

**ITU-T SG 12 QOS WORKSHOP & RG-AFR MEETING, 1- 4
JULY 2025, FREETOWN, SIERRA LEONE**

**ITU-T E.805.1
“USE-CASE IMPLEMENTATION – NCA GHANA”**

**NATIONAL
COMMUNICATIONS
AUTHORITY**



Presentation Outline

- Background and Objective of E.805.1
- Scope and Operational Concept of E.805.1
- E.805.1 Implementation Scenarios – Case of NCA
- Conclusion & Way Forward



NATIONAL COMMUNICATIONS AUTHORITY

Division

BACKGROUND & OBJECTIVE



NATIONAL COMMUNICATIONS AUTHORITY

Division

Background & Objective (ITU-T E.805.1)

- In line with Resolution 95 of the World Telecommunication Standardization Assembly (Hammamet, 2016), and as follow-up to E.805, ITU-T Recommendation E.805.1 “**QoS Operational Strategy for Improved Regulatory Supervision on providers of mobile telecommunication services**” was birthed to provide further guidance to NRAs on best practices and policies related to service quality.



Background & Objective (ITU-T E.805.1)

- E.805.1 (formerly E.QoSMod) “QoS Operational Strategy for Improved Regulatory Supervision on providers of mobile telecommunication services” addresses the case of countries where the national legislation or the QoS framework requires an **involvement of regulators in QoS supervision activities**
- E.805.1, given its regulatory implications went through ITU’s **Traditional Approval Process (TAP)** prior to its approval at the SG 12 meeting held from 6th to 7th January 2021.
- Ghana served as the Editor of this work item and received the active support of Mexico, Greece, Costa Rica, Brazil, Senegal, Orange and Info Vista



SCOPE & OPERATIONAL CONCEPT

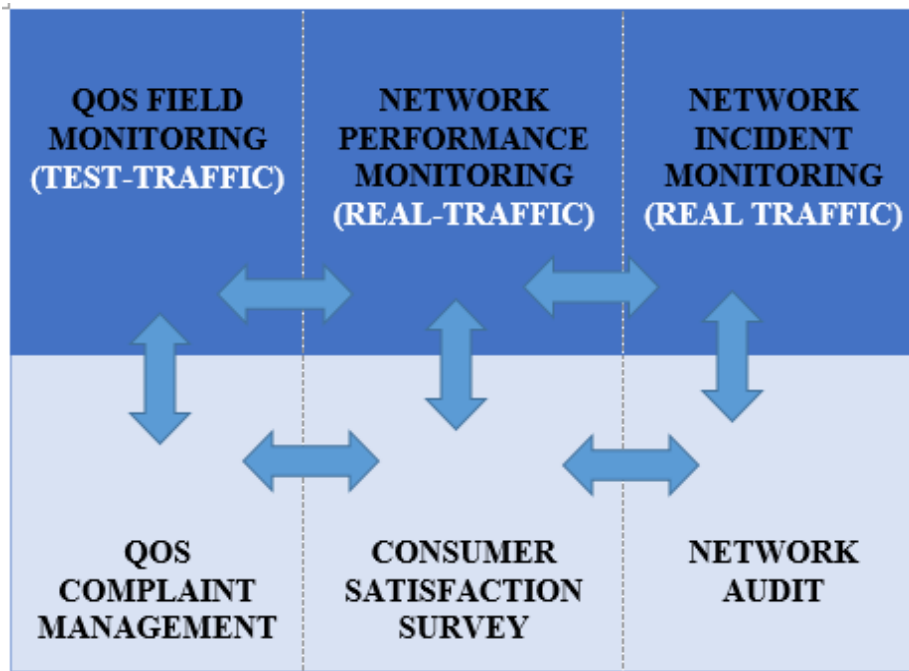


Scope of Work (ITU-T E.805.1)

- E.805.1 Recommendation provides guidance on how NRAs can implement quality of service regulation or in some cases a National Strategic Plan on QoS, at reduced regulatory effort and improved operational efficiency.
- It also addresses the case of those countries where the national legislation or the QoS framework requires the involvement of regulators in QoS supervision.
- The applicability of this ITU-T Recommendation may be limited under some national and regional laws, regulations and policies.



ITU-T E.805.1 QoS Operational Model



[Reference Model/Standard: ITU-T Recommendation, E.805.1]

- ▶ ITU-T E.805.1 provides guidance for the implementation of an effective regulatory strategy on QoS
- ▶ This Recommendation was approved in 2021.

IMPLEMENTATION SCENARIOS (CASE OF NCA)



QoS Field Monitoring – System Overview



Each Nemo Invox Setup offers the following channels:

- ❖ 8 x voice 2G/3G devices with MOS POLQA
- ❖ 04 x data 3G devices
- ❖ 06 x data 4G devices

Total of 7 Nemo Invox II Systems

Nemo Wind Catcher / Nemo Analyze offers :

- ❖ 10- user GLS desktop licenses for post-processing

QoS Field Monitoring: Tests & Methodology

- ❖ The following tests and methodologies are used in the QoS Field Monitoring in line with ITU-T E.800-series

Tests	Technology Mode	Objective	Test Methodology
Mobile Voice QoS	Locked (3G)	To check MOS and Call Setup Time	Calls of 90 sec duration with 15 seconds idle wait time between them to allow for cell reselection and release of channels, where applicable.
Mobile Data QoS (stationary)	Locked (3G)	To check data download speed	A series of FTP download tests, to be conducted and each separated by five (5) seconds wait time.
	Locked (4G)	To check data <ul style="list-style-type: none">•download speed•service access time•latency	A ping test, HTTP download test and an FTP download test are conducted in that order and separated by five (5) seconds wait time.
Coverage Assessment	Locked (3G / 4G)	To check network coverage	The User equipment is left in IDLE mode

QoS-Network Performance Monitoring

The **Regulatory (QoS) Performance Management System** is **the novel NMS solution** that handles the task of interfacing operators'/service providers' operations support systems (OSS), **collect performance data records** and **create KPI reports** that renders a given network performance against pre-set benchmarks (QoS thresholds).



NCA has acquired RPM system as the QoS Network Monitoring Solution (NMS)

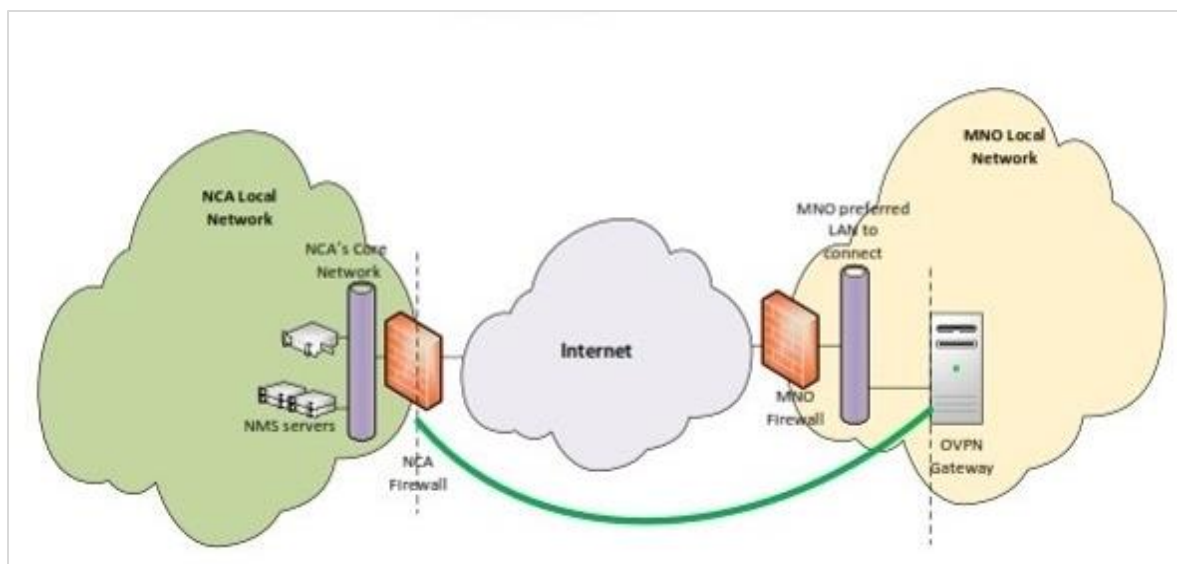
QoS-Network Performance Monitoring

NCA's network performance monitoring system operates a **three (3) module operational** architecture as below:

Module 1: Collect raw OMC-R data (PM files)

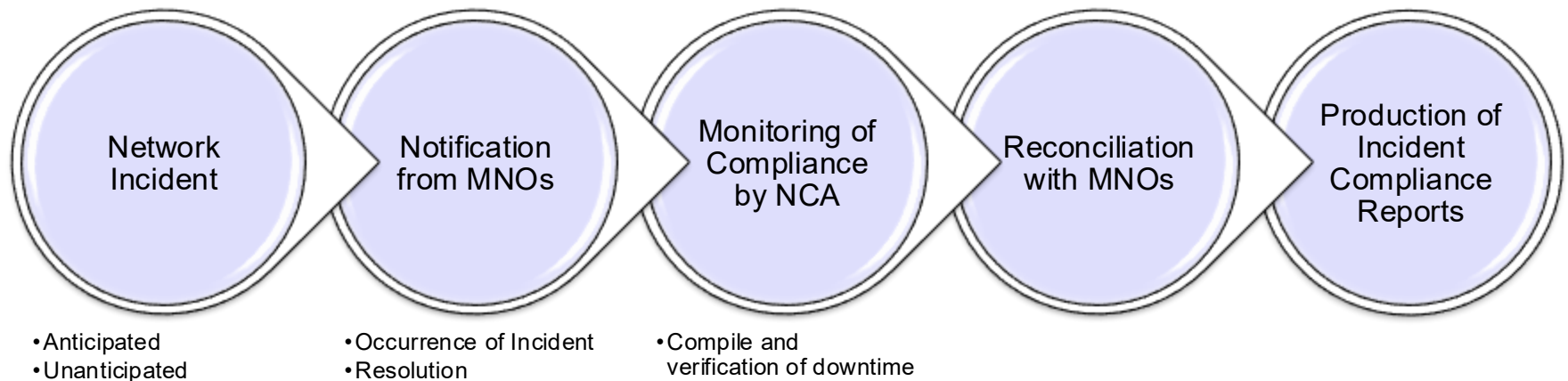
Module 2: Perform data integrity and reliability checks

Module 3: Perform KPI monitoring against defined license targets

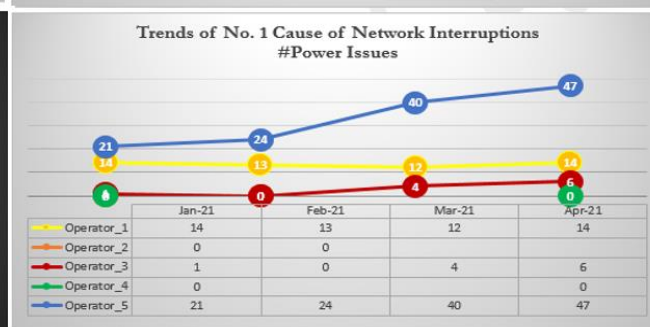
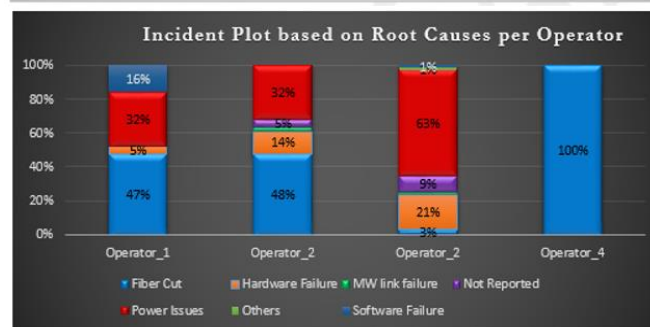
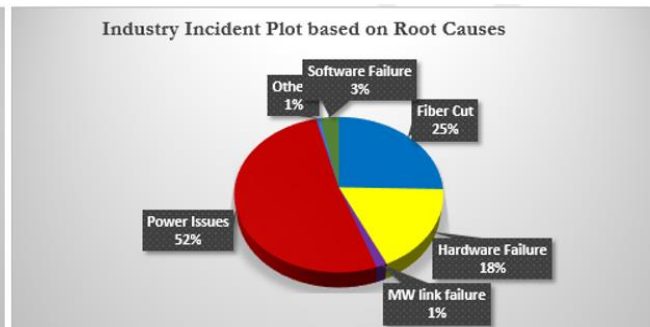
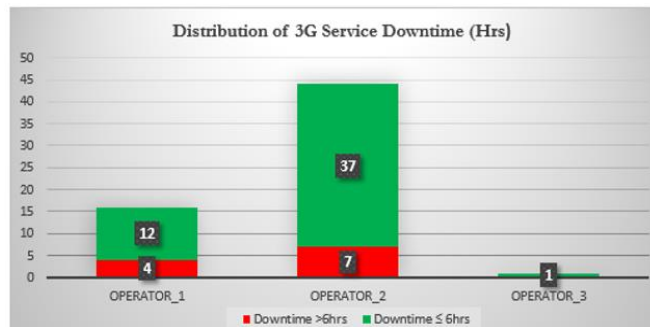


QoS- Network Incident Monitoring Process

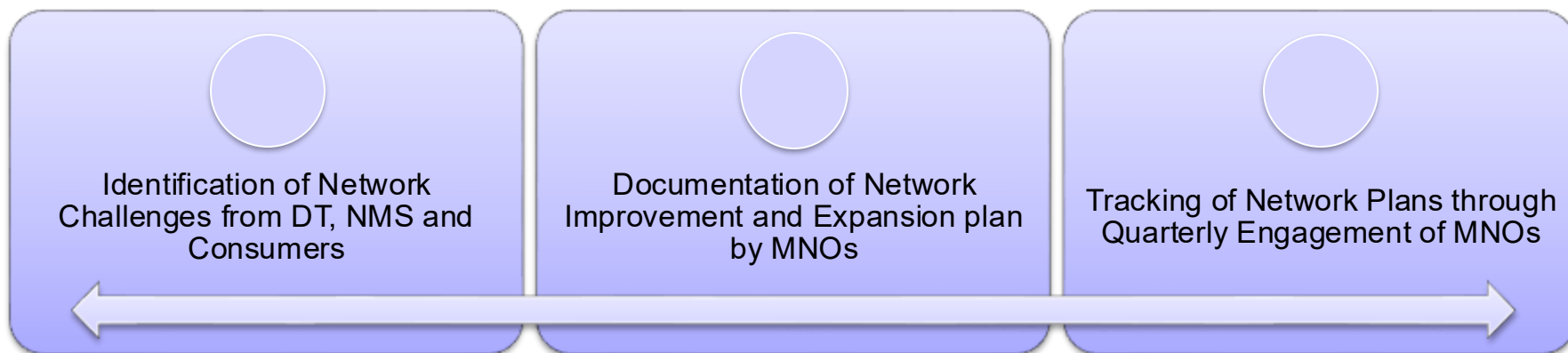
- The NCA perform network incident monitoring to have first hand information on causal factors and also ensure compliance to licence conditions. The following processes are employed by the NCA:



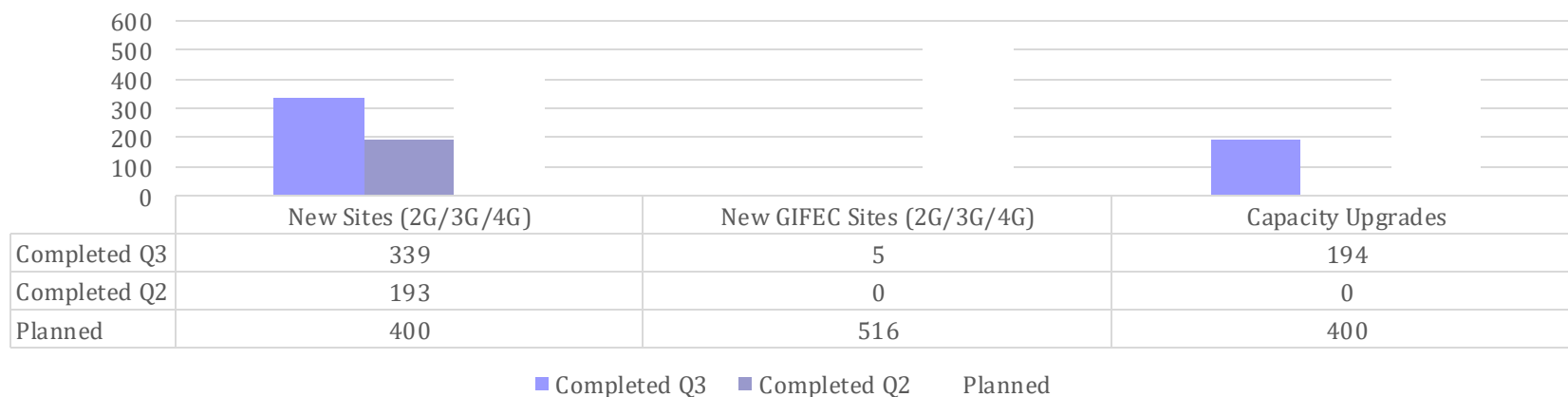
QoS- Network Incident Monitoring



Network Audit



STATUS OF 2022 NETWORK EXPANSION PLAN



Consumer Satisfaction Survey

- The NCA conducts periodic Consumer Surveys/Opinion Polls, bearing in mind the following objectives:
 - Capture consumer's evaluation of service attributes and expectations from all mobile Service Providers.
 - Evaluate the level of consumer satisfaction with the various mobile service operators.
 - Measure the level of service delivery in the mobile telephone industry.
 - Evaluate the performance of the operators against Key Performance Indicators (KPIs).



NATIONAL COMMUNICATIONS AUTHORITY

Division

QoS Complaints Management & Redress



QoS Complaints Resolution Tracker

S/N	Nature of Issue	Expected Resolution Timeline	Planned Action(s)	Issue Resolved?	Linked QoS KPI
1	Inability to make or receive calls	e.g. 05/10/21	New 2G Site to be integrated	Yes	Call Setup Success
2	Inability to hear clearly during voice calls			Yes	MOS
3	Slow internet during file downloads		PS nodes upgraded	No	Data Download Speed
4	Over-charged after completing voice calls		Metering system optimized.	No	Billing Accuracy

[NB: Issue resolution to be confirmed by complainant(s) and supported by investigations from monitoring tools]



NATIONAL COMMUNICATIONS AUTHORITY

Division

Concluding Remarks & Way Forward

- E.805.1 provides a best practice “QoS operational strategy” model for NRAs, including the NCA, pursuant to **Resolution 95 of WTSA** (Rev. New Delhi, 2024).
- The Recommendation is further aimed at **facilitating collaborative working relationship** between technical and non-technical units of the NRA responsible for QoS as well as between the NRA and its external stakeholders.
- NRAs are encouraged to develop or update their **QoS Operational plans/strategies using the E.805.1 standard** as a guide.
- E.805.1 implementation may come at a **cost** to the NRA and should be supported by the relevant **legal provisions**.



***Thank You for your time &
attention***

