

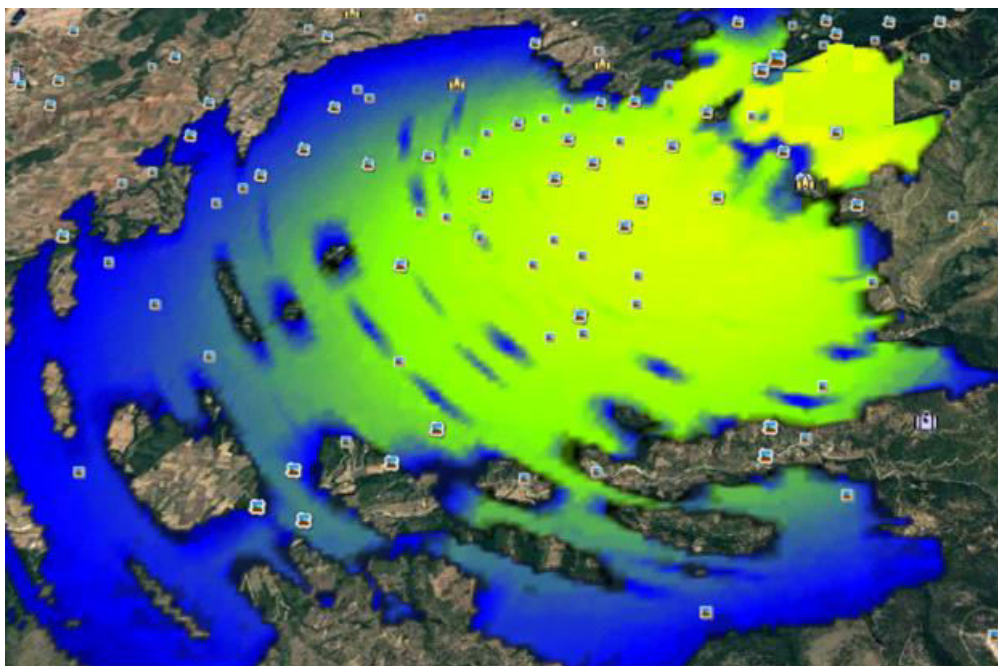
Title: [LTE-TDD C-Band RAN Redesign](#)

MCNS has successfully undertaken and delivered a full RAN redesign project, moving the frequency band of *“Rural Connect, Greece, Implementation and Support of Hybrid NGA”* network from 3.6-3.8 GHz band down to the lower spectrum of C-Band 3.4 GHz.

The projects' immediate goal was the frequency re-planning to a lower C-Band with total channel bandwidth re-configuration and antenna tilt and azimuth re-evaluation to support larger throughputs in excess of interference.

Interference reduction with the support of proper optional features (ICIC, IRC etc) was tested in the field and a final network configuration was concluded. Moreover the antenna MIMO enhancement was further investigated with 8x8 MIMO TM8 and 4x4 MIMO Transmission Mode 4 (TM4) beamforming and OLSM functionality, preparing the network for future 5G support.

Finally MCNS has participated into a proper vendor selection procedure, evaluating the network performance under different radio conditions.



MCNS re-planning services support was based on a well-known professional radio planning software tool, considering all project restrictions on coverage areas, interference, number of populated villages and population percentage.

MCNS project technical reports and deliverables were:

- Propagation model and pathloss re-evaluation assessment
- Frequency re-planning for LTE TDD RAN in C-Band of 3.4 GHz
- RAN re-design with proper surgical improvements on antenna tilt, MIMO transmission mode and azimuthial planning in conjunction with interference reduction optional features
- Interference reduction optional features evaluation and report
- Participation the the technical report for the vendor equipment evaluation.
- Coverage and Capacity optimization to increase channel bandwidth to 20 MHz per sector by simultaneously increasing throughput in excess of Interference
- Antenna MIMO technology enhancement to MIMO 8x8 TM8 and 4x4 TM4, evaluating and concluding on the proper configuration and performance enhancements under different radio channel conditions

For further information about the affiliated company press [here](#)