

ZAIN JORDAN WIRELESS QOE MEASUREMENT TOOLS AND ENHANCEMENT METHOD

Oct 2022



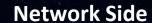


You've got to start with the customer experience and work back toward the technology - not the other way around.

Steve Jobs



QoE Measurement Tools





Monitor whole network elements including Radio, Transmission and Core

Service KQI

Establishing real time quality monitoring for all services in order to optimize services' KQI such as: latency, throughput, video quality and page response for OTT applications and gaming.



Drive Test (KPI and KQI)



Drive test by BM tools and Probs distribution based on P3 standard (ETSI)

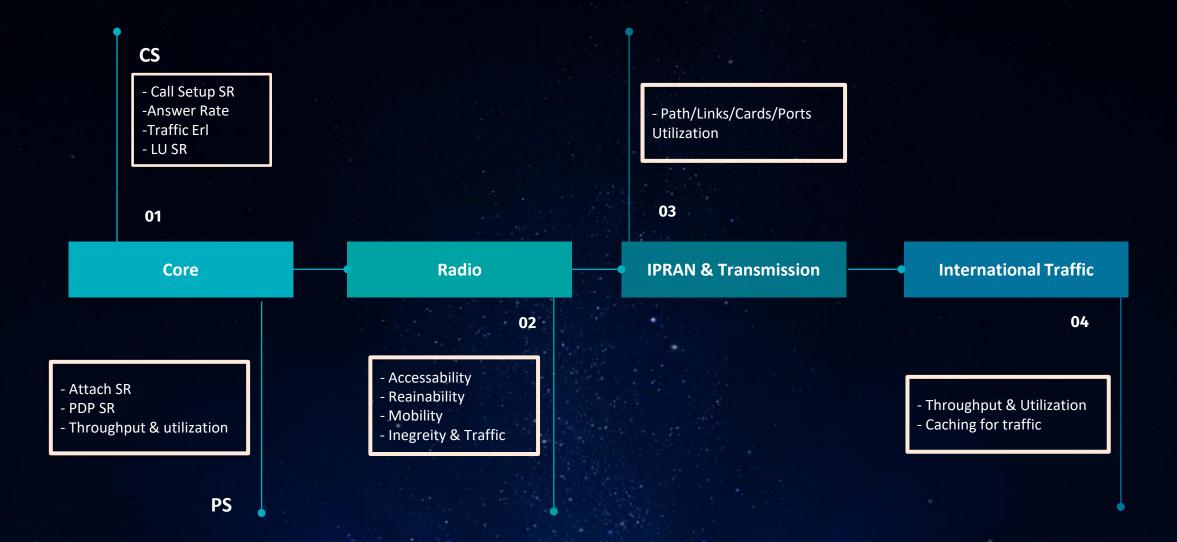
Customer Experience

KQI Measurement per user.





Major Network's KPIs





Drive test Benchmark by using P3 standard KQI's (Network Performance Score (NPS)



Data Service Score



Browsing score
Activity SR and activity time.



Data testing score
DL/UL Throughput and file transfer SR.

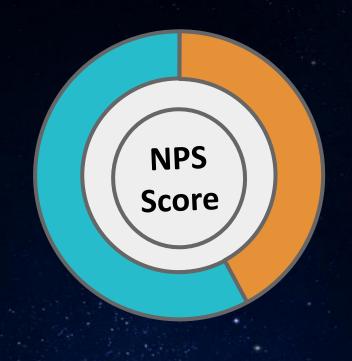


Video streaming score Video quality indicators.



Social media and messaging score

Activity SR, activity time(delay) and throughput.



40%



Telephony Score

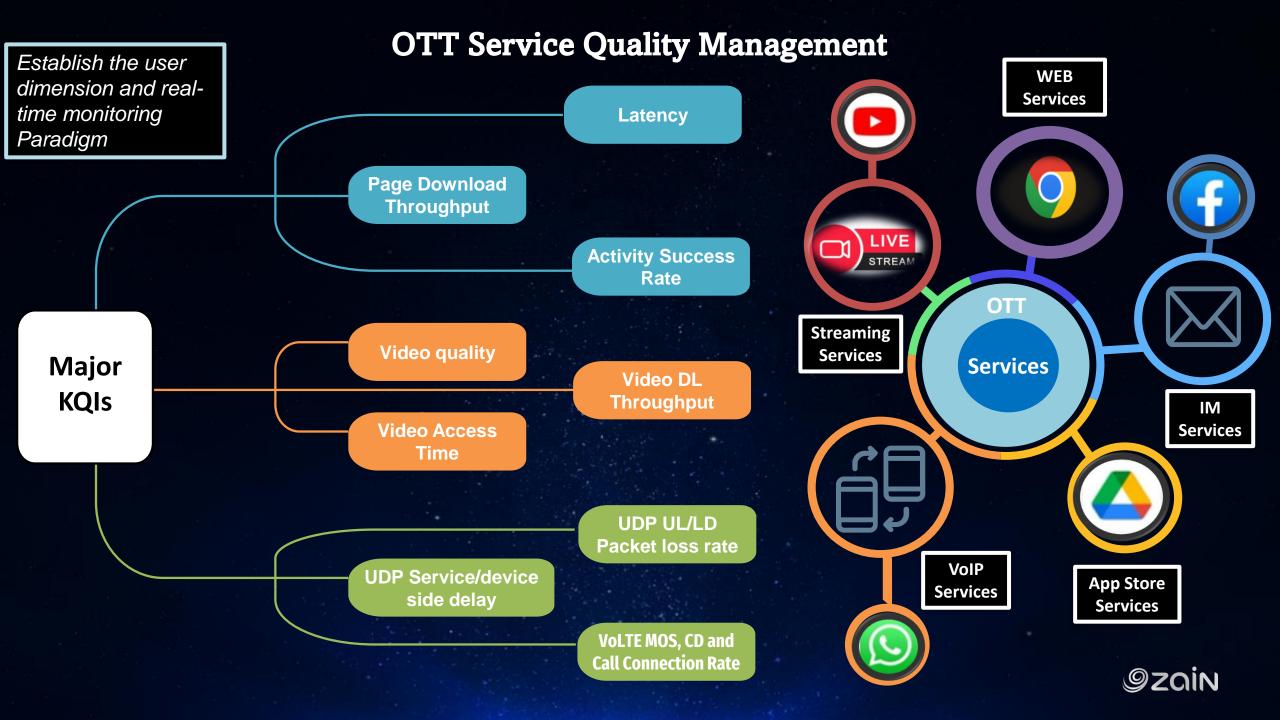


Telephony Score: Service availability, accessibility, retainability and performance.

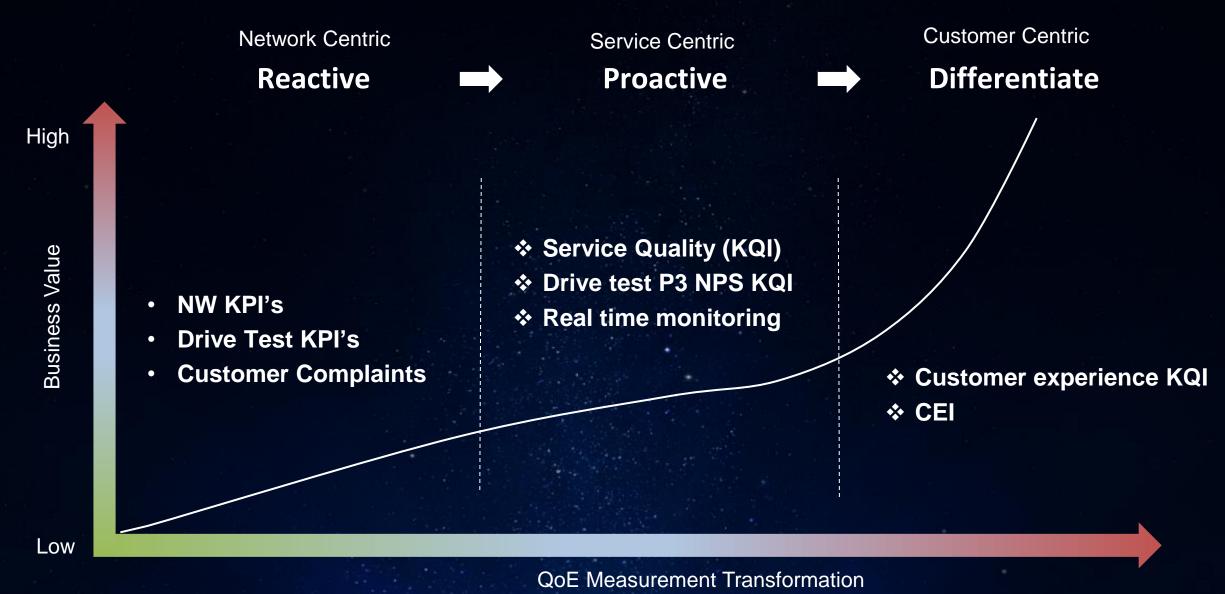


Voice telephony contributors: MOS, Call setup SR, Call setup time and Drop call rate.





QoE Measurement Transformation





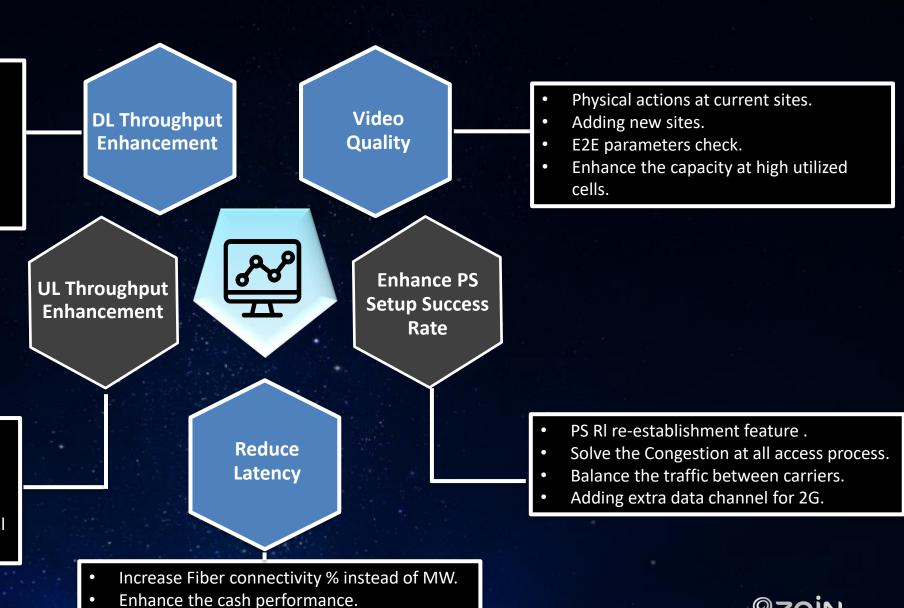
Data QoE Enhancement actions

E2E QoS parameters audit.

- DC-HSDPA and Carrier aggregation
- Enhance the balance between the carriers.
- Features to enhance the scheduling and reduce the overall overhead.
- Massive MIMO and Capacity solution.
- Power Adjustment to increase data power.
- Enabling high modulation.



- Using high modulation scheme.
- Enabling enhancement Features as UL COMP, MLB and power adjustment.
- Using High speed Channel during the CS call initiation.



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Voice QoE Enhancement actions

Physical actions at current sites.

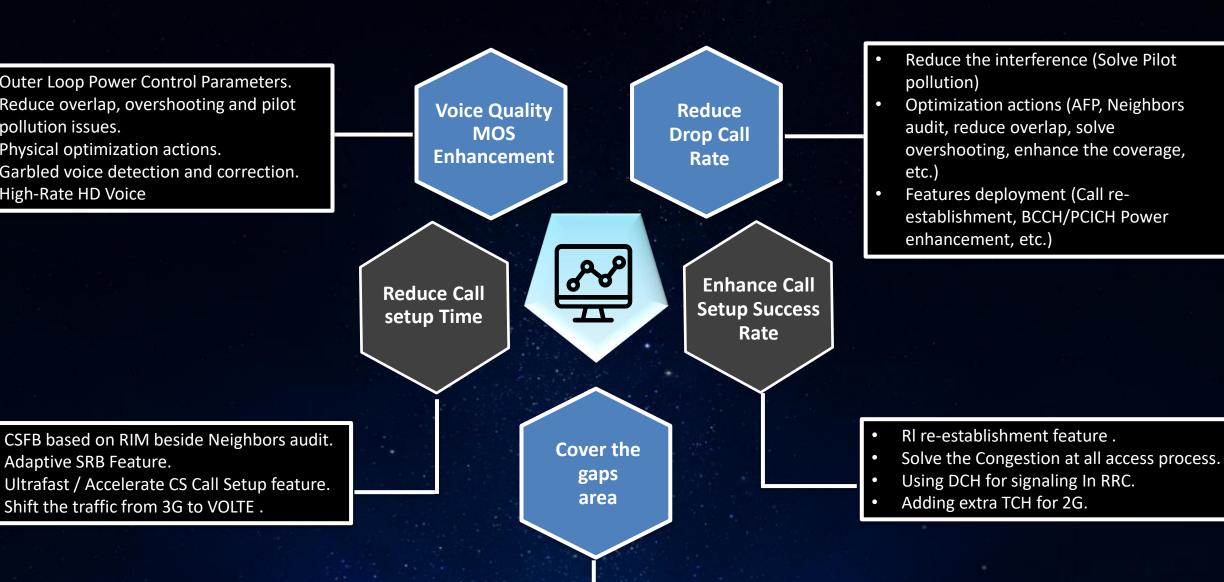
Adding new sectors or sites.

- Outer Loop Power Control Parameters.
- Reduce overlap, overshooting and pilot pollution issues.
- Physical optimization actions.

Adaptive SRB Feature.

Shift the traffic from 3G to VOLTE.

- Garbled voice detection and correction.
- High-Rate HD Voice



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THANKS

