Why do we need a sustainable digitization?

Smart Green Infrastructure

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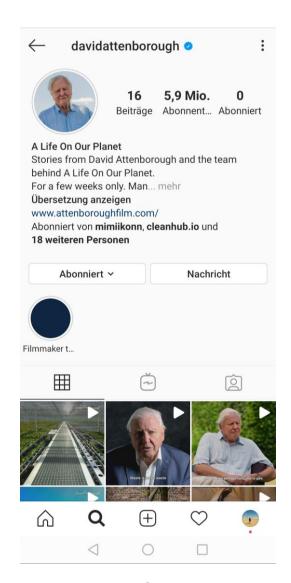
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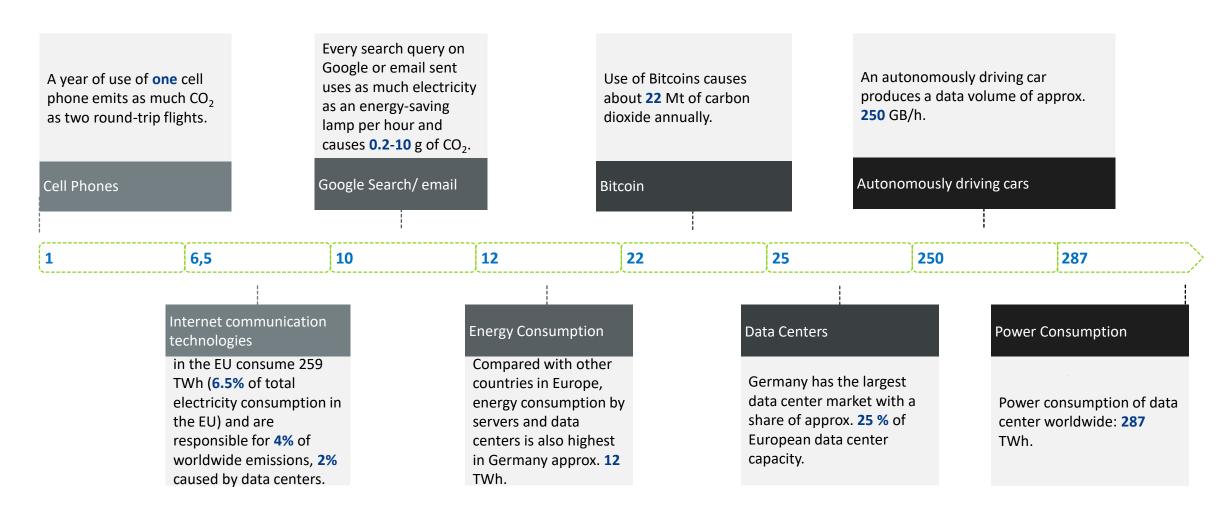
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Increasing Digitization

The increasing digitization in all areas is resulting in an increasing need for processing power.

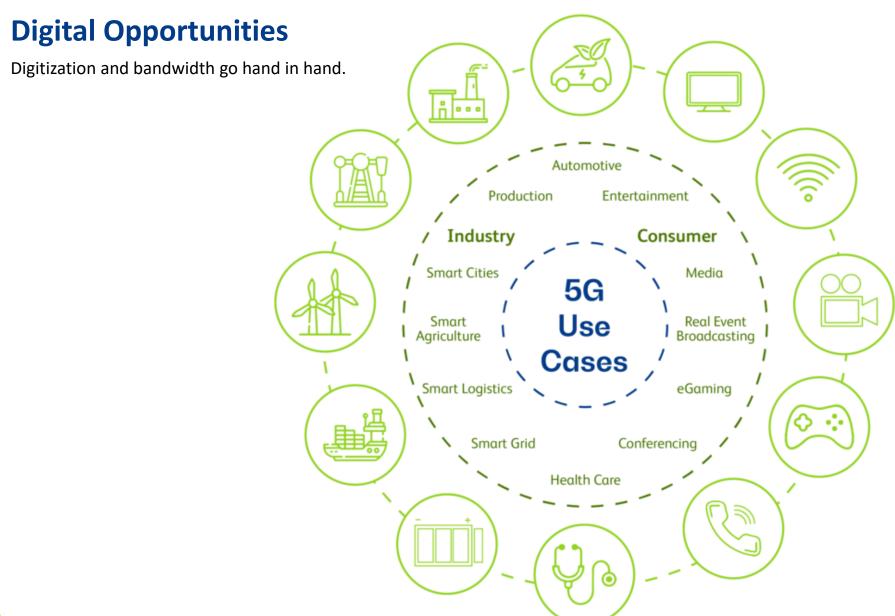




Evolution of Digitization Videos cause **80%** of the How may the digital transformation look like in 2025? world's Internet traffic. Rebound **Effects** Digital Digital overdevices will consumption be in rich responsible **Digital** Digital EU will be countries. for 8% of **Behavior** Dependency responsible ' global for 1/3 of all emissions. data. **Digital** The electricity consumption of World data centers in Global data Germany is sphere: **175 Big Data** Data 2025 yearly increasing ZB (2018: **Centers** by 3% (will be 16 33 ZB). billion kWh). The number **45%** of the of physical The internet world's data will servers is increasing by consumes be stored in 6% per year. 10% of total publicly accessible cloud electricity Investments in Costs environments. consumption modernization annually. and new data center

infrastructure increase by **10%**.





Digital Opportunities - Mobility

of driving 100 percent without a driver.

This means that children and the

elderly also have unrestricted

access to mobility."

Electric mobility in particular could benefit from a 5G expansion in cities.





"The logistics chain in the city is completely autonomous and functions around the clock. For example, deliveries are made at night to packing stations and central delivery points around the house."



Our Outlook

"In city centers, smaller vehicles with less space requirements and lower emissions are gaining ground."



Our Outlook:

"New forms of mobility such as
Hyperloops (high-speed transport system)
complement the mobility portfolio and
connect large cities with the surrounding
countryside."





City

Digital Opportunities - Mobility

Electric mobility in particular could benefit from a 5G expansion in rural areas.





Digital Opportunities – Smart Mobility

It is a combination of intelligent transport systems (ITS) equipped with cameras, radars and traffic counters, and data from the internet/smartphones.

In order to improve mobility without causing additional air pollution and CO_2 emissions, transport systems must be holistic and integrated, for example when means of transport are shared or the flow of traffic becomes more efficient.

Such an approach requires land use planning that shortens distances and travel times as much as possible (15 minutes city). Compact cities in which walking and cycling are possible and the use of public transport is also attractively priced.



Green Digital Revolution - Association of Digitization and Climate Protection

How can we support sustainable digitization?

Green Data Centers

- Cooling with water instead of air
- Using waste heat
- Connection to data highways
- Use location advantages (landscapes: hydropower)
- Renewable energies
- Innovative battery solutions
- Green architecture
- Connection to state-of-the-art fiber optic networks

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Green

Smart Internet Behavior

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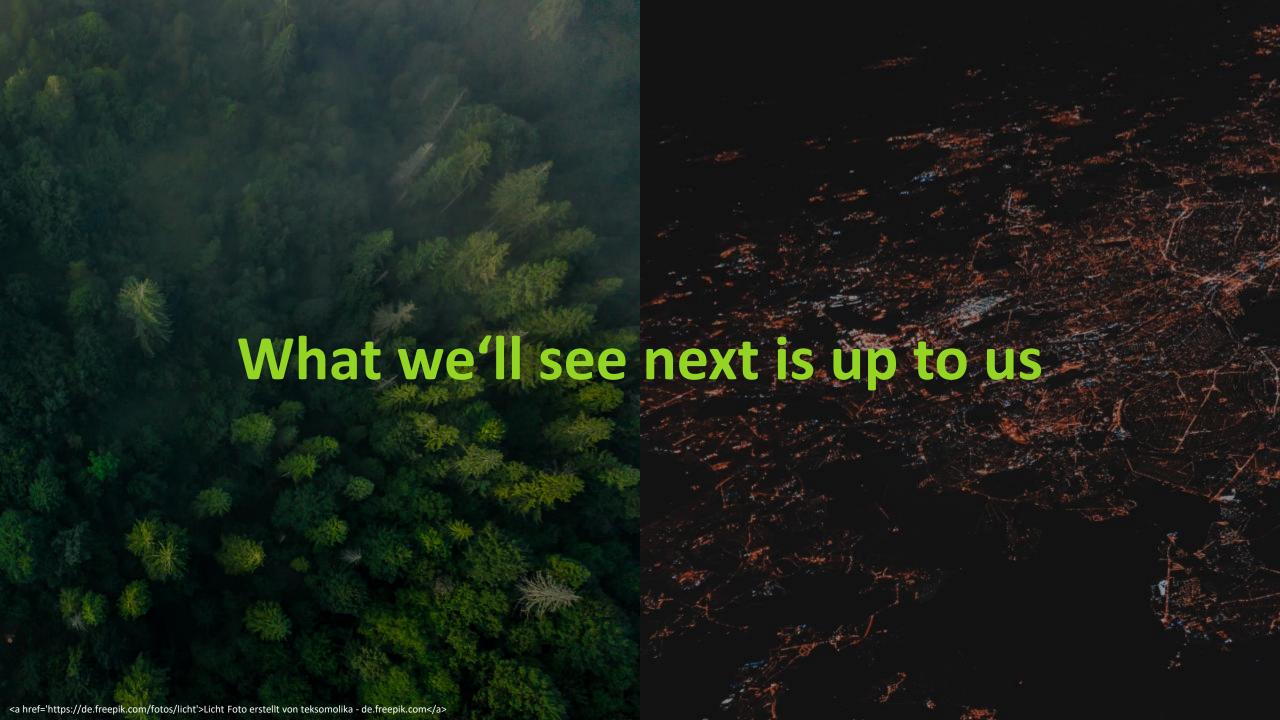
Smart Green Infrastructure

- Open-source applications
- Energy saving apps
- Certificates and Standards
- Education
- Do not send file, send a link

- Latest technological developments
- City strategy and vision
- Politicians, cities, research, energy suppliers and municipalities must work together
- Smart concepts and technologies
- Energy strategy
- Power generation and distribution
- Water management and treatment
- E-Waste management







Thank you

Digital (R)evolution