

carboncalcpf.com

Product Carbon Footprint Dashboard

for "ottuqtgiuu"

Total PCF: **24.33** kgCO₂e per unit

Total Footprint

24.33

kgCO₂e per unit

Carbon Intensity

24.33

kgCO₂e / unit

Top Material Hotspot

PCB

1.44 kgCO₂e

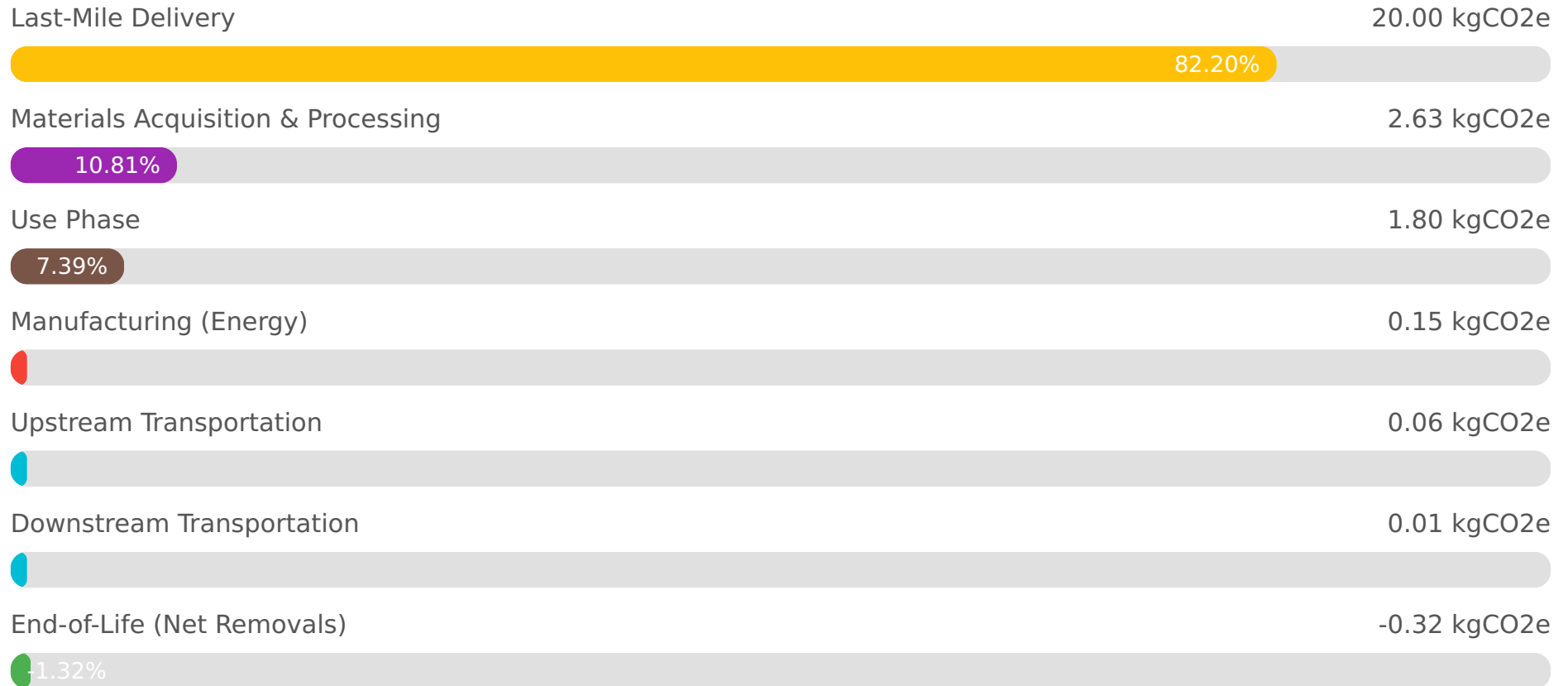
Primary Emission Scope

Scope 3

99.4% of total

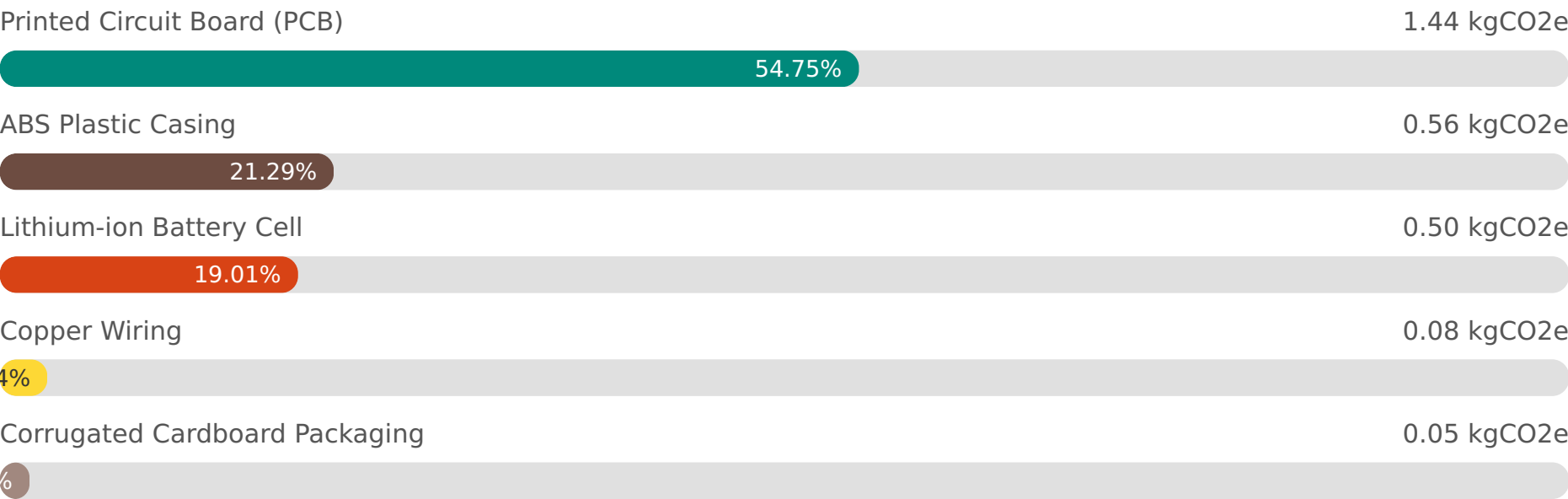
Lifecycle Stage Breakdown

Emissions by Lifecycle Stage (Total: 24.33 kgCO2e)



Material Composition vs Carbon Impact

Emissions from Materials Acquisition & Processing (Total: 2.63 kgCO2e)



Highlights & Key Insights

Last-Mile Delivery Dominates: The last-mile delivery phase is identified as the most significant emission hotspot, contributing a staggering 82.20% of the total product carbon footprint.

Scope 3 is Crucial: A vast majority (99.4%) of the product's emissions fall under Scope 3, highlighting the critical importance of value chain interventions for impactful reductions.

Electronic Components are Material Hotspots: Within materials, the Printed Circuit Board (PCB) and Lithium-ion Battery Cell are particularly emission-intensive, accounting for over 73% of material-related emissions.

Recommendations for Emission Reduction

Optimize Last-Mile Delivery: Implement strategies such as consolidating deliveries, exploring electric vehicle fleets, or establishing pick-up points to drastically reduce emissions from the largest hotspot.

Sustainable Material Sourcing: Prioritize sourcing lower-carbon alternatives, increasing recycled content, and collaborating with suppliers to reduce the footprint of high-impact components like PCBs and batteries.

Enhance Circularity: Strengthen existing take-back programs and explore product design improvements for higher recyclability or extended lifespan, potentially yielding greater end-of-life benefits.

Renewable Energy Integration: Further increase the percentage of renewable energy used in manufacturing beyond the current 50% to achieve zero Scope 2 emissions and demonstrate leadership.

Customer Engagement for Use Phase: Educate end-users on energy-efficient product usage and promote proper disposal and recycling channels to minimize downstream impacts.