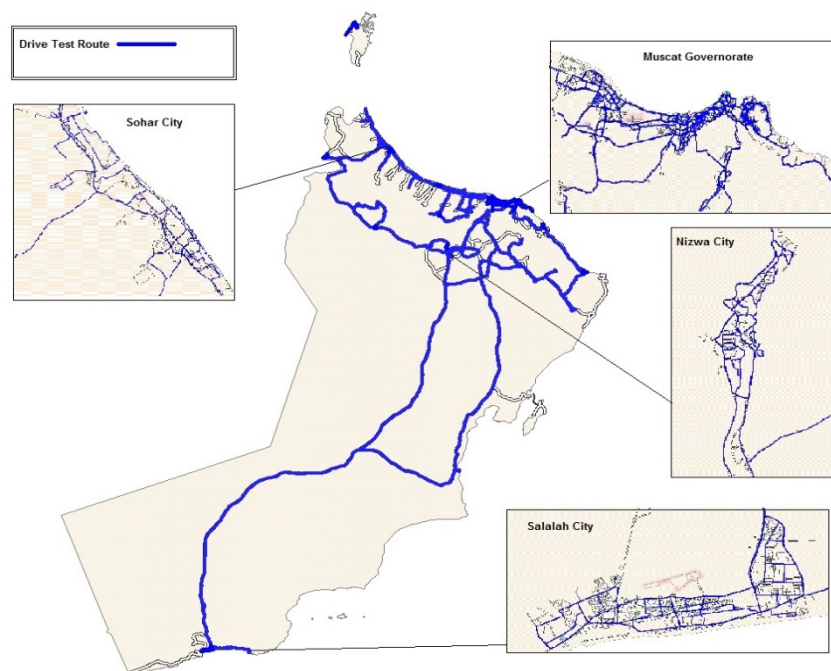


In 2013, the TRA acquired services of a specialised Consultant to conduct a QoS KPIs audit to ascertain the performance achievements reported by the Class I Licensees/service providers to TRA in their quarterly QoS reports and to carry-out a nation-wide drive test to benchmark the performance of the service providers networks. The scope of the audit was as following:

1. **The audit** activity encompassed assessment of key performance indicators (KPIs) related to Quality of Service of mobile and fixed networks. The exercise included collection of raw data from service providers systems and subsequent calculation of KPIs to ascertain the achieved performance in relation with the TRA set target values. The QoS KPI Audit comprised:
  - Assessing Omantel and Nawras Quality of Service Key Performance Indicators as per TRA QoS resolution No 13/2011 while adhering to TRA QoS measurement guidelines document No 22/2011.
  - Analysis was based on raw data collected from Operators' exchanges and performance management systems.
2. **Field testing** was conducted throughout Oman for a period of 2 months in May and June 2013 to test the end to end performance of the mobile and fixed networks as perceived by the end-users. The field test included driving more than 10,000km across Oman and performing 65 static tests in 46 Wilayats across all Governorates of Oman



## Key Findings:

Below are the main findings of the Quality of Service Audit:

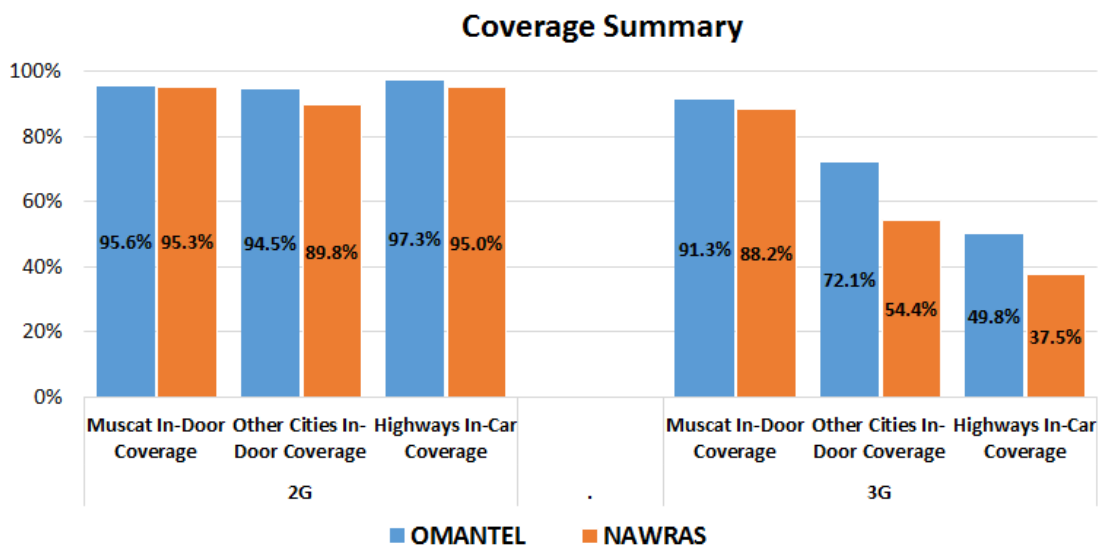
## KPI Audit

The audited results of the Operators' KPI for Q4-2012 and Q1-2013 indicate that both Omantel and Nawras exhibit good performances for Mobile and Fixed services with all audited KPIs meeting the TRA targets.

## Field Testing

From the field test it was found that:

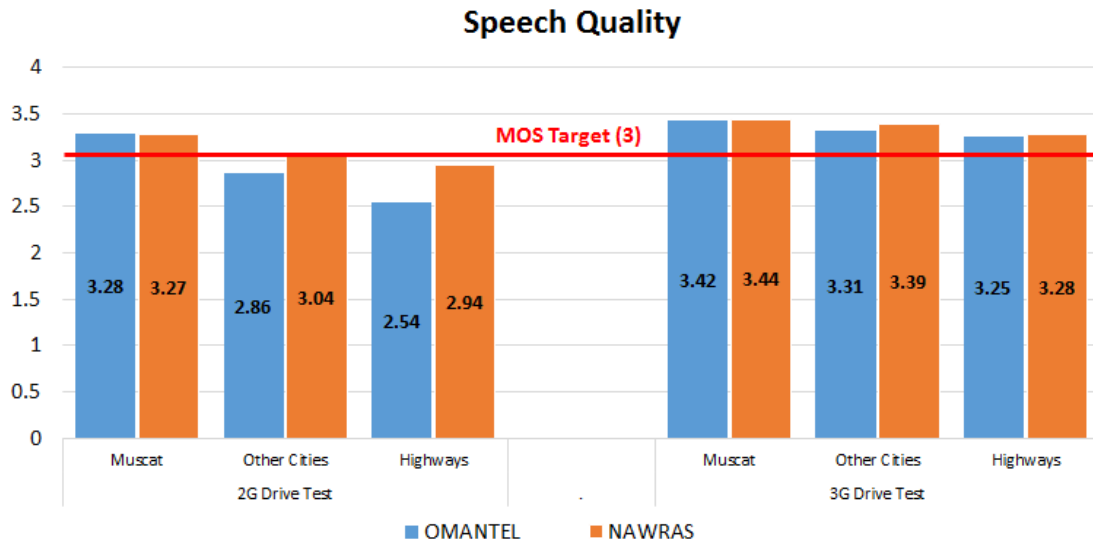
## Mobile Coverage



- Good 2G Indoor Coverage nation-wide for both Operators
- Good 3G Indoor Coverage in Muscat for both Operators
- Deficient 3G Indoor Coverage in cities outside of Muscat for both Operators.
- Deficient 3G in-car Coverage along highways and the main connecting routes for both Operators.

The results are based on signal strength (coverage) measured on drive test routes on a particular date and instance of time.

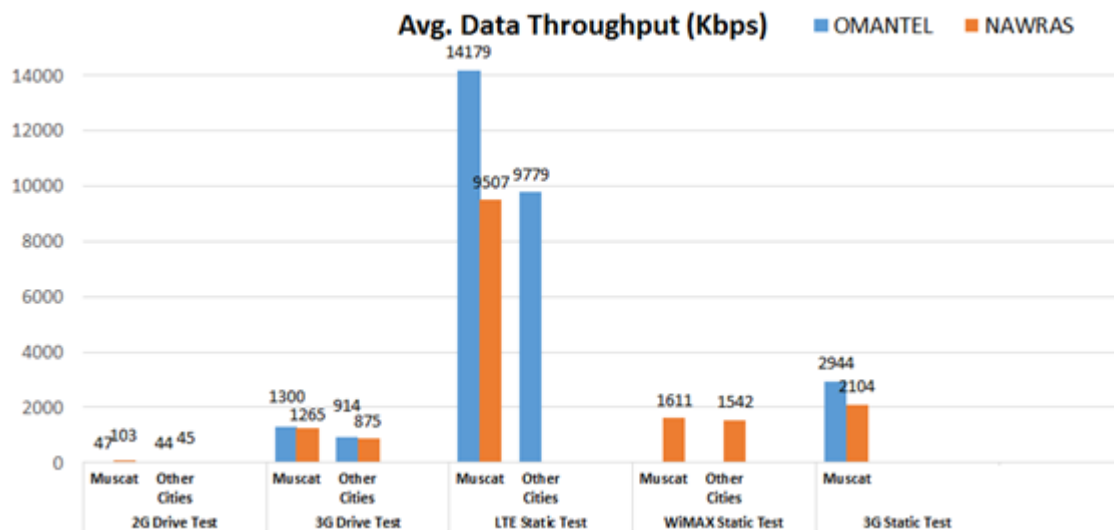
## Mobile Voice Speech Quality



- Voice Speech Quality is good for both operators in 3G
- Voice Speech Quality is good overall for Nawras but borderline on highways
- Omantel Speech Quality is good in Muscat but poor outside Muscat and especially along highways and connecting routes.

## Data Performance

### Data Throughput



- Data Throughput is found to be in line with the expected performances of each of the respective technologies.