Holi Report (Operator's Comparison)

Operators : EE(23430), Vodafone(23420), Lebara(23415) & O2(23410)

EE

Vodafone

Lebara

O2

Date : 8th March 2026
No of people attendance: More than 1000 in attendance

Location: The Town Gardens, Swindon Bowl
https://maps.app.goo.gl/TcLoWaydUjFjJ1oW7


SWINDON HOLI FESTIVAL

Network type & Data Mapping

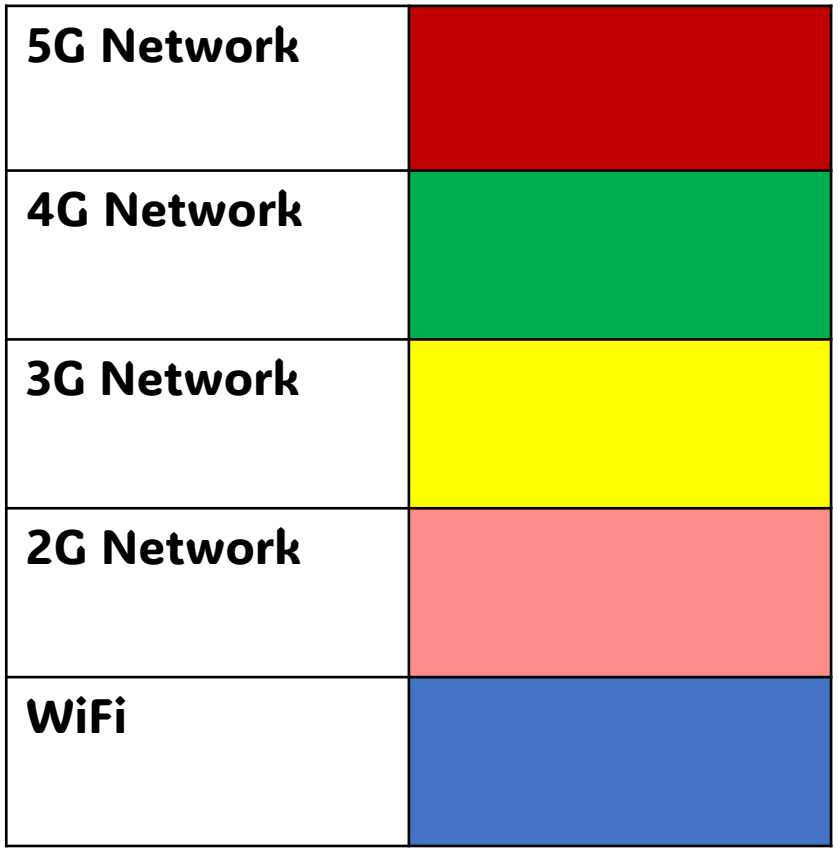
This section shows the network technology (5G/4G) and data usage distribution for EE and Vodafone during the event.

- **EE:**
  Operates on 100% 5G coverage during the test.
  Most data traffic is also on 5G (~88%), with only a small portion on LTE (~12%), indicating strong 5G availability.
- **Vodafone:**
  Shows a mixed network presence, with ~52% on 5G and ~48% on LTE.
  Data usage is mostly on LTE (~62%), with only ~38% on 5G, indicating limited 5G usage during the event.

- **During peak crowd time, Vodafone devices appear to shift more towards LTE, possibly due to network load or limited 5G capacity, while EE continues to maintain strong 5G usage.**

- **Summary**

EE delivers full 5G coverage with most data carried on 5G, ensuring better next-gen network availability.
Vodafone shows mixed 4G/5G usage, with higher reliance on LTE, especially under load.



Network type & Data Mapping

5G Network	
4G Network	
3G Network	
2G Network	
Wi-Fi	

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Generation

Data

Active Test – Signal Strength (RSRP) Mapping

This section shows how strong the mobile signal (RSRP) was for EE and Vodafone during real usage at the event. It also includes average signal levels and overall distribution.

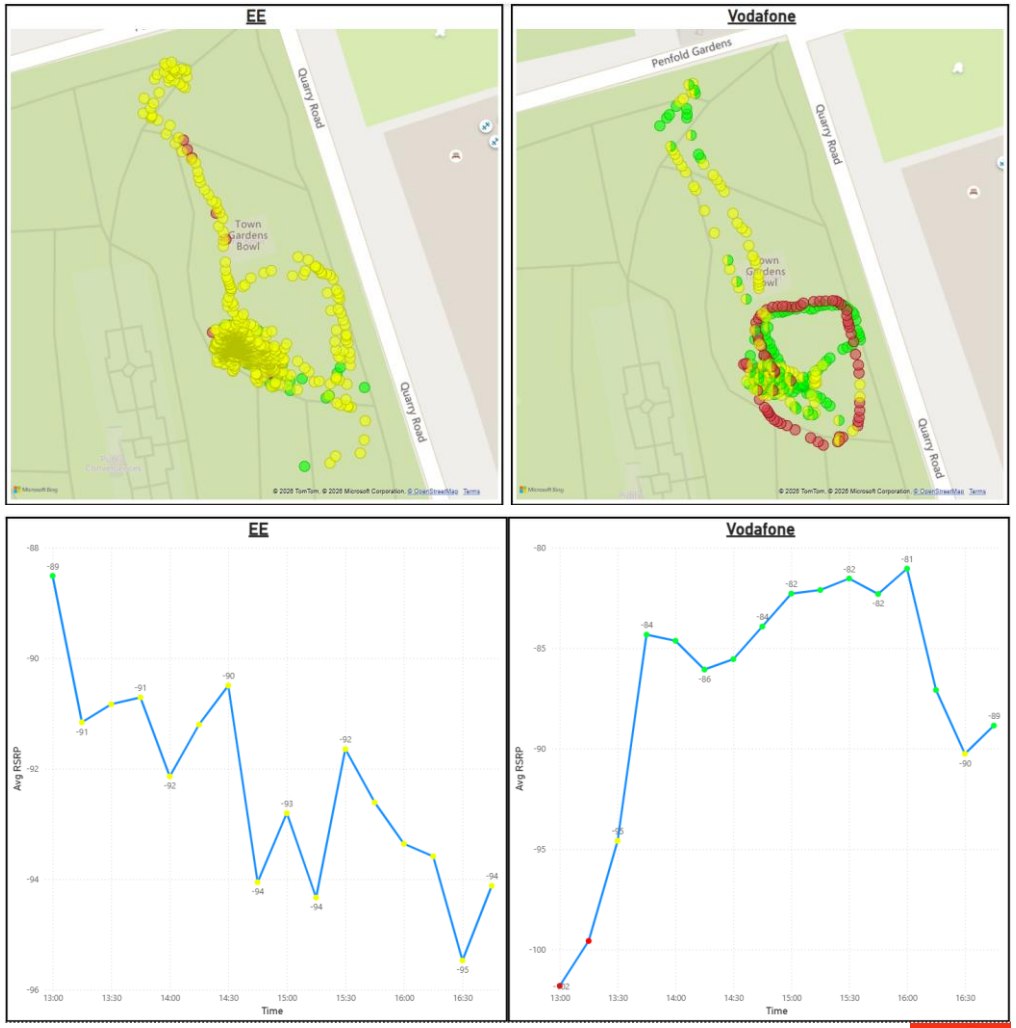
- **EE:**
  Mostly stable coverage with ~76% moderate signal and ~22% strong signal.
  Average signal strength is around -92 dBm, indicating overall steady performance.
- **Vodafone:**
  Higher share of strong signal (~77%), but also more weak signal areas (~14%), showing less consistency.
  Average signal strength is around -86 dBm, better on paper but more variable in real use.

As the crowd increases, signal quality is affected due to congestion. EE shows a gradual decrease over time, while Vodafone shows more fluctuation but tries to maintain performance.

- **Summary**

EE provides more stable and consistent coverage during the event. Vodafone shows stronger average signal but with more variation and weak spots.

Good (>= -89)	
Average (-90 to -99)	
Poor (-100 to -115)	
No coverage (<= -115)	



Active Test – Signal Quality (RSRQ) Mapping

Good (>= -7)	
Average (-8 to -9)	
Poor (<-10)	

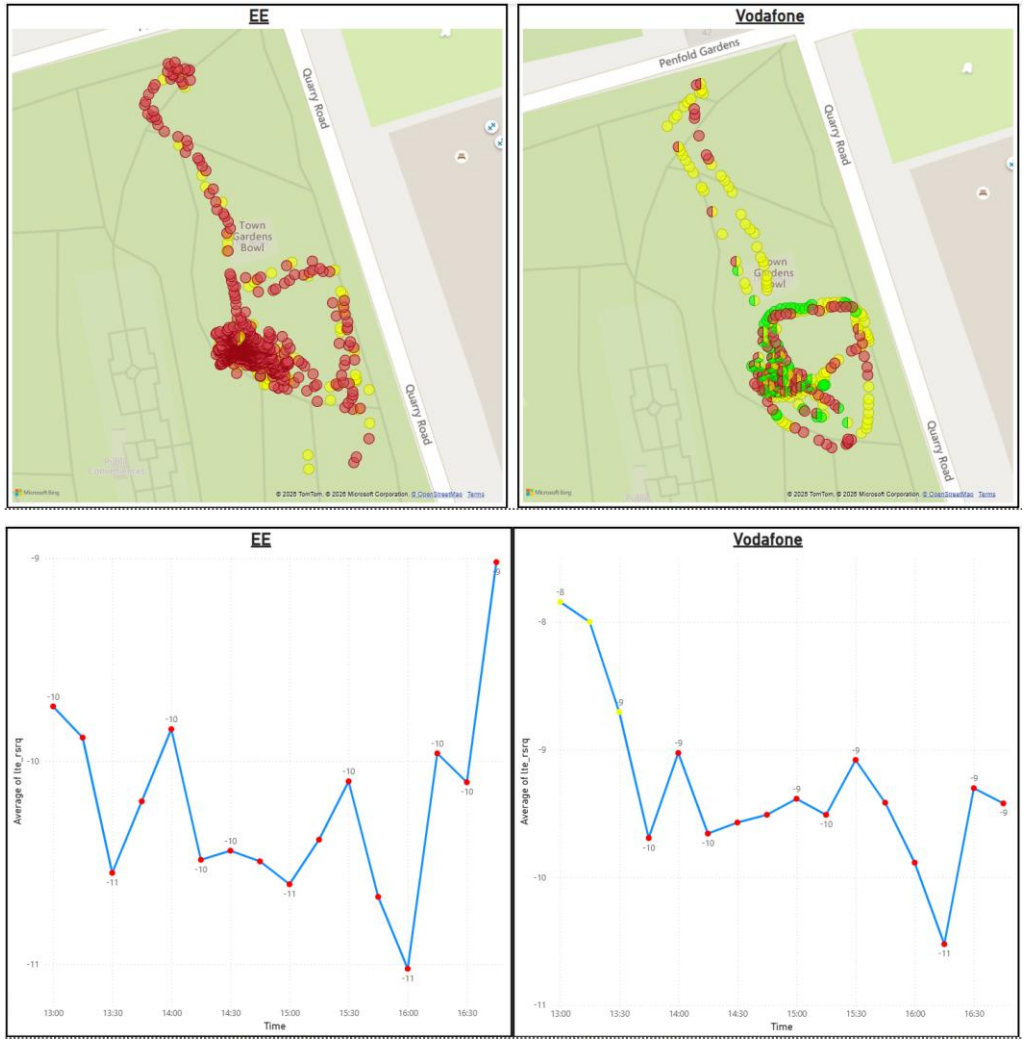
This section shows the signal quality (RSRQ) for EE and Vodafone during real usage at the event. RSRQ indicates how clean and stable the signal is.

- **EE:**
  Majority of readings fall in the poor range (~68%), with ~32% in average and almost no strong signal.
  Average RSRQ is around -10, indicating weaker and less stable signal quality.
- **Vodafone:**
  Shows a more balanced distribution with ~44% poor, ~33% average, and ~23% good signal quality.
  Average RSRQ is around -9, indicating better and cleaner signal overall.

As the crowd increases, signal quality is affected due to network load and interference.
EE shows more noticeable drops, while Vodafone maintains relatively better stability, though some fluctuations are present.

- **Summary**

Vodafone delivers better and more stable signal quality during the event.
EE shows higher poor signal share and more fluctuation under crowd load.



Active Test – Signal to Noise Ratio (SNR) Mapping

This section shows the signal clarity (SNR) for EE and Vodafone during real usage at the event. SNR indicates how clear the signal is — higher values mean better performance.

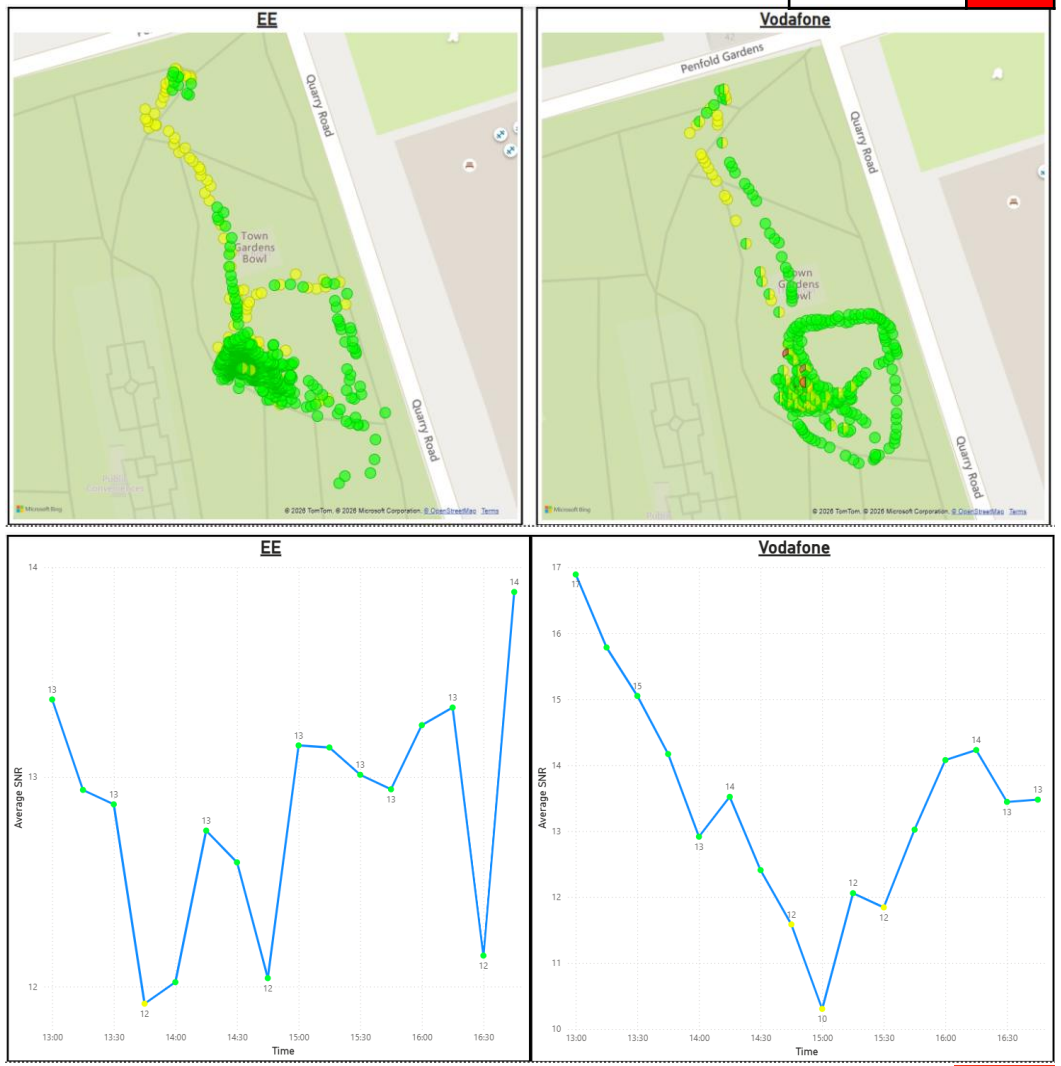
- **EE:**
  Shows consistently good signal clarity, with ~83% in good range and ~17% in average.
  Average SNR is around 13dbm, indicating stable and reliable signal quality.
- **Vodafone:**
  Also shows strong signal clarity with ~79% in good range and ~21% in average.
  Average SNR is higher at around 14dbm, but with slightly more variation over time.

As the crowd increases, signal clarity is affected due to interference and network load.
EE remains fairly stable with minor fluctuations, while Vodafone shows a drop during peak time and then recovers.

- **Summary**

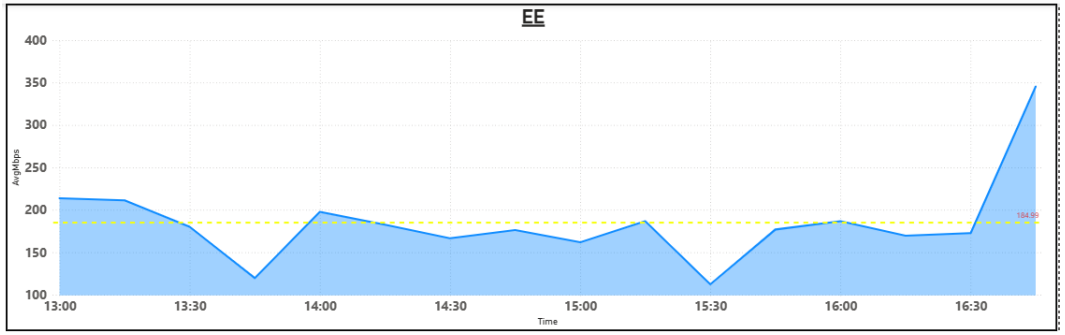
EE maintains more stable and consistent signal clarity throughout the event.
Vodafone shows slightly better average clarity but more fluctuation under load.

Good (>= 12)	
Average (11 to 5)	
Weak (4 to 0)	
Poor (<0)	

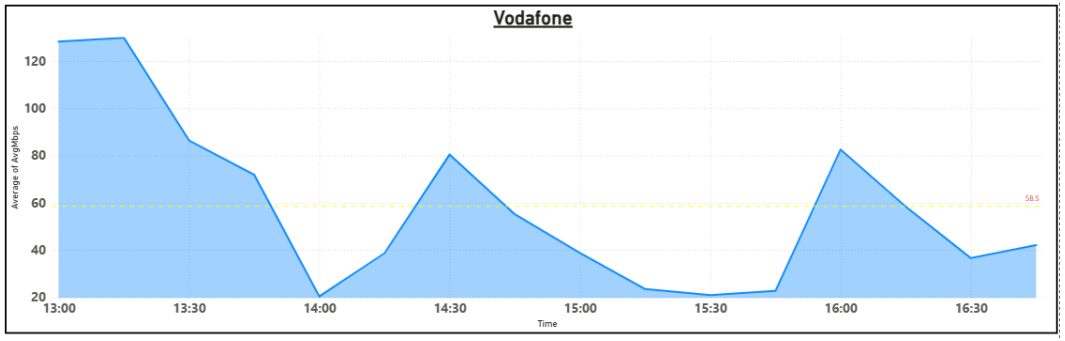


Active Test - Speed test (Download) Mapping

This section shows the download speed performance for EE and Vodafone during real usage at the event.



- **EE:**
  Delivers consistently high download speeds, with an average of around 185 Mbps.
  Performance remains strong throughout, with only minor drops during peak time.
- **Vodafone:**
  Shows lower and more variable download speeds, with an average of around 58 Mbps.
  Speeds drop significantly at certain times, especially during higher network load.



As the crowd increases, download speeds are affected due to network congestion.
EE maintains relatively stable performance, while Vodafone shows sharp drops and fluctuations, with occasional recovery.

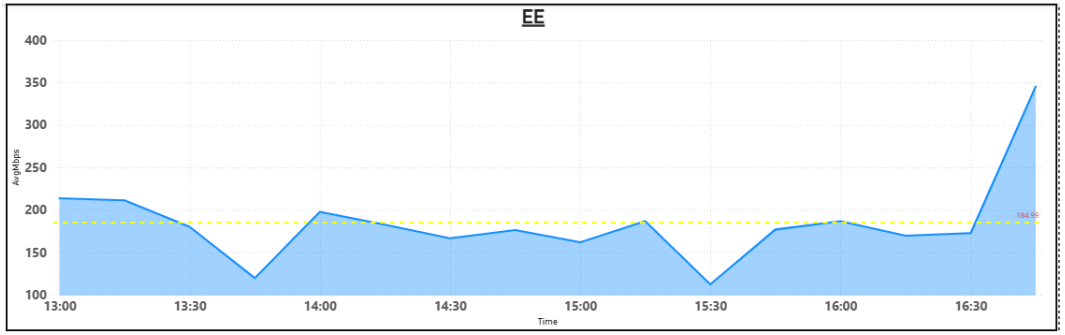
- **Summary**

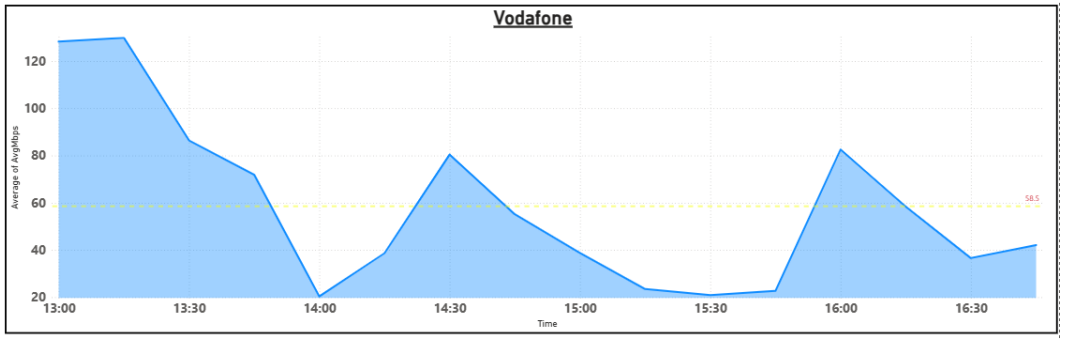
EE delivers significantly higher and more consistent download speeds during the event.
Vodafone shows lower speeds with higher variation, especially under peak load conditions.

Active Test - Speed test (Upload) Mapping

This section shows the upload speed performance for EE and Vodafone during real usage at the event.

- **EE:**
  Delivers stable upload performance, with an average of around 42.5 Mbps.
  Speeds remain fairly consistent, with only minor drops during peak time.
- **Vodafone:**
  Shows very low upload speeds, with an average of around 0.5 Mbps.
  Apart from one short spike, performance remains consistently low throughout.





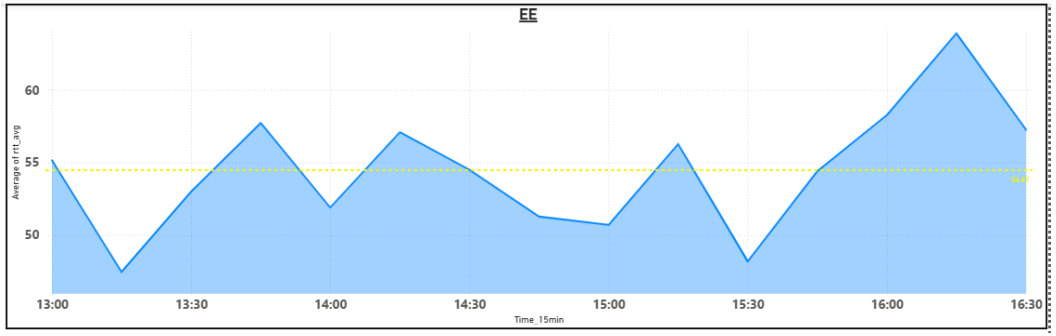
As the crowd increases, upload performance is impacted due to network congestion and limited uplink capacity.
EE maintains usable and stable upload speeds, while Vodafone struggles with very low and inconsistent performance.

- **Summary**

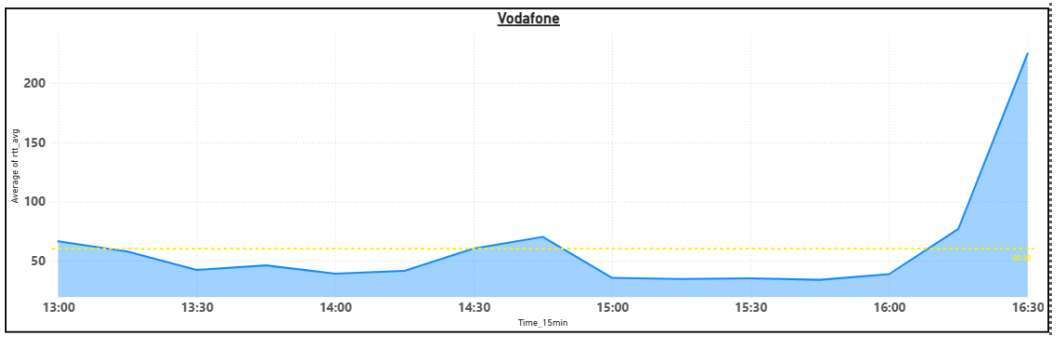
EE delivers strong and reliable upload performance during the event.
Vodafone shows extremely low upload speeds, making it less suitable for data-heavy usage like uploads or live sharing.

Active Test - Response Time (Ping) Performance Mapping

This section shows how quickly the network responds during real usage. Lower values mean faster response and smoother experience (like browsing, gaming, or video calls).



- **EE:**
  Provides faster and more stable response time, with an average of around 54 ms.
  Performance remains fairly consistent throughout the event.
- **Vodafone:**
  Shows a slightly higher response time, with an average of around 60 ms.
  There are more fluctuations, especially during peak usage.



As the crowd increases, response time is affected due to network congestion.
EE remains more stable, while Vodafone shows more variation and occasional delays.

- **Summary**

EE delivers faster and more consistent response time during the event.
Vodafone shows slightly higher delay and more fluctuation under load.

Active Test – CallTest Performance Mapping

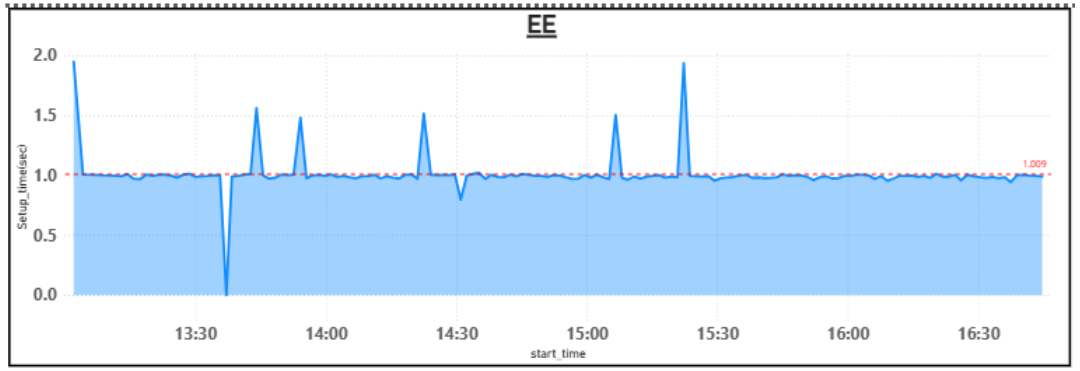
Call Performance
This section shows how quickly calls connect and how successful the call attempts were during real usage at the event.

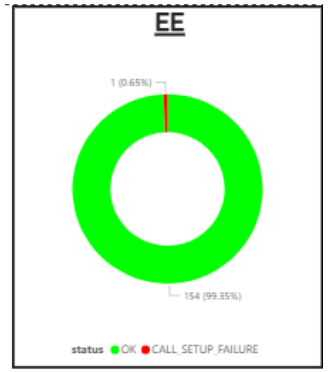
- **EE:**
  Provides fast and stable call setup, with an average connection time of around 1.0 sec.
  Call success rate is ~99%, with very few failures observed.
- **Vodafone:**
  Shows slightly slower call setup time, with an average of around 1.9 sec.
  Call success rate is 100%, with no failures recorded.

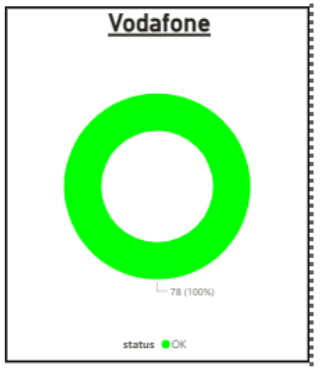
As the crowd increases, call performance can be affected due to network load.
EE maintains quick connection times, while Vodafone shows slightly higher delay but consistent success.

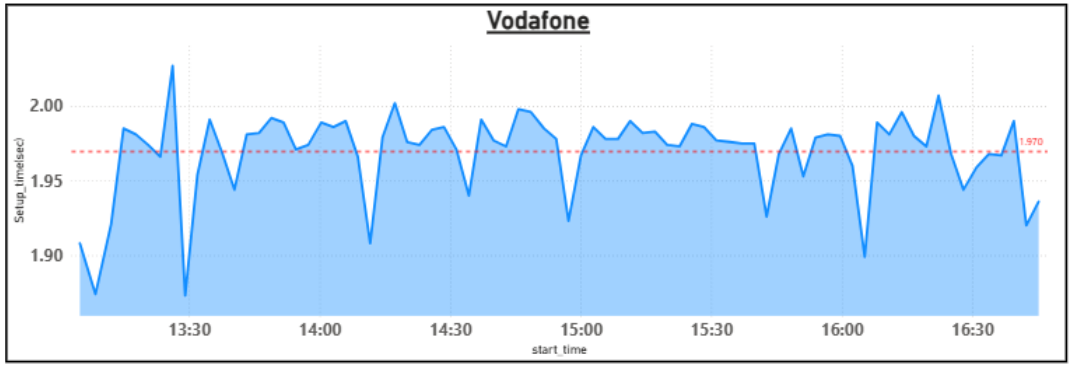
- **Summary**

EE delivers faster call connection time with very high success rate.
Vodafone achieves 100% call success but with slightly slower connection time.







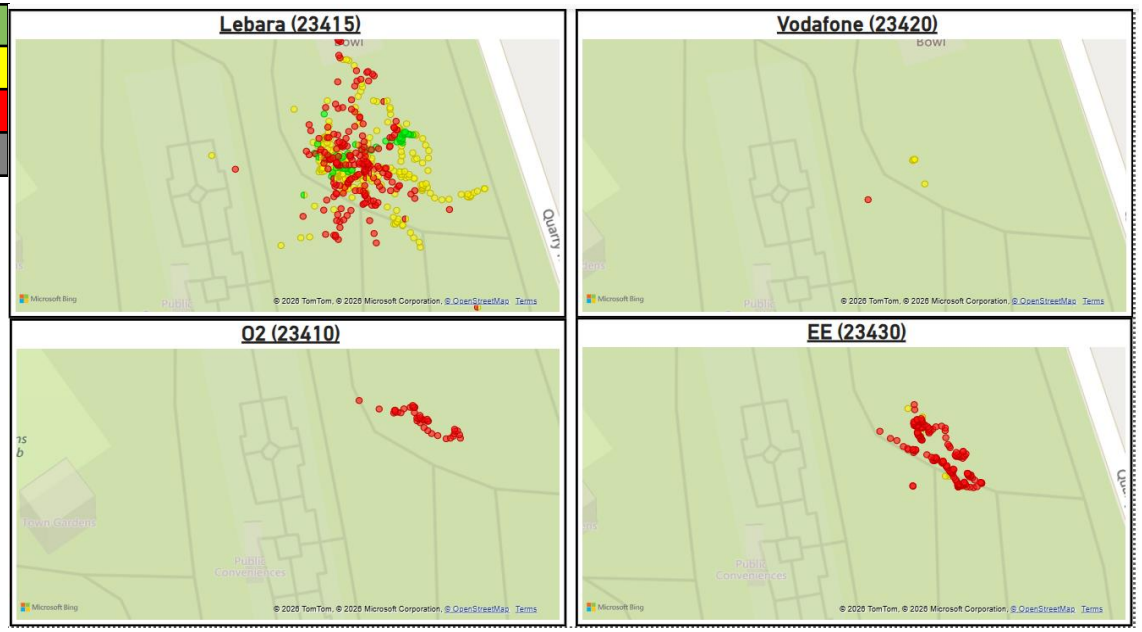


Crowdsourced Signal Strength Comparison (Lebara, Vodafone, O2 & EE)

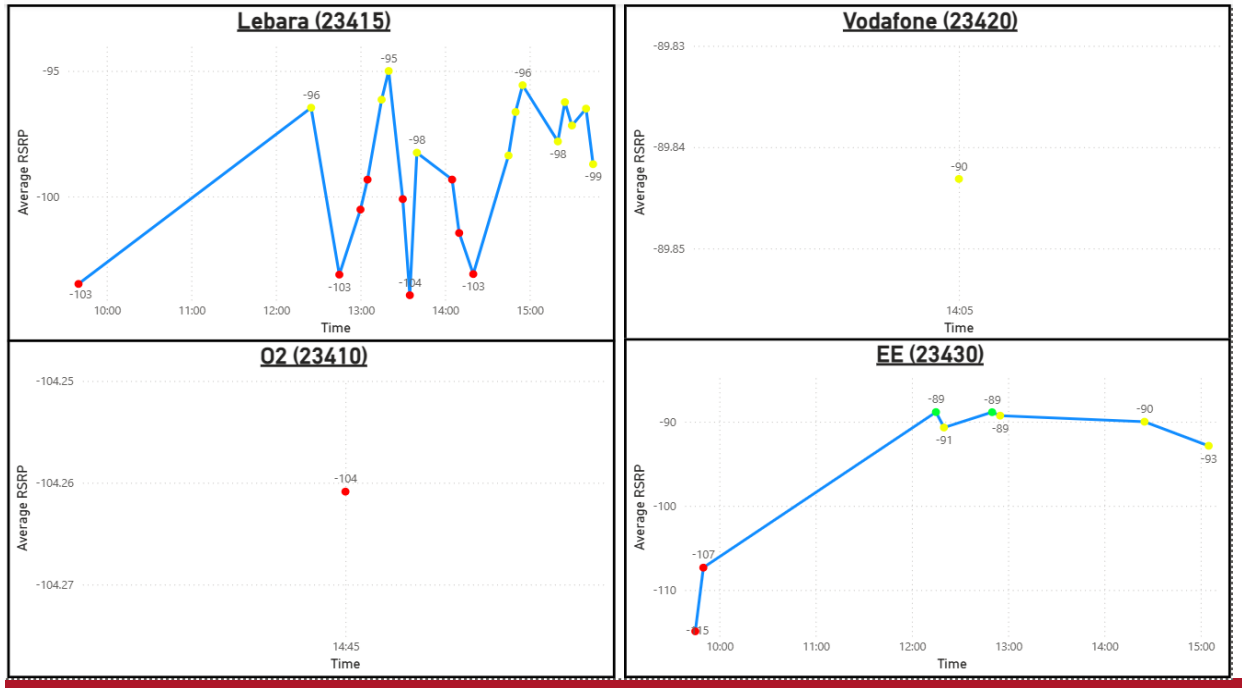
Good (>= -89)	
Average (-90 to -99)	
Poor (-100 to -115)	
No coverage (<= -115)	

Map-Based Comparison

The maps show real user signal experience across the area for all operators.



Operator	Observation
EE	Better coverage with more strong and usable signal areas
Vodafone	Mixed signal with limited data points
Lebara	Mostly moderate to weak signal
O2	Mostly weak signal across the area



Graph-Based Comparison (Average Signal Strength)

The graphs show average signal strength (RSRP) over time for each operator.

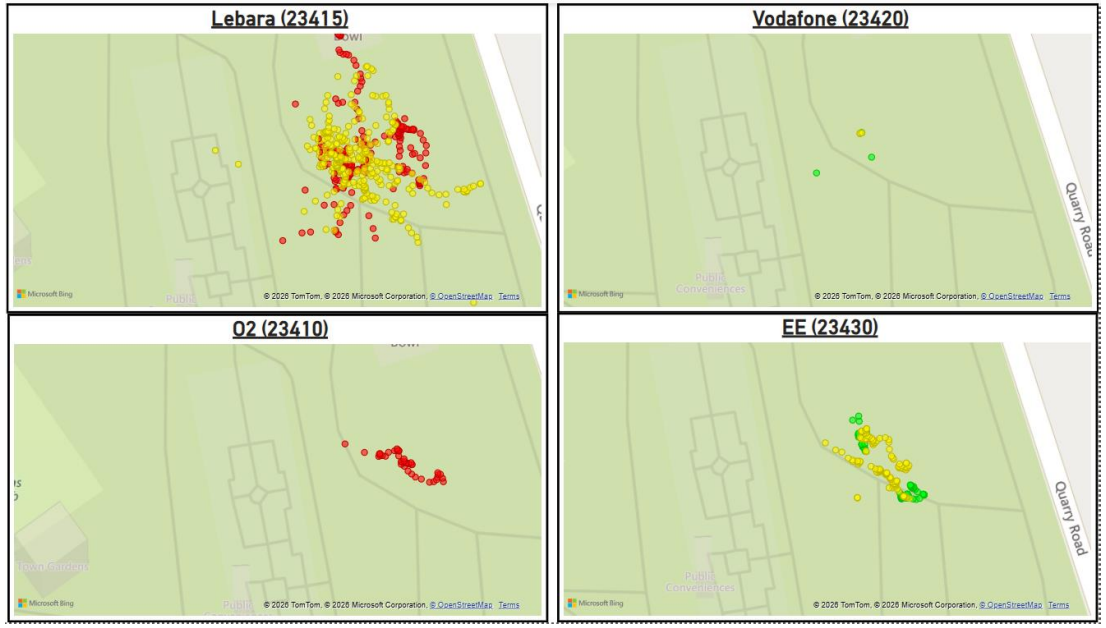
Operator	Avg Signal (RSRP)	Performance
Vodafone	-90 dBm	Strongest signal
EE	-96 dBm	Good and stable
Lebara	-100 dBm	Moderate
O2	-104 dBm	Weakest

Crowdsourced Signal Quality Comparison (Lebara, Vodafone, O2 & EE)

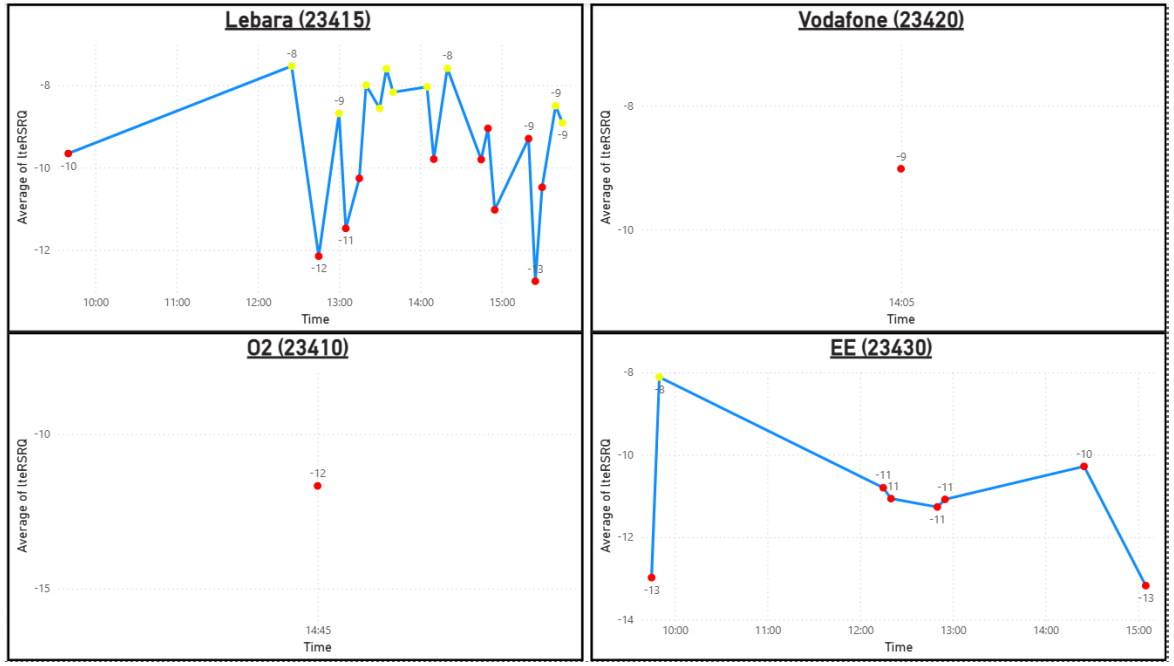
Good (>= -7)	
Average (-8 to -9)	
Poor (<-10)	

Map-Based Comparison

The maps show signal quality experienced by real users across the area.



Operator	Observation
Vodafone	Better and more usable signal quality
Lebara	Mixed (moderate + weak areas)
EE	Moderate with some weak spots
O2	Mostly poor signal quality



Graph-Based Comparison (Average Signal Quality)

The graphs show average signal quality (RSRQ) over time.

Operator	Avg RSRQ	Performance
Vodafone	-9 dB	Best
Lebara	-10 dB	Moderate
EE	-11 dB	Lower
O2	-12 dB	Weakest

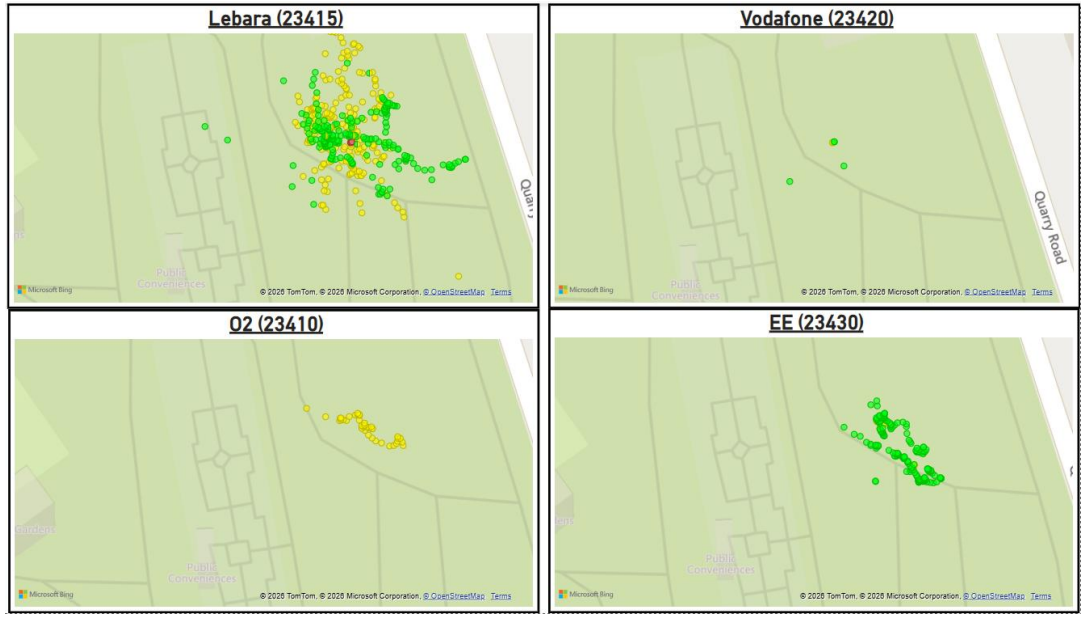
Crowdsourced Signal to Noise Comparison (Lebara, Vodafone, O2 & EE)

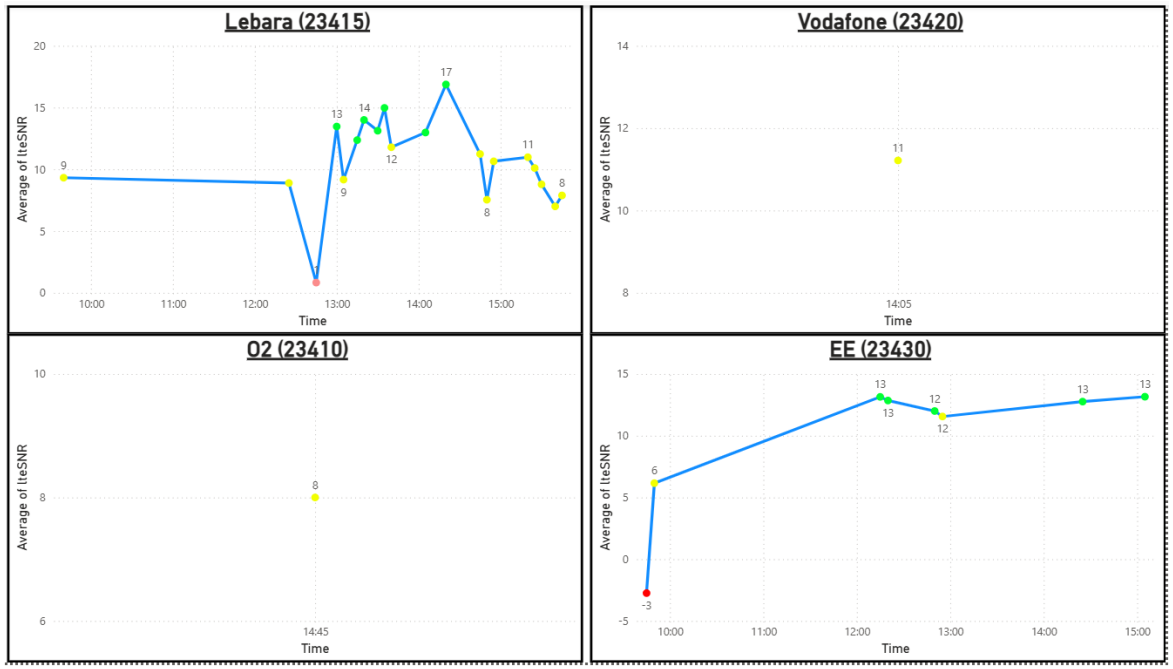
Good (>= 12)	
Average (11 to 5)	
Weak (4 to 0)	
Poor (<0)	

Map-Based Comparison

The maps show how clear and clean the signal is for users across the area.

Operator	Observation
EE	Strong and consistent signal clarity
Vodafone	Good clarity (limited data points)
Lebara	Mixed (good + average)
O2	Mostly average clarity





Graph-Based Comparison

The graphs show average signal clarity (SNR) over time.

Operator	Avg SNR	Performance
Lebara	11 dB	Good
Vodafone	11 dB	Good
EE	10 dB	Stable
O2	8 dB	Lower

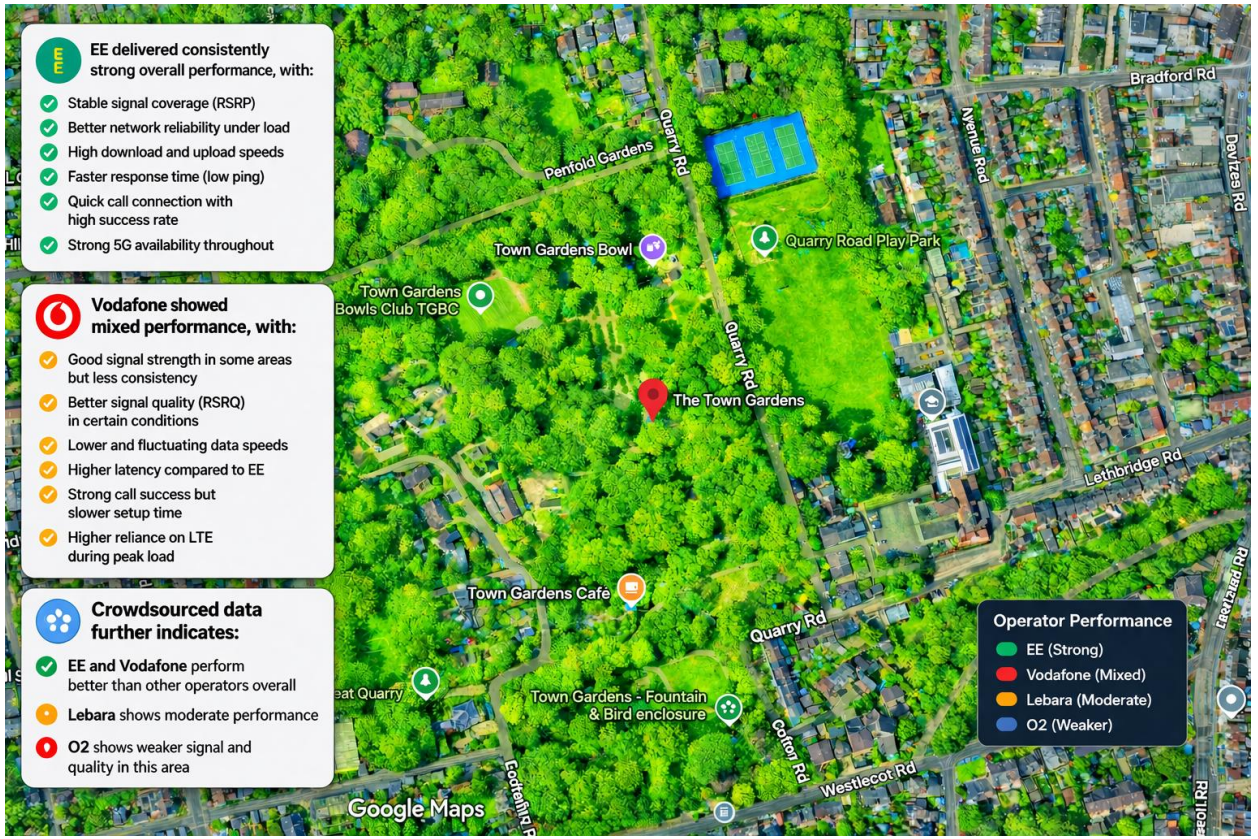
Overall Network Performance Summary

The testing was conducted during a live event environment, where increasing crowd density impacted network performance across all operators.

- ❑ **EE delivered consistently strong overall performance, with:**
  - **Stable signal coverage (RSRP)**
  - **Better network reliability under load**
  - **High download and upload speeds**
  - **Faster response time (low ping)**
  - **Quick call connection with high success rate**
  - **Strong 5G availability throughout**

- ❑ **Vodafone showed mixed performance, with:**
  - **Good signal strength in some areas but less consistency**
  - **Better signal quality (RSRQ) in certain conditions**
  - **Lower and fluctuating data speeds**
  - **Higher latency compared to EE**
  - **Strong call success but slower setup time**
  - **Higher reliance on LTE during peak load**

- ❑ **Crowdsourced data further indicates:**
  - **EE and Vodafone perform better than other operators overall**
  - **Lebara shows moderate performance**
  - **O2 shows weaker signal and quality in this area**



The test results show how mobile networks perform in a real event environment, where increasing crowd density impacts overall network performance.

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- High download and upload speeds
- Faster response time (low ping)
- Quick call connection with high success rate
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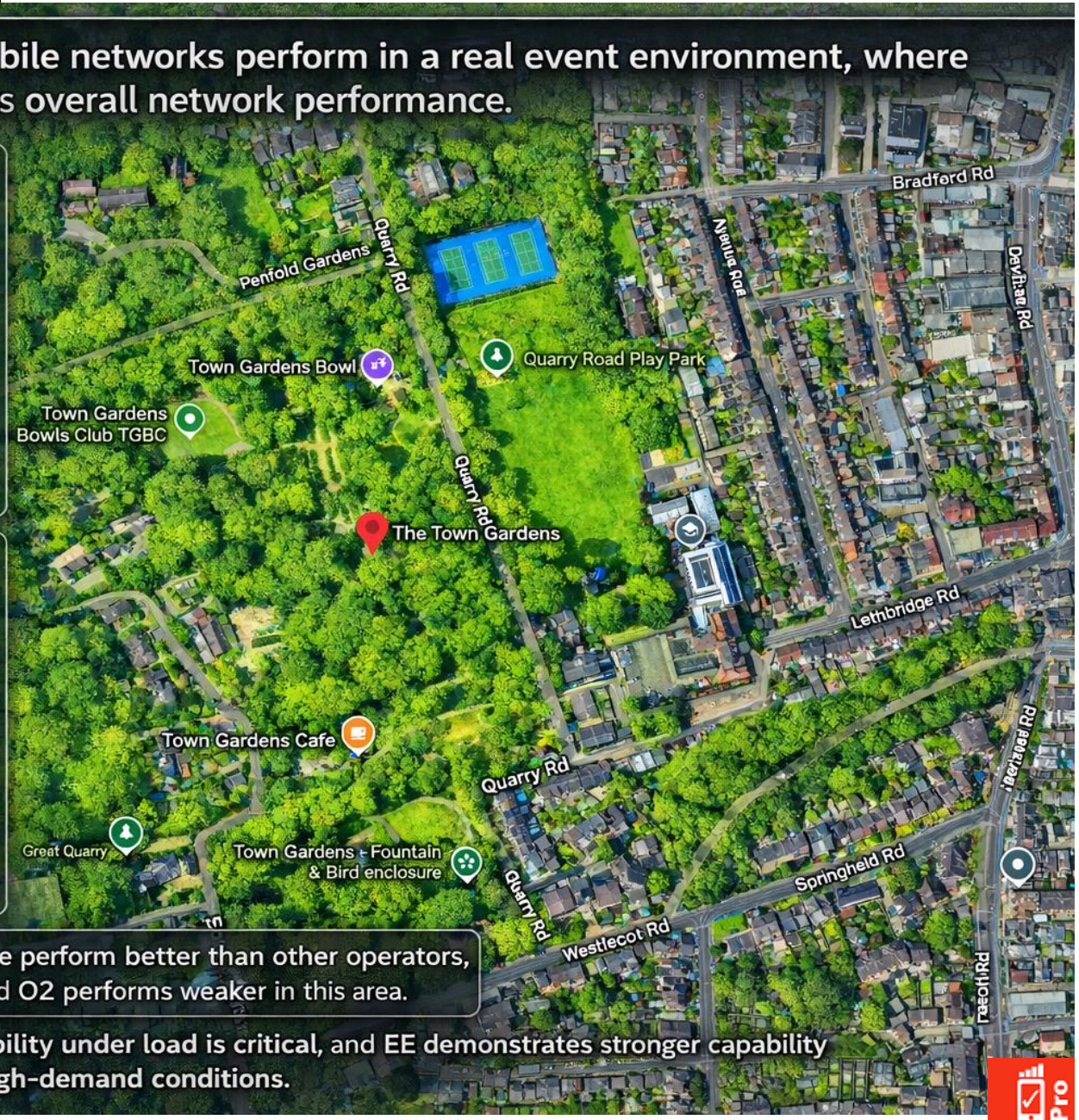

From the crowdsourced data, **EE** and **Vodafone** perform better than other operators, while Lebara shows moderate performance and O2 performs weaker in this area.

Overail, the results highlight that network **stability under load is critical**, and **EE demonstrates stronger capability** in maintaining consistent performance during **high-demand conditions.**

Conclusion

- **The test results show how mobile networks perform in a real event environment, where increasing crowd density impacts overall network performance.**

- **EE delivers the most consistent and reliable performance across all key metrics.**
  It maintains stable signal coverage, strong download and upload speeds, and faster response times. Even during peak crowd conditions, EE handles network load effectively, providing a smooth and dependable user experience supported by strong 5G availability.

- **Vodafone shows good performance in some areas but with less consistency.**
  While it maintains good signal strength and strong call success rates, its data speeds (especially upload) and latency are more affected during peak times. Increased reliance on LTE during congestion also indicates some limitations under heavy load.

- **From the crowdsourced data, EE and Vodafone perform better than other operators, while Lebara shows moderate performance and O2 performs weaker in this area.**

- **Overall, the results highlight that network stability under load is critical, and EE demonstrates stronger capability in maintaining consistent performance during high-demand conditions.**