

# CCO rApp

## Coverage and Capacity Optimization

A Non-Real-Time RIC application

## Autonomous Coverage and Capacity Optimization for the Modern RAN

Mobile networks are denser, traffic more volatile, and the gap between provisioned capacity and actual demand widens by the hour. Manual cell-by-cell tuning of tilts, transmit power, and handover offsets is reactive and labour-intensive. CCO rApp brings autonomous, closed-loop optimization to the RAN — detecting performance anomalies and pushing corrective A1 policies continuously, without operator intervention.

### Why CCO Matters

The Innova CCO rApp is a Non-Real-Time RIC application that continuously monitors cell-level RAN performance, detects five classes of coverage and capacity anomalies, and pushes corrective A1 policies — closing the loop between observation and action without operator intervention.

#### Setting the scene

*Mobile operators face a growing optimization burden. Networks are denser, traffic is more volatile, and the gap between where capacity is provisioned and where demand actually appears widens by the hour. Manual coverage and capacity tuning — adjusting tilts, transmit power, and handover offsets cell by cell — is reactive, slow, and labour-intensive. Operations teams investigate complaints after they happen, while emerging issues go undetected until they degrade customer experience. Automation moves these continuous, rules-driven tasks off engineering desks and into the platform.*

#### Introduction to the solution

*Innova CCO rApp brings autonomous, closed-loop optimization to the RAN. Built natively for Ericsson EIA, it subscribes to performance counters via R1/DME, applies anomaly detection across five RAN performance dimensions, and generates corresponding A1 policies for tilt, transmit power, and handover offset adjustments. The rApp is vendor-neutral by design, deployable across multi-vendor RAN environments, and built to integrate cleanly with EIA rApp Manager, Data Management & Exposure (DME), and the A1 Policy Management Service.*

### rApps benefit strongly from Ericsson Intelligent Automation Platform capabilities

The Ericsson Intelligent Automation Platform (EIA) provides Service Management and Orchestration (SMO) for Open RAN and further enhances openness, network management, and automation by supporting multi-vendor and multi-technology RAN environments.

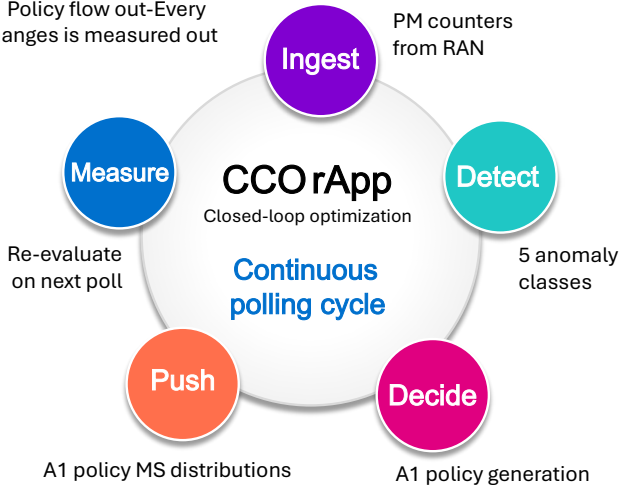
EIA is supported by open interfaces and the industry's leading Software Development Kit (SDK) to enable an ecosystem of developers with all the capabilities needed to innovate, build, validate, share and operate rApps.

# Our Solution

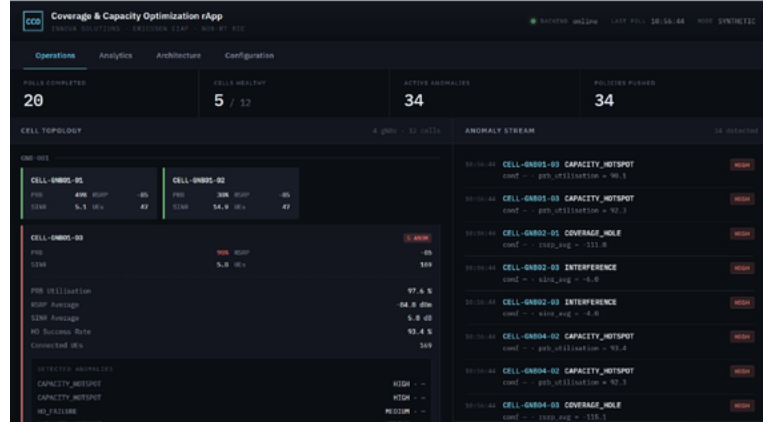
Innova CCO rApp runs as a containerised microservice on Ericsson EIAP, managed by the rApp Manager via a standard AppDescriptor.yaml. On each polling cycle, the rApp ingests cell-level performance counters via R1/DME, applies anomaly detection across five RAN performance dimensions, and generates corresponding A1 policies pushed to the EIAP A1 Policy Management Service. The closed loop measures the effect of every change on subsequent poll cycles, with KPI degradation triggering automatic policy reversion. Both open-loop (operator-approved) and closed-loop (zero-touch) modes are supported.

## Continuous Closed -Loop Operation

PM data flows via R1/DME –  
A1 Policy flow out-Every changes is measured out



**Five anomaly classes detected**  
Each mapped to a corrective AI policy



Live operations dashboard. Scan QR for the running prototype.

**CAPACITY HOTSPOT**  
PRB > 80%

**COVERAGE HOLE**  
RSRP < -100 dbm

**INTERFERENCE**  
SINR < -3 db

**HO SUCCESS**  
HO success < 95%

**UNDERUTILISED**  
PRB < 20%

## Key Benefits

**Autonomous closed-loop optimization.** Eliminates manual cell-by-cell parameter tuning; detection, decision and policy push happen continuously without engineer involvement.

**Confidence through automatic rollback.** KPI degradation triggers automatic policy reversion. Open-loop and closed-loop modes both supported.

**Vendor-neutral via O-RAN.** Built on R1/DME and A1 — no vendor-proprietary dependencies. Works across Ericsson, Nokia, and Samsung RAN equipment.

## rApp Characteristics

<b>Category</b>	Network Optimization
<b>Technology</b>	4G, 5G
<b>RAN technology</b>	Cloud / Open / Physical RAN
<b>RAN vendor</b>	Ericsson, Nokia, Samsung
<b>Closed loop</b>	Yes
<b>Trial ready</b>	Yes — synthetic data prototype



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### About Innova Solutions

Innova Solutions is a global technology and talent partner specializing in transformative digital solutions. Founded in 1998, we empower client success through bold innovation, exceptional talent, and unwavering partnership - helping organizations modernize, scale, and deliver measurable technology outcomes. With the launch of AIFICIENT™, our enterprise AI offering, we embed intelligence across the full technology delivery lifecycle and close the AI outcome gap by turning ambition into measurable results. Combined with our deep talent communities across digital and AI product engineering, digital assurance, data engineering, cloud, and enterprise applications, AIFICIENT delivers meaningful impact at scale. Together, these capabilities enable our clients across industries to operate smarter and move faster in an AI-driven world.

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