How can digital help save the planet?

Climate Change and Sustainability - Transport

Mobile UK

BUILDING MOBILE BRITAIN

“Digital technology may be the most powerful, scalable tool the world has to tackle climate change.

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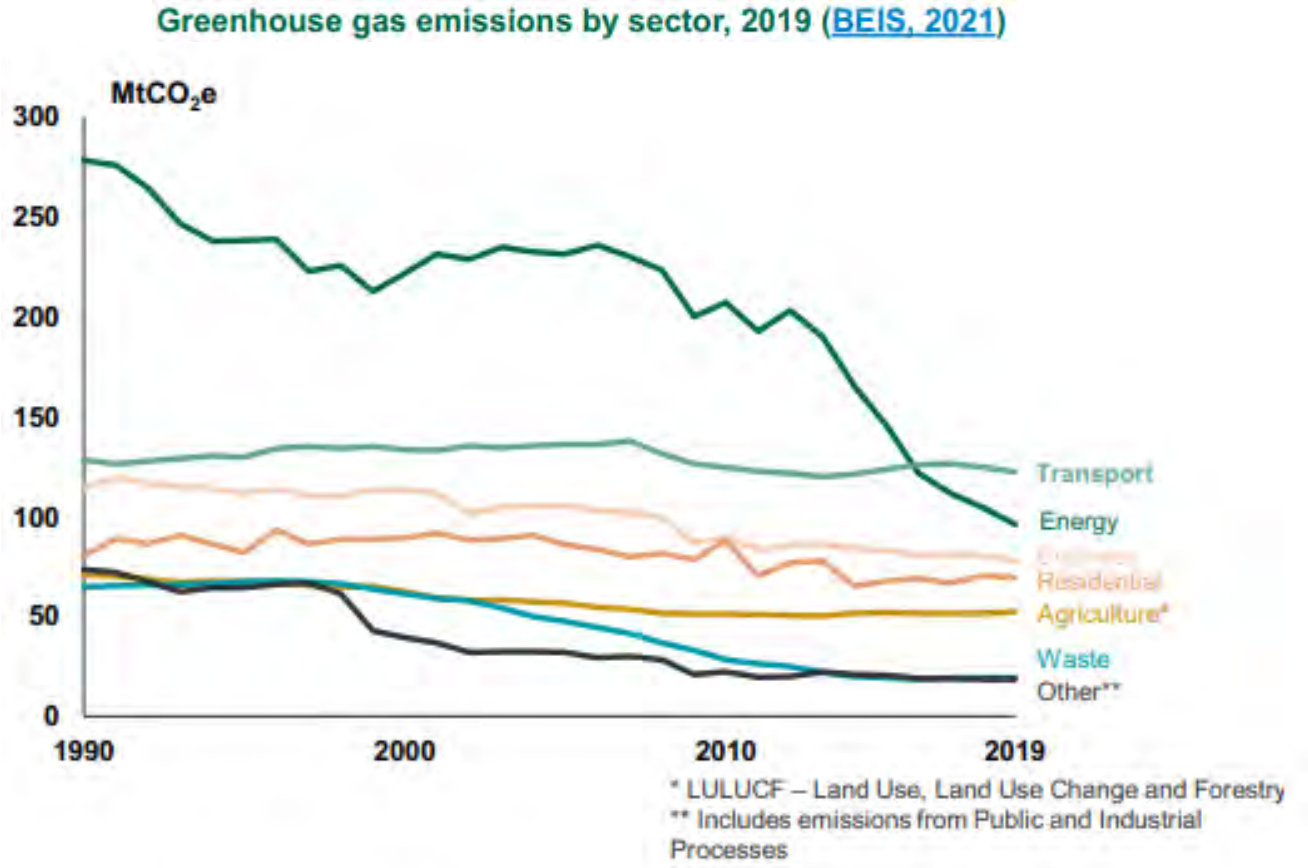
As an accelerator, it has the potential to reduce global emissions by up to 15% by 2030.”

(Ericsson)

Transport, emissions and the Environment

- Total UK emissions from surface transport were 122 MtCO2e in 2019.
- This amounts to **27% of total UK greenhouse emissions**.
- Globally transport is responsible for 24% of direct global emissions.
- The **biggest contributors were cars and taxis (61%) followed by HGVs (18%) and vans (17%).**
- There has been little change in transport emissions.
- Fuel efficiency has resulted in decreases but more can be done.



How can digital connectivity drive down emissions?

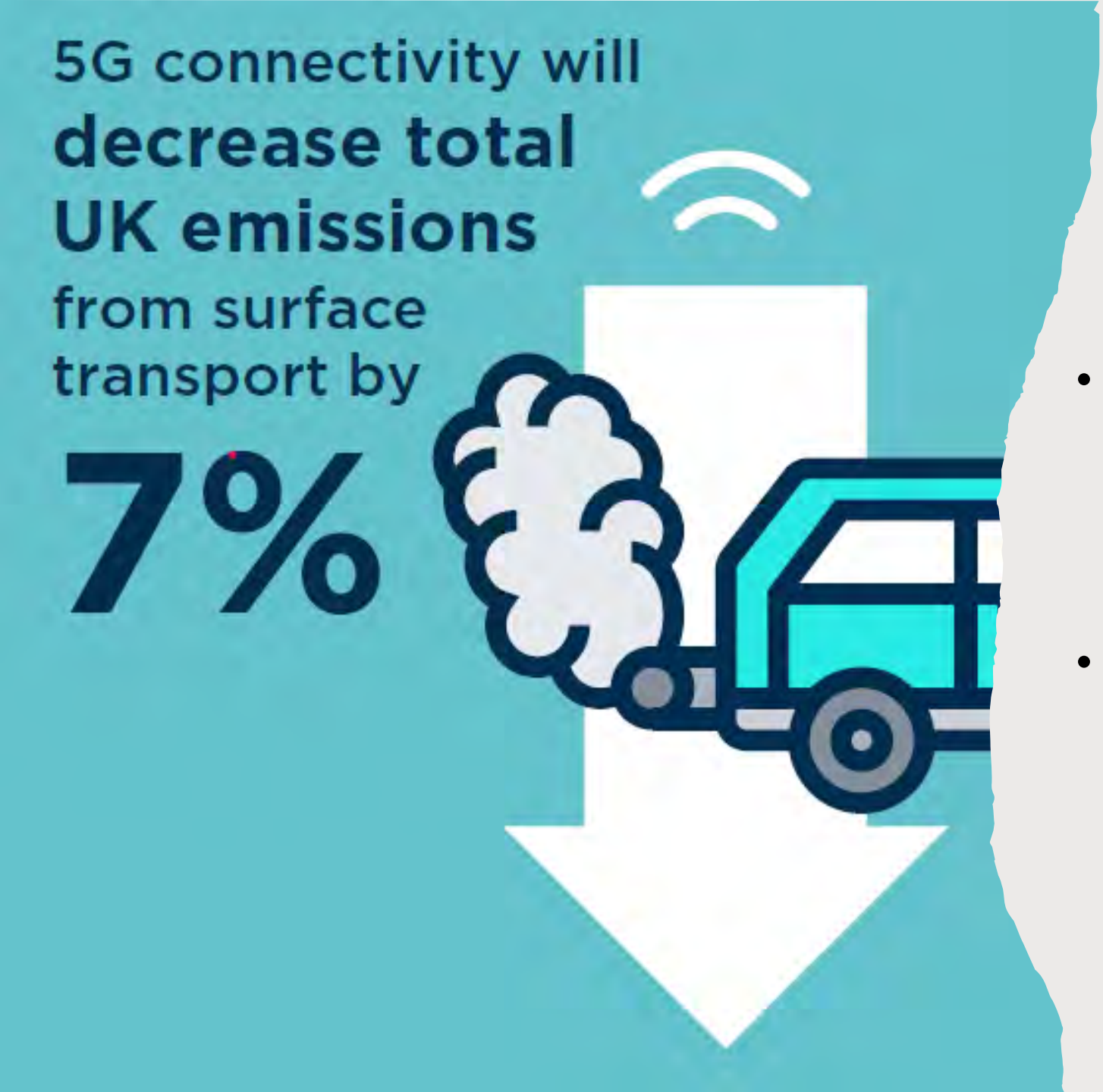
- Enabler technology (not the silver bullet)
- A platform enabling technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), and Extended Reality (XR).
- Create new and disruptive uses to drive down costs, energy usage, emissions, waste and mitigate climate change.
- Early Examples:
  - Video conferencing – remote working and meetings
  - Telemedicine – remote consultations
  - Wearables – encourage healthier / emissions free travel
  - Negating travel

Real-Time Kerbside Parking Availability

- Around 520,000 UK van drivers typically spend over 20 minutes looking for a parking space for each delivery they make
- The average delivery driver spends a total of 1 hour and 40 minutes searching for parking every day.
- Estimated to cost the UK economy £76.2 billion per year.
- Reduces idling, stop-start and unnecessary run-arounds.
- **NB: Vans produce 17% of the UK's transport greenhouse emissions.**

Intelligent transport systems

- Vehicle counting sensors offer live traffic monitoring
- Data gathered offers state-of-the-art prediction models
- More accurate forecasting of traffic flow to help manage congestion
- Enable traffic managers to mitigate traffic-impacting disruption (e.g. diverting buses or sending real-time warnings to drivers)
- Reduce waiting times at traffic signals by prioritising traffic by class and respond dynamically to emerging situations.
- Maintain traffic flow and reduce emissions.
- Multi-modal transport (e.g. micro mobility)
- Encourage public transport usage (e.g. app based transport – City Mapper, Trainline etc).



5G and Transport

- Ability to synchronise speeds and shift to truck platooning via 5G-connected lorries reducing air resistance, potentially reducing fuel use by 7 – 16%.
- Dynamically controlled intersections streamlining the flow of traffic and reducing delays— potentially reducing the energy demand by 13 – 44%.

Smart logistics

Lower fuel consumption

Continuous incremental efficiency gains

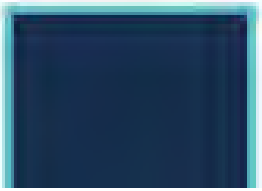
Supply chain traceability

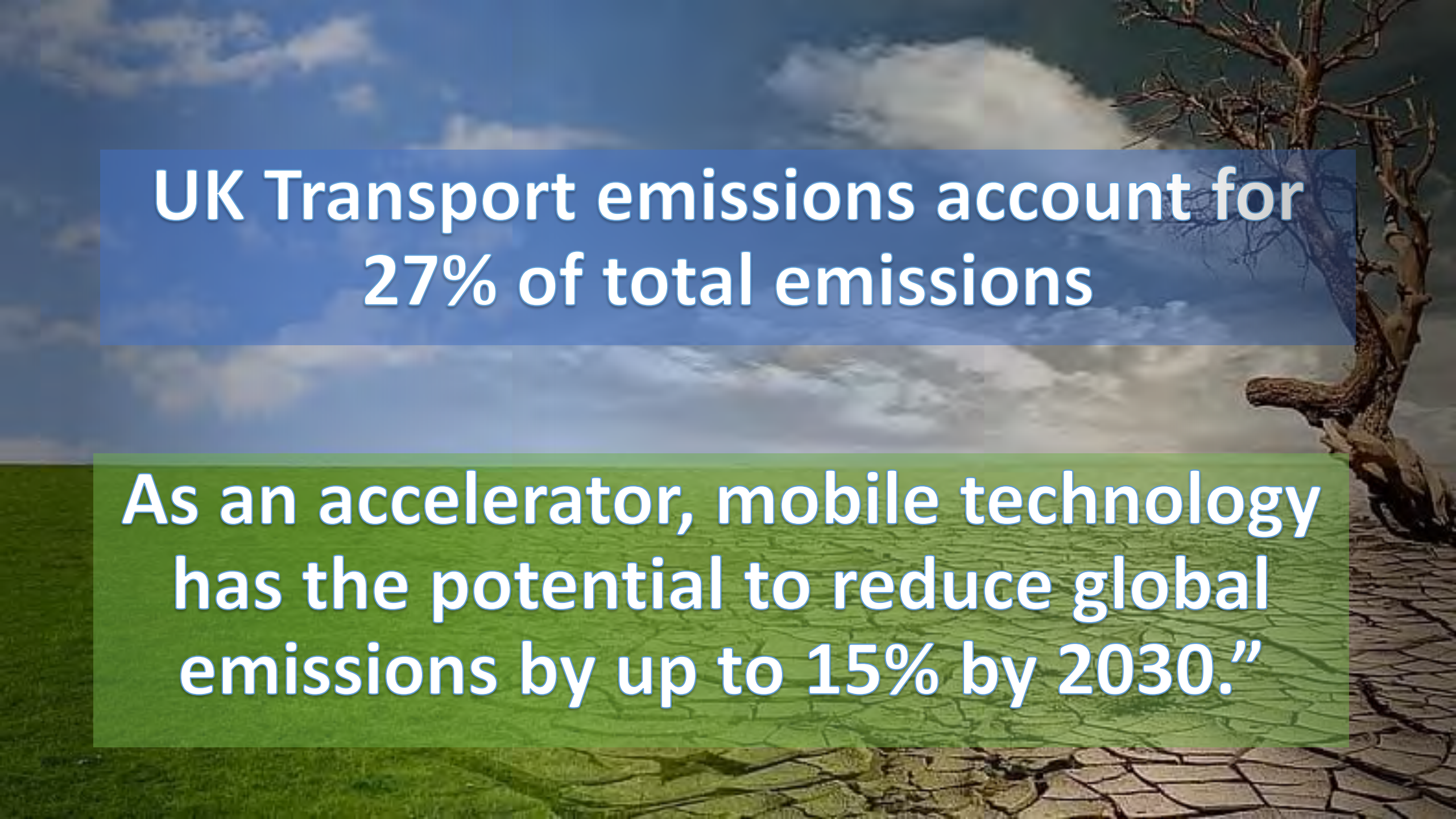
Fewer emissions

...reduce emissions from transport by

6.6 - 9.3 million

tonnes of CO_2e annually




UK Transport emissions account for 27% of total emissions
As an accelerator, mobile technology has the potential to reduce global emissions by up to 15% by 2030.”

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