up with sustainable solutions in this area! The explosive development of AI activity (an increasing part of this digital development) will in parallel drive research and insights that will benefit us all in so many ways, but ALSO put an enormous burden on our electricity supplies and, as a result, the environment, by fueling an escalating CO2 footprint.

So, while it's urgent to cut down our CO2 footprint, AI computations are posing a significant sustainability problem.

EU requirements on data storage

The second challenge is where to store the data. Most European companies are using one of the big four US-based companies, but the Schrems II EU legislation requires all data containing GDPR information pertaining to EU citizens must be held by a company whose HQ is registered within the EU. This makes it necessary for companies to find local European alternatives for their AI operations.

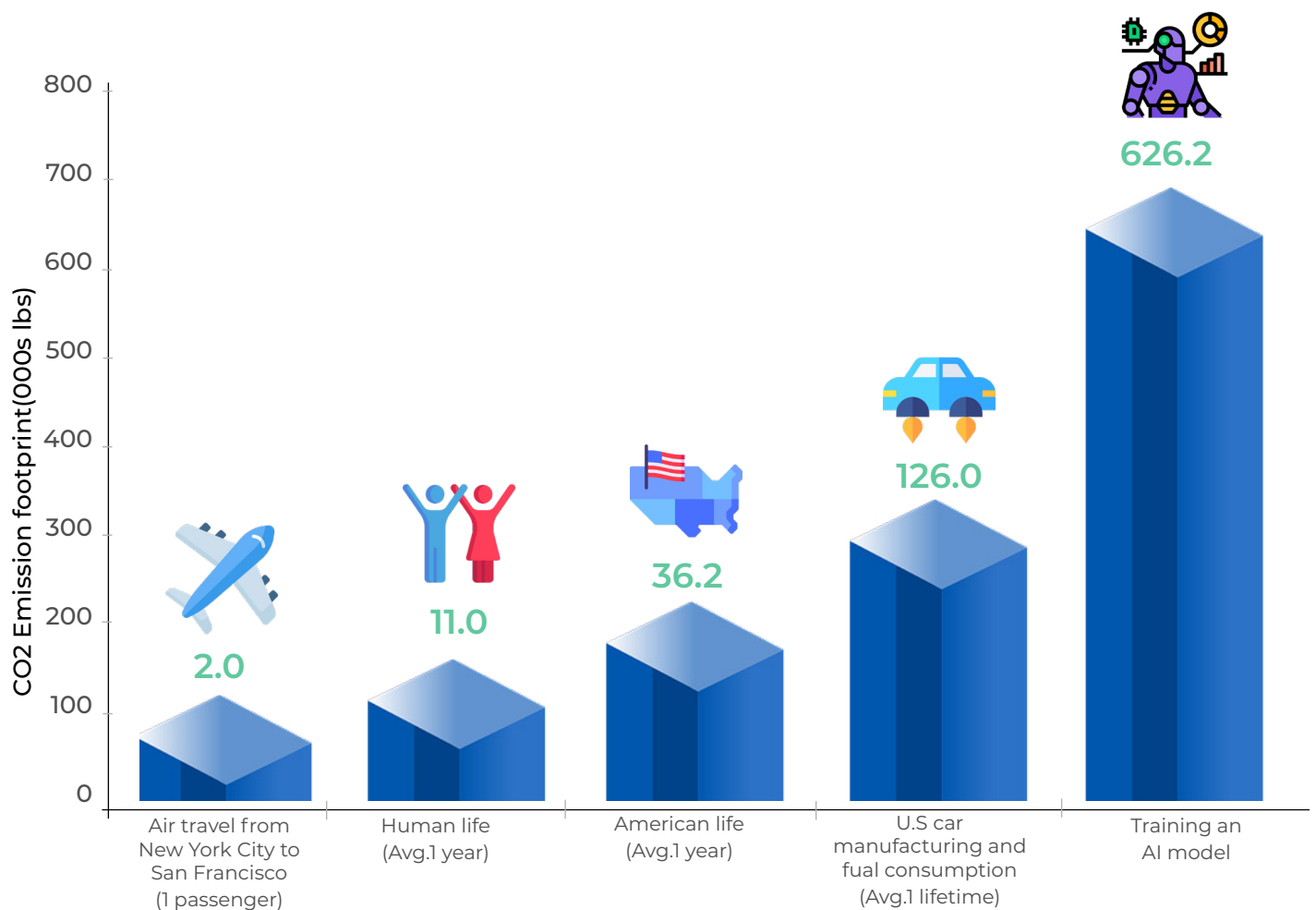
**Data is the new currency,
but just how much is it costing us?**

The true cost of AI

Training just one standard AI model results in 284 tonnes of CO2 emissions.

That's nearly 5 times the lifetime emission of the average American car!

CO2 Emission benchmarks



Training AI models puts a huge strain on processing power. Common hardware and cloud services on the market today are generally not strong enough to cope with these requirements. It can sometimes take several weeks to complete models using today's IT infrastructure.

Only high-end processors (GPU based solutions) can offer an adequate level of computational power, and while data grows, requirements grow alongside it. That capacity is a bottleneck, and if nothing is done, it will remain so.

The location problem

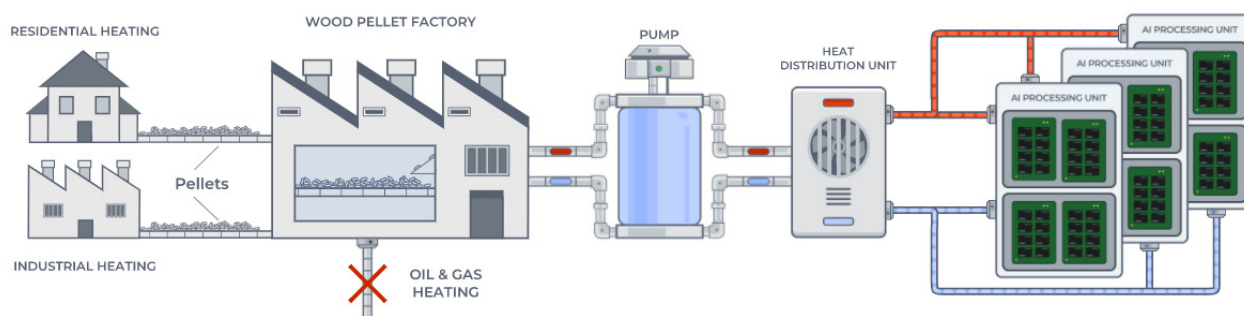
The Schrems II European Union legislation regarding GDPR is quite clear – European companies will not be able to use cloud computing services by any companies whose HQ is not within the borders of the EU.

It's not enough to have it stored in the EU, because that leaves data open to data requests from foreign authorities based outside the EU.

So – our data is growing exponentially, and our need for computational power is growing alongside it – but now we have the extra challenge of needing to store our data within the EU, and not overseas.

Two problems, one solution

Green AI Cloud can offer a cloud compute service for AI calculations using 100% renewable energy. We use Wind & Water, and on top of this, we convert the excess heat from our operation into energy for other companies, resulting in a negative CO2 footprint overall.



This is made possible by a unique connection between the data centre and the companies in the surrounding area that has an interconnected heating / water cooling system, allowing for heated water from the data centre to flow and power the companies situated next door.

Our customers receive a yearly dividend based on how much CO2 emission has been saved thanks to this solution, based on official greenhouse gas protocol calculations.

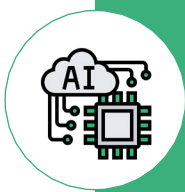
As Green AI Cloud is registered in Sweden, and operates in Sweden, it is 100% in alignment with the EU regulation regarding data protection and especially the Schrems II framework.

Up to 150 times faster processing

Green AI offers a 5-petaflop processing power from NVIDIA, with unlimited use 24/7/365, clearing any potential bottlenecks and allowing large corporations across the EU to test, train and develop AI models without any limits.

We offer a 5-petaflop & 5TB disc storage capacity as standard, but this can be adjusted up to 50 petaflops at a fraction of the cost compared to market alternatives.

The result is a unique global cloud solution that's up to 150 times faster than current AI solutions on the market – to considerably lower costs.



You can choose a fully integrated AI solution, integrating machine learning software for AI calculations with AI storage, visualization and efficient learning with supporting Cloud Compute services.



Your existing AI software can be connected to our Cloud Compute Service.

Are you ready to get started with Green AI Cloud?

We are here to help you!

Contact Carl-Johan Elg to get started



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