How to Save Energy in Your Digital Life

How Does My Digital Life Consume Electricity?
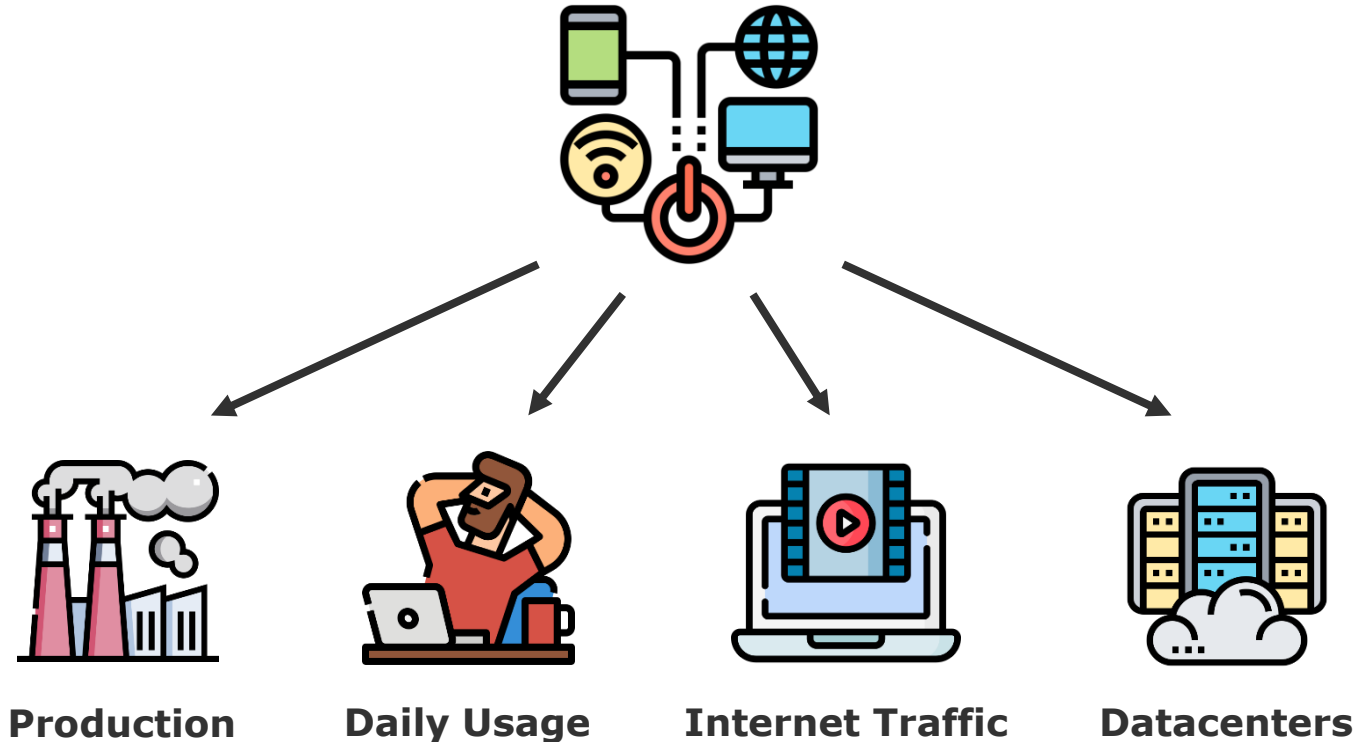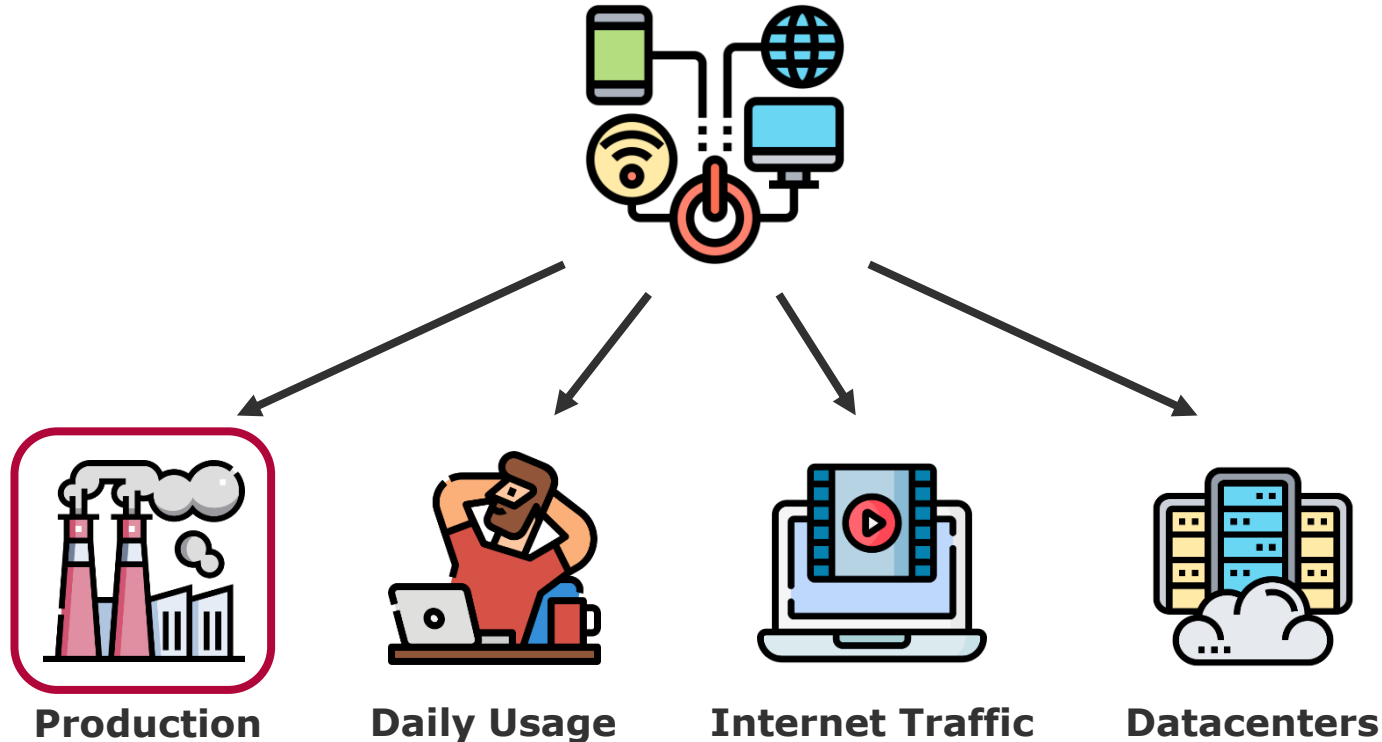
Production

Daily Usage

Internet Traffic

Datacenters

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Chart **3**

Manufacturing

"The real energy cost of an iPhone 6 is not charging its battery, [...] it is creating the phone."

"Embodied Energy": The sum of energy required to produce any goods

Use devices longer!

Buy long-lasting products

- Higher Quality
- Can be repaired
- Long-lasting Support (Updates)
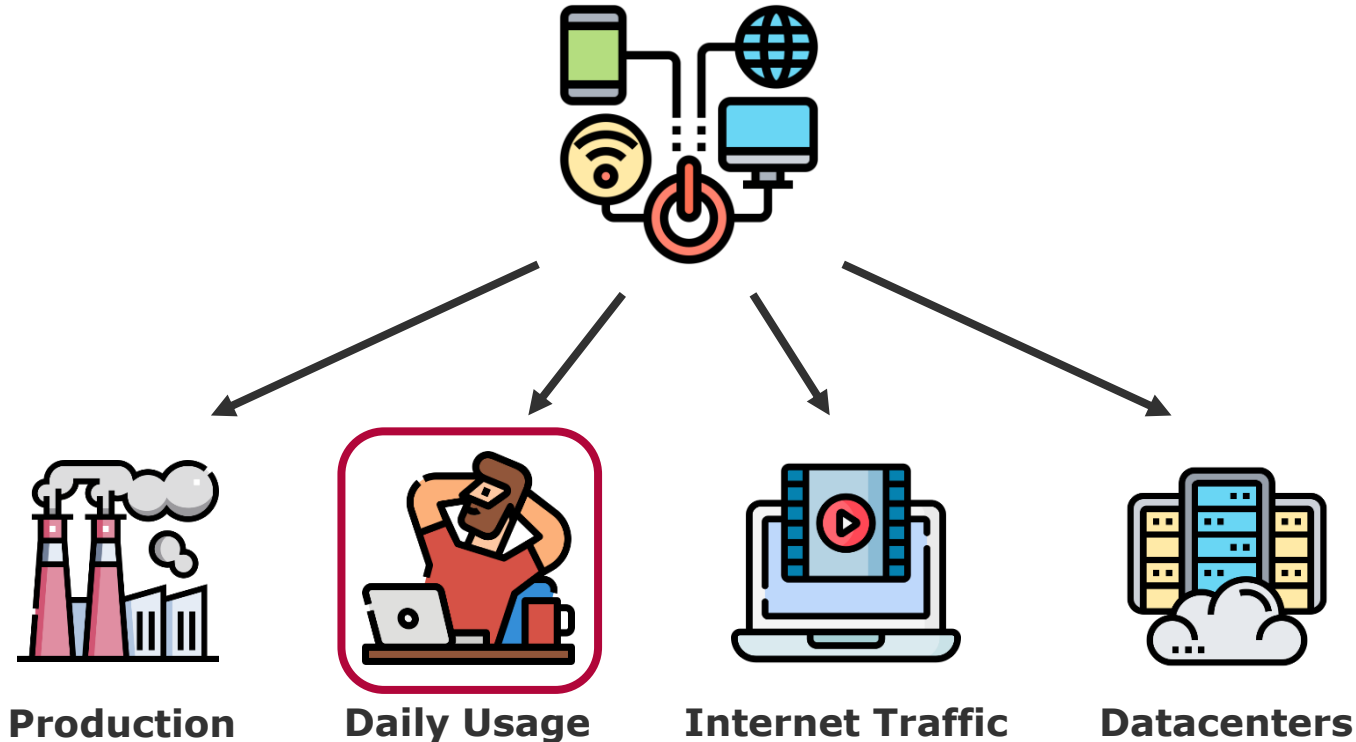
Consider manufacturers' energy consumption

- Do they use renewable energy?
- Are their subcontractors eco-conscious?

How Does My Digital Life Consume Electricity?

Production   **Daily Usage**   **Internet Traffic**   **Datacenters**

Usage of Electronic Household Devices

In 2019, 24% of the total power usage in Germany was caused by private homes. 17% of that were caused by private electronic devices.

How to Save Energy:

- Unplug electric devices over night
  - Computer, TV, WiFi, …
- Use energy-saving devices
  - LEDs instead of lightbulbs, look out for energy consumption when buying laptops and other devices
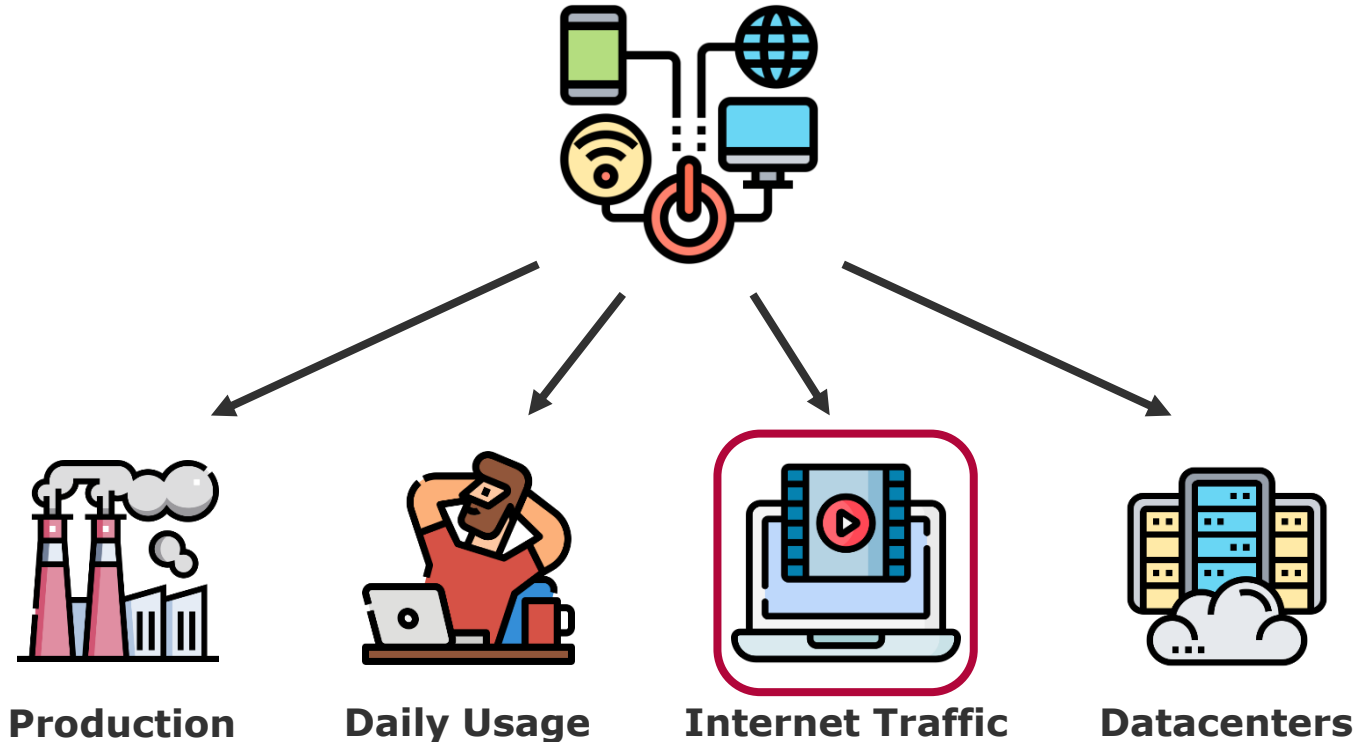- Do not use screensavers

Also: Get a renewable energy contract!

How Does My Digital Life Consume Electricity?

Production

Daily Usage

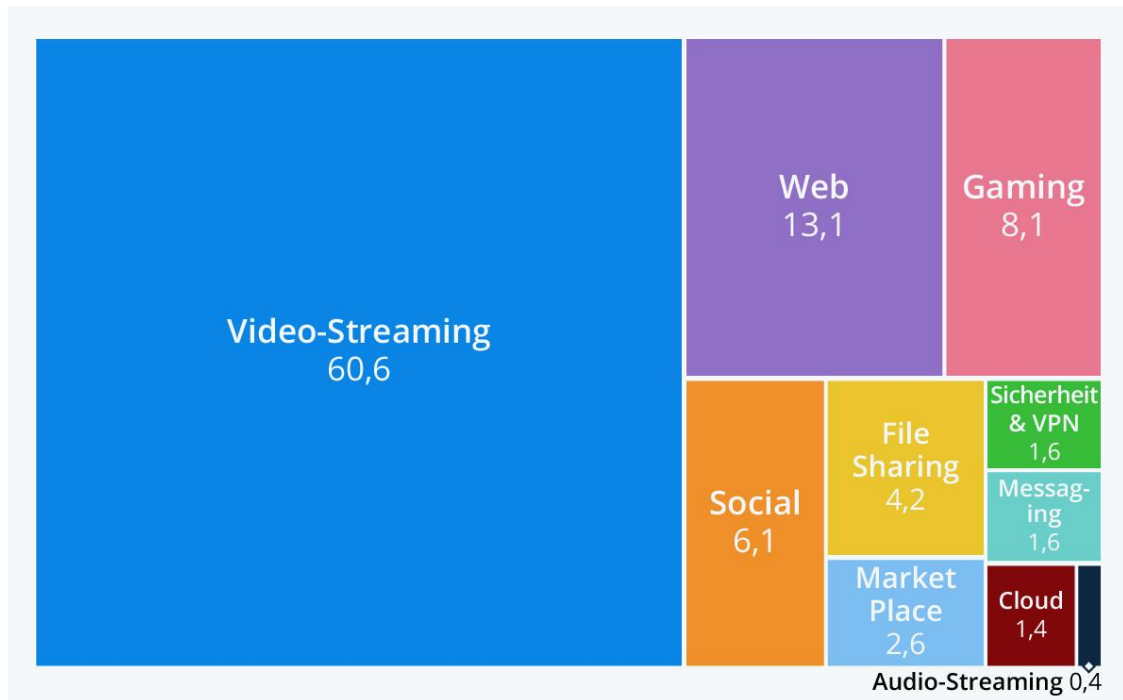**Internet Traffic**

Datacenters

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Chart **7**

Data Transmission Through the Internet

The Internet is responsible for 3.7% of global CO_2 emissions.

Video streaming alone accounts for 61% of those emissions.

Data Transmission Through the Internet

What We Can Do:

- Less streaming (especially videos)
  - Download files you use regularly
- Streaming music without video
- Set lower resolution when streaming audio and video
- If possible, do not use a webcam during video conferences
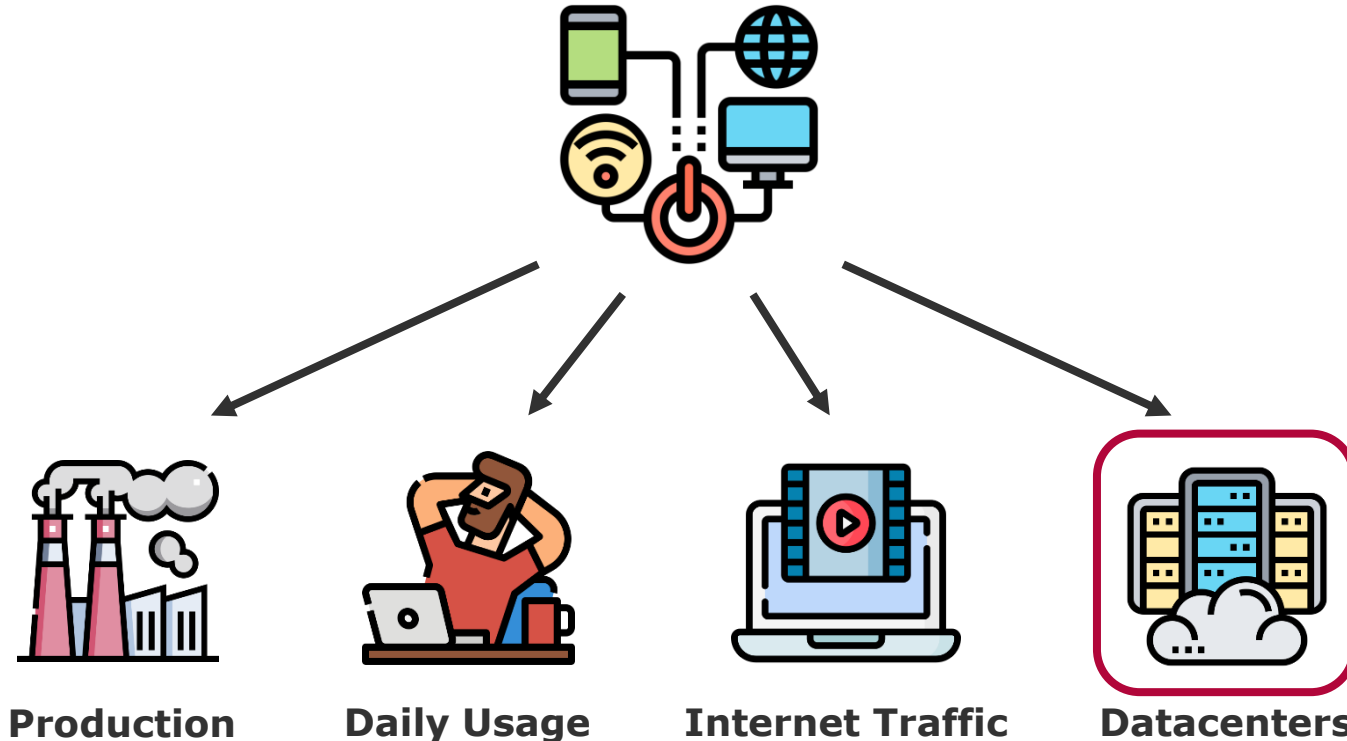
Generally, reduce "garbage data":

- Delete unnecessary emails, unsubscribe newletters

How Does My Digital Life Consume Electricity?

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Datacenters

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Chart **10**

Operating Datacenters

On-Demand Services

⇒ Servers need to be running constantly

Big Companies

⇒ Need big datacenters

⇒ Many datacenters are not using renewable energy

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Chart **11**

Operating Datacenters: Examples

Google

- CO2-neutral since 2007
- Goal: No emissions by 2030

amazon

- Currently 42% renewable energy sources
- Goal: 100% renewable energy sources by 2025
- Goal: No emissions by 2040

ECOSIA

- Already has negative CO2 balance

NETFLIX

- Aims to compensate energy usage

Operating Datacenters

What We Can Do:

- Switch to eco-friendly search engine (e.g. Ecosia)
- Look out for eco-friendly streaming services and settings
- Store less data in clouds
  - Photos, music, emails, …

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Chart **13**

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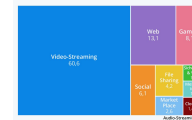
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Daily Usage

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Data Transmission

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Operating Datacenters: Examples

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Chart **16**