

TM Forum

ANLAV Report

Indosat Ooredoo Hutchison (IOH)

Scenario: GB1526A – RAN Energy Efficiency Optimization

Sub-scenarios: 1 & 2 in scope

Maturity Level: Beta

Date: 26/05/2026

Region: Indonesia (National)

Score: 4.00 (validated, Sub-3 out of scope)

ANLAV Report: Indosat Ooredoo Hutchison (IOH)

Executive Summary - 26 May 2026

IOH's GB1526A submission (v1.5, Powerstar) documents a credibly deployed Huawei PowerStar AI engine integrated with MAE-Access, managing 17,866 cells across Indonesia (14,122 LTE under the energy saving feature, 1,770 cells in active saving state, 58,852 in ICES). The solution operates as a closed five-step loop, Data Access via MAE-Access internal interface, PowerStar AI learning (eligibility filtering plus joint optimisation of PRB and UE-number thresholds), MML Execution to NEs, eNodeB policy execution at idle hours, and daily Performance Monitoring Feedback with a two-stage AI architecture combining linear regression on PRB load / UE-number versus throughput for initial threshold prediction and reinforcement learning with an explicit TD reward for iterative threshold adjustment.

The RL agent continuously evaluates network KPIs (RRC, E-RAB, HO, CDR, Throughput) against intent targets and adjusts shutdown thresholds per cell on a daily cadence. This is genuine AI/ML, not rule-based. The submission demonstrates Option A across all nine cognitive activities on both in-scope sub-scenarios. Sub-1 (Intra-RAT intra-frequency, 33%) and Sub-2 (Intra-RAT inter-frequency, 67%) are evidenced across the capabilities. Production-scale automation is comprehensively proven (14,058 acknowledged execution records, FW Saving Monitor per-OSS daily exec-success file trail through 2026-04-01).

The validator accepts IOH's formal exclusion of Sub-3 from this assessment, supported by an internal management email thread documenting an explicit strategic decision to NOT shut down 5G during low traffic because IOH currently operates only one 5G layer (2.1 GHz) and is prioritising 5G coverage retention against competitors, with reassessment planned for ~Q4 2026 when a 2nd 5G layer (700 MHz / 2.6 GHz) is deployed and by production CM evidence confirming Inter-RAT load-based power saving is not active in production. This is a business non-activation, not a capability gap.

Validated Score is 4.00 (Sub-1 = $4.00 \times 33\%$ + Sub-2 = $4.00 \times 67\%$).

ANLAV Report: Indosat Ooredoo Hutchison (IOH)

First Review Cycle - 26 May 2026

Service Capability	Weight	Question	Scoring Method: Average																	Overall Score
			Criteria				Sub-scenarios RAN Energy Efficiency Optimization			Intra-RAT intra-frequency multi-Site energy saving			Intra-RAT inter-frequency multi-Site energy saving			Inter-RAT multi-Site energy saving				
										33%			67%			0%				
			Option A	Option B	Option C	Option D	Intra-RAT intra-frequency multi-Site energy saving	Intra-RAT inter-frequency multi-Site energy saving	Inter-RAT multi-Site energy saving	Original score	Compensated score	Sub-Score	Original score	Compensated score	Sub-Score	Original score	Compensated score	Sub-Score		
Intent Translation	15%	How does the System translate the RAN Energy saving intent to the RAN energy saving related control information?	4	3	2	1	A	A	Business decision not to activate	4	4	4.0	4	4	4.0	Business decision not to activate	4.0			
Intent Fulfillment & Evaluation	10%	How does the System evaluate RAN energy saving intent fulfillment?	4	3	2	1	A	A		4	4		4	4						
RAN Energy Saving Information Collection	10%	How does the System collect RAN energy saving related information?	3	2	1	0	A	A		3	4		3	4						
RAN Energy Saving Issues Identification	10%	How does the System identify energy saving issues?	4	3	2	1	A	A		4	4		4	4						
RAN Traffic & Performance Prediction	10%	How does the System predict traffic load and network performance that can be used for energy saving solutions?	4	3	2	1	A	A		4	4		4	4						
RAN Energy Saving Issues Demarcation & Root Cause Analysis	10%	How does the System demarcate energy saving & performance issues and analyze their root cause?	4	3	2	1	A	A		4	4		4	4						
Solution Generation	15%	How does the System generate the recommended RAN energy saving solutions to solve the identified energy saving issues?	4	3	2	1	A	A		4	4		4	4						
Solution Evaluation & Decision Making	10%	How does the System evaluate energy saving solutions and decide on the best solution to be implemented?	4	3	2	1	A	A		4	4		4	4						
Solution Implementation	10%	How does the System implement solution that can resolve identified energy saving issues?	2	1	0	0	A	A		2	4		2	4						
										High Value Scenario Score- 4.00										

ANLAV Report: Indosat Ooredoo Hutchison (IOH)

First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Intent	Intent Translation	A/A/NA	A / A / NA	KPI Saving Group Setup: 21,633 cell-group rows with system-derived per-group thresholds at Adjustment -3% (= 97% of Avg.last4w observed). Activated KPI IP/User Throughput DL QC19. Operator-defined KPIs (AVG PDCP Cell Throughput DL/UL, Inter eNB X2 HO SR, Interval 60min, 4G). Sub-1 evidence: same interface governs four intra-frequency strategy tabs (RF Channel Intelligent Shutdown, Symbol Shutdown, RF Channel Dynamic Muting, flexible frequency-domain scheduling). Sub-2 evidence: same interface governs Intelligent Carrier Shutdown with sub-options Dynamic power-off in same coverage, LTE overlap neighbouring cell, Co-coverage neighbouring cell auto-learning. IOH narrative: “User defines target KPIs, system do the prediction and select right time slot and threshold”.Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED). Combined with the 5-strategy auto-selection visible in Solution Evaluation, the Option A criteria are met for both in-scope sub-scenarios.	Option A: Based on RAN energy saving Intent defined by Human, the System automatically selects candidate energy-saving objects (e.g. NE/CELL) and generates the RAN energy saving related control information based on the RAN energy saving intent, without Human Intervention. The system can automatically explore the energy saving gains and performance impacts to support human continuous adjustment of intent targets to achieve optimal energy saving effect and performance.	No additional clarification required – both in-scope sub-scenarios CLOSED. Sub-3 OUT OF SCOPE per executive summary.

IOH Response:

ANLAV Report: Indosat Ooredoo Hutchison (IOH)

First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Intent	Intent Fulfillment & Evaluation	A/A/NA	A / A / NA	Energy Saving Gain Dashboard for IOH/Indonesia (2025-11-20 to 11-26): Total Energy Saving Gain 5.1% (24,210 kWh), Average Site Energy Saving 20.4 kWh, Daily Energy Consumption Comparison (4G Previous vs Latest). Prediction-vs-Actual hourly grid for cell 10018 (2026-03-30) with 15-min granularity. Daily Accuracy % chart spanning ~25 days March 2026, sustained ~80%. System auto-generates reports without human confirmation. Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED) for Sub-1 and Sub-2.	Option A: The system automatically evaluates and generates an intent fulfillment report including targets fulfillment status, based on intent.	No additional clarification required – both in-scope sub-scenarios CLOSED. Sub-3 OUT OF SCOPE per executive summary.

IOH Response: .

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First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Awareness	RAN Energy Saving Information Collection	A/A/NA	A / A / NA	IOH Power Saving Region Management dashboard: 17,866 cells managed (3,743 GSM / 14,122 LTE / 1 NR). PM via MAE-Access internal interface. CM: Engineering Parameter Check 17,166 / Configuration Data Sync 17,166 / Abnormal 0. Energy efficiency dashboard 2026/01/01-2026/03/10. Geographic map of Indonesia. Per-cell BTS/Cell/Saving Action/Vendor (Nokia). Working State: PW 1,770 cells, ICES 58,852. Feature status visible: LTE Intelligent Shutdown Saving = ON, 14,122 cells, 37925/215498 advice (Sub-2 mechanism); Adaptive Power Reduction = ON, 14,122 cells, 1440/8549 advice, 12 exceptions (Sub-1 mechanism, highlighted in IOH submission); GSM Intelligent Network Energy = OFF; Multi-RAT Intelligent Network Energy = OFF (Sub-3 OUT OF SCOPE confirmation). Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED). All four data categories evidenced: PM, CM, environment, energy saving state.	Option A: The System continuously collects RAN energy saving related information, without human intervention. Option B: As above but requires human intervention (e.g.: for data quality checks).	No additional clarification required. Both in-scope sub-scenarios CLOSED – data collection is comprehensive and automated across PM, CM, environment, and energy saving state. The “Multi-RAT Intelligent Network Energy” feature being OFF is consistent with Sub-3 OUT OF SCOPE and reinforces the formal exclusion (Inter-RAT data collection is not active in production by design).

IOH Response:

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First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Analysis	RAN Energy Saving Issues Identification	A/A/NA	A / A / NA	FW Saving Alarm: Nokia BTS 571507 Cells 21 & 61, 4G, 2026-03-25, energySaving state, KPI valid, auto alarm/cancel timestamps. Application Notification alarm 711401 “KPI threshold notification - IP/User Throughput DL: total 3.77 < 5.0” on /src-1/JAW/BTS-571667/PSGRP-2/CELL-23 plus 3 other cells (2026-03-31, Severity Warning). Anomalies List with RM/SM/BTS power split per BTS. System automatically detects performance issues caused by energy-saving actions. Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED) – alarm 711401 is the canonical “issue caused by energy-saving action” auto-detection that distinguishes Option A from rule-based identification.	Option A: The System intelligently identifies energy saving issues, without human intervention. Option B: As above but with human intervention.	No additional clarification required. Both in-scope sub-scenarios CLOSED. Alarm 711401 is exactly the “issue caused by energy-saving action” auto-detection required by Option A. Sub-3 OUT OF SCOPE.

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First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Analysis	RAN Traffic & Performance Prediction	A/A/NA	A / A / NA	Power Star Model Construction: CM+EP+PM inputs → linear regression model of Throughput vs PRB load/UE number → initial prediction threshold → RL iterative optimization with explicit TD reward $R_t(x_i) = R_t(x_{i-1}) + w(r + R_t(x_i') - R_t(x_{i-1}))$ → adjusted thresholds + shutdown period policy. KPI Setup confirms 60-min interval (Threshold Plan, xBSG KPI Plan, Definite-Time KPI Plan). Throughput KPI and Volume KPI plan setup tabs. Inputs include RRC, E-RAB, HO, CDR, Throughput. Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED). 60-min granularity satisfies Option A “minimum granularity available from the source” clause. The two-stage model (linear regression followed by RL with explicit TD-style reward) is genuine AI/ML, methodologically distinct from rule-based threshold tables, this is the strongest single piece of AI/ML evidence in the deck.	Option A: The System intelligently predicts traffic load & network performance that can be used for energy saving solution at the minimum granularity that data is available from the source, without human intervention. Option B: As above but without the “the minimum granularity that data is available from the source”	No additional clarification required. Both in-scope sub-scenarios CLOSED. Sub-3 OUT OF SCOPE.

IOH Response:

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First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Analysis	RAN Energy Saving Issues Demarcation & Root Cause Analysis	A/A/NA	A / A / NA	KPI deterioration markers (Latency +5ms, RRC - 0.5%, HO -0.3%) auto-matched against feature activation period. Classification: ES Reasons subcategories explicitly named in the Analysis Method diagram – “Channel shutdown” (Sub-1 / intra-frequency channel-level mechanism) and “Carrier shutdown” (Sub-2 / inter-frequency carrier-level mechanism) – vs Other reasons (OM, Transmission link). Optimization Advice timeline 2025-11-22 to 11-28 with explicit Failure Cause strings (“KPIs has deteriorated: Weak coverage MR Proportion...”, “Average Downlink Throughput...”, “Proportion of CQIs 0-6...”). Saving Quality logs per cell: BTS 570876 Cell 23/33, Nokia, Trigger DL_PRB_RATE:78 > threshold:70, Plan DL_PRB>70 (2026-03-30 13:00). Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED). Temporal correlation between KPI deterioration and feature activation period is methodologically sound. Auto-rollback advice confirms autonomous decision. Per-cell trigger conditions provide audit trail.	Option A: The System intelligently demarcates energy saving & performance issues and analyze their root cause, without human intervention. Option B: As above but “requires human intervention to confirm the root causes”.	No additional clarification required. Both in-scope sub-scenarios CLOSED. The Saving Quality table provides the per-cell trigger conditions / RCA trace audit trail. Sub-3 OUT OF SCOPE.

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First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Analysis	Solution Generation	A/A/NA	A / A / NA	Multi-parameter joint optimization architecture (RL + Adaptive shutdown threshold + KPI stability constraint). Step 1: linear regression for PRB/UE-number vs throughput. Step 2: RL iterative optimization with State/Reward/Action/Environment loop. Saving & Traffic production chart 2026-03-02 to 03-21 shows clear inverse correlation between traffic and saving (~6,000-9,000 kWh, floor 6,713.67 kWh). v1.5 Sub-1 differentiation evidence (page 14): “Inter/Intra-RAT — System generates different time for different profiles” — Optimization Details table with Cell Frequency Band column showing differentiated Stop Time per band (Band 1 → 16:59:59; Band 3 → 17:59:59) across 13,977 records. Hourly granularity confirmed. Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED)	Option A: The System intelligently generates energy saving solutions, adjusted to adapt to RAN Traffic & Performance changes, without human intervention	No additional clarification required. Both in-scope sub-scenarios CLOSED. Sub-3 OUT OF SCOPE.

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First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Decision	Solution Evaluation & Decision Making	A/A/NA	A / A / NA	Optimization Details screen shows FIVE strategies: (1) Intelligent Carrier Shutdown (Sub-2); (2) RF Channel Intelligent Shutdown (Sub-1); (3) Symbol Shutdown (Sub-1); (4) RF Channel Dynamic Muting (Sub-1); (5) flexible frequency-domain scheduling (Sub-1). Optimization Advice 2025-11-27 to 2025-12-04 with Total/Successful/Failed counts. 14,058 records “Automatic acknowledged”; eNodeB names visible (KAPASA_TAMALANREA_HS, KIMA0_GT, KIMA8_DAYA_EP, JLGUNUNG_NONA_PL). v1.5 Sub-1 differentiation evidence (page 16): geographic cluster map titled “System choose site that is capable to handle all load during power saving” with legend “Itself - Shutdown L21” (red) / “NBR - L21 Up” (green) across sites 29UPD0121 / 29UPD0112 / 29UPD0124 — both shutdown cell and absorbing neighbour on the same L21 (LTE 2100 MHz) carrier = intra-frequency. Sub-1: Option A fulfilled (CLOSED). Sub-2: Option A fulfilled (CLOSED) – Intelligent Carrier Shutdown auto-selects across inter-freq sub-options.	Option A: The System intelligently evaluates energy saving solution when the recommended solutions are generated, and selects the best solution, without human intervention.	No additional clarification required. Both in-scope sub-scenarios CLOSED – the 5-strategy selection in Optimization Details satisfies multi-candidate evaluation. Sub-3 OUT OF SCOPE.

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First Review Cycle - 26 May 2026

Capability Area	Capability	Score Claimed	Score Validated	Provided Evidence	TMF (GB1526A) requirements	Questions
Execution	Solution Implementation	A/A/NA	A / A / NA	14,058 Optimization Detail records “Automatic acknowledged” against real production BTS names (PANONG_MT, BADOOKA_TB, BIRA_TAMALANREA_TB, etc.). v1.5 Sub-1 evidence (page 18): “Powerstar Intra-RAT Sample Implementation” cluster maps with pink header “For Intra-RAT Sample Cluster L21 Off while Neighbor On”. Caption: “At cluster level, sites work together in Intra-RAT whereas some site shutdown and the neighboring sites will still have L21 band activated to serve the load.” Two cluster views with legend “Itself - Shutdown L21” / “NBR - L21 Up” across sites 29UPD0040/0048/0049/0121/0124/0147/0151/0206/0211/0227/0238/0242. Saving Action Setup (page 20): SYNC=yes, LTE1891, 00:00–23:59. FW Saving Monitor exec-success files through 2026-04-01. Sub-1: Option A (CLOSED). Sub-2: Option A (CLOSED).	Option A: The System implements solution without human supervision.	No additional clarification required. Both in-scope sub-scenarios CLOSED. Production-scale execution evidence (14,058 acknowledged records, exec-success file trail through 2026-04-01, SYNC=yes) is comprehensive. The slide-17 CM evidence (actLBPowerSaving=false on MBTS-801360 and actNRLBPowerSaving=false on LNBTS-1009887) is now used as supporting evidence. Sub-3 OUT OF SCOPE determination accepted in the executive summary – it is no longer treated as a scoring inconsistency.

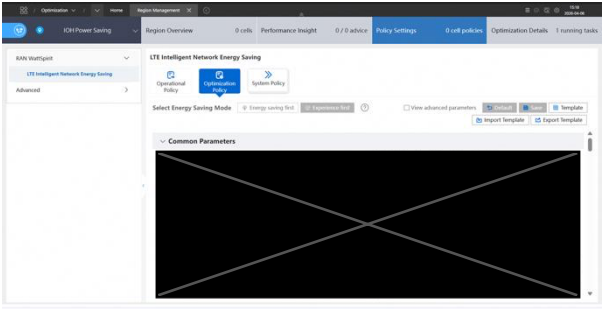
IOH Response:

Intent Translation

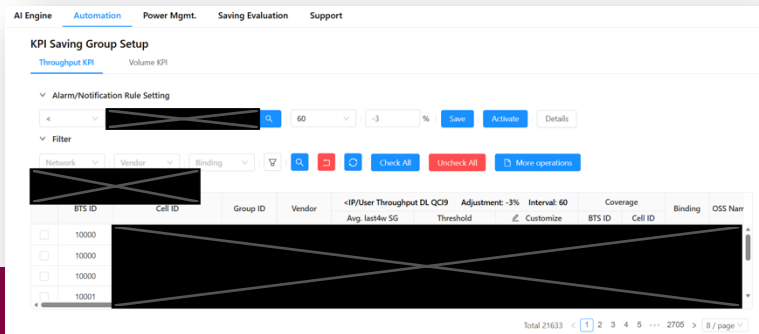
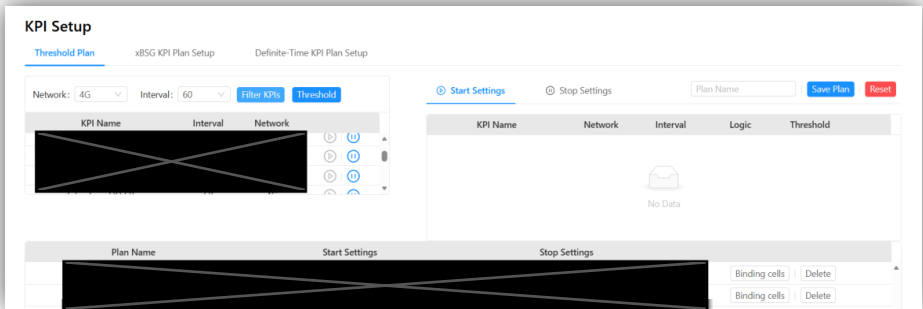
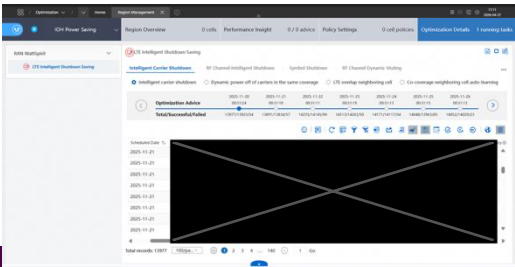
Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C
Intent	Intent Translation	15%	How does the System translate the RAN Energy saving intent to the RAN energy saving related control information? RAN energy saving intent includes RAN energy saving targets and performance targets (including but not limited to RAN UE Throughput Targets). Note1: Human defined policies can overwrite the automated selection of energy saving candidate objects	Based on RAN energy saving Intent defined by Human, the System automatically selects candidate energy-saving objects (e.g. NE/CELL) and generates the RAN energy saving related control information based on the RAN energy saving intent, without Human Intervention. The system can automatically explore the energy saving gains and performance impacts to support human continuous adjustment of intent targets to achieve optimal energy saving effect and performance.	The System can automatically generate RAN energy saving related control information through the execution of predefined Rules. Human manually select candidate energy-saving objects (e.g. NE/CELL) and confirm the RAN energy saving related control information based on the RAN energy saving intent.	RAN energy saving related control information are manually defined based on expertise

User defines the target KPIs, system do the prediction and select right time slot and threshold for energy saving.

Intent defined by human



System automatically selects candidate



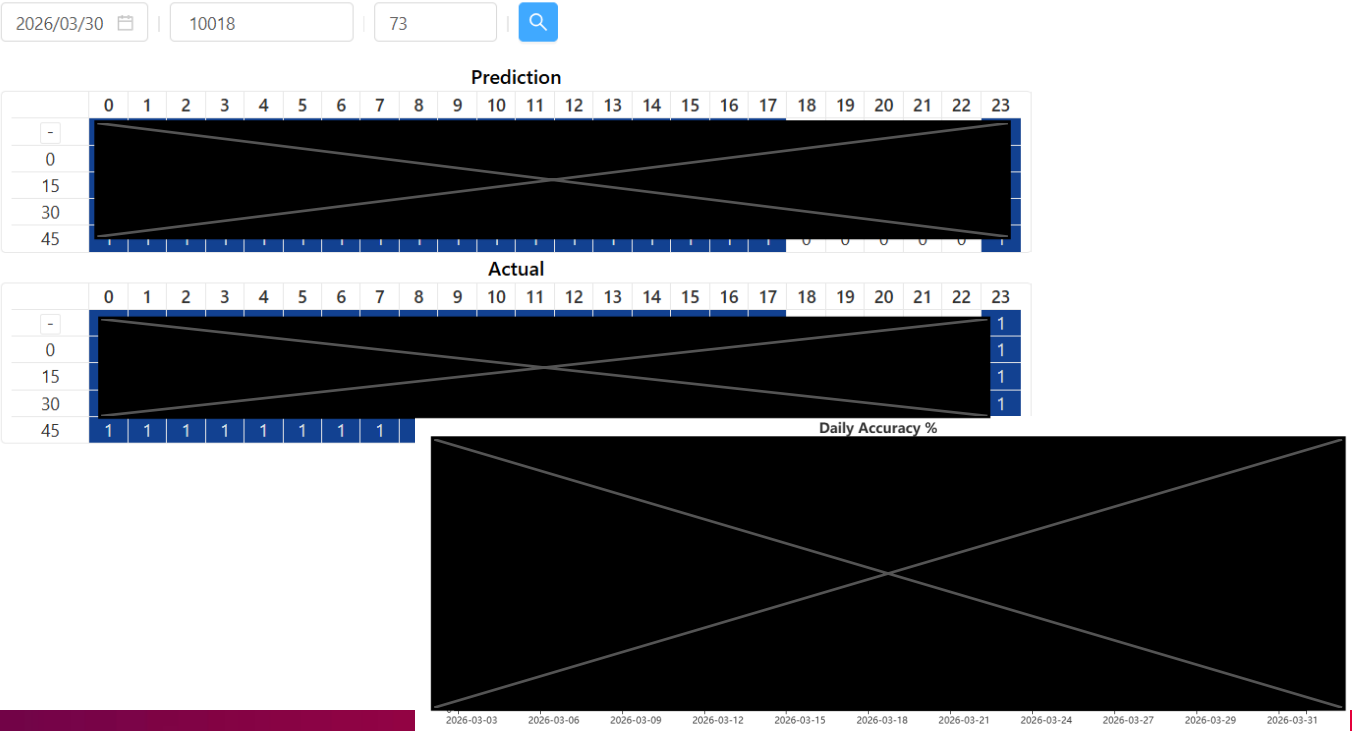
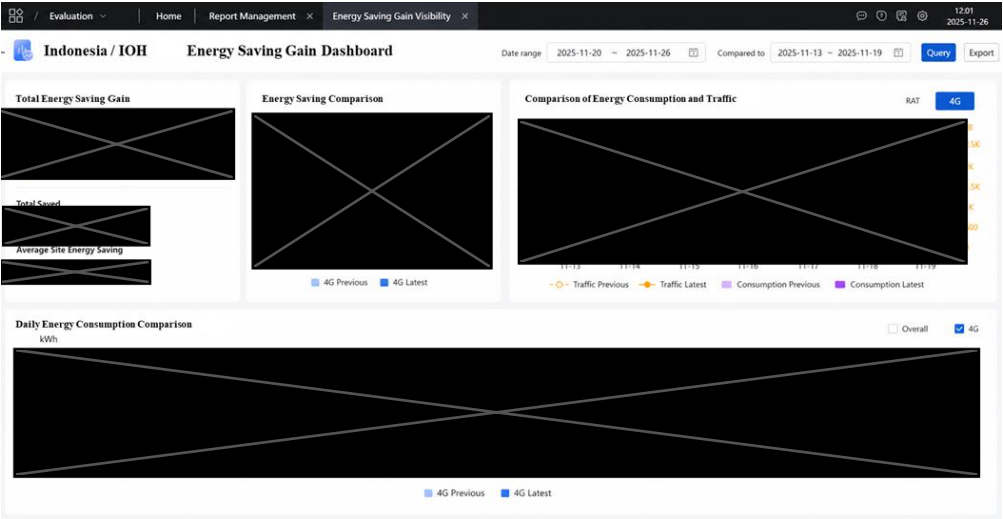
Intent Fulfilment Evaluation



Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C
Intent	Intent Fulfilment evaluation	10%	How does the System evaluate RAN energy saving intent fulfilment?	The system automatically evaluates and generates an intent fulfilment report including targets fulfilment status, based on intent.	The system automatically evaluates and generates an intent fulfilment report (including targets fulfilment status) based on intent, but human confirms the evaluation result	Intent Fulfilment is manually evaluated

System compare the prediction with actual KPIs result and track and maintain the accuracy.

Intent fulfillment report

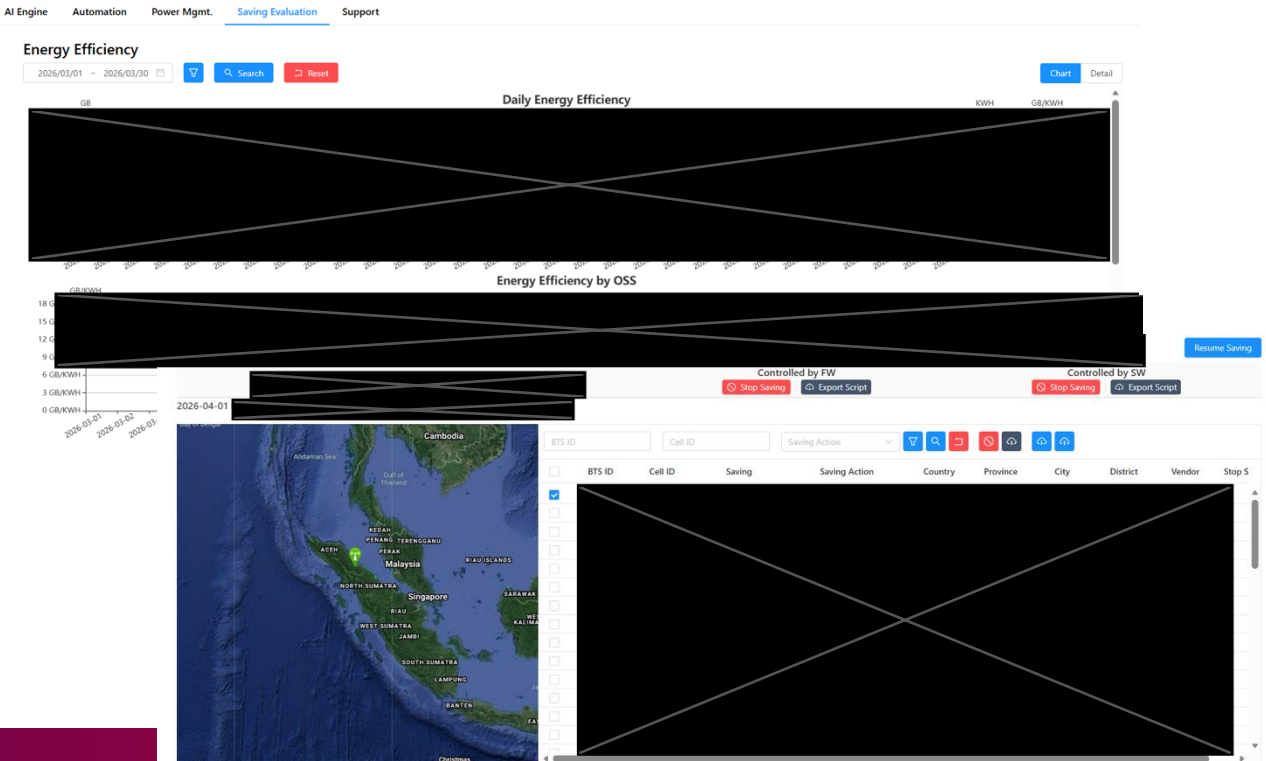
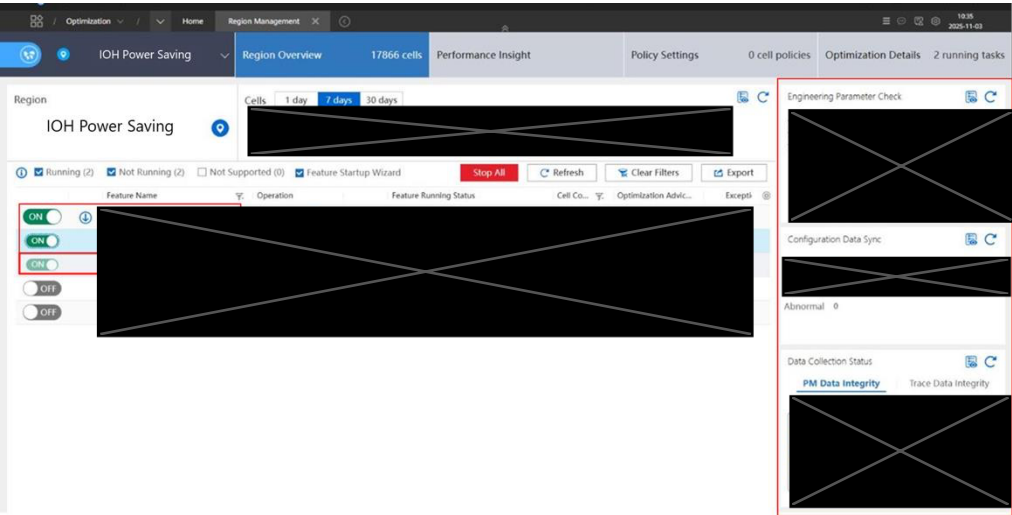


RAN Energy Saving Info Collection

Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C	Option D
Awareness	RAN Energy Saving Information Collection	10%	How does the System collect RAN energy saving related information? RAN energy saving related information includes but not limited to energy efficiency measurements, e.g. Data Volume measurement and performance data, network configuration data e.g. energy saving state and environment data e.g. electronic map, site location.	The System continuously collects RAN energy saving related information, without human intervention	The System continuously collects RAN energy saving related information, but requires human intervention (e.g.: for data quality checks)	The System continuously collects RAN energy saving related information based on predefined rules.	RAN energy saving related information are collected based on expertise

Automatically collects energy efficiency related data and consolidate the data to be presented on the Dashboard.

Dashboard to monitor data collected



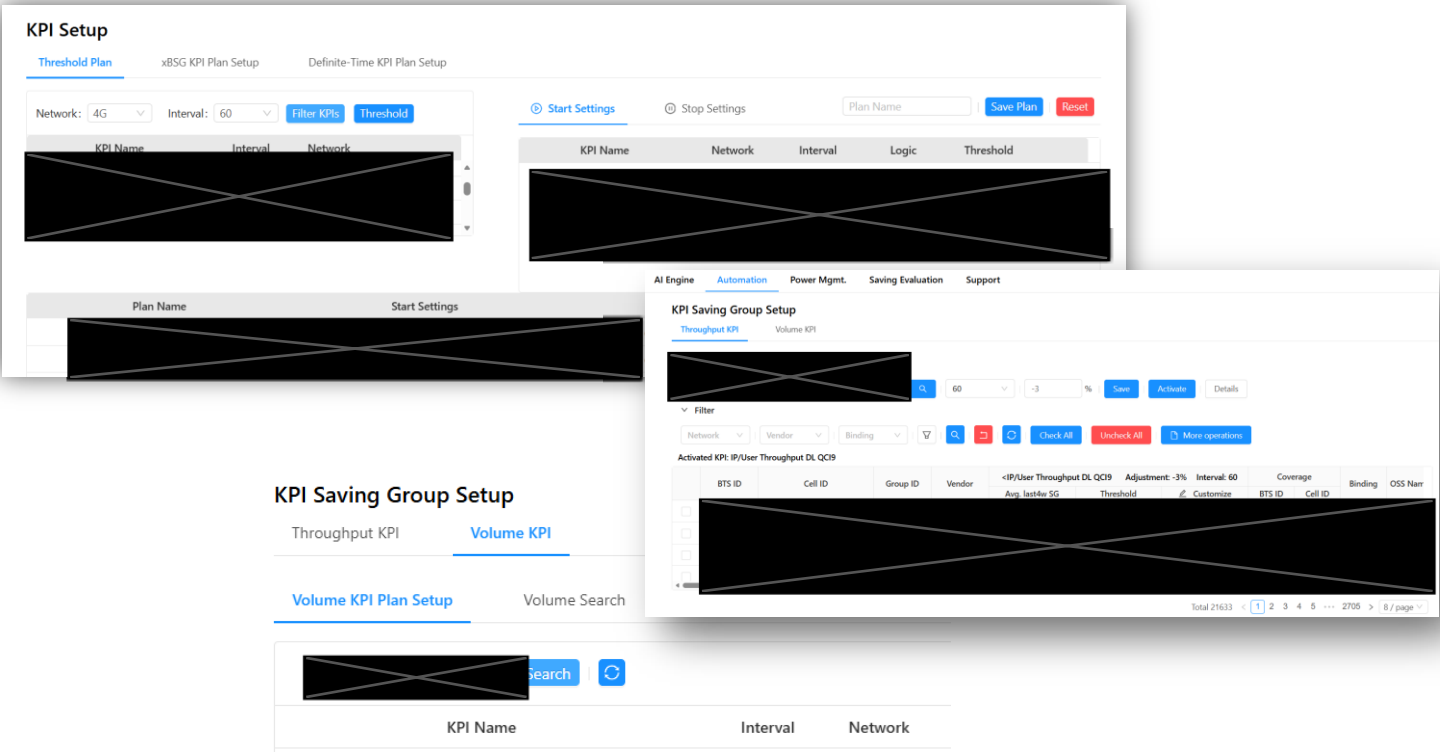
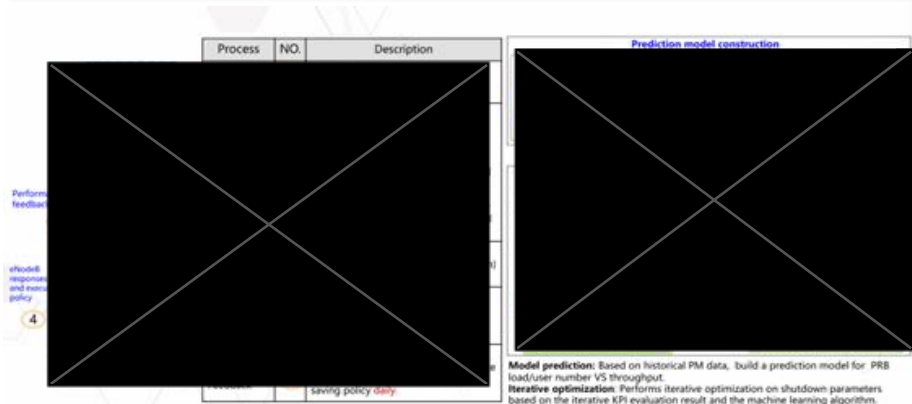
RAN Traffic & Performance Prediction



Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C	Option D
Analysis	RAN Energy Saving Issues Demarcation & Root Cause Analysis	10%	How does the System demarcate energy saving & performance issues and analyze their root cause (e.g., performance issues caused by which energy saving actions)?	The System intelligently demarcates energy saving & performance issues and analyze their root cause, without human intervention	The System intelligently demarcates energy saving & performance issues and analyze their root cause, but requires human intervention to confirm the root causes	The System identifies energy saving issues, based on predefined rules The root cause is analyzed by expert	Energy saving & performance issues demarcation and root cause analysis are performed manually

Automatically predict network performance to be used for dynamically define the saving window and threshold.

System intelligently predicts load and performance, human can control the KPI



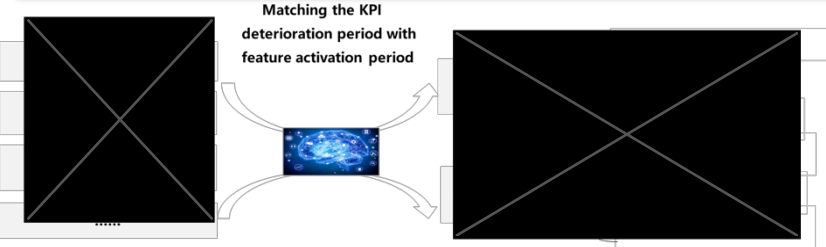
RAN Energy Saving Issues Demarcation & Root Cause Analysis



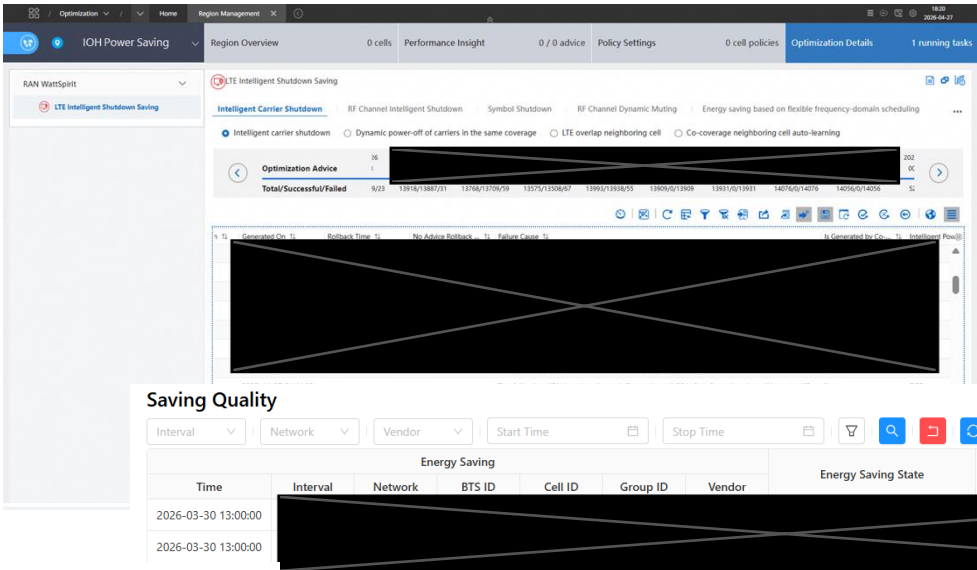
Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C	Option D
Analysis	RAN Energy Saving Issues Demarcation & Root Cause Analysis	10%	How does the System demarcate energy saving & performance issues and analyze their root cause (e.g., performance issues caused by which energy saving actions)?	The System intelligently demarcates energy saving & performance issues and analyze their root cause, without human intervention	The System intelligently demarcates energy saving & performance issues and analyze their root cause, but requires human intervention to confirm the root causes	The System identifies energy saving issues, based on predefined rules The root cause is analyzed by expert	Energy saving & performance issues demarcation and root cause analysis are performed manually

The System intelligently demarcates energy saving & performance issues and analyze their root cause, without human interventi on.

Analysis method



root cause analysis



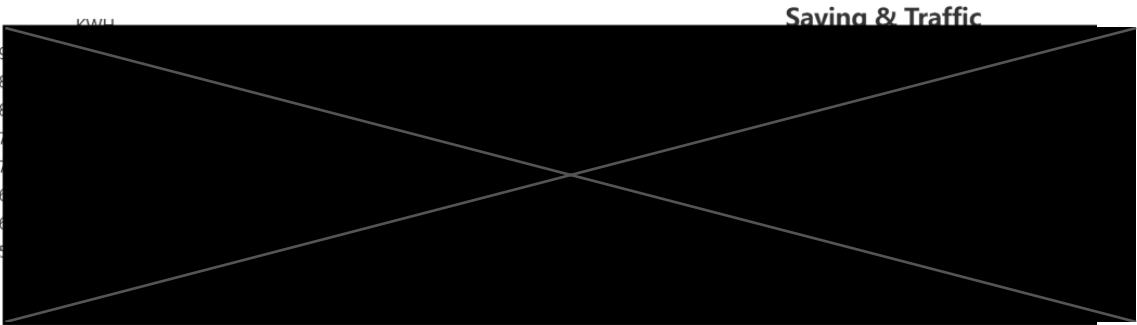
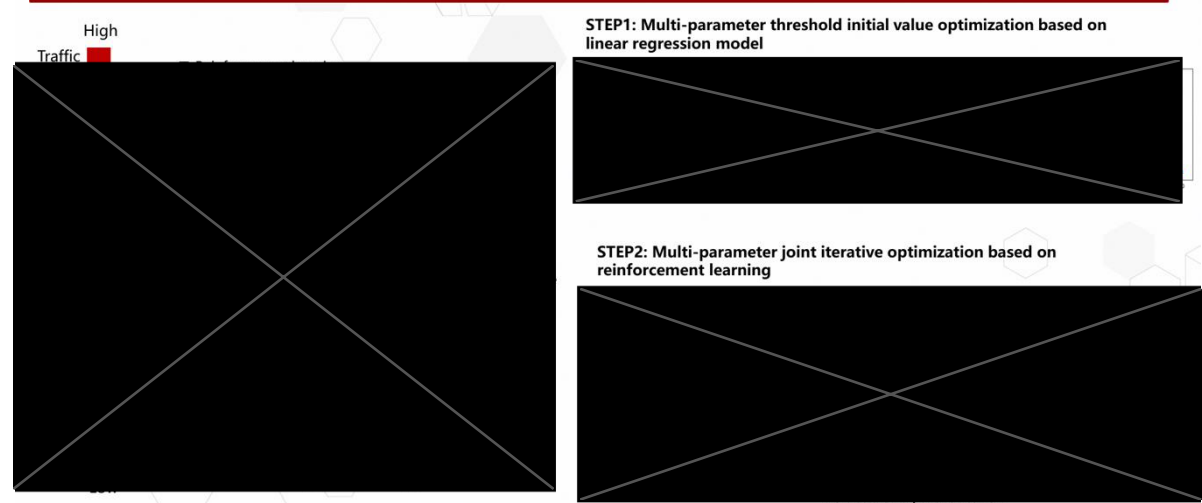
Solution Generation

Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C	Option D
Analysis	Solution Generation	15%	How does the System generate the recommended RAN energy saving solutions to solve the identified energy saving issues?	The System intelligently generates energy saving solutions adjusted to adapt to RAN Traffic & Performance changes, without human intervention	The System intelligently generates energy saving solutions, without human confirmation	The System generates energy saving solutions based on predefined rules, and requires human intervention.	Energy saving solutions are manually proposed based on expertise.

when the traffic goes up, system adjust the savign automatically, and saving goes down accordingly, when the traffic goes down, saving goes up

System intelligently adapting to profile changes

Multi-parameter joint optimization for shutdown PRB threshold and UE number threshold



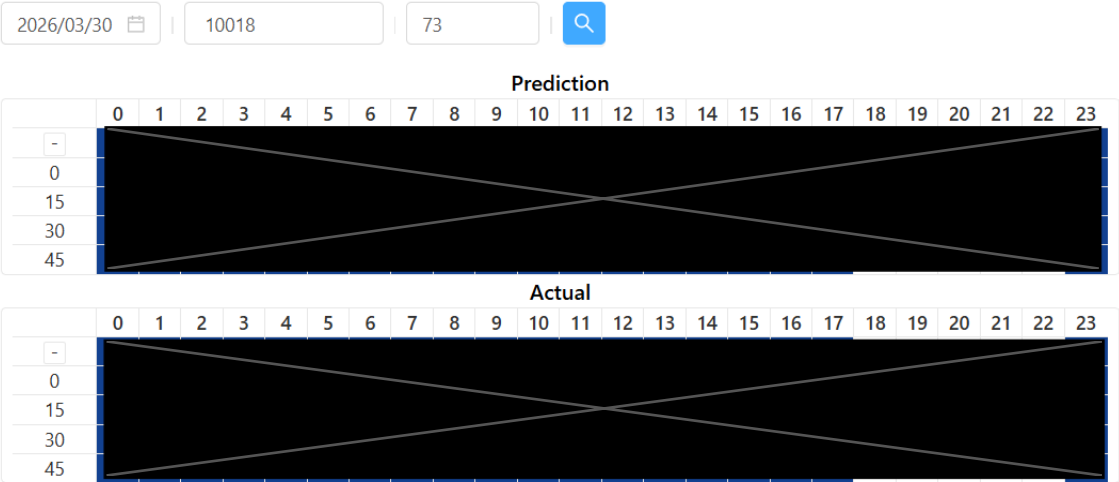
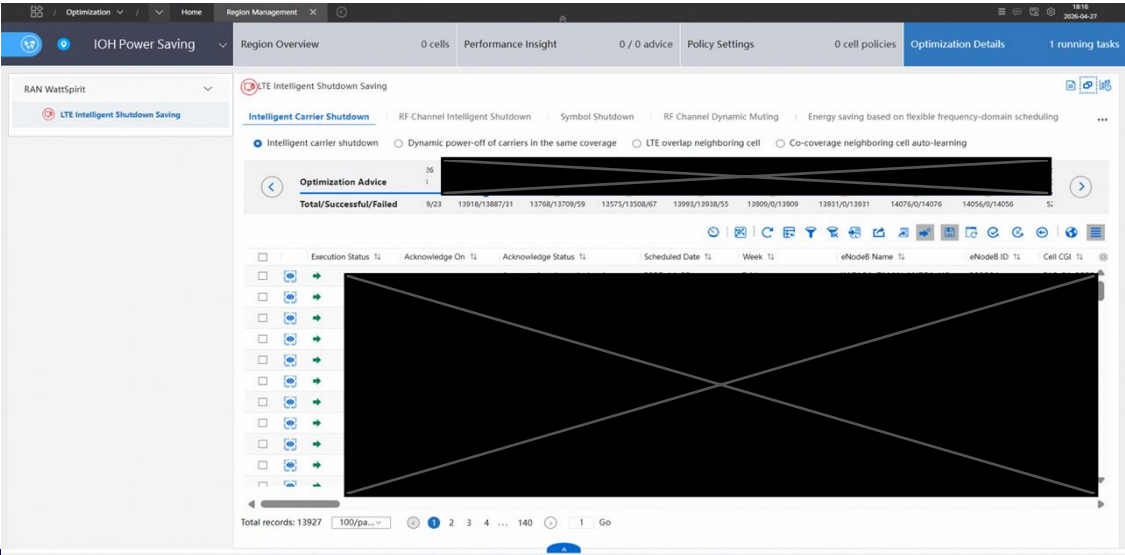
Solution Evaluation & Decision Making



Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C	Option D
Decision	Solution Evaluation & Decision Making	10%	How does the System evaluate energy saving solutions and decide on the best solution to be implemented?	The System intelligently evaluates energy saving solution when the recommended solutions are generated, and selects the best solution, without human intervention	The System intelligently evaluates energy saving solution and selects the best solution, but requires human confirmation	The System evaluates energy saving solution and selects the best solution based on predefined rules	Energy saving solutions are evaluated and decided based on manual expertise.

The system do review the actual KPI and compare it with prediction to learn if it really made right decision or need to change to improve

System evaluates and choose best solution



Solution Implementation

Cognitive Activity	Service Capability	Weight	Questions	Option A	Option B	Option C
Execution	Solution Implementation	10%	How does the System implement solution that can resolve identified energy saving issues?	The System implements solution without human supervision	The System implements solution under human supervision	Solution implementation is entirely manual.

System generates the plan automatically and logs can be found in the GUI.

System implements solution automatically

Optimization / Home Region Management

IOH Power Saving Region Overview 0 cells Performance Insight 0 / 0 advice Policy Settings 0 cell policies Optimization Details 1 running tasks

RAN WattSpirit

LTE Intelligent Shutdown Saving

LTE Intelligent Shutdown Saving

Intelligent Carrier Shutdown RF Channel Intelligent Shutdown Symbol Shutdown RF Channel Dynamic Muting

Intelligent carrier shutdown

Dynamic power-off of carriers in the same coverage

LTE overlap neighboring cell

Co-coverage neighboring cell auto-learning

Optimization Advice

Total/Successful/Failed

Execution Status T1 Acknowledge On T1 Acknowledge Status T1 Scheduled Date T1 Week T1 eNodeB Name T1

Total records: 14058 100/pa... 1 2 3 4 ... 141 1 Go

Saving Action Setup

BTS ID

Search

Reset

Filter

Delete All

Saving Action

More operations

BTS ID	Cell ID	Vendor	Network	SYNC	Energy Saving			Coverage		Saving Group
								BTS	Cell	
					Saving Action	Start Time	Stop Time			

AI Engine Automation Power Mgmt. Saving Evaluation Support

FW Saving Monitor

Start Time Stop Time State Vendor JAW daily Search Reset Export

OSS Name	Vendor	Time	State	File Name

Intent Translation

Intent Fulfilment
EvaluationRAN Energy Saving
Info CollectionRAN Energy Saving
Issues IdentificationRAN Traffic &
Performance
PredictionRAN Energy Saving
Issues Demarcation
& Root Cause
Analysis

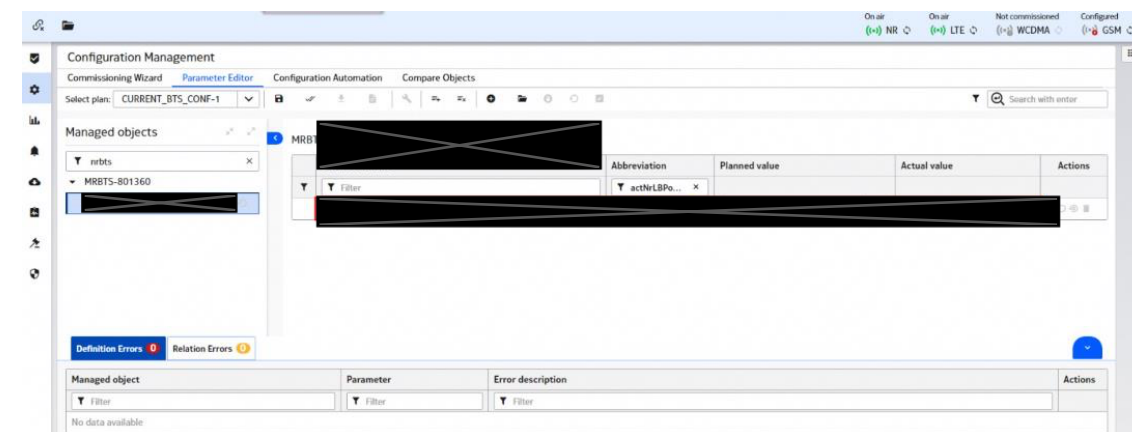
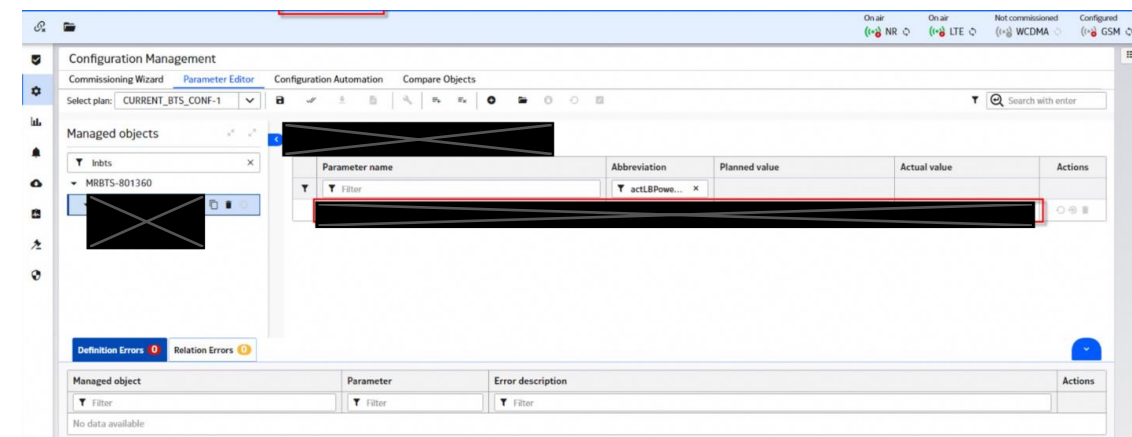
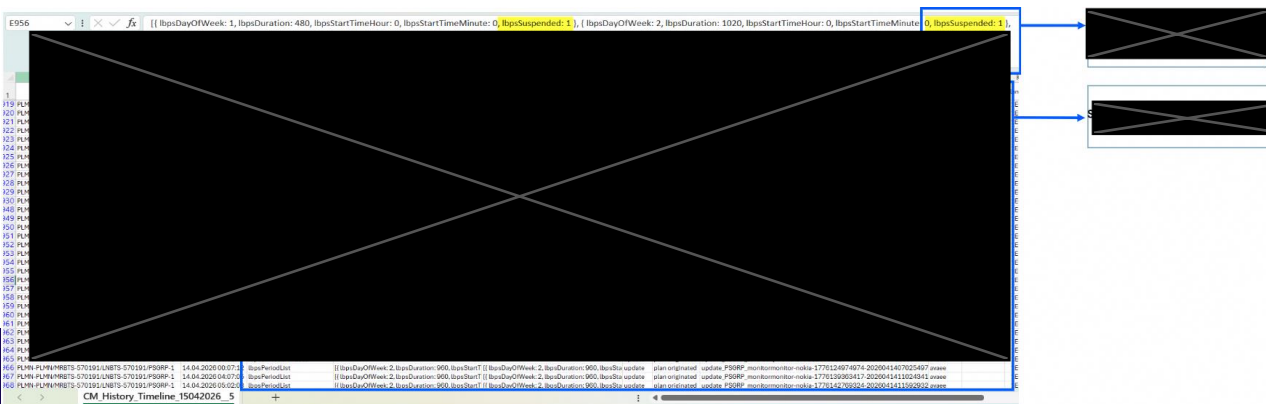
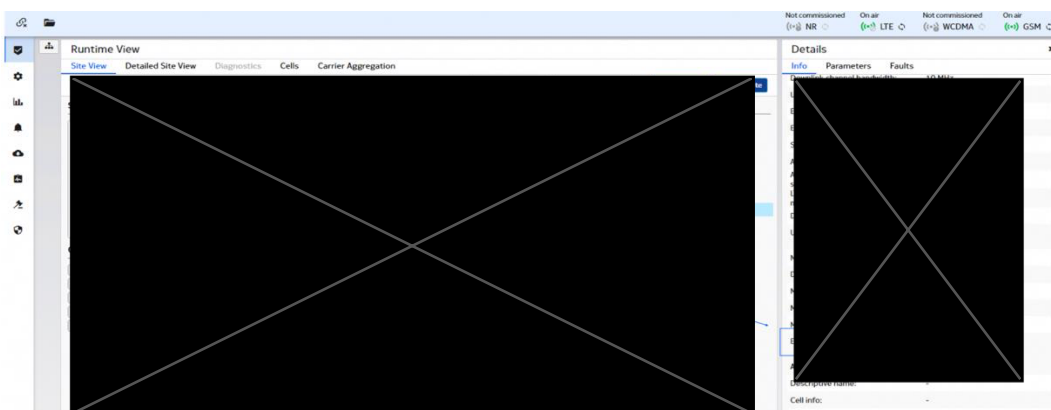
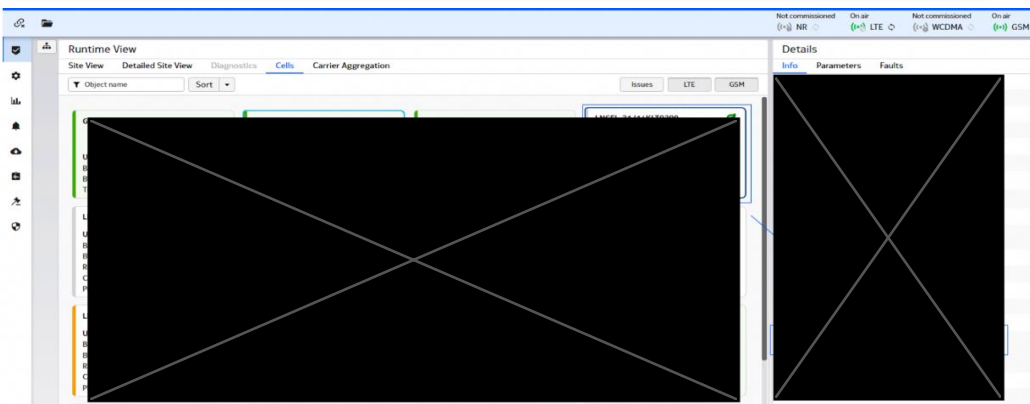
Solution Generation

Solution Evaluation
& Decision MakingSolution
Implementation

System implements solution automatically

indosat
OOREDOO HUTCHISON

Disabled Capability to Load Balance 4G<=>5G



Thank you

Nikos Kontis

ANLAV Chief Validator