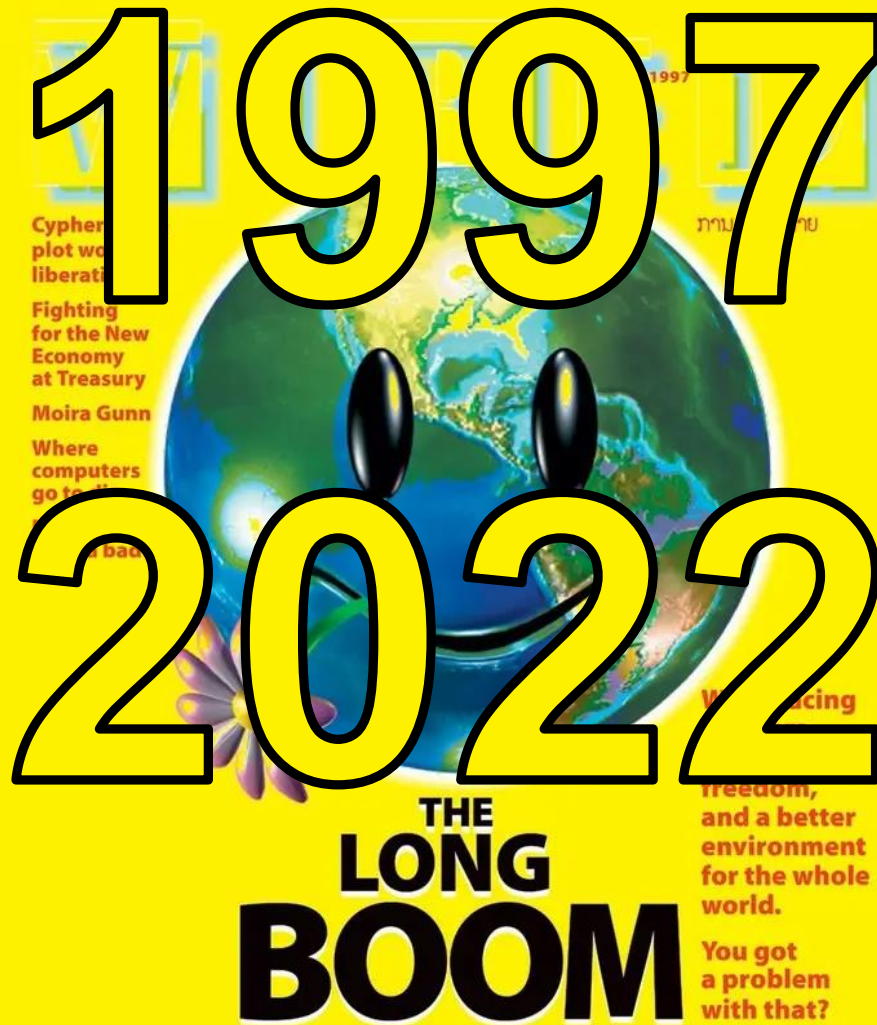


#WorldWideWaste
@gerrymcgovern



We're facing
25 years of
prosperity,
freedom,
and a better
environment
for the
whole world.

You got a
problem
with that?



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25 years of
prosperity,
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You got a
problem
with that?

- 2020: \$234.9 billion in
- online US retail sales
- 40% growth
- \$70.5 billion -- 30% --
expected to be returned

-  **FLIGHTS**
-  CAR HIRE
-  HOTELS
-  EVENTS & ACTIVITIES

- Return trip
- One way
- Apply promo code

From To

Search

 [Europe's Covid-19 Travel Documentation & Public Health Restrictions](#) [Read more](#)

HOME FOR CHRISTMAS

HOME FOR CHRISTMAS

Lockdown lifted.

[Book now](#) No change fee.
Test & go! Pre-departure Covid test available near you.



EXPLORE SANTORINI

GIFT CARDS

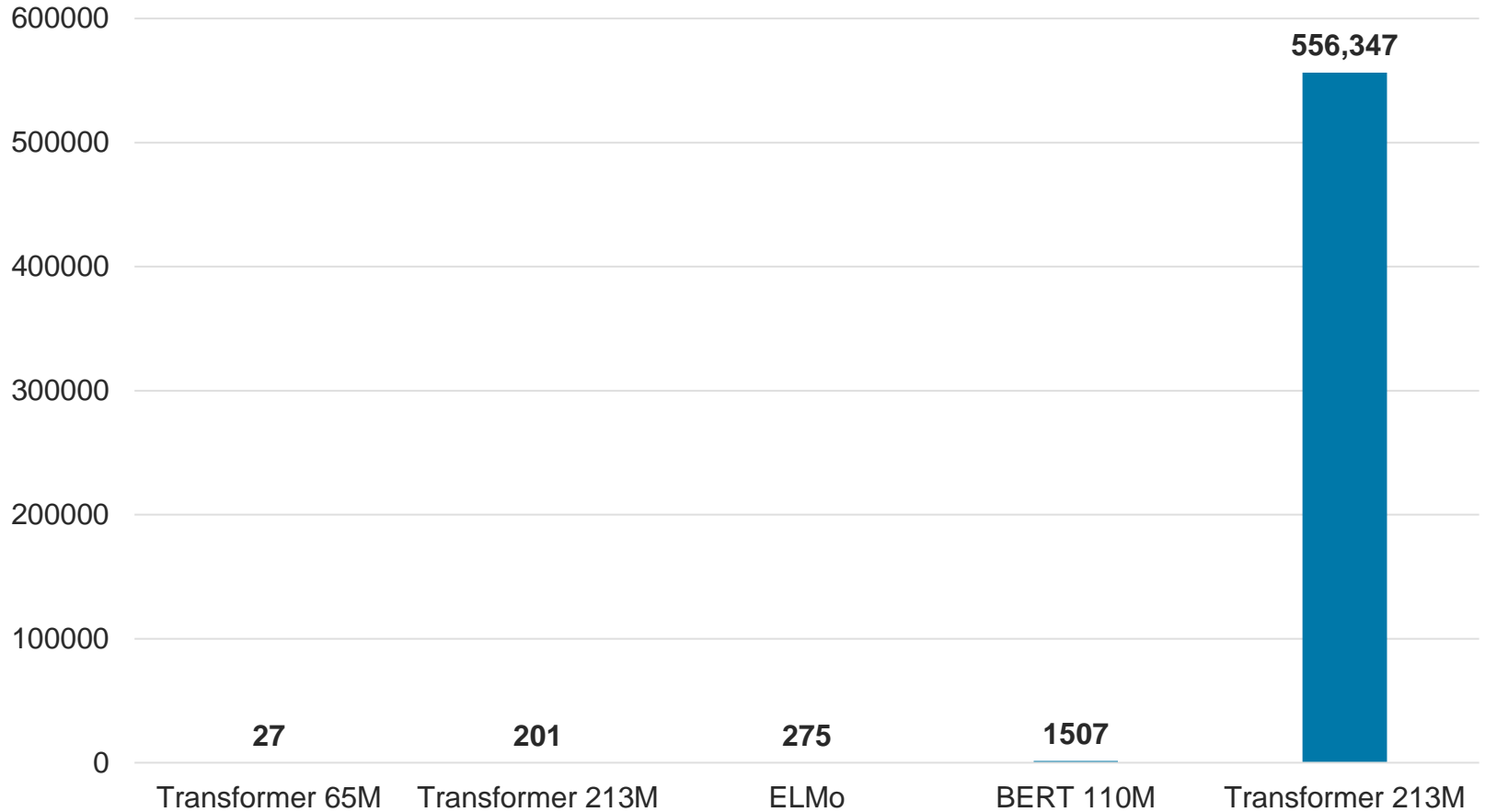
FLIGHTS





Timnit Gebru

kWh required to train AI models (2017 -2019)



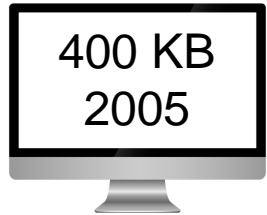


Uh oh! This web page is dirtier
than **56%** of web pages
tested

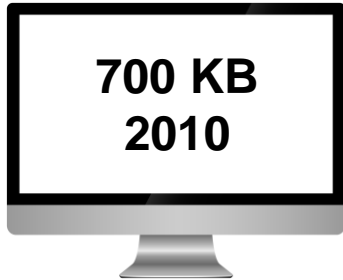
5 MB



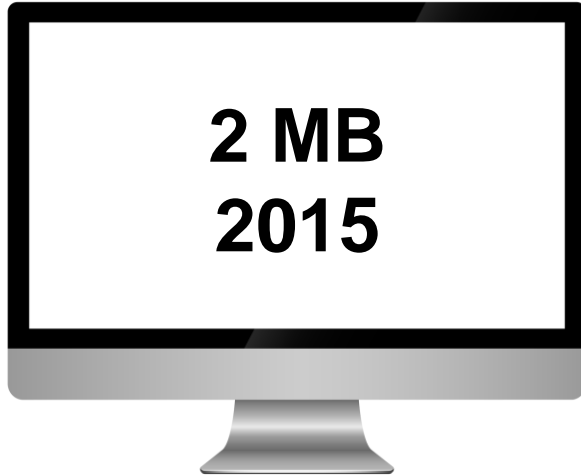
Oh my, **1.11g of CO₂** is produced every
time someone visits this web page.



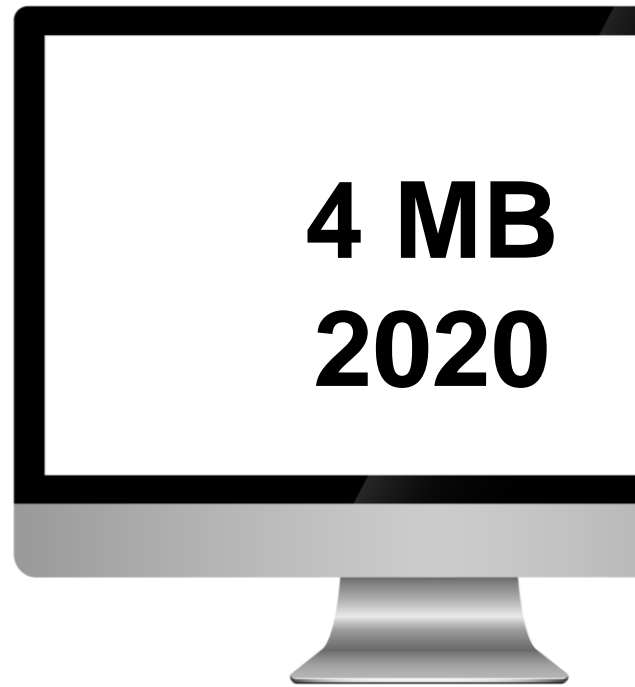
400 KB
2005



700 KB
2010



2 MB
2015



4 MB
2020

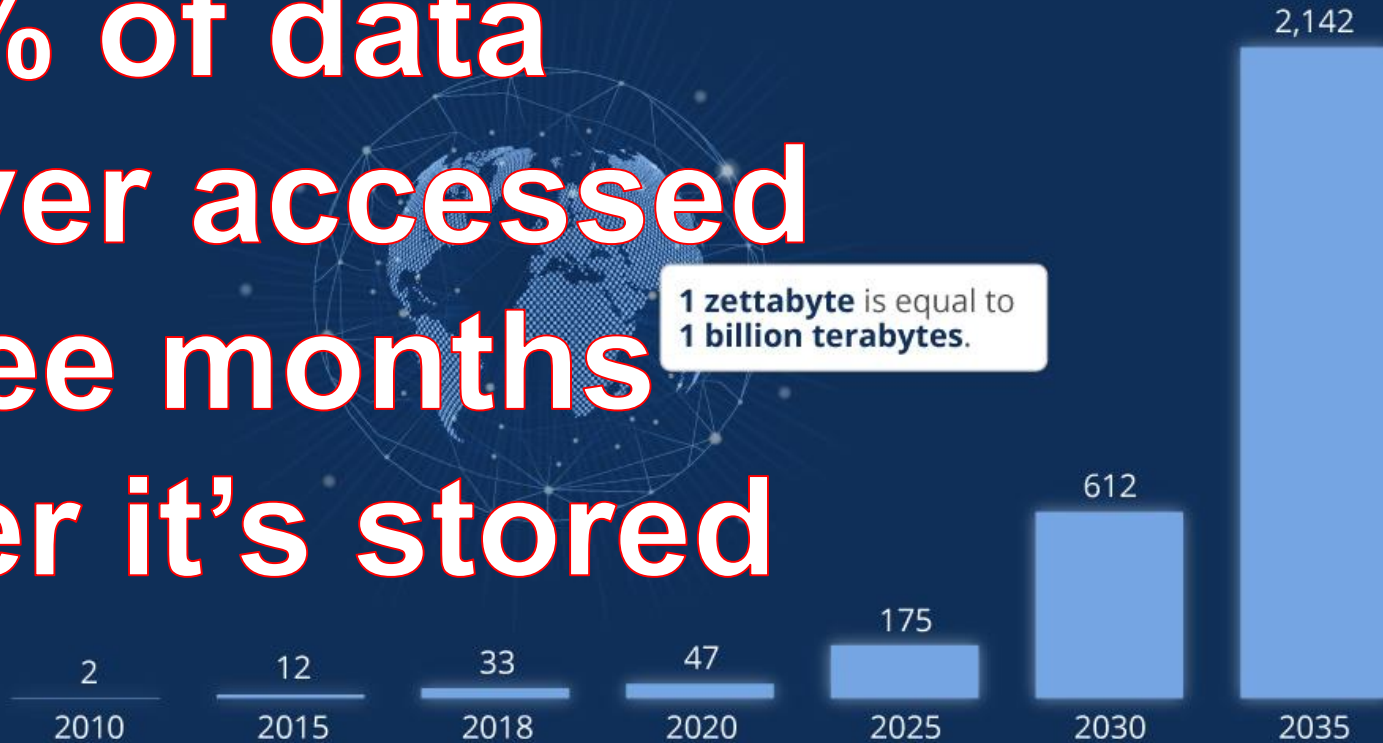
#WorldWideWaste
@gerrymcgovern

Global Data Creation is About to Explode

Actual and forecast amount of data created worldwide 2010-2035 (in zettabytes)

90% of data
never accessed
three months
after it's stored

1 zettabyte is equal to
1 billion terabytes.



@StatistaCharts

Source: Statista Digital Economy Compass 2019

statista



Courtesy of Wikimedia Commons

Agbogbloshie
scrap yard
in Ghana.

- ❑ **2019: 54 million tons of e-waste**
- ❑ **16 out of 17 rare earth materials used in smartphones**
- ❑ **Viruses increasing because of greater habitat disturbance**

The fumes
are toxic
as the
e-waste
is “recycled”



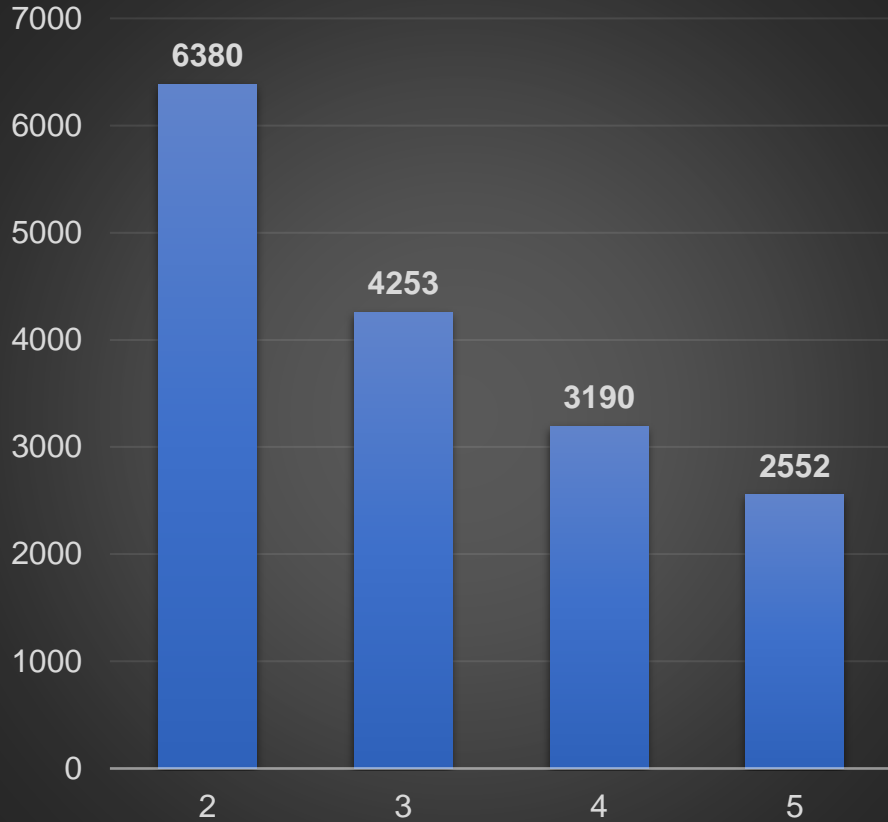
iPhone Model	Carbon Emissions (Kg of CO2)
iPhone 11	72
iPhone X	79
iPhone 8	57
iPhone 7	56
iPhone 6	95
iPhone 5s	65

<https://www.apple.com/uk/environment/>

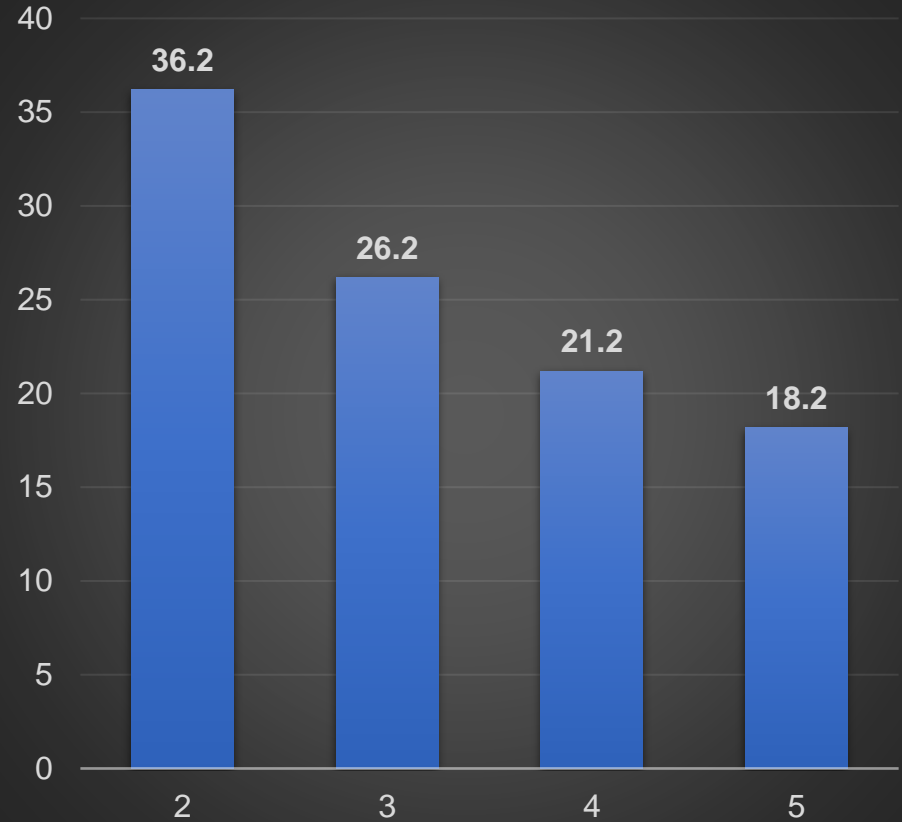
Hold Onto Your PHONE!

Source: Green Alliance

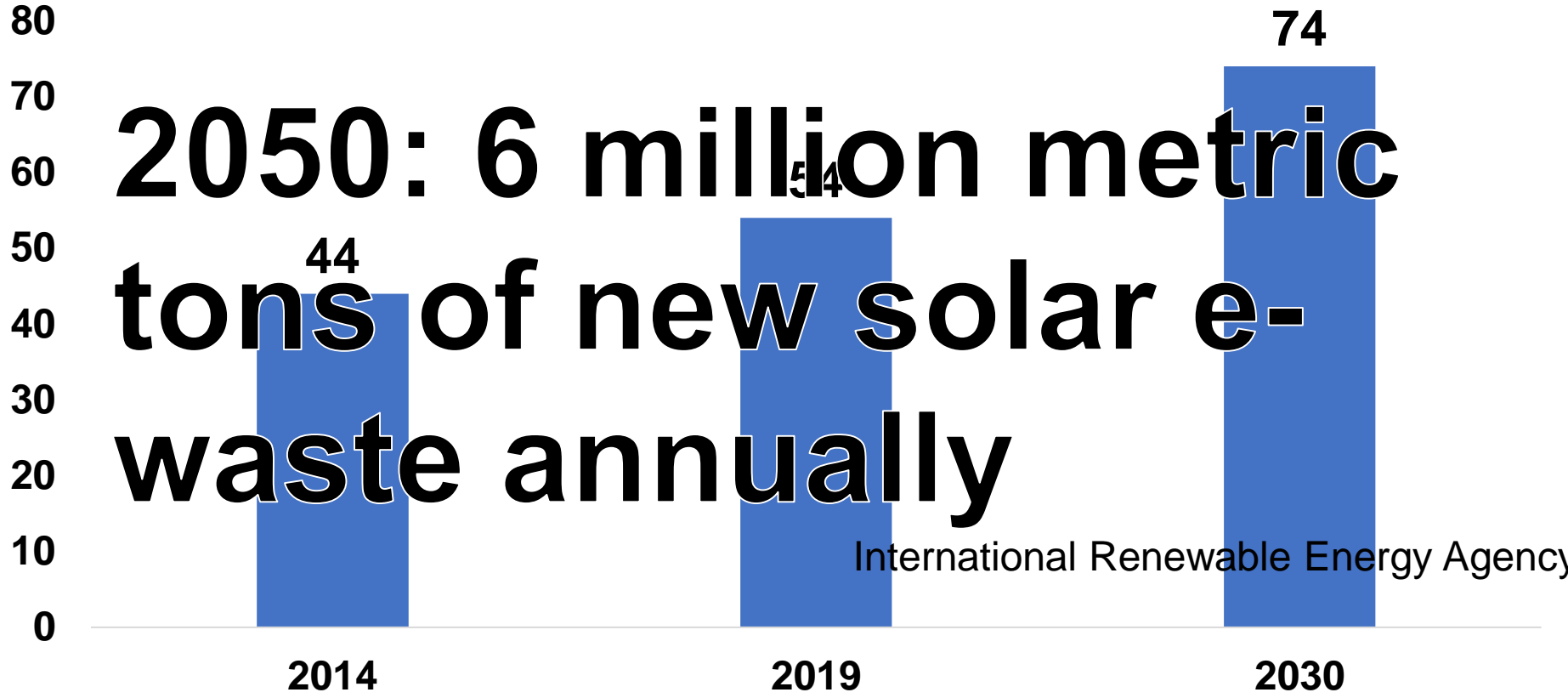
Water footprint per year (liters)



Carbon footprint per year (KG CO2)



E-waste: Million metric tons

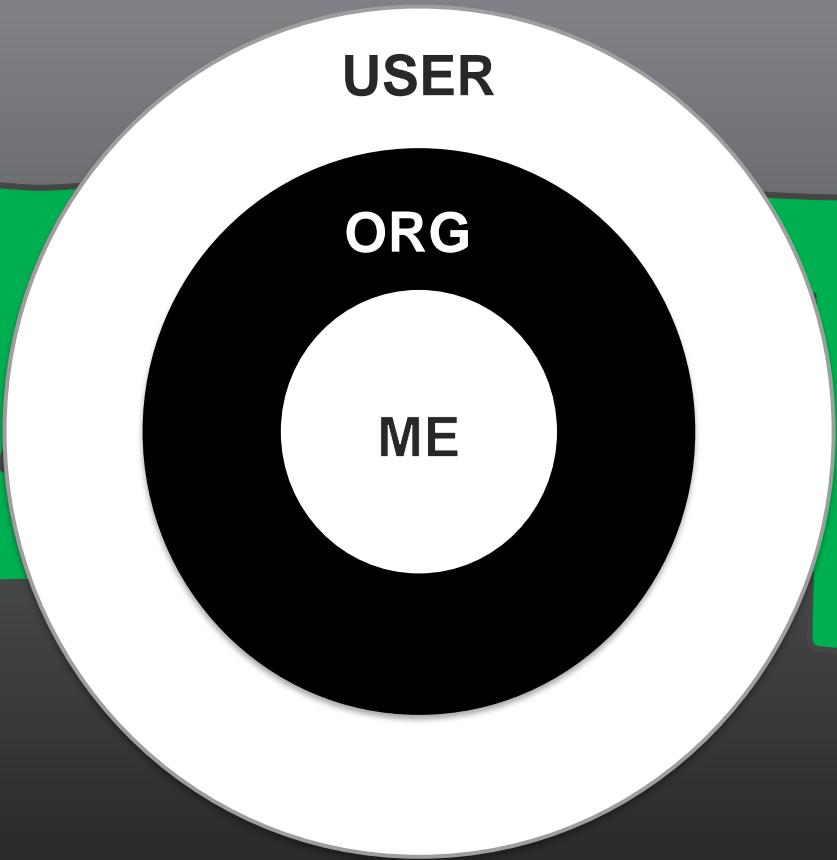


2050: 6 million metric tons of new solar e-waste annually

International Renewable Energy Agency /

- 
- An aerial photograph of a large solar farm. The solar panels are arranged in neat rows across a flat, open landscape. The text is overlaid on the image in a white, bold, sans-serif font with a blue outline. The text is arranged in four lines, each starting with a decorative symbol.
- ❖ Solar panel recycling yield: \$3
 - ❖ Cost to recycle: \$12 - \$25
 - ❖ (Not counting transportation.)
 - ❖ Cost to dump: \$1

TEAMWORK



SOCIETY

...ING
Impact (CO₂) 0,29 kg
Water 33,27 m³
Energy 12,41 mJ

MANUFACTURING
Impact (CO₂) 1,12 kg
Water 0,50 m³
Energy 20,00 mJ

TRIMS
Impact (CO₂) 0,24 kg
Water 1,30 m³
Energy 5,40 mJ

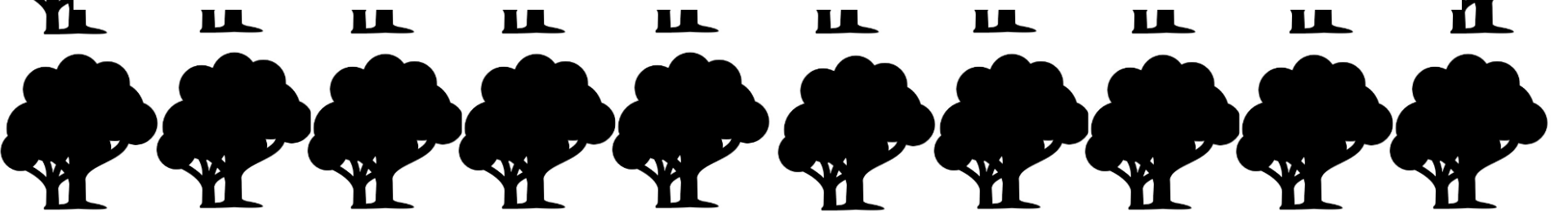
TRANSPORT
Impact (CO₂) 0,13 kg
Water 0,03 m³
Energy 5,14 mJ

TRUE COST
Impact (CO₂) 0,11 kg
Water 0,00 m³
Energy 1,20 mJ

180 WE
1,89 kg
35,10 m³
44,1 mJ



- **Danny van Kooten, Dutch programmer**
- **Developed a Mailchimp plugin for WordPress**
- **Made a 20 KB reduction in code**
- **2 million websites use his plug-in**
- **Monthly CO₂ reduction = 59,000 kilograms**
- **5,900 trees saved every month**

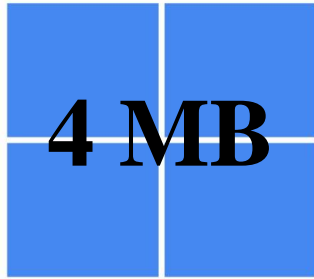


Pixel density



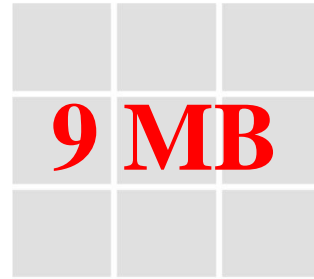
1x

1 MB



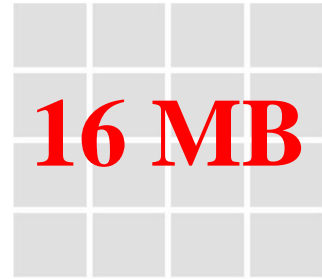
2x

4 MB



3x

9 MB



4x

16 MB

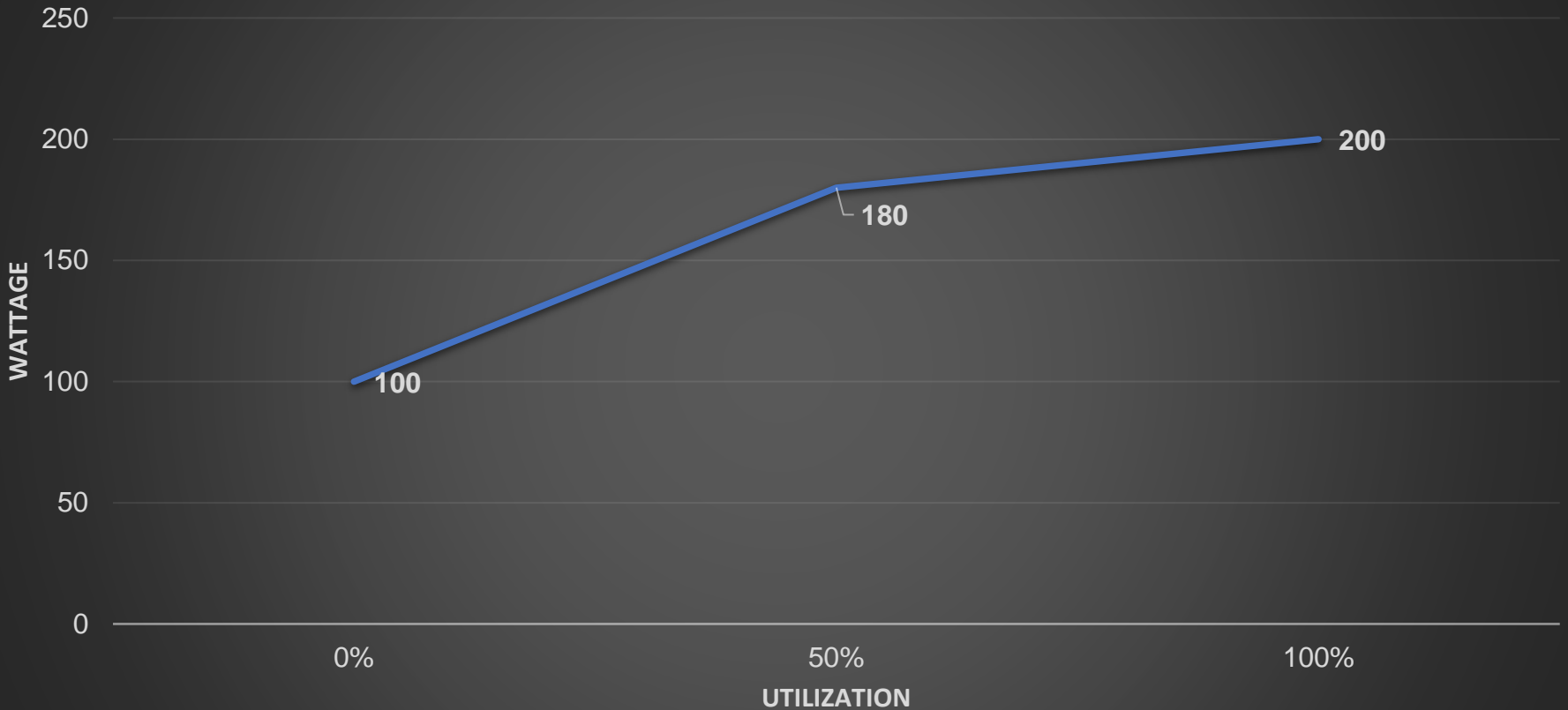
**1.4 billion photos
taken every year**

**Human eye can't
see the difference**



1. Buy a laptop, not desktop
2. Best energy ratings
3. Keep it as long as possible
4. Don't use large screens
5. Reduce monitor brightness
6. Do not use screen savers
7. Monitor off after 5 mins max
8. Sleep after 10 mins max
9. Shut down when not using
10. Shut down at night
11. Switch everything off at night

Turn stuff OFF (Desktop power usage)





1. Minimize notifications
 2. Disable location services
 3. Remove unused apps
 4. Think hard for slow loading
 5. Keep battery level above 50%
 6. Short charges are better
 7. Use wire to charge
 8. ... screen
 9. Use data in
 10. Stream in standard definition
 11. ... when charged. Plug out
- # HOLD
- # ONTO

#WorldWideWaste
@gerrymcgovern

Transferring DATA

Form	CO2
Wired	1
WiFi	
3G	
4G	
5G	

3,000 times more
polluting to save to
the cloud than to
save to a local drive

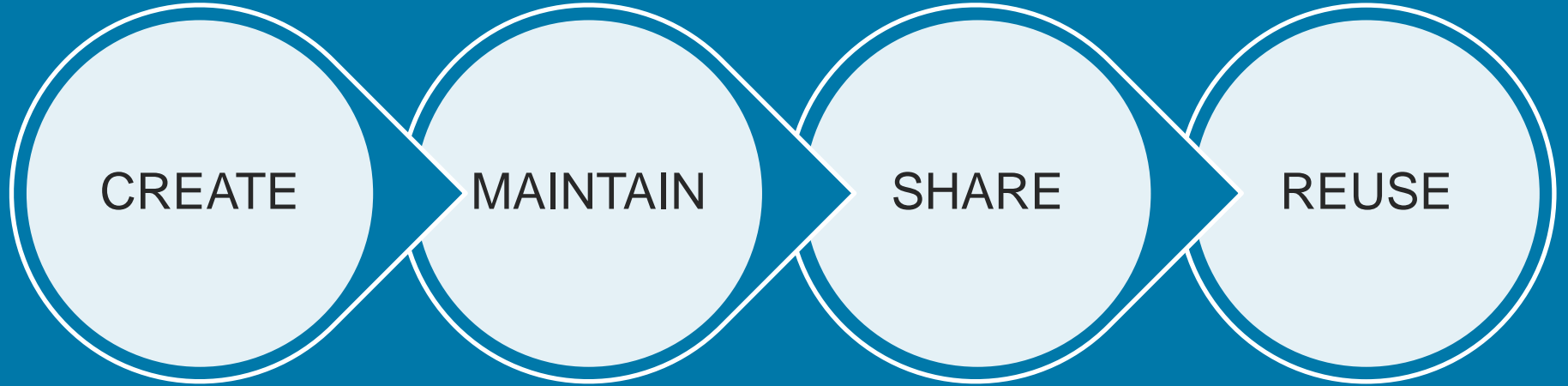
Sending the message: “Thanks very much for your message.”

Form	CO2
SMS	1
Email	
Audio	
Standard video	
High Def video	

1-hour call, 2 people

Audio-only	36 MB
Standard video	270 MB
High definition	540 MB
Ultra-high definition	1.35 GB

CIRCULAR ECONOMY



Digital Waste Audit

- 1) Culture
- 2) Communities
- 3) Work from home
- 4) Computers, smartphones
- 5) Website design
- 6) App design
- 7) Metadata, information architecture
- 8) Data
- 9) Communication

Culture

		Actual Score	Optimal Score	Weight	Total Actual Score	Total Optimal Score
	Culture					
	Do people tend to work in multi-disciplinary, cross functional teams?		5	100	0	500
	Are people responsible for everything they create, from the moment of its creation to its final archiving or deletion? Traceability of content or code.		5	100	0	500
	Are people encouraged to think twice before they create, whether code, content, emails, etc. That sometimes the best thing is to do nothing.		5	100	0	500
	Does organizational culture judge people on more than simply what they create, what they launch, what they produce? Does it avoid a culture where people feel they must be seen to be producing, meeting deadlines, regardless of the quality?		5	100	0	500
	Does the organization seek to only create and collect data that has a clear and compelling use, and that it does the minimum tracking of online behavior possible?		5	100	0	500



World Wide Waste

gerrymcgovern.com/www

