

# The digital economy's impact on the climate

First results of a Bitkom study

**bitkom**

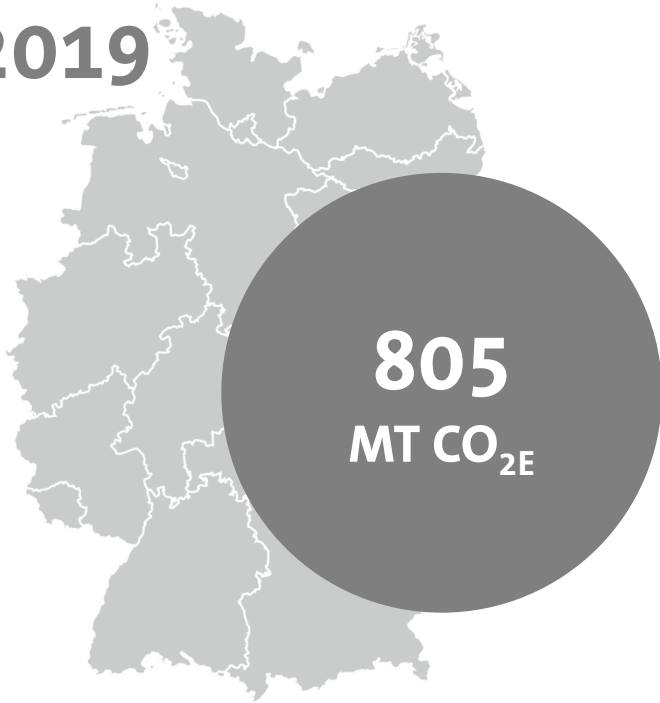
conducted by

**accenture**



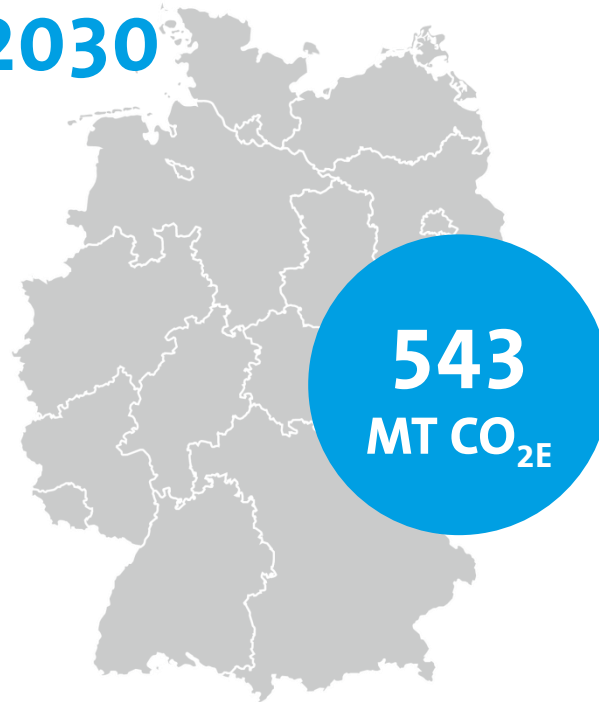
# Germany must reduce 262.000.000 tons of CO<sub>2E</sub> until 2030

2019



➔ 35,7% less than 1990

2030



➔ 55% less than 1990

262.000.000 t

CO<sub>2E</sub> must be reduced  
until 2030.

# Study: What is the potential of digital technologies?

First results for four clusters are available. Three more clusters will follow in 2021.

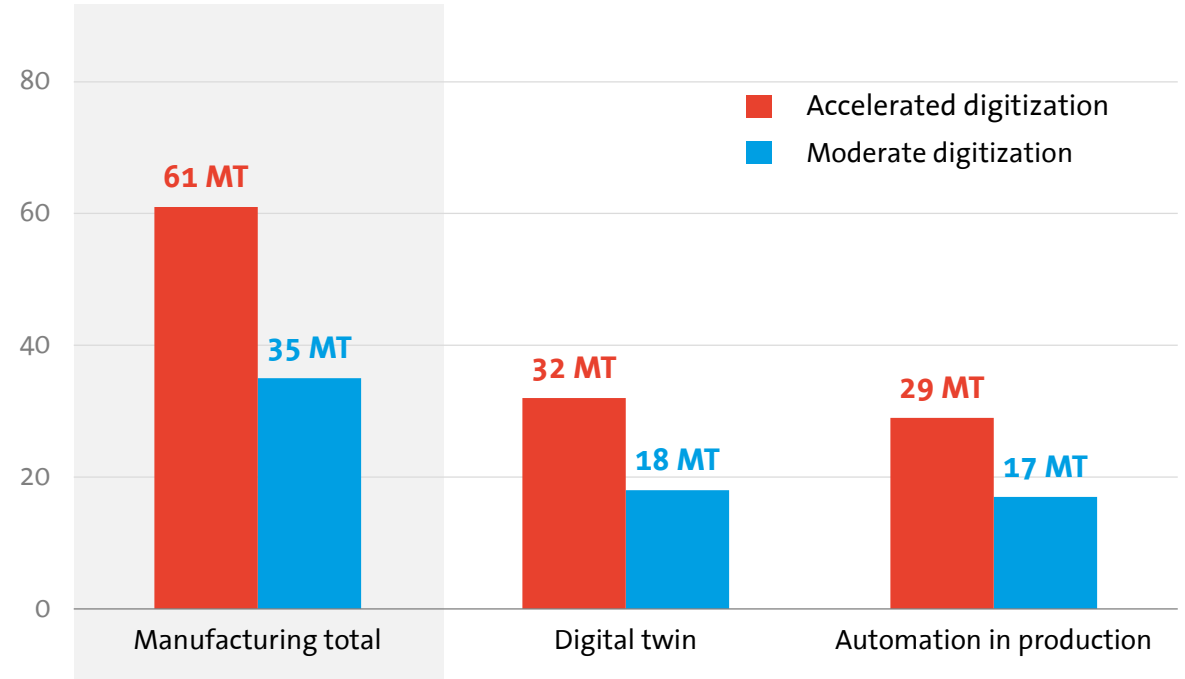


# Smart Manufacturing

CO<sub>2</sub>E reduction potential with moderate and accelerated digitization

## Use cases:

- Automation in production
- Digital twin

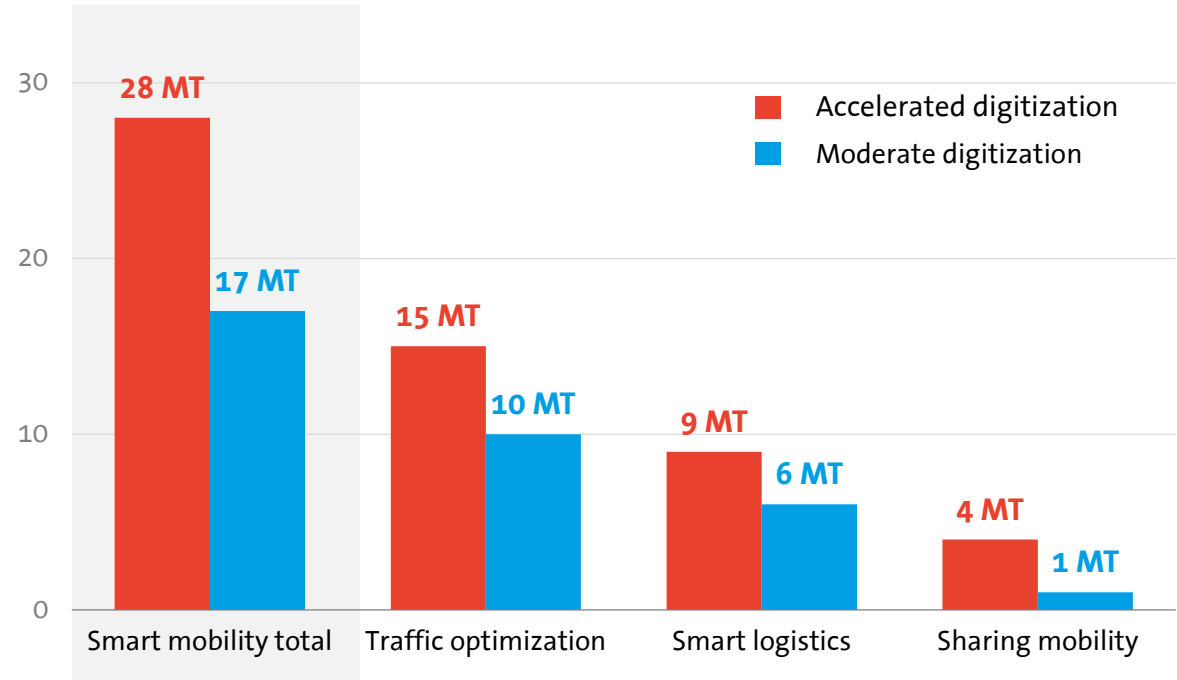


# Smart Mobility

CO<sub>2</sub>E reduction potential with moderate and accelerated digitization

## Use cases:

- Traffic optimization
- Smart logistics
- Sharing mobility

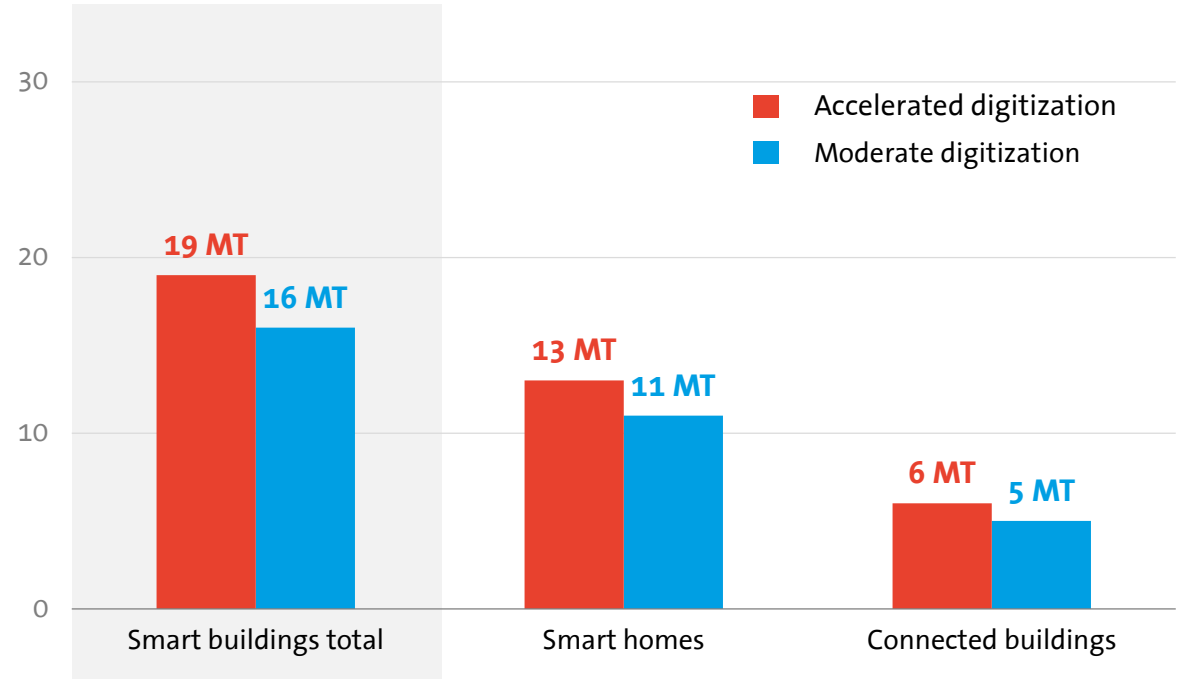


# Smart Buildings

CO<sub>2</sub>E reduction potential with moderate and accelerated digitization

## Use cases:

- Smart homes
- Connected buildings

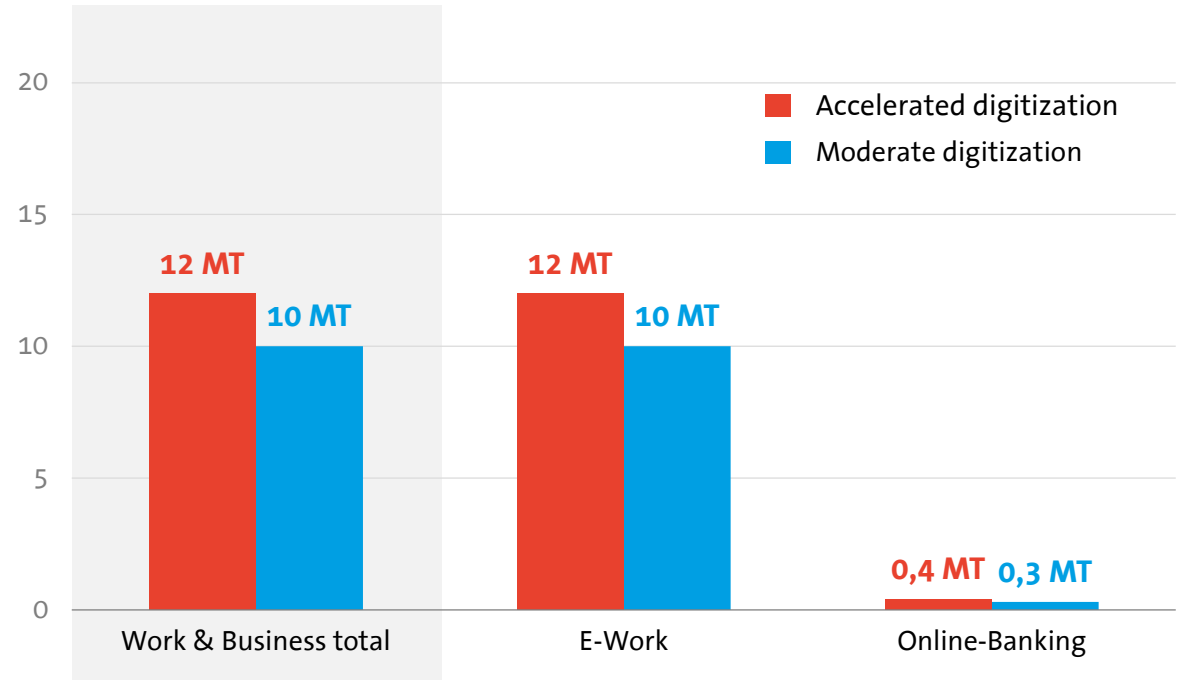


# Work & Business

CO<sub>2</sub>E reduction potential with moderate and accelerated digitization

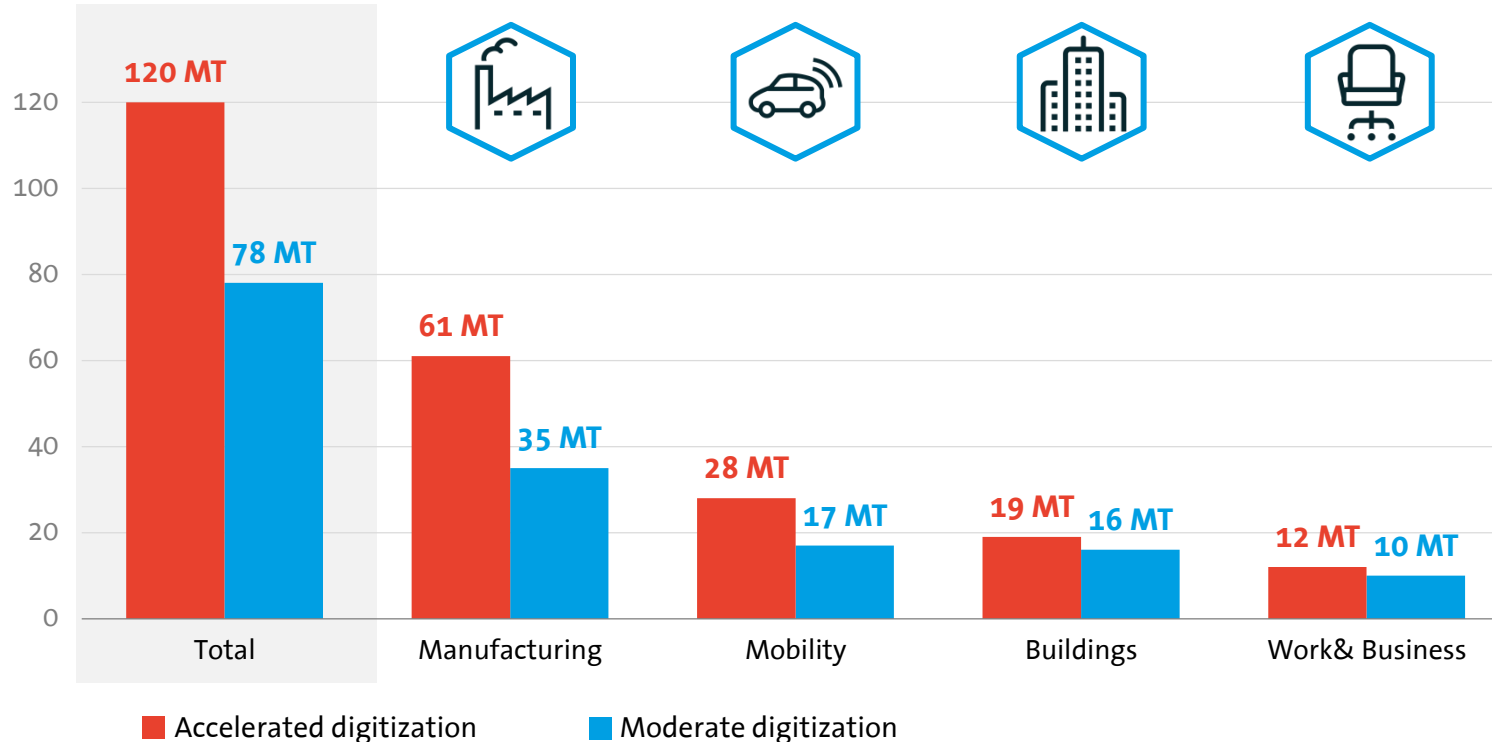
## Use cases:

- Telework
- Online banking



# Digitization of manufacturing has the highest potential

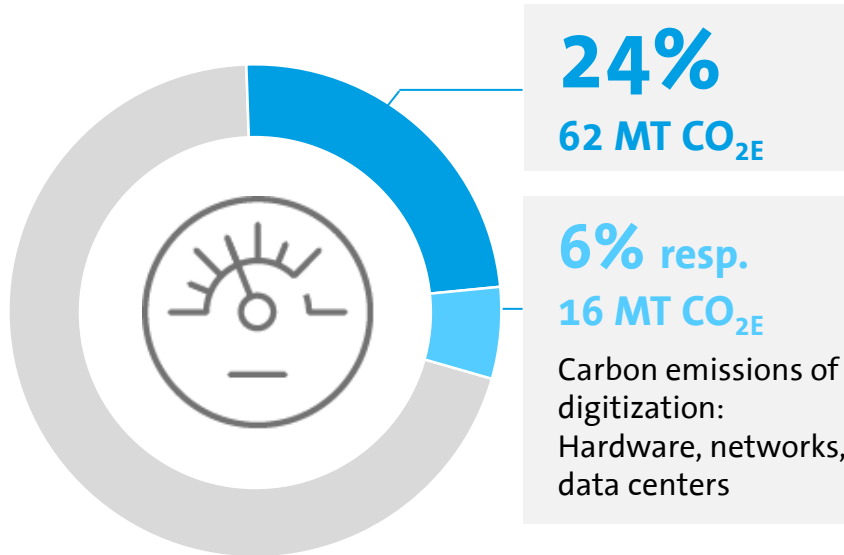
How much CO<sub>2E</sub> can be reduced in 2030 in total?



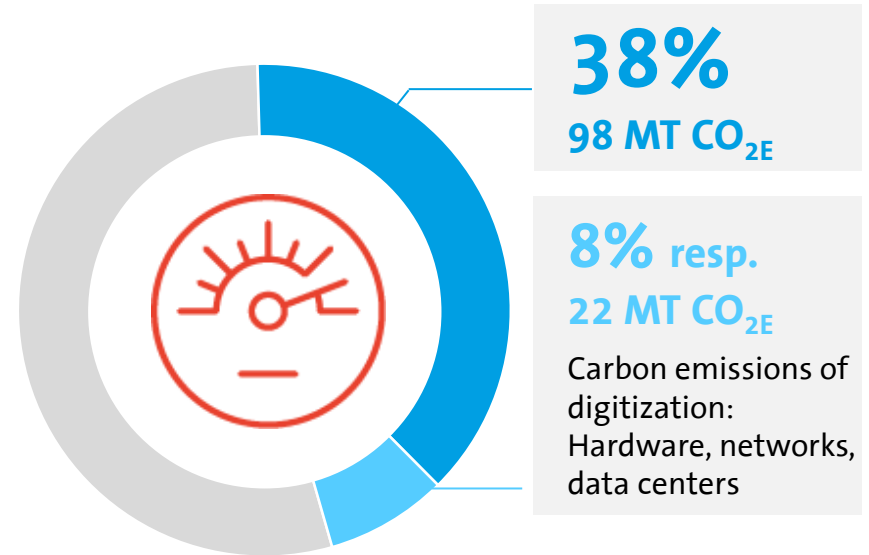


# Reduction potential is significantly higher than carbon footprint

Net-potential of four clusters with moderate and accelerated digitization



**78 MT CO<sub>2E</sub> resp. 30% of necessary carbon reduction in 2030**



**120 MT CO<sub>2E</sub> resp. 46% of necessary carbon reduction in 2030**

# Conclusion

- If we speed up digitization, we can achieve **almost half of the CO<sub>2E</sub> savings required by 2030 (46%)** in the four examined clusters alone. Including other applications, the potential contribution is likely to be higher than 50%.
- The greatest potential is in the area of **smart manufacturing and smart mobility**.
- The **carbon footprint of digitization** can be greatly reduced by the increased use of renewable energies.
- Accelerated digitization does not only contribute to environmental and climate protection, it also improves the **competitiveness of the German economy**. Digitization can balance economic growth with environmental and climate protection.
- We need immediate **targeted and daring support from policymakers** and decisive action by decision-makers at the top of the corporate ladder.

# Methodology



The study is conducted by Accenture. The methodology is based on the global GeSI study "SMARTer2030", which Accenture conducted in 2015 in preparation of the 21st UN Climate Conference in Paris.

## Development of two scenarios for the year 2030:



**Moderate digitization:** Assumes that the pace of how fast digital technologies are implemented follows the same pace as it has in Germany over the past 5 to 10 years. The framework conditions and incentives are as they have been up to now - or as is specifically planned up to 2030.



**Accelerated digitization:** The pace of how fast we implement and spread digital technologies is accelerating significantly due to ambitious political incentives.