# Network Impact on Battery Life & Device Temperature in Nigeria

## Battery Drain & Overheating: The Hidden Impact of Network Quality

# Agenda

1. The Real Mobile Experience
2. Battery Drain: Where is Your Phone Losing Power?
3. Thermal Status: When Phones "Run Hot"
4. Summary of Experience
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# The Real Mobile Experience

Nigeria is rapidly expanding its mobile connectivity and transitioning toward 5G. However, coverage maps don't always tell the full story. This report looks at how the network affects your phone's physical performance: specifically, **battery life** and **temperature**.

We analysed millions of measurements across the country to find "high stress" zones—areas where phones are working harder to stay connected.

# Battery Drain: Where is Your Phone Losing Power?

We measured how much battery phones use during the active day (12:00–16:00) compared to the quiet night hours (00:00–04:00). A high difference means your phone is draining power rapidly, often due to searching for a signal or network congestion.

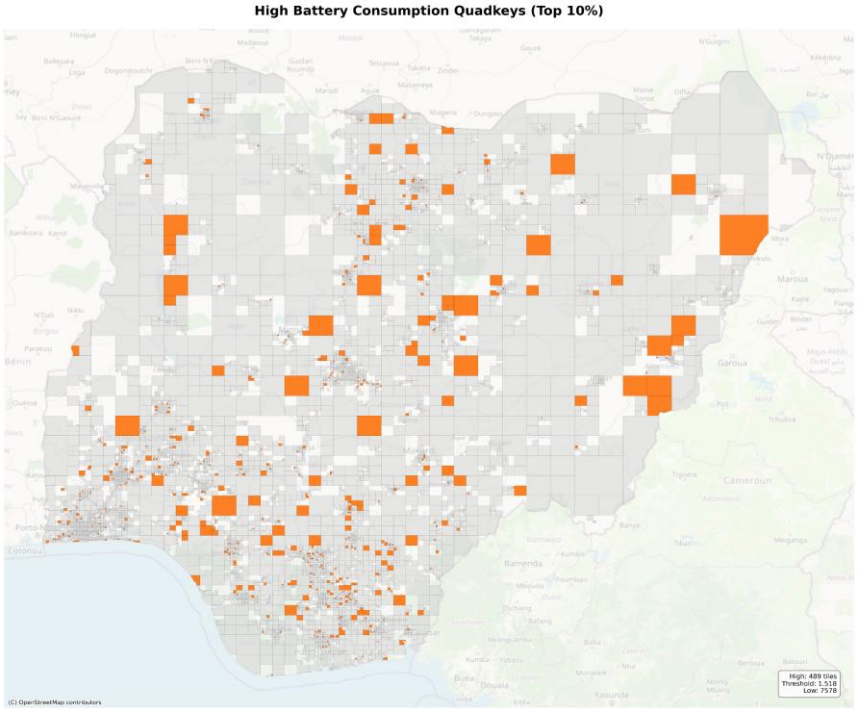
What We Found:
Performance Drop: In these high-drain areas, the network is significantly slower.

- Download Speed: 21% slower than in low-drain areas.
- Upload Speed: 30% slower.
- Responsiveness (Latency): 7ms more delay (lag).

Impact on You: If you live or work in these orange zones, your phone battery dies faster, and your internet is roughly one-third slower than in other areas.

# Battery Drain: Where is Your Phone Losing Power? (II)

High Drain Zones: The map highlights the top 10% of areas in Nigeria where battery consumption is most intense (shown in orange).



# Thermal Status: When Phones "Run Hot"

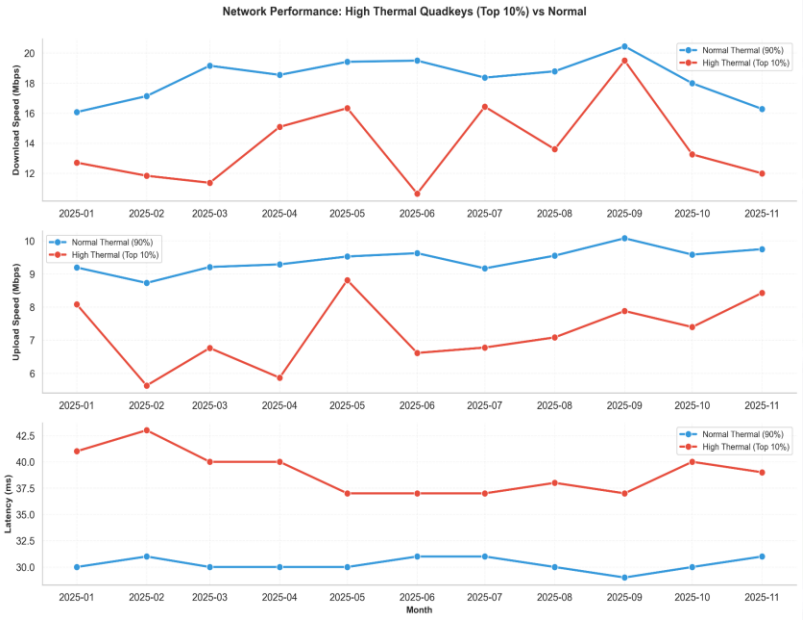
We also tracked "Thermal Status"—how hot devices get during use. Overheating usually happens when a device is struggling with heavy data processing or poor signal conditions.

What We Found:

Performance Drop: When devices get hot, performance suffers.

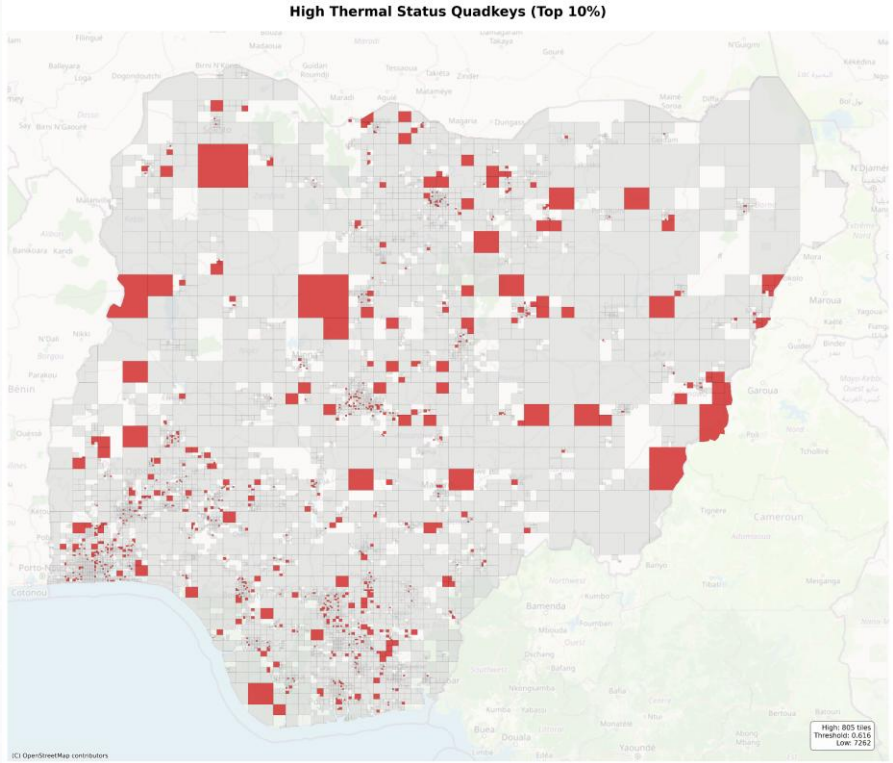
- Download Speed: 23% lower in hot zones.
- Upload Speed: 26% lower.
- Responsiveness: 6ms more delay.

Impact on You: Heat slows down your phone. In these zones, you are more likely to experience buffering during video streaming because your device limits its own speed to cool down.



# Thermal Status: When Phones "Run Hot" (II)

Hot Zones: The red areas on the map represent the top 10% of regions where devices frequently overheat.



# Summary of Experience

Poor network conditions do more than just buffer a video; they impact your daily life.

- Shortened Battery Life: Users in affected areas need to charge more frequently, impacting their mobility.
- Device Health: Constant overheating and battery drain can reduce the lifespan of your smartphone.
- Digital Divide: The gap between "low drain" and "high drain" areas shows a clear divide in quality of experience.

# Thank You