A Tech Paradox

Digital Innovation and the Climate Crisis

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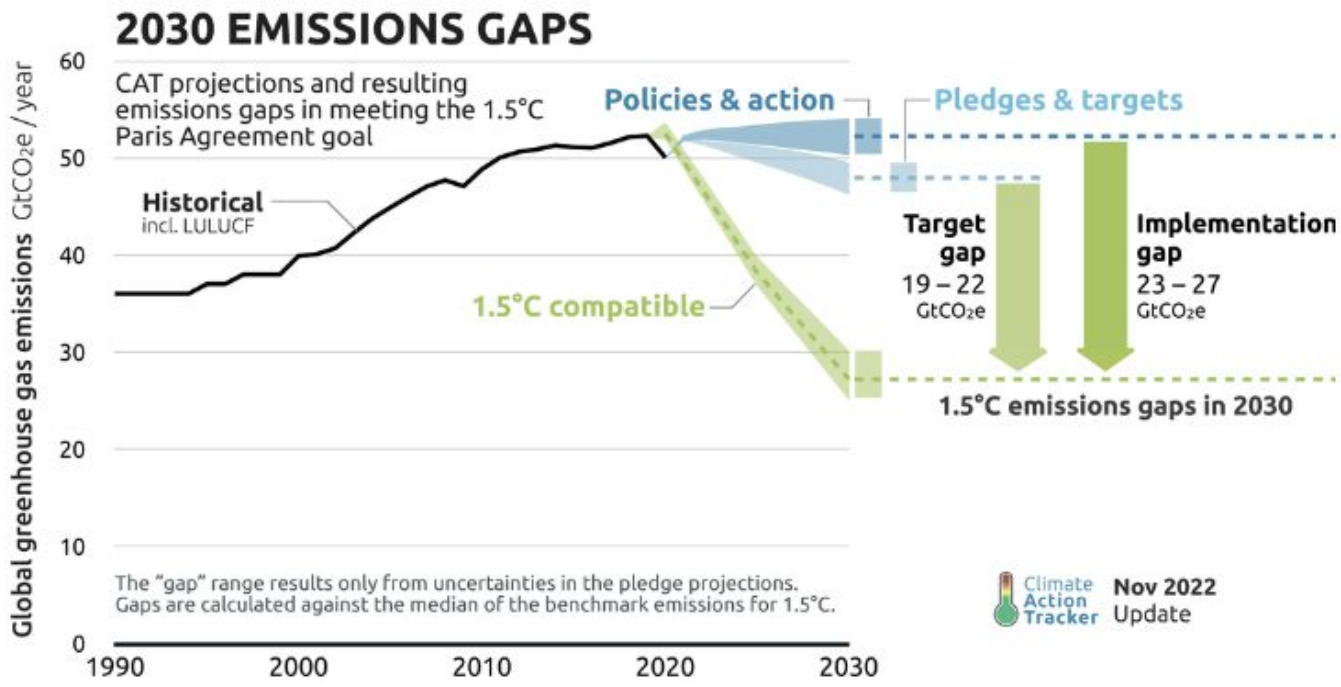
Collision 2023

FORESIGHT CANADA

Rapid Decarbonization is Needed



Why are we all here?

Do you know the carbon cost of an email?

Are you aware of digital solutions tackling the climate crisis?

Let's have a real conversation about the tech paradox of digital innovation as we accelerate a global net zero transition AND discuss what we can do to reduce this gap.

A Tech Paradox of Action

Technology will provide us with the tools to rapidly decarbonize our economy

Technology is rapidly becoming a large carbon source and environmental burden


Digital Innovations
Make a Big Impact

> …The potential value unlocked by AI in helping design out waste in a circular economy for food is up to **$127 billion** a year in 2030.
>
> – McKinsey

> **2%** of global GHG emissions are attributed to water utilities, and this figure is projected to **more than double by 2040.**
>
> - Water UK

Pani Energy

Optimizes and decarbonizes the operations of desalination and wastewater treatment plants and using a cloud-based machine learning platform

pani

IMPACT STATS

29 tonnes

CO2e offset per MW asset per year

Clir Renewables

Improves the performance and profitability of wind and solar farms using a cloud-based machine learning platform

clir


What is the Carbon Cost
of an Email?

ENVIRONMENTAL IMPACT: **DATA CENTRES**

200
Terawatt-Hours
of Electricity Used

1-5M
Gallons of Water
Consumed Per Day

0.3%
Of All Global
CO2 Emissions

50M+
Metric Tonnes of
Electronic Waste Per Year

SECTORS IMPACTED

CARBON

ENERGY

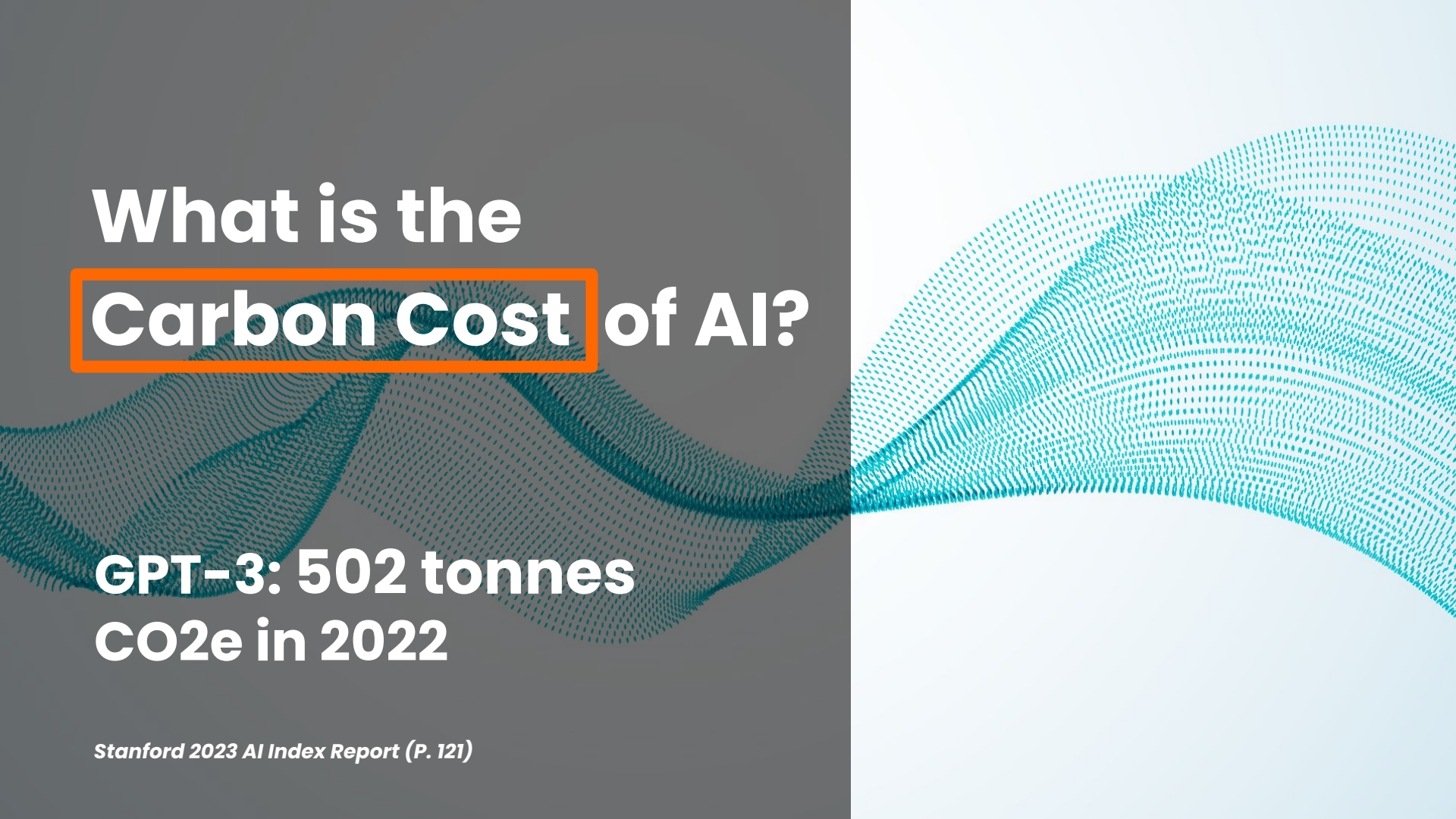
WATER

WASTE

MINING

MANUFACTURING

What is the Carbon Cost of AI?

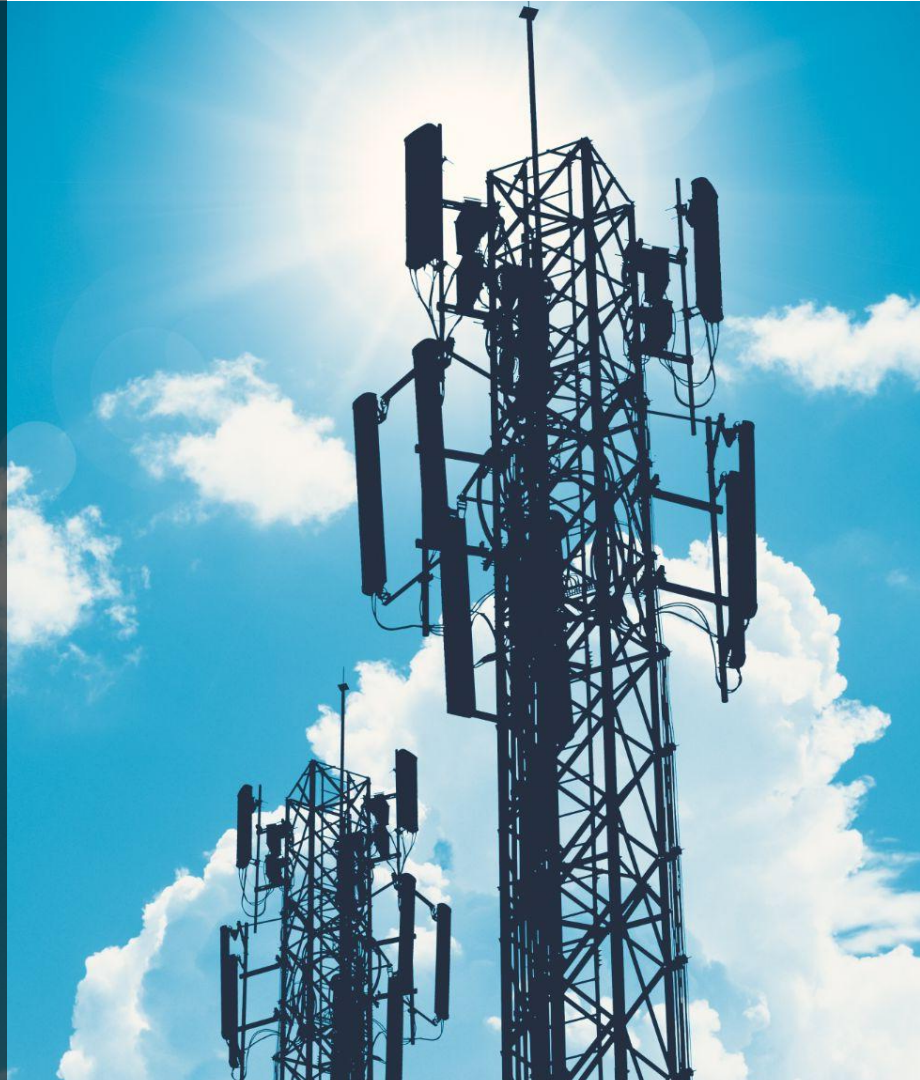


GPT-3: 502 tonnes CO_2e in 2022

Stanford 2023 AI Index Report (P. 121)

“...the entire ICT industry uses approximately **4%** of the world’s electricity for its operation, and represents **1.4%** of the global greenhouse gas emissions from a life cycle perspective.”

– Ericsson




There is a Carbon Cost
to Everything

Paradox as a Mindset

> Competing demands can also enable one another
>
> – Ella Miron-Spektor, INSEAD


The Tech Paradox
as an Opportunity

IMPACT STATS

3,100 tonnes

Of CO2e per MW eliminated

Mintgreen

BC-based company recovering heat from bitcoin mining, to generate zero-carbon energy for district energy and industrial processes

mintgreen

MINERALS RECOVERED

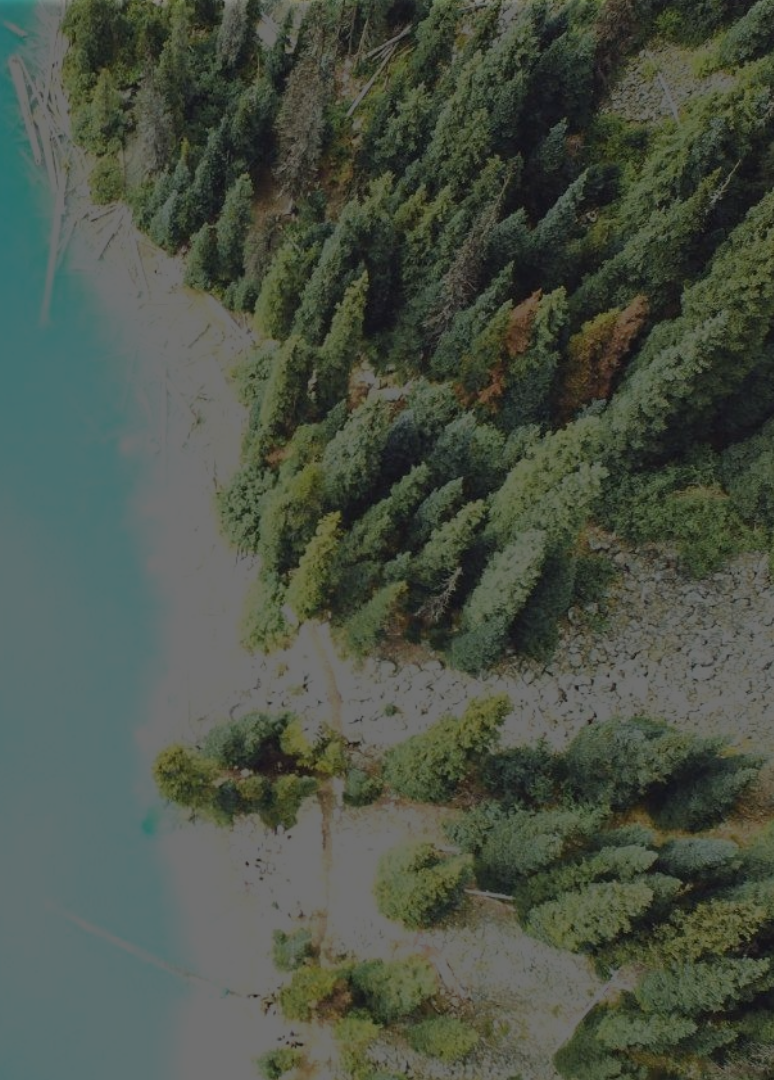
- Au, Ag, Pd, Pt, Sn, Cu, Nd from circuit boards
- Co, Ni, Mn, Li, Cu from spent lithium-ion batteries (“LIBs”)
- Cd, Ni, Mn from spent alkaline and NiCad batteries
- Nd, Dy from magnets used in hard drives, EV motors, wind turbines
- Cd, In, Ga, S from CIGS thin film solar panels
- Cd, Te from CdTe thin film solar panels

Ronin8

BC-based company specializing in sustainable treatment and recovery of critical minerals from e-waste

What can you do ?

1. Adopt a paradox mindset
2. Consider both the carbon cost and opportunities of digital innovations, systems and platforms in your business
3. Be the voice in your organization that strives for balance



Ready to Make a Climate Impact?

Connect with us and learn how
you can make a difference today.

Join our Community of Innovators

SCAN ME