

# best in test.

For adding something on top in Ireland and reaching an overall score of 843 dots in mobile network benchmarking survey we proudly award this certificate to

## Vodafone Ireland

Score 843 out of 1000 in Total  
Score 253 out of 270 in Voice Services  
Score 374 out of 480 in Data Services  
Score 216 out of 250 in Crowdsourced Quality



Hakan Ekmen  
Chief Executive Officer Telecommunication





# Measurement Overview

umlaut tested and measured the performance of its voice and data services on smartphones in comparison to other 5G/LTE mobile radio networks in metropolitan and rural areas of Ireland.

The audit was done as a performance benchmark performed by umlaut between 31.03 and 26.04 2023 in cities and towns as well as on connection roads.

Dedicated measurements have been executed as drive tests outdoors using a Samsung Galaxy S21+ and a Samsung Galaxy S22+. All data measurements have been performed in 5G preferred mode. Voice measurements have been done in 5G/5G preferred mode on both sides, while call origin has been alternated.

In addition crowdsourced performance data has been collected and evaluated between CW46 2022 and CW17 2023.

The following pages provide a comparative overview about the performance results observed for the different tested service types.



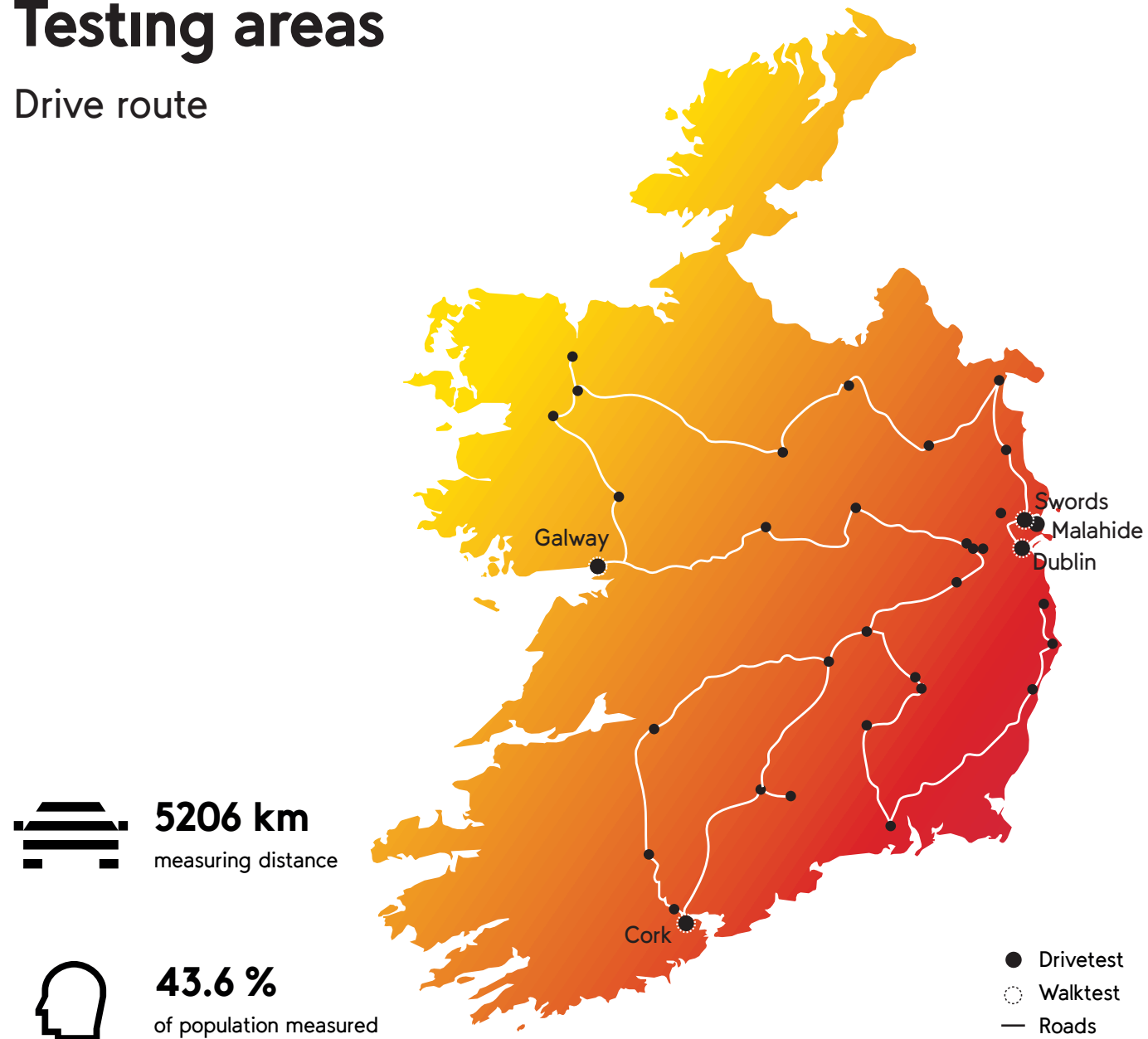
# Measurement setup

Drivetest	Voice	Data
Device	Samsung Galaxy S21+	Samsung Galaxy S22+
Test Cases	Mobile-to-Mobile (M2M) Side1 (VoLTE) to Side2 (VoLTE) 105 sec call window 70 sec call duration 15 sec call setup timeout Multi-RAB traffic injection on both sides Generic OTT Voice Channel	Data 5G preferred CA HTTP DL datastream 7s HTTP UL datastream 7s HTTP 10MB DL fixed file transfer HTTP 5MB UL fixed file transfer 9 Live web pages YouTube v16 Interactivity testing (eGaming)
Mobility and Route Types	Drive test: 54% in Cities, 21% in Towns and 26% on Roads Walk test: 100% in Cities	
Samples	~ 10075	~ 70343
Dates	13 measurement days for DT 31.03.2023. - 19.04.2023 5 measurement days for WT 21.04.2023 - 26.04.2023	
Crowd Data Assessment	24 weeks CW46 2022 - CW17 2023	



# Testing areas

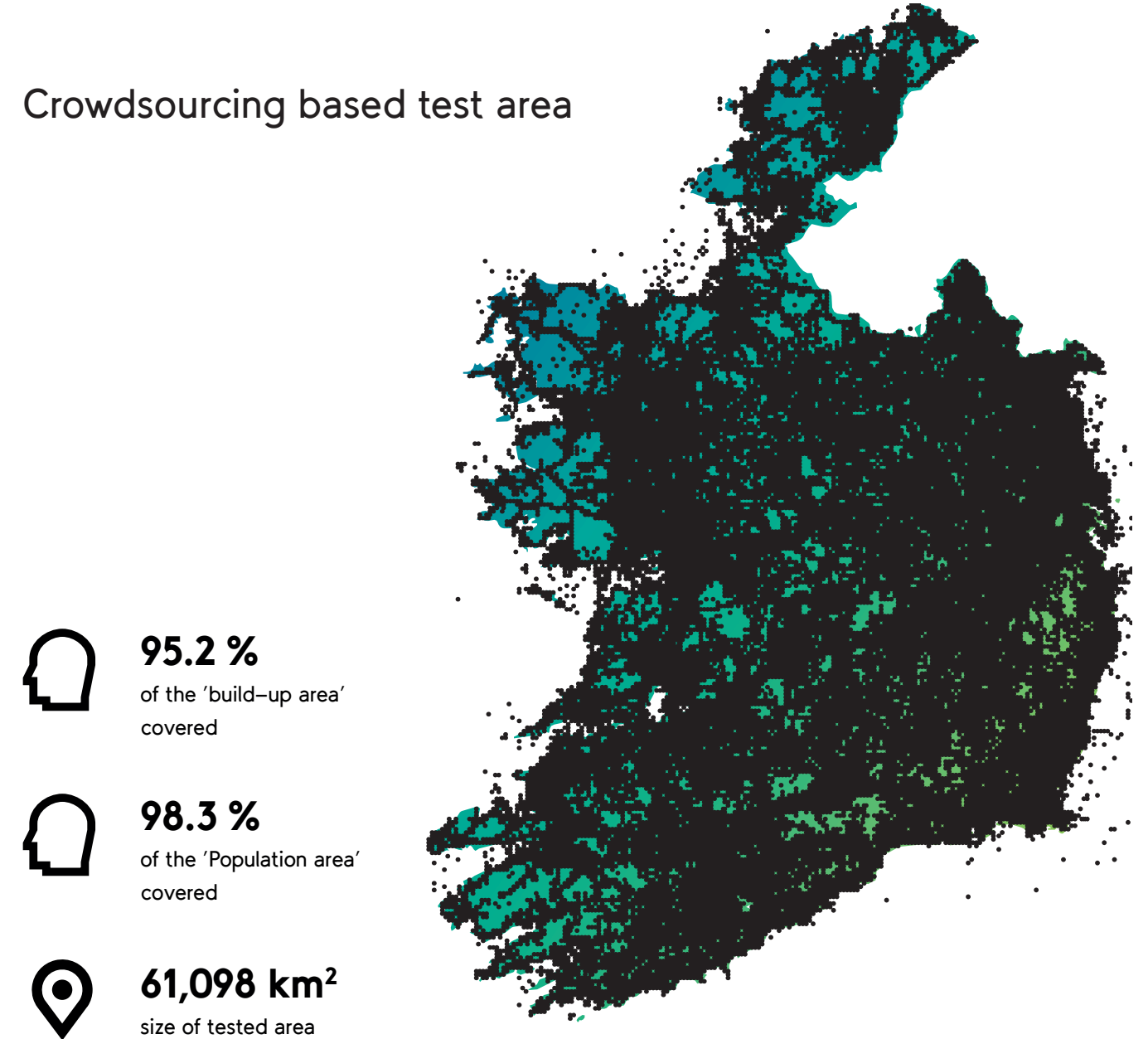
## Drive route





 **5206 km**  
measuring distance

 **43.6 %**  
of population measured

## Crowdsourcing based test area




 **95.2 %**  
of the 'build-up area'  
covered

 **98.3 %**  
of the 'Population area'  
covered

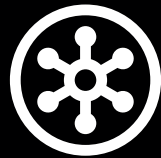
 **61,098 km<sup>2</sup>**  
size of tested area




# Claims

**Best in test**  
Vodafone Ireland



**Best in crowd-sourced quality**  
Vodafone Ireland



**Best in Reliability**  
Vodafone Ireland



# Methodology

The leader in mobile benchmarking, umlaut, has analyzed the mobile networks of Ireland with regards to mobile network performance. We measure smartphone voice and data performance based on extensive drivetests – from major metropolitan areas to smaller cities and connection roads.

We objectively define the routes and test methodology and publish the results through certificates or public benchmark reports. In addition crowdsourced performance data has been collected and evaluated. As the de-facto industry standard, our benchmarking methodology focuses on customer-perceived network quality and covers a wide range of mobile services. Today, more than 200 mobile networks in more than 120 countries are being evaluated by our unique scoring

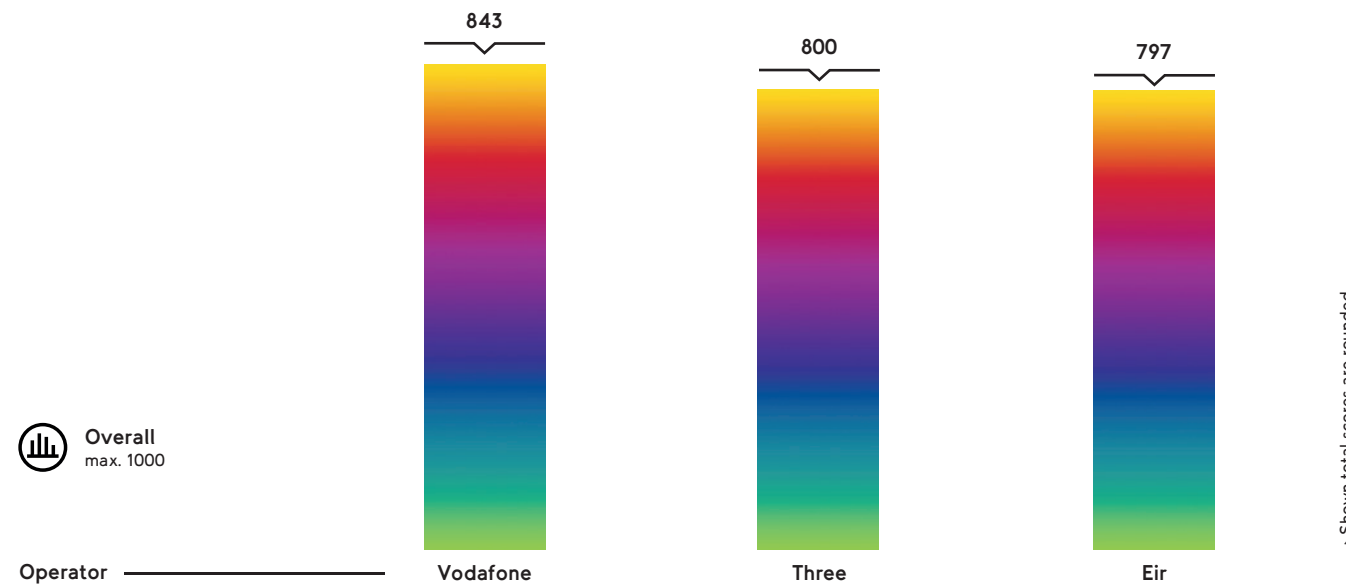
methodology. It allows a technical analysis that is unprecedented in its level of detail and enables comparisons between the network performance and capability of each mobile network. Our public benchmarks as well as the certificate benchmarks help network operators to demonstrate how well they are delivering wireless connections to consumers, business users and enterprises and reveals the areas of improvement.



# Score and breakdown

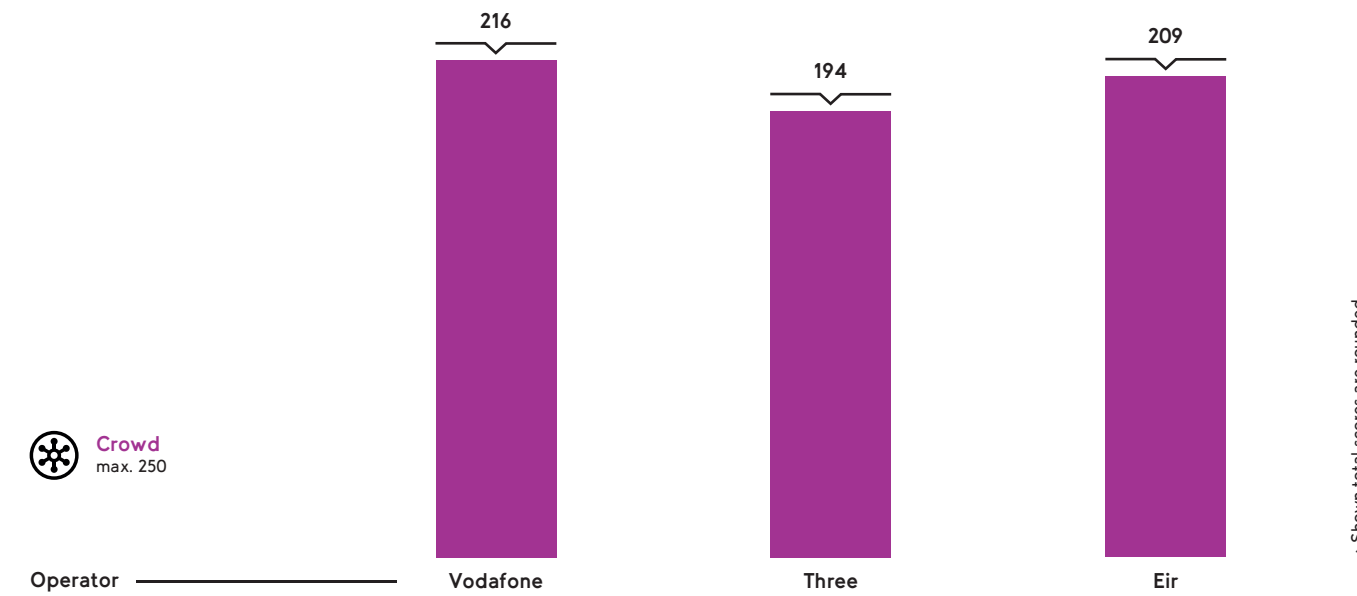
Vodafone achieved the highest overall score among competitors with 843 dots out of 1000.

Total Score  
1000 Dots



Overall score considering Voice, Data and Crowdsourcing.

Crowd Score  
250 Dots

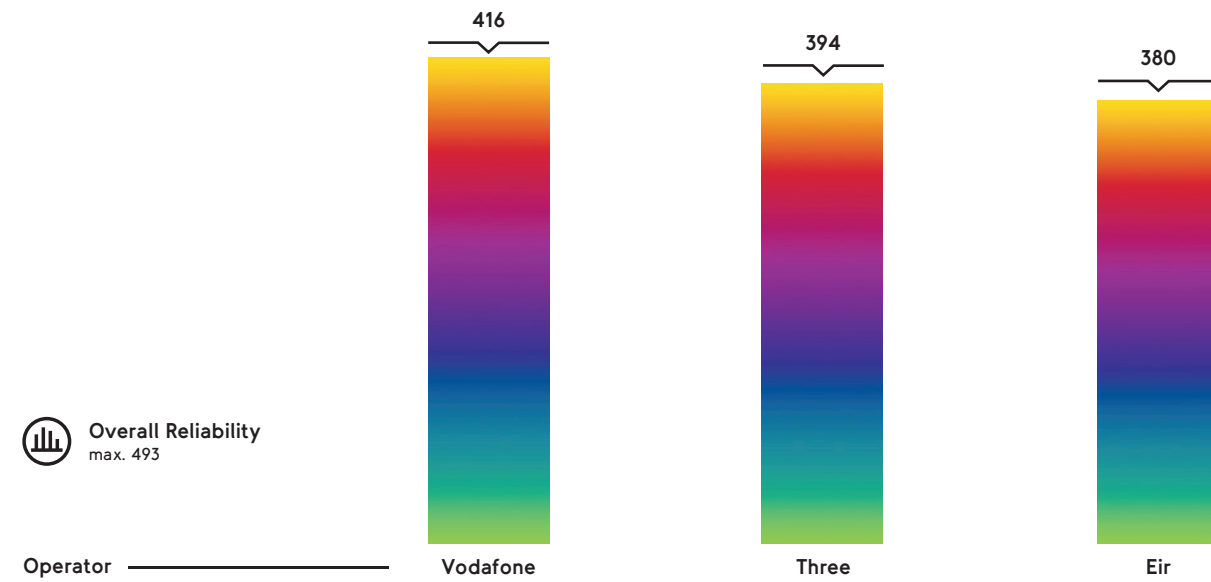


Overall score considering Crowdsourcing.



# Reliability

Total Score  
493 Dots



→ Consistent UE = Consistent User Experience (Crowd)

Reliability score considering Voice Reliability, Data Reliability and Consistent UE.





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