

WHAT CAN I DO ABOUT
CLIMATE CHANGE AS A
DEVELOPER... AND A HUMAN
BEING?



- Julien
- Developer Advocate @Adyen
 - Kotlin GDE
 - @jlengrand
- #Meetups #Kotlin #Gardening



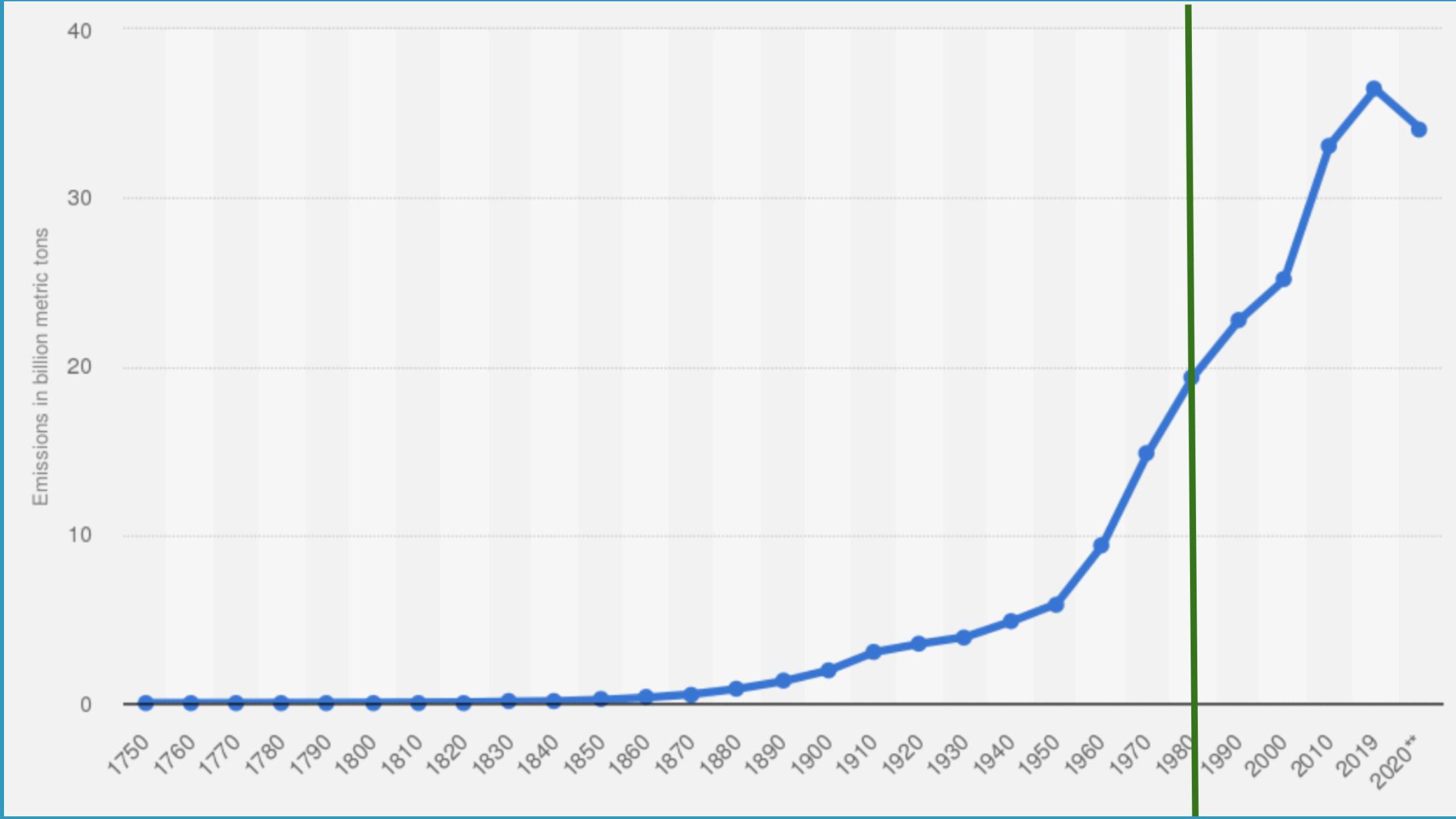
- ! I'm not a climate scientist :)
- 🙌 let's do it positively
- 🤚 No pointing fingers



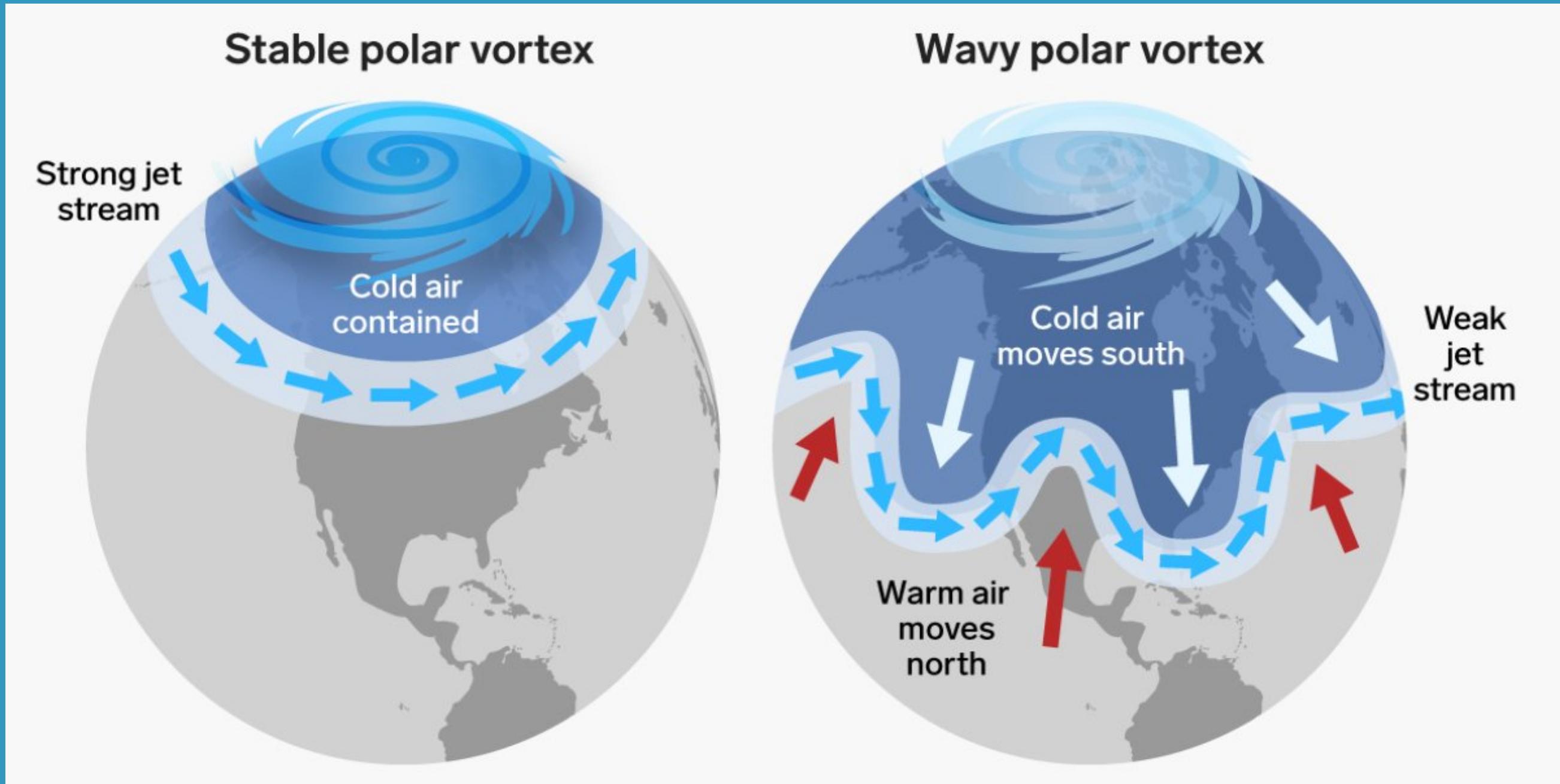
Content

- Current situation
- Tackling it with Tech
- A personal take
- Final tips!

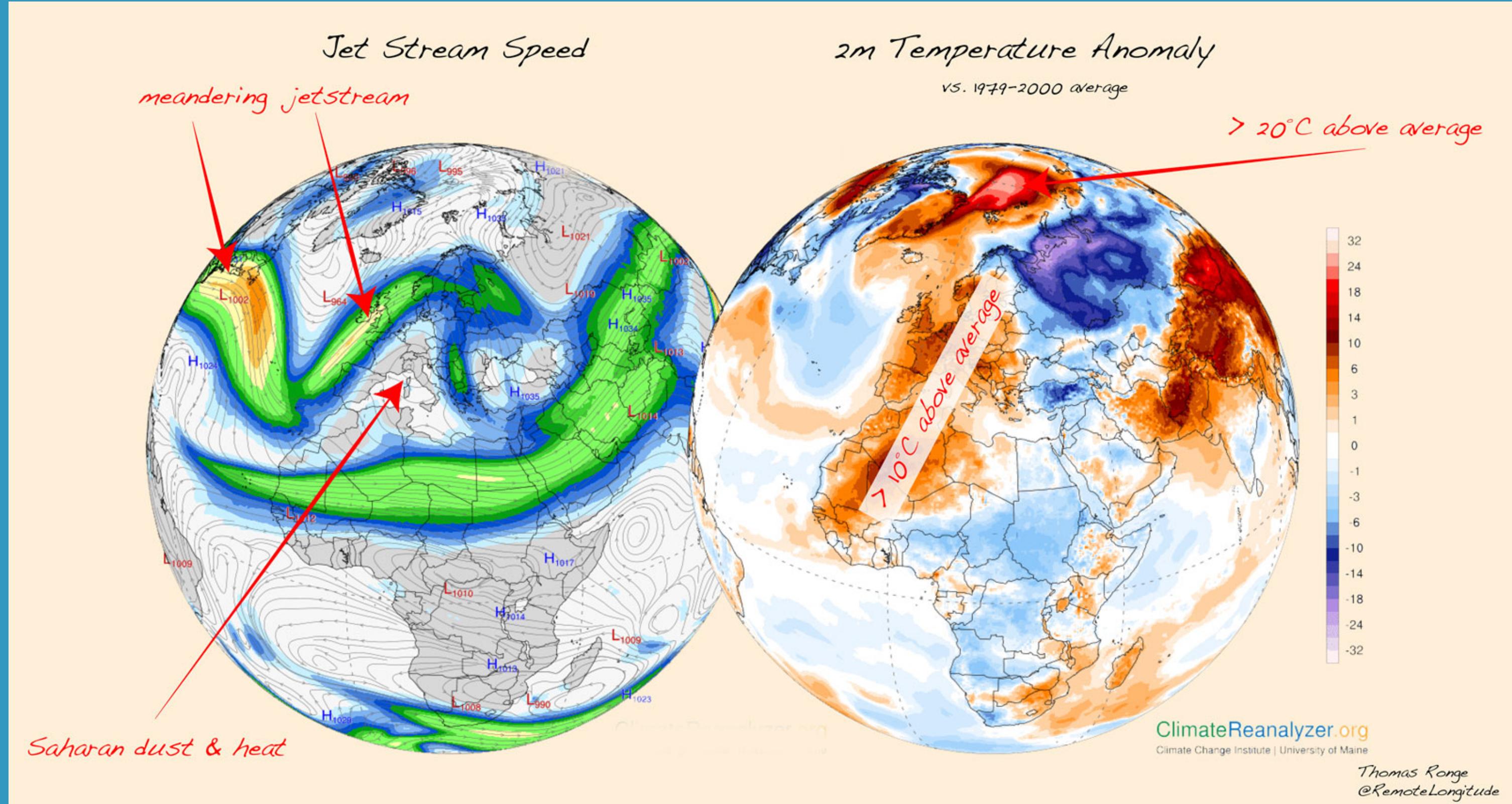
LET'S LOOK INTO THE
SITUATION BEFORE DIVING
FURTHER



48% of world total global emissions since I was born



Global "warming" is a bad term.



Climate change is watching disasters happen on
other people's cameras, until you are the one
filming the disaster

-- Unknown Twitter user

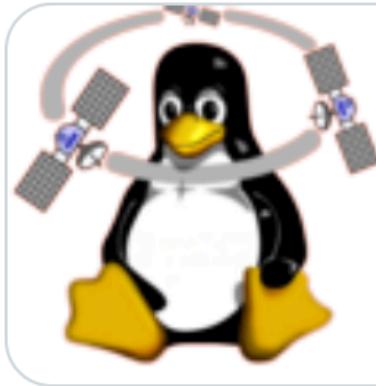


Ariadne Conill
@ariadneconill

...

TIL: Climate change has resulted in the earth spinning faster, cancelling out leap seconds.

“As I previously said, the reason it will affect live GPS is due to, and I hate to say it, global warming causing the earth to speed up, unexpectedly.”



gitlab.com

GPSD time will jump back 1024 weeks at after week=2180 (...

I just discovered a lurking problem in the timebase.c module in all of the branches for releases >=3.20: In ...

1:52 PM · Aug 2, 2021 · Twitter for iPhone

With crazy effects



Felix Miller RE100Japan.org #EnergyTransition

@_felix_miller

...

If we ⚡ STOPPED ⚡ ALL #CO2 #EMISSIONS
NOW...

the earth would only stop warming in 2033 ! !



And a lot of latency

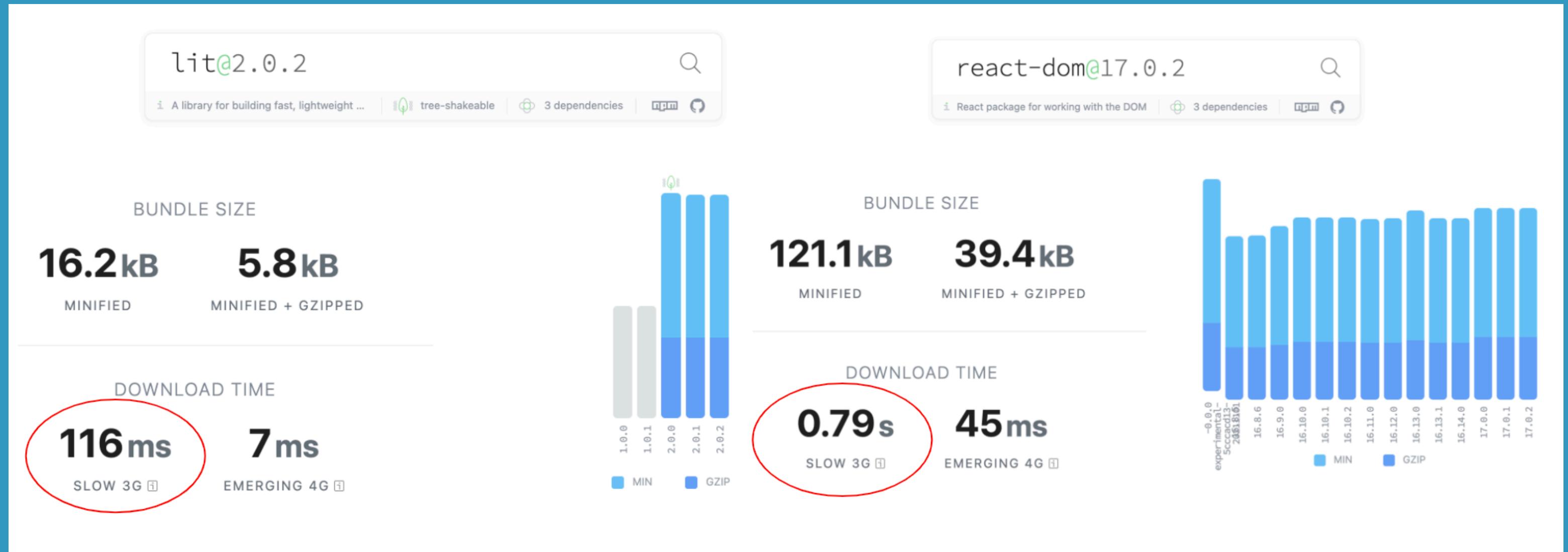
SO LET'S GET TO IT

REDUCE

REUSE

RECYCLE

Do you really need
99.9999%



CO₂ per transaction



0.43 tCO₂



0.01 tCO₂



0.00000033 tCO₂

Choice of technology matters

Nike says it's 'actively working' to fix its broken smart sneakers

No timeline on a fix, though

By Ashley Carman | @ashleyrcarman | Feb 21, 2019, 2:00pm EST

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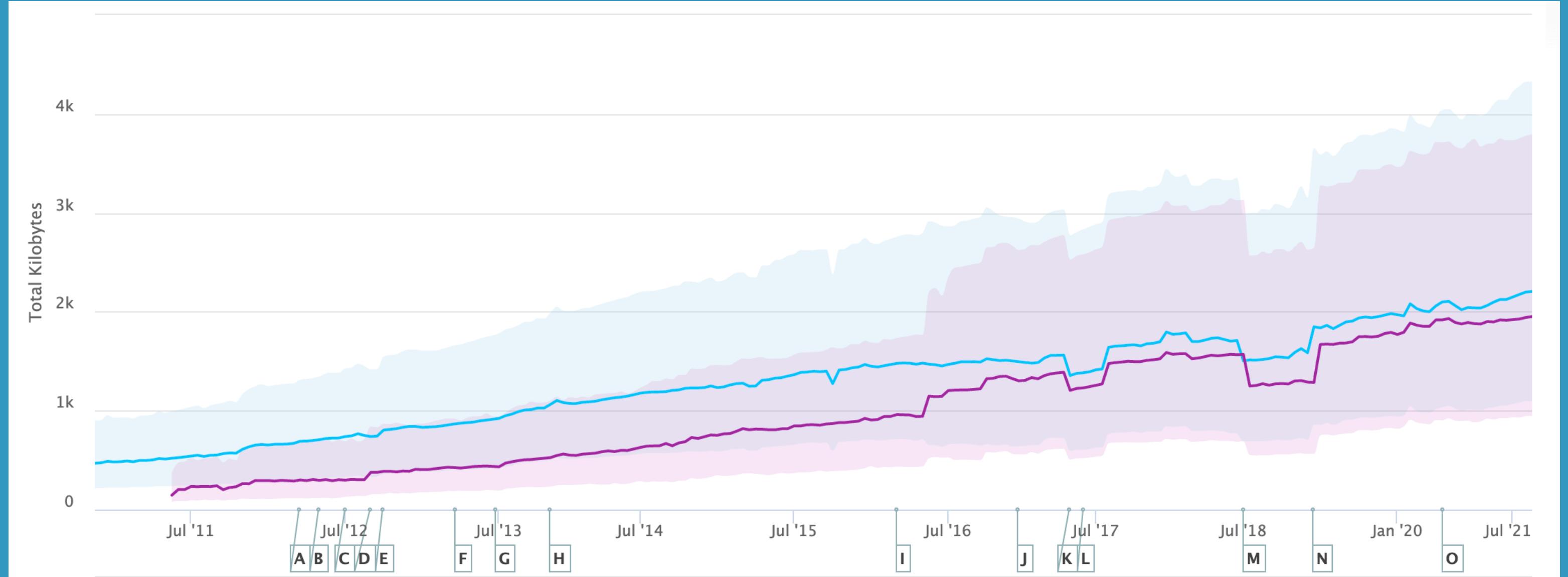
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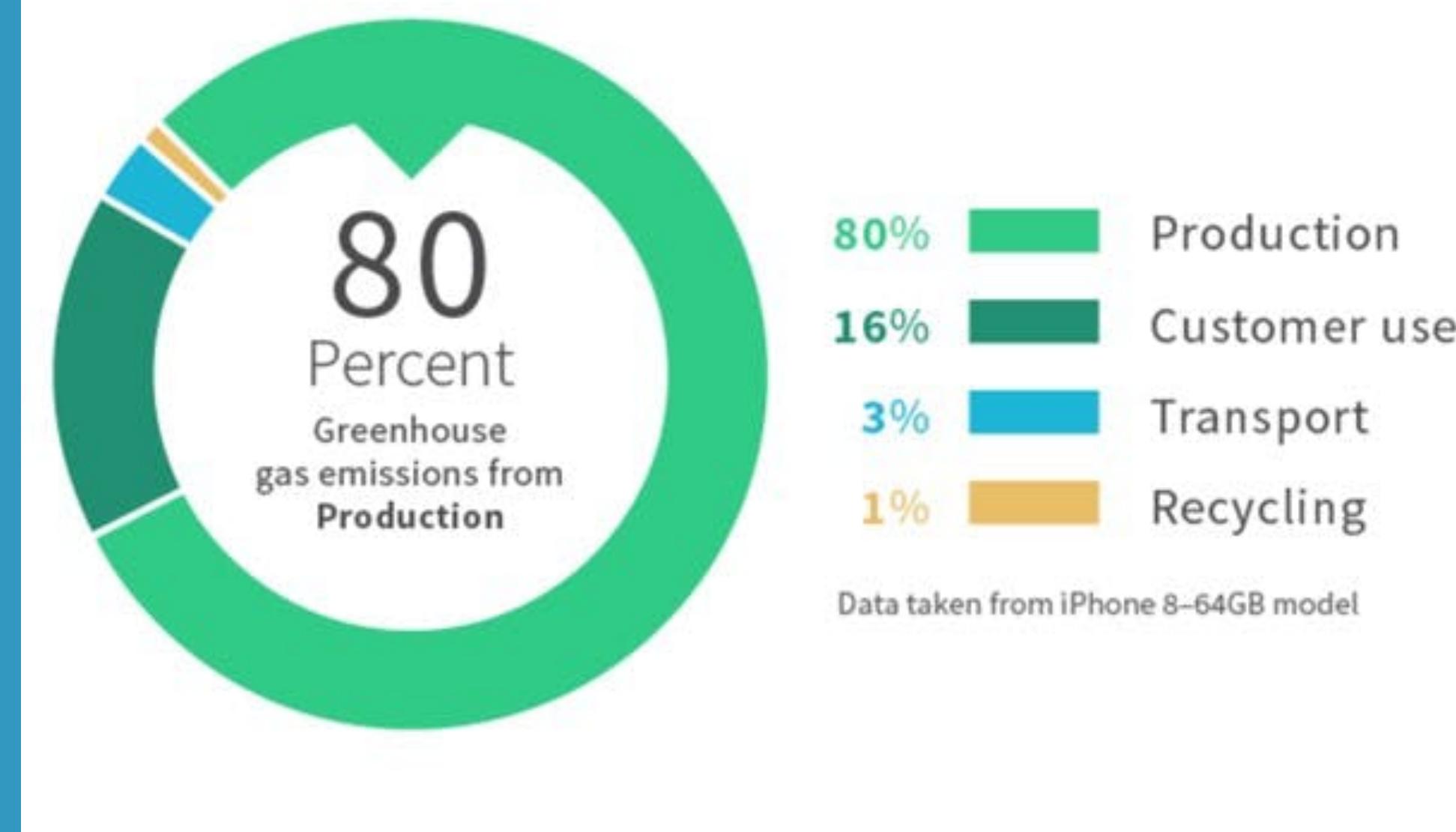
Your scientists were so preoccupied with whether or not they could, they didn't stop to think if they should.
— Dr Ian Malcolm, Jurassic Park



Average web page size raised by **1240%** in 10 years

In the Netherlands, the average lifespan of a phone 2.5 years.

Greenhouse Gas Emissions of a Smartphone



Your users' smartphone

Buying one new phone takes as much energy as
recharging and operating a smartphone for an
entire decade

BUT WAIT A SECOND. . .

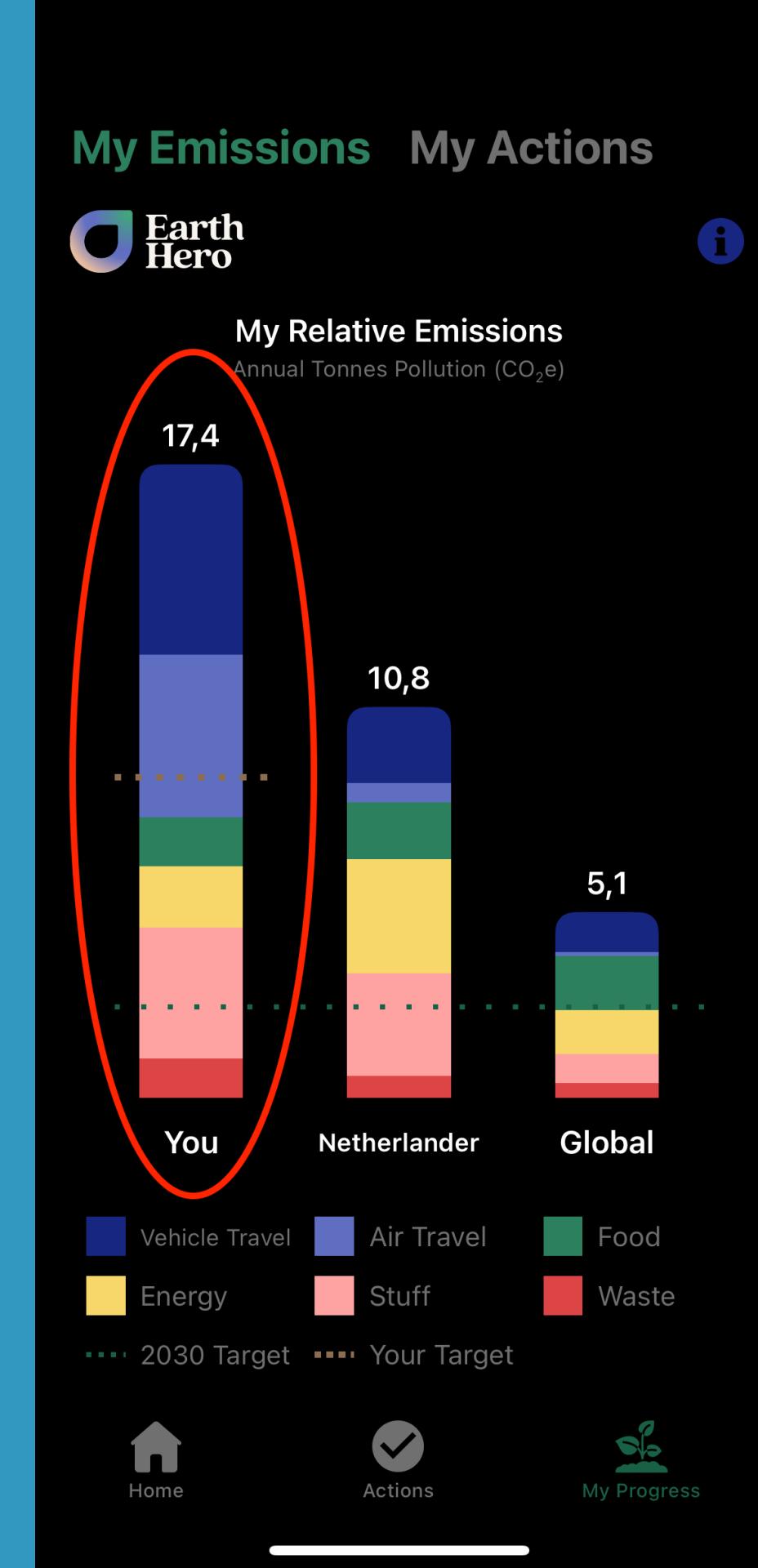
How many of you . . . ?

IF YOU'RE ASKING YOUR KIDS TO
EXERCISE, THEN YOU BETTER DO IT,
TOO. PRACTICE WHAT YOU PREACH.

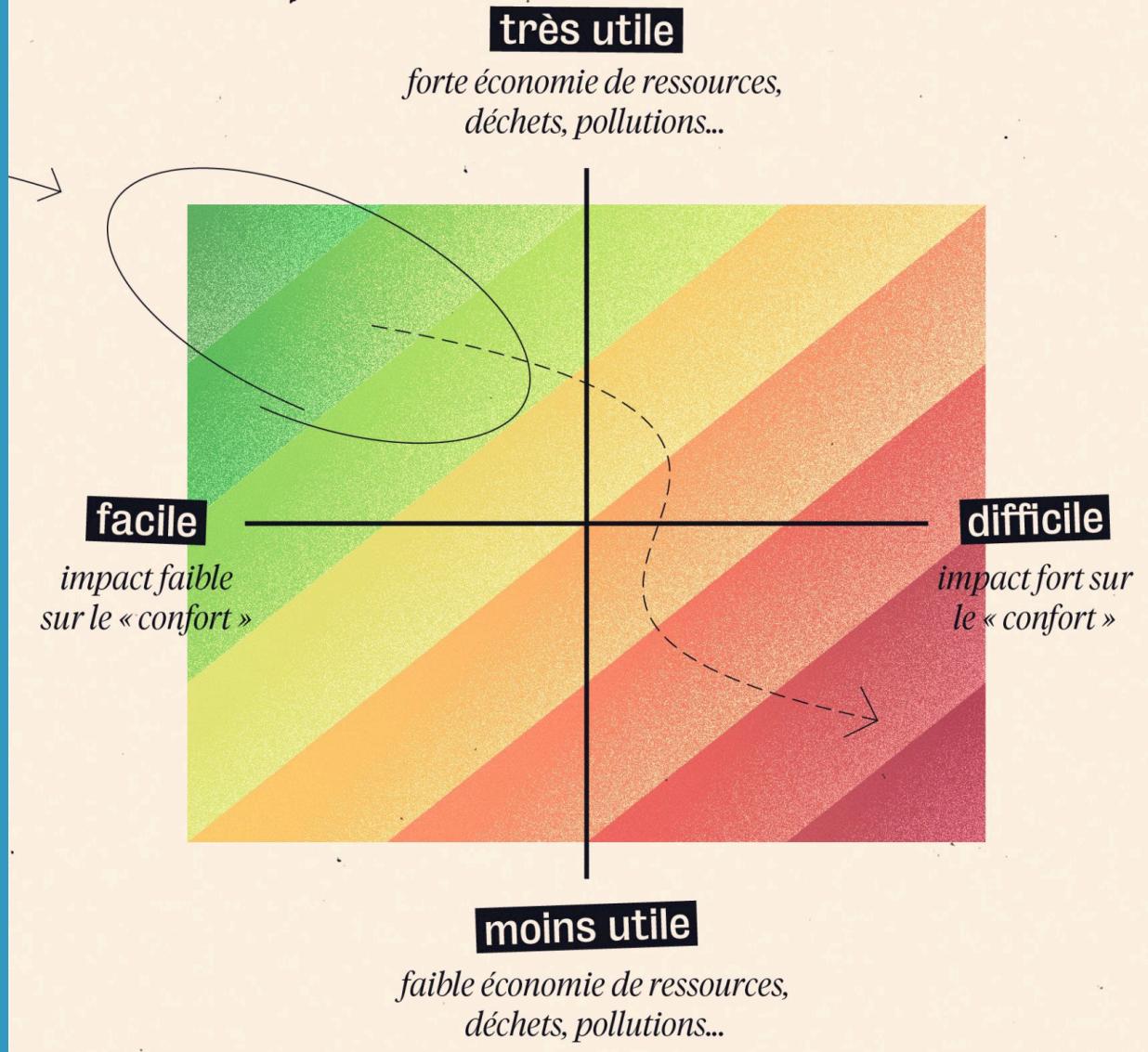
A DIVE INTO MY CARBON FOOTPRINT

MY FOOTPRINT IN 2018

- Me : 17.4 Tons / year
- NL : 10.8 Tons / year
- Global : 5.1 Tons / year
- Goal : 3 Tons / year



- Tech represents only 1/5 of my emissions
 - Over half is me travelling
- A trip to San Fransisco = roughly 2 Tons of CO₂



Let's prioritize

My Emissions My Actions



i

My Relative Emissions

Annual Tonnes Pollution (CO₂e)

17,4

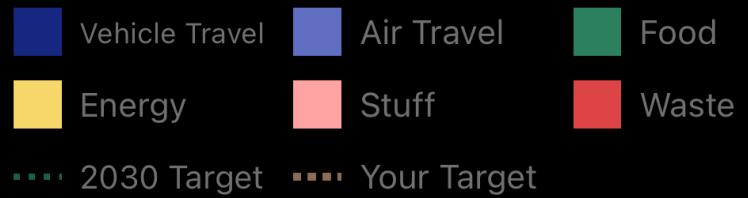
10,8

5,1

You

Netherlander

Global



Home



Actions



My Progress

My Emissions My Actions



i

My Relative Emissions

Annual Tonnes Pollution (CO₂e)

10,8

6,2

5,1

You

Netherlander

Global



Home



Actions



My Progress



We are not perfect. We get better every day



But we do need to be passionate



And bring the next generation with us



The Lengrand-LAmbert

Member #29769



6 months
climate positive



16.38t
of carbon reduction



263
trees in your forest

We can compensate for what we can't reduce.

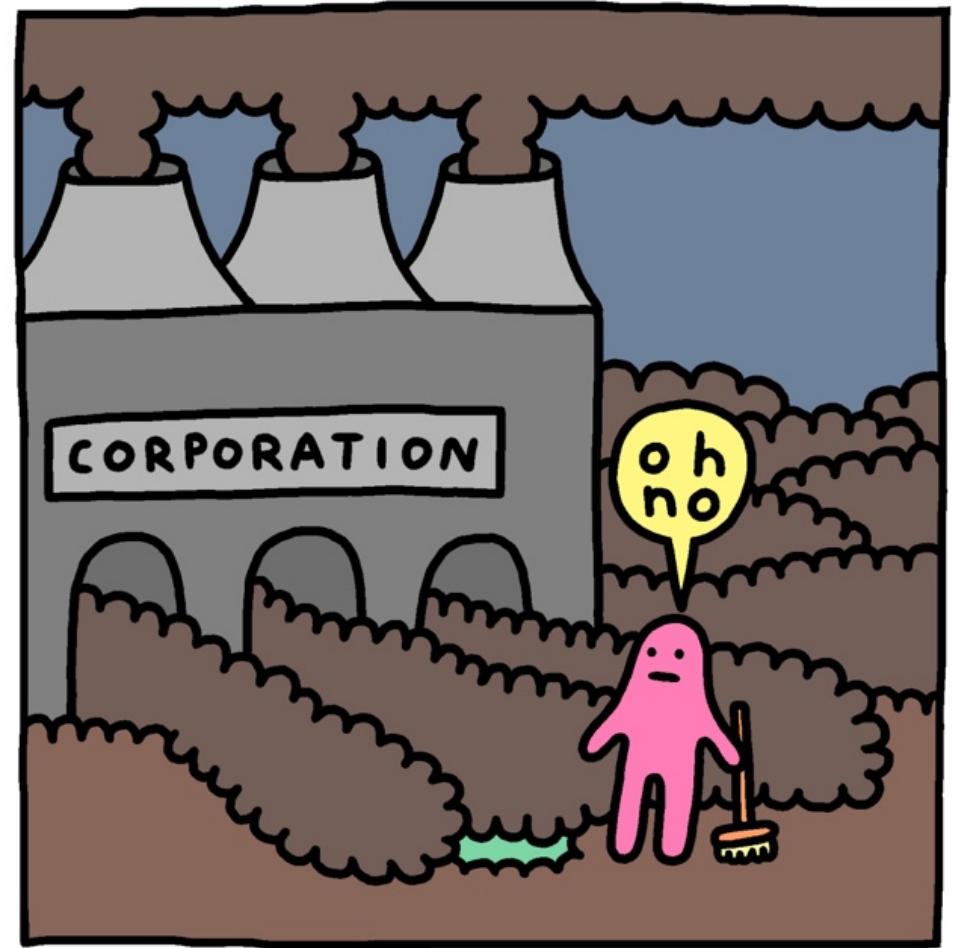
SOME ADDITIONAL THOUGHTS

Globally, the **richest 10%** are those with incomes above \$35,000 a year...

If we are not the change, who is ?

The richest 10% of the global population, are responsible for about 52% of global emissions ...

"We are just 1% of emissions".



webcomicname.com

**"It's the big corporations".
True but**

- We buy their products
- We work there
- We vote

Just 100 companies responsible for 71% of global emissions, study says

A relatively small number of fossil fuel producers and their investors could hold the key to tackling climate change



▲ An oil rig exploring for oil and gas. A new report says more than 50% of global industrial emissions since 1988 can be traced to just 25 companies. Photograph: Dazman/Getty Images/iStockphoto

Just 100 companies have been the source of more than 70% of the world's greenhouse gas emissions since 1988, according to a new report.

Amsterdam · May 10, 2021

Adyen launches Restore, enabling climate action at checkout



[Download the image above to use for your publication](#)

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How we became climate neutral

To move forward, we looked at the footprint we left behind

Carbon negative commitment

Removing carbon from the atmosphere is an essential way to slow the accumulation of greenhouse gases and mitigate our impact on a warming climate. Shopify is committed to investing **at least \$1 million USD each year into carbon sequestration.**

<https://www.shopify.com/about/environment> ::

[Environment - Shopify](#)



BEYOND MEAT®

OUR PRODUCTS

FOOD SERVICE

LEARN

COO

FIGHT CLIMATE CHANGE.

Unlike their ¼ lb U.S. beef counterparts, original Beyond Burgers can be made by generating 90% fewer Greenhouse Gas Emissions. *Univ. Of Michigan, 2018, Environmental impact of the original Beyond Burger vs ¼ lb. U.S. beef. Life Cycle Analysis

Decrement carbon: Stripe's negative emissions commitment



SATELLIGENCE

Lead the world to a net-zero future.

And many are committing

FINAL TIPS!

The research found **an hour of streaming emits the equivalent of about 55 grams of carbon dioxide into the atmosphere**, based on a user in Europe. About half the emissions come from the device used itself, with larger and older technology harming the environment the most. 11 Jun 2021

<https://fortune.com/2021/06/11/netflix-streaming-small-carbon-footprint/> :

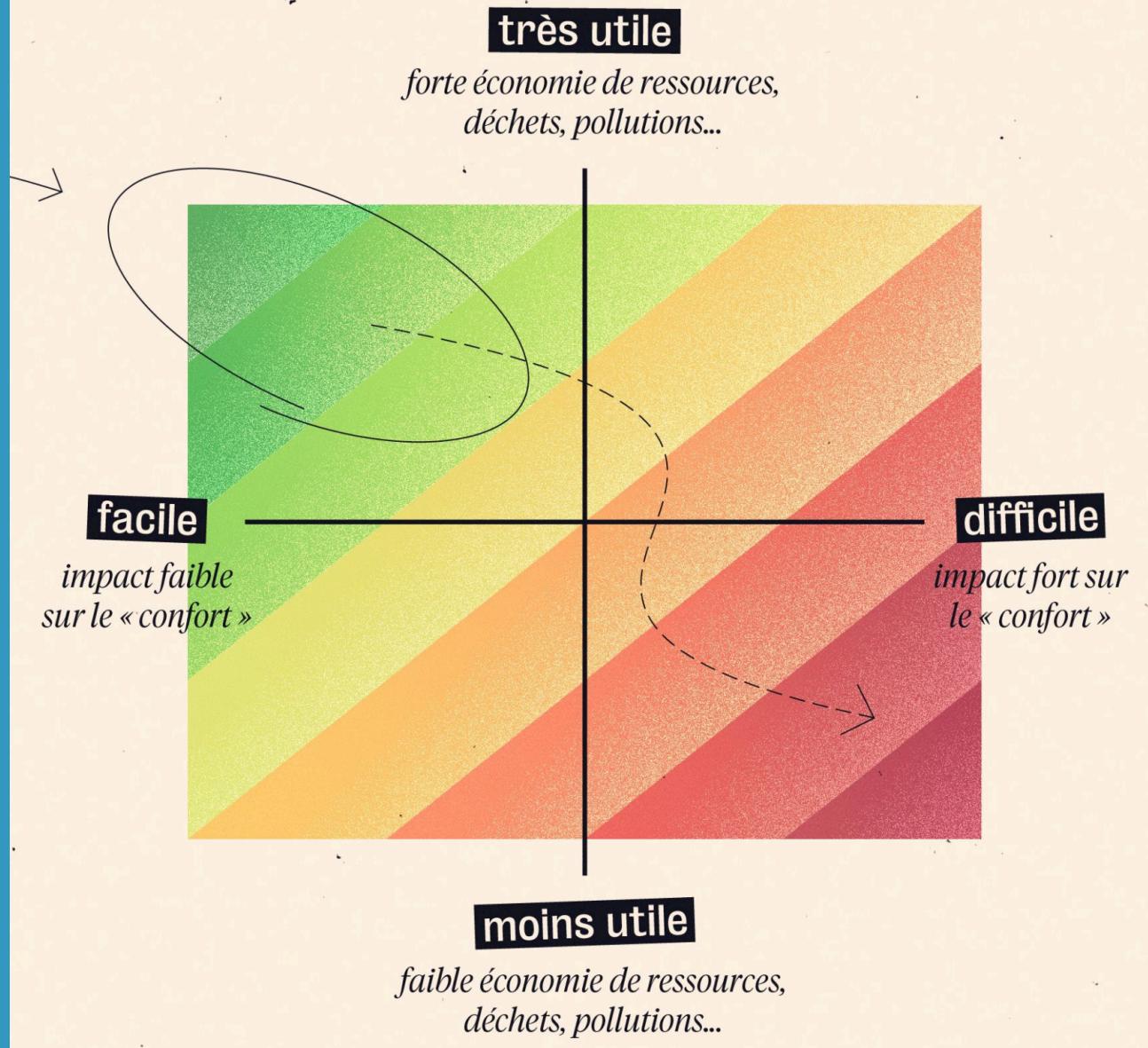
Netflix has a small carbon footprint according to Carbon Trust

Check your facts

Principles of Green Software Engineering

[Endorse the principles](#)[Join the newsletter](#)

Principles of Green Software Engineering



Prioritize

No dooming
Best time to be alive. Don't lose hope

It's **really** not too late, but we
need to act now.



REDUCE

REUSE

RECYCLE

SOURCES :

- <https://github.com/jlengrand/climate-change-quicky/>