



KESKKONNAAGENTUUR

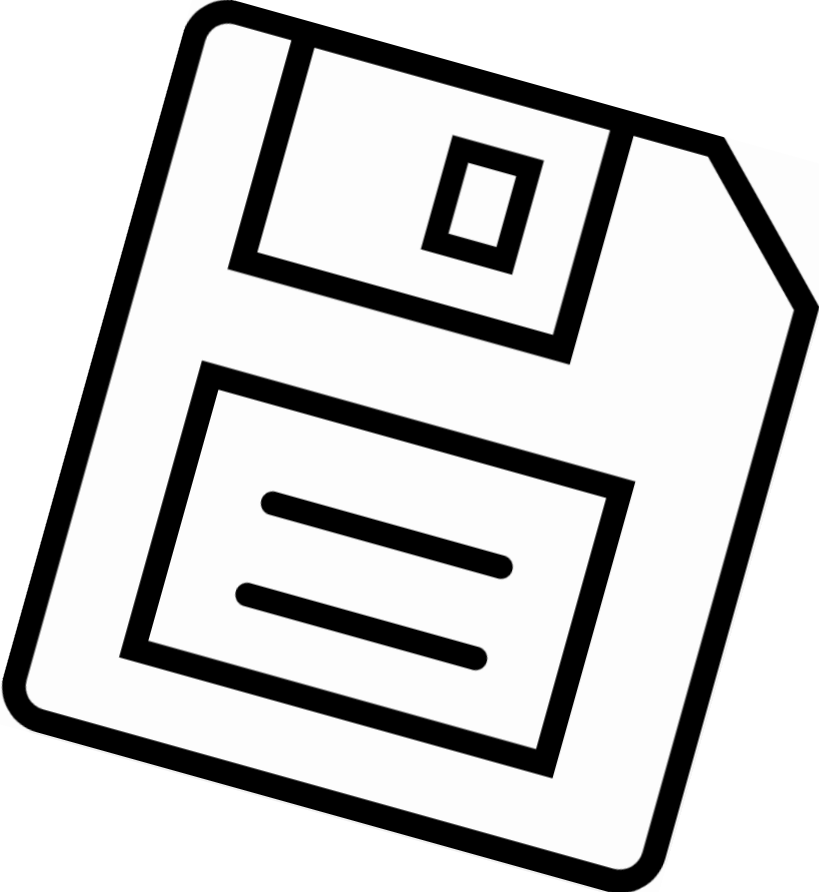
KESKKONNATEADLIKUD VALIKUD IGA ILMAGA

Digitaalne jalajälg – nähtamatu prügihiiglane

Jana Põldnurk

Ringmajanduse Roheaed 2023, 1. november





zetta	[Z]	10^{21}	=	1 000 000 000 000 000 000 000 000
exa	[E]	10^{18}	=	1 000 000 000 000 000 000 000
peta	[P]	10^{15}	=	1 000 000 000 000 000 000
tera	[T]	10^{12}	=	1 000 000 000 000
giga	[G]	10^9	=	1 000 000 000
mega	[M]	10^6	=	1 000 000
kilo	[k]	10^3	=	1 000

A DAY IN DATA

The exponential growth of data is undisputed, but the numbers behind this explosion - fuelled by internet of things and the use of connected devices - are hard to comprehend, particularly when looked at in the context of one day

500m

tweets are sent every day

Twitter



4PB

of data created by Facebook, including

350m photos

100m hours of video watch time

Facebook Research

294bn

billion emails are sent

Radical Group

320bn

emails to be sent each day by 2021

306bn

emails to be sent each day by 2020

3.9bn

people use emails

4TB

of data produced by a connected car

Intel

DEMYSTIFYING DATA UNITS

From the more familiar "B" or "megabyte", larger units of measurement are more frequently being used to explain the masses of data.

Unit	Value	Size
b	bit	0 or 1
B	byte	8 bits
KB	kilobyte	1,000 bytes
MB	megabyte	1,000 ² bytes
GB	gigabyte	1,000 ³ bytes
TB	terabyte	1,000 ⁴ bytes
PB	petabyte	1,000 ⁵ bytes
EB	exabyte	1,000 ⁶ bytes
ZB	zettabyte	1,000 ⁷ bytes
YB	yottabyte	1,000 ⁸ bytes

*In some cases "T" is used as an abbreviation for bits, while in other cases "T" represents bytes.

65bn

messages sent over WhatsApp and two billion minutes of voice and video calls made

Facebook



463EB

of data will be created every day by 2025

McKinsey

95m

photos and videos are shared on Instagram

Instagram Business



Searches made a day

5bn

Searches made a day from Google

3.5bn

Search Insights



ACCUMULATED DIGITAL UNIVERSE OF DATA

4.4ZB

44ZB

28PB

to be generated from wearable devices by 2020

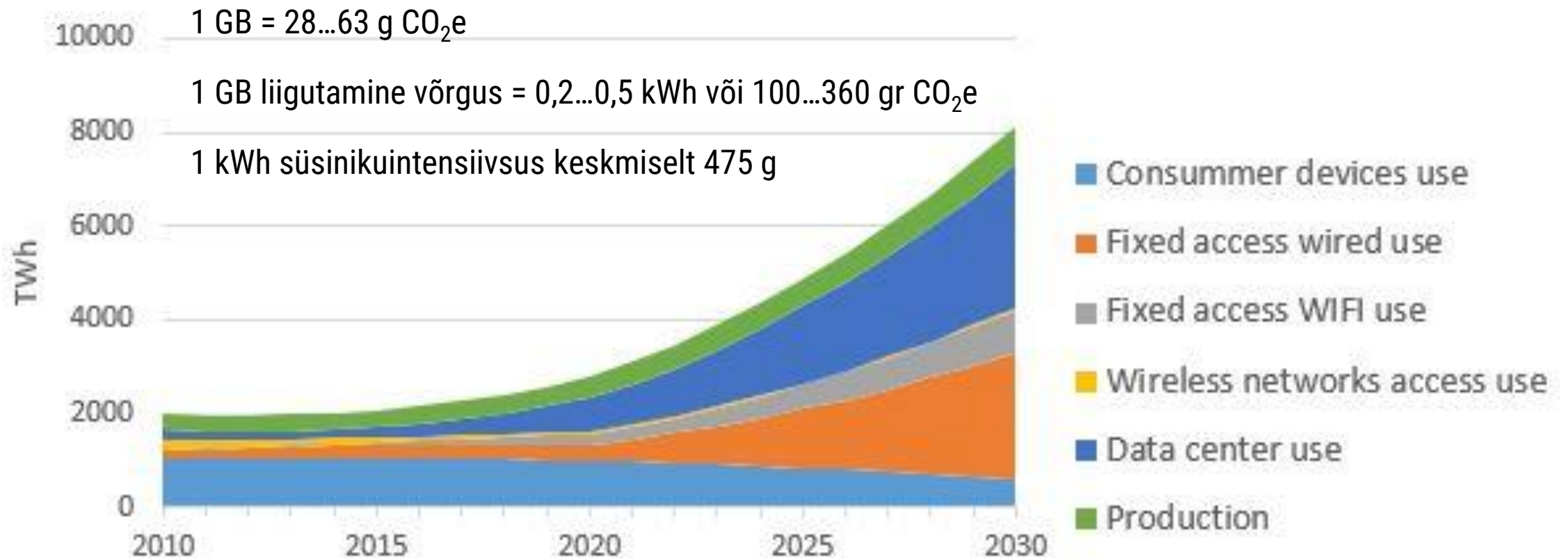
Statista



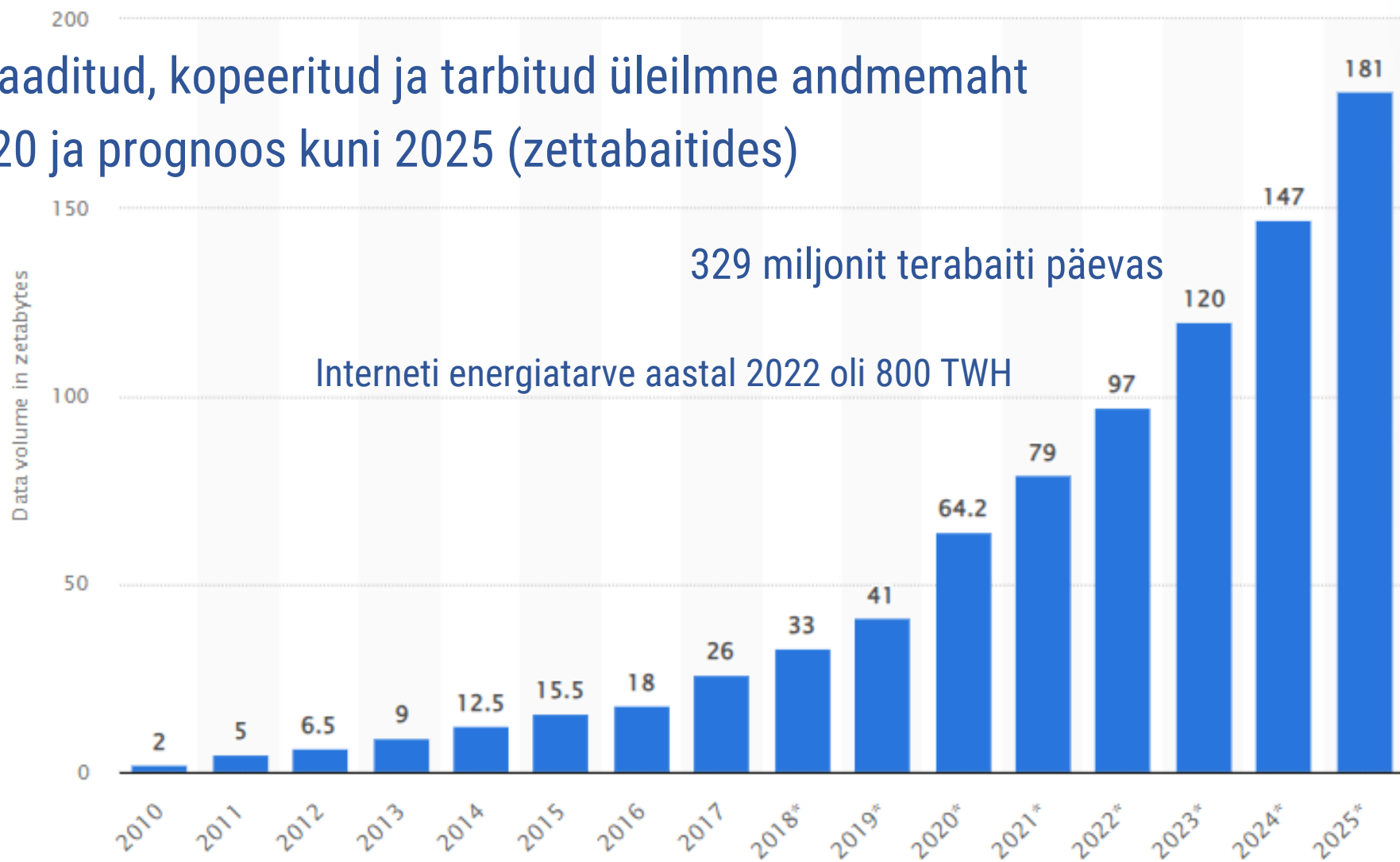
Interneti kasutajate arv 1996...2022, ca 65% elanikkonnast



IKT sektori energiatarbimine moodustab aastaks 2023 kuni 20% globaalsest energiavajadusest ja kuni 6% CO₂ heitmest



Loodud, alla laaditud, kopeeritud ja tarbitud üleilmne andmemaht 2010 kuni 2020 ja prognoos kuni 2025 (zettabaitides)



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[Additional Information](#)

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(Discovery Magazine, 2007)

40 petabaiti internetti = 0,2 miljondikku untsi

2023 → 120 ZB = 0,0006 untsi ehk **0,17 grammi**

(John Kubiawicz, 2011)

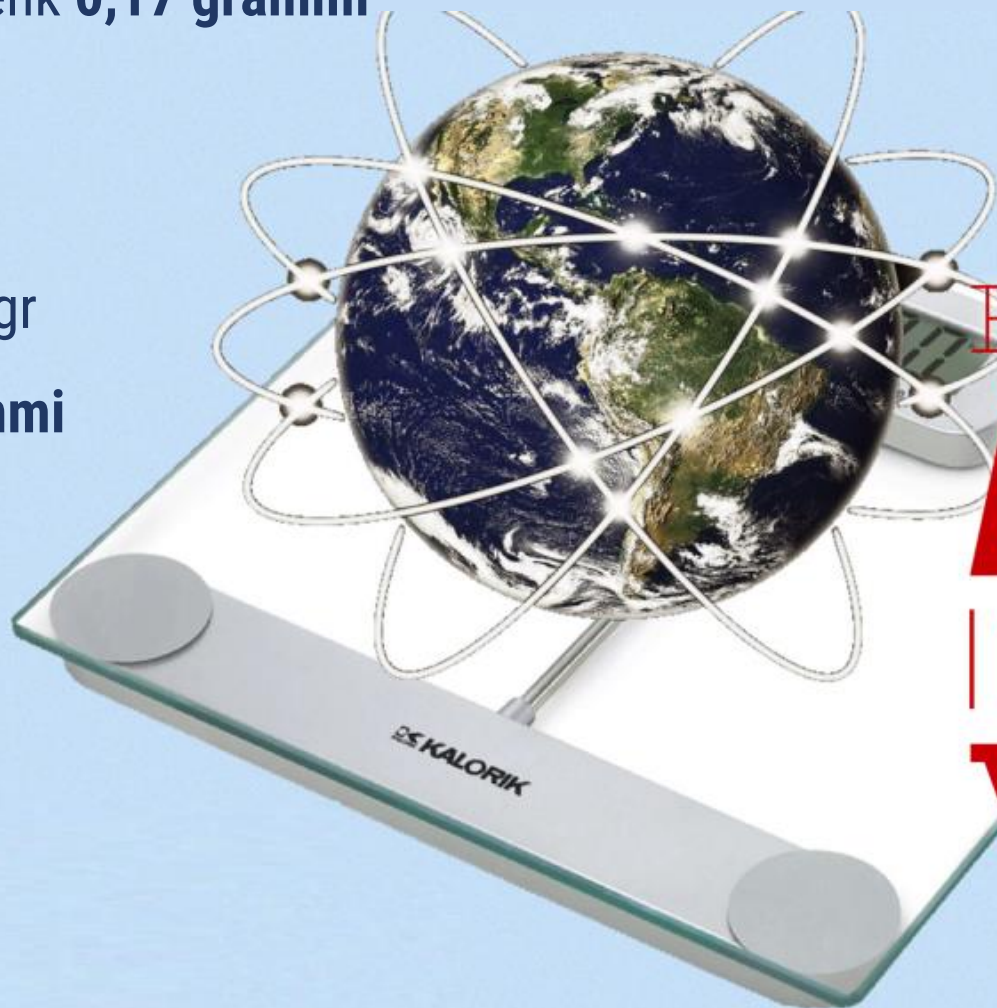
4GB = 0,00000000000000000001 gr

2023 → 120 ZB = **0,00003 grammi**

(Russell Seitz, 2006)

2 untsi jagu elektrone

2023 → **284 kg** elektrone



HOW MUCH
**DOES THE
INTERNET
WEIGH?**



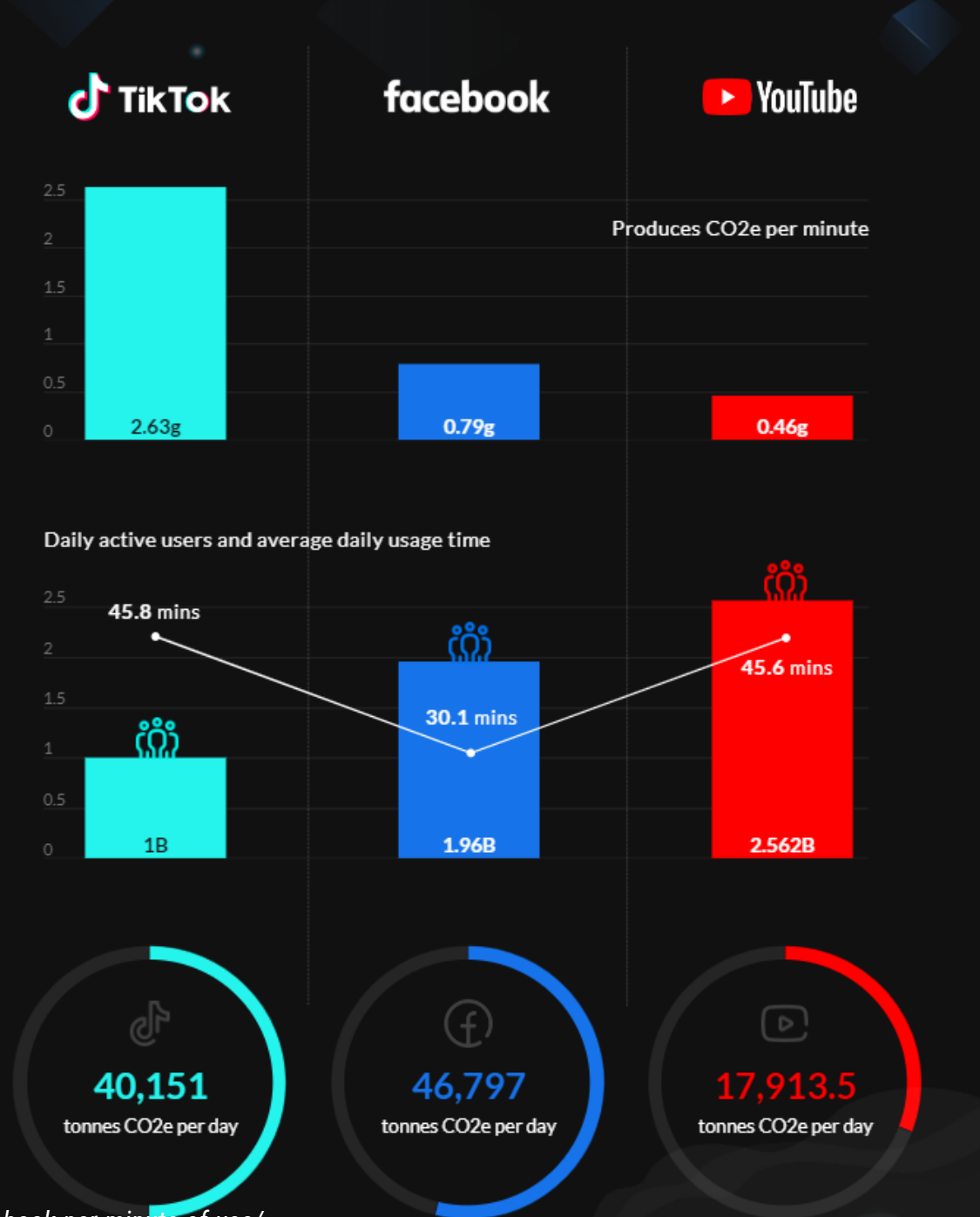
Kõik kolm kokku toodavad aastas

17 080 905 tonni CO₂e

Üks London – New York edasi-tagasi ots
toodab 1,7 tonni CO₂e

FB ja TikTok'i kasutuse üheaastase CO₂
ekvivalendiga saaks terve inimkonna
lennutada Londonist New York'i ja
tagasi

30 minutit Netflixi vaatamist tekitab 1,6
kg CO₂, sama kui sõita autoga 6,4 km





Digiringmajandus – riulirämps

Loo süsteem, kustuta kohe
(digi hügieen nagu igapäevane
hambapesu), vabasta ruumi

Kustuta vanad versioonid

Ära paljunda faile, ära saada
meiliga vaid jaga asukohta, ära
laadi alla

Tee vähem pilte/vidosid





Digiringmajandus – võrgurämps

Digipuhkus 😊

Hoia pilves vaid hädavajalikku,
ülejäanu võid „riiulisse“ panna

Lülita välja kaamera, vähenda striimi
kvaliteeti kui võimalik

Laadi üles **üks hea** mitte kümme
halba pilti/videod

Pole vaja tänada e-mailiga, kui väga
tänada tahad, siis täna ette



KESKKONNAAGENTUUR

KESKKONNATEADLIKUD VALIKUD IGA ILMAGA

See ettekanne kaalub 139 gr CO₂e

#keskkonnateadlik

#ringmajandus

#igailmaga

