

NOKIA

Corteca for Managed Wi-Fi

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Get to Fast Faster 2025

Nokia Corteca

Cloud and home software
powers broadband devices

Corteca Cloud

Fiber

Wi-Fi

FWA

Corteca for Experience
Deliver unstoppable Wi-Fi

Corteca for Operations
Reduce your OPEX

Corteca for Revenue
Monetize new service offers

A highly interoperable platform to manage your
residential networks via industry standards

Corteca
Applications

The Corteca Cloud covers three main groups of use cases



Wi-Fi management

- Real-time monitoring
- Troubleshooting
- Performance monitoring
- Wi-Fi optimization



Device management

- Configuration management
- Software lifecycle management
- Remote diagnostics



Application management

- Configuration management
- Software Lifecycle management

Corteca Cloud



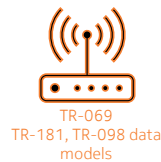
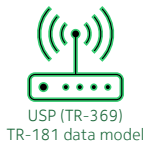
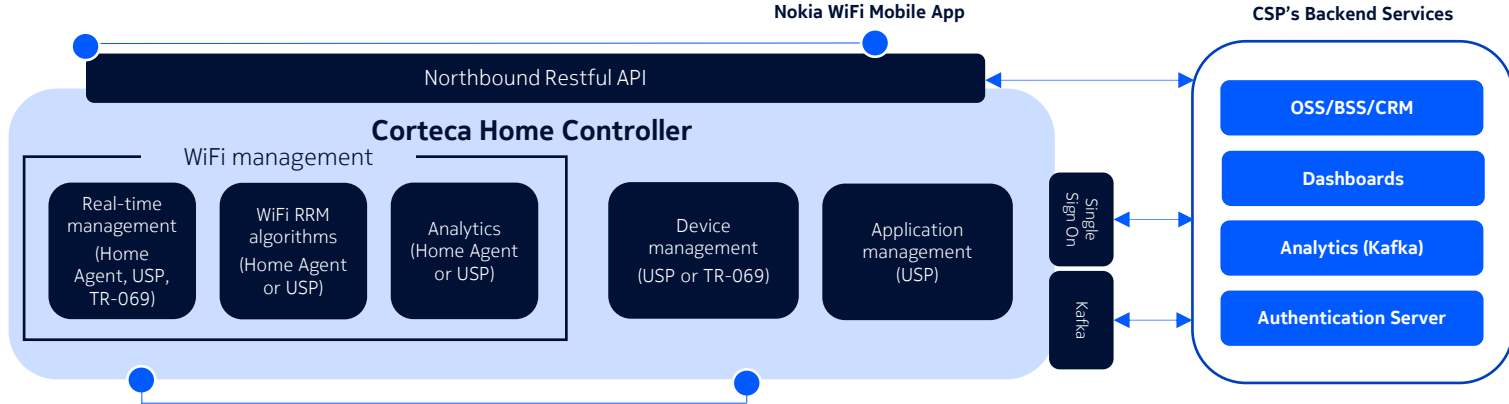
Corteca Console

Single user interface application, consisting of several dashboards for different user roles (customer care agents, network admin or operation engineers, technicians) to manage, troubleshoot and optimize home networks.



Nokia WiFi Mobile App

For the end-user, self install and management of the WiFi network and gives access to premium services such as parental control; customization options available



Interoperability with the Home Controller



USP Agent

User Service Platform (USP) Agent based on TR-369 Broadband Forum (BBF) standard.



TR-069 Client

TR-069 client based on Broadband (BBF) forum standard (2025 Roadmap)



Home Agent

Proprietary agent that interfaces with the Home Controller

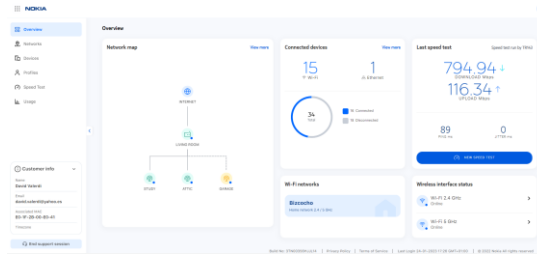
A scalable solution for CSPs

Nokia WiFi can scale from cloud-less device deployments with local self-healing mesh to millions of households remotely managed for WiFi monitoring and optimization



Cloud-Less (Nokia devices)

- No cloud
- Local RRM via Mesh Middleware
- Local Mobile App access



Real time holistic view of a single home network for customer care agents

Home Controller L1

Basic WiFi management

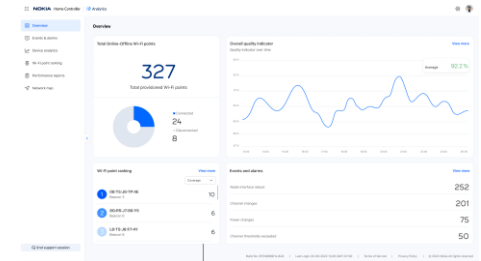
Real time monitoring (for the care agent)

Device management (USP)

Configuration mgmt.
Software lifecycle mgmt.
Remote diagnostics

Application management (USP)

Configuration mgmt.
Software lifecycle mgmt.
Troubleshooting



Monitoring and WiFi optimization tools for network administrators

Home Controller L2

Advanced WiFi management

Real time monitoring (for the care agent)
Proactive troubleshooting
WiFi optimization
Performance monitoring

Device management (USP)

Configuration mgmt.
Software lifecycle mgmt.
Remote diagnostics

Application management (USP)

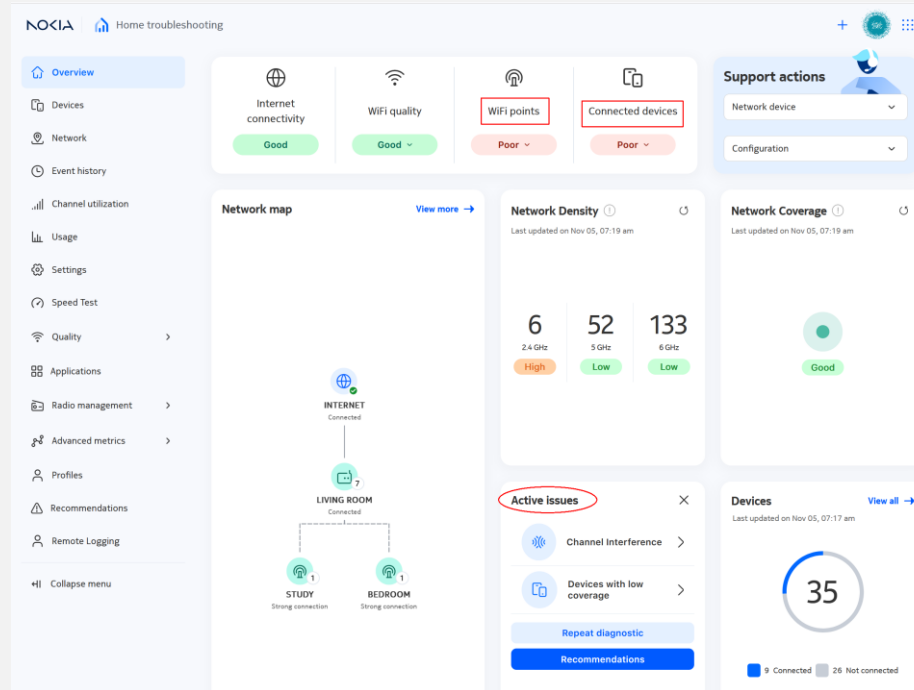
Configuration mgmt.
Software lifecycle mgmt.
Troubleshooting

Managed WiFi with Corteca

- Troubleshooting Home WiFi
- Proactive Network Monitoring

Corteca Home Troubleshooting - Overview

From high-level Home WiFi topology view to alarms, history and recommendations in just a few clicks

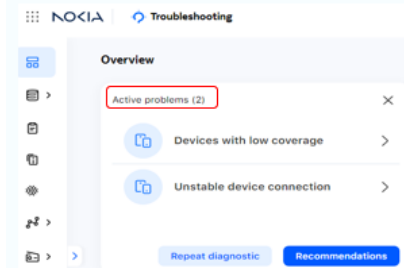


Corteca Offers various troubleshooting paths

Care Agents can choose the troubleshooting path per their skillset and preference

View the issues that Corteca has identified automatically and review the given recommendations

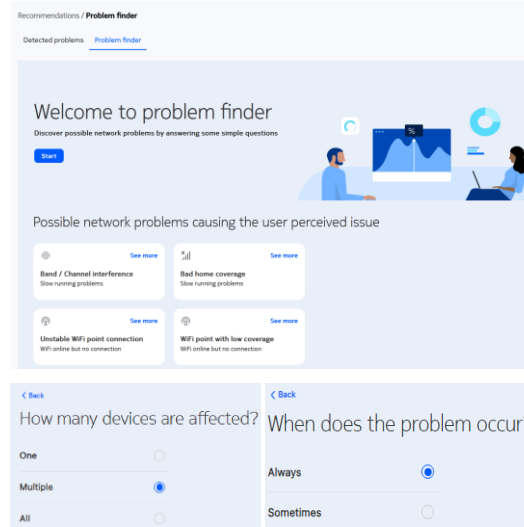
Identified problems:



Recommendations:

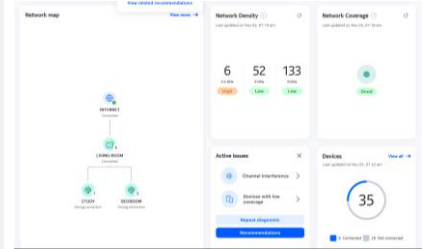


Answer questions about the observed issue and then Corteca gives causes and recommendations



Use the well-organized Corteca portal to easily navigate from a high-level view to detailed charts and alarms

From top-level view:



to details in just a couple of clicks



Corteca activation service includes training sessions for the Care Agents

Overall network health

Get an overall assessment easily and then proceed to recommendations

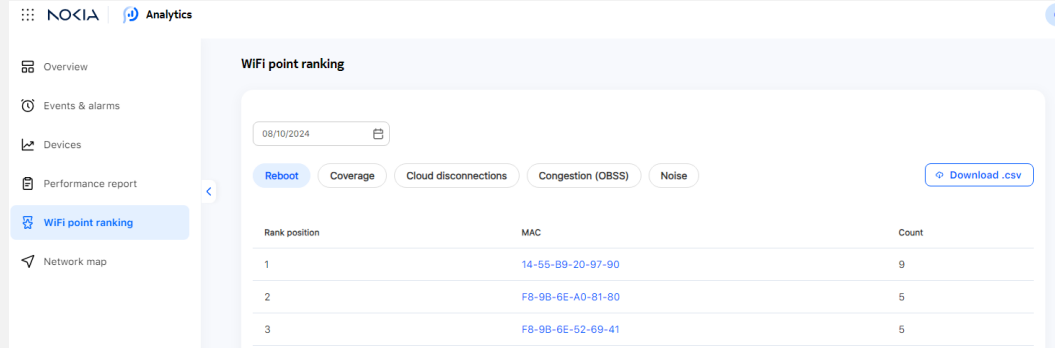
The dashboard is divided into several sections:

- Modify WiFi networks:** Shows two networks: 'Home network' (2.4 GHz, 5 GHz, 6 GHz) and 'Guest network' (2.4 GHz, 5 GHz).
- Wireless interface status:** Lists three interfaces: 'WiFi 2.4 GHz' (Channel 6, BW 20MHz), 'WiFi 5 GHz' (Channel 52, BW 160MHz), and 'WiFi 6 GHz' (Channel 133, BW 320MHz-2).
- Last speed test:** Shows a download speed of 817.09 Mbps (decreasing) and an upload speed of 43.63 Mbps (increasing). Ping is 33 ms and jitter is 1 ms. A 'New speed test' button is present.
- Problem history:** Lists two recent issues: 'Band Interference' and 'Channel Interference', both from Thu 30 Oct, 12:37 pm.
- Event history:** A table with columns for Time, Event, and Description.
- Recommendations / Detected problems:** A detailed view of detected issues:
 - Channel Interference:** Detected on Wed 5 Nov, 7:19 am. Description: A significant number of nearby network devices are detected on channel 6 using the 2.4GHz band. This can cause congestion events. However, the system will not change the channel if the channel change conditions are not met (i.e. high congestion or interference levels, significantly better candidate channel, candidate channel that can provide better coverage).
 - Devices with low coverage:** Detected on Wed 5 Nov, 7:19 am. Description: Devices that are not getting good coverage: MyQ-738... Suggest that the user try to move devices with poor coverage closer to a WiFi point.
 - WiFi point with low coverage:** Detected on Wed 5 Nov, 7:19 am. Description: Network devices that are not getting good coverage. Suggest that the user move the WiFi point with poor coverage closer to the root WiFi point.

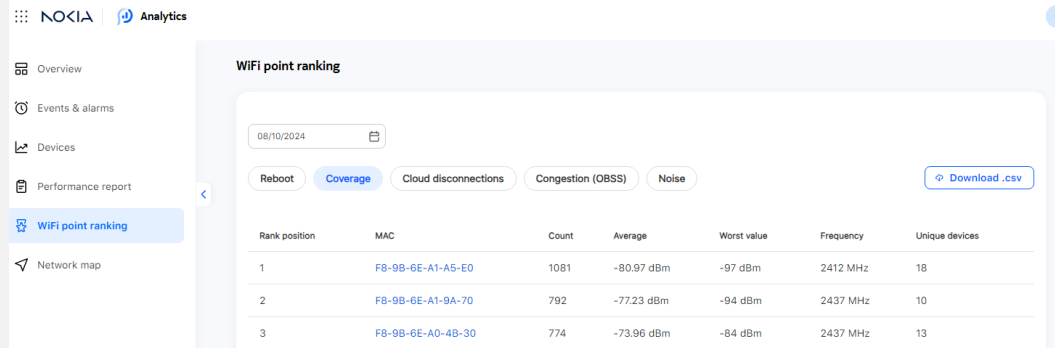
Proactively identify the problem APs – reboots, coverage

Identify the problem APs before the end-user calls you

APs that have rebooted most frequently



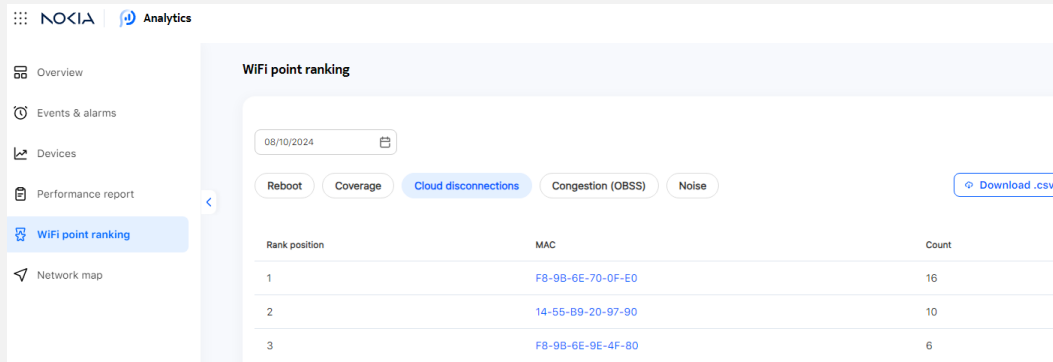
APs that offer the worst coverage



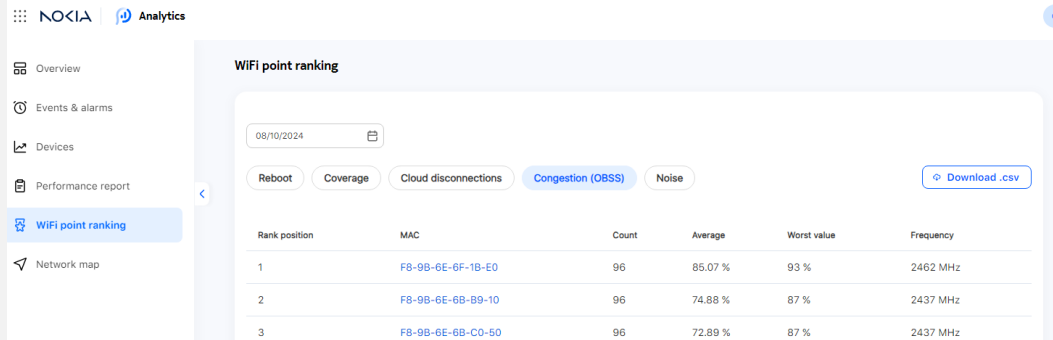
Proactively identify the problem APs – cloud disconnections, OBSS congestion

Identify the problem APs before the end-user calls you

APs that disconnected from Corteca Cloud most frequently



APs that experience the worst OBSS congestion



Backhaul Quality Report

Backhaul Quality Report identifies APs with unstable backhaul link

DEVICEID	NETWORKID	SUBSCRIBERID	STATE	STARTTIME	ENDTIME	ENDREASON
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	POOR	2024-10-08T03:15:26.322Z	2024-10-08T05:19:29.407Z	BACKHAUL_STATE_CHANGED_TO_FAIR
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	FAIR	2024-10-08T05:19:29.407Z	2024-10-08T05:19:53.388Z	BACKHAUL_STATE_CHANGED_TO_POOR
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	POOR	2024-10-08T05:19:53.388Z	2024-10-08T07:16:36.263Z	BACKHAUL_STATE_CHANGED_TO_FAIR
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	FAIR	2024-10-08T07:16:36.263Z	2024-10-08T07:17:20.279Z	BACKHAUL_STATE_CHANGED_TO_POOR
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	POOR	2024-10-08T07:17:20.279Z	2024-10-08T07:26:25.359Z	BACKHAUL_STATE_CHANGED_TO_FAIR
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	FAIR	2024-10-08T07:26:25.359Z	2024-10-08T07:26:40.355Z	BACKHAUL_STATE_CHANGED_TO_POOR
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	POOR	2024-10-08T07:26:40.355Z	2024-10-08T07:27:42.374Z	BACKHAUL_STATE_CHANGED_TO_FAIR
F8-9B-6E-70-13-40	F8-9B-6E-A1-C2-B0	6358075397	FAIR	2024-10-08T07:27:42.374Z	2024-10-08T07:28:06.376Z	BACKHAUL_STATE_CHANGED_TO_POOR

Monitor overall health of the network

A network engineer can keep an eye on the health of the network

A Quality Indicator can be viewed over desired time interval and across all or specific device types in the network

The Quality Indicator takes into consideration these metrics: coverage, congestion and noise



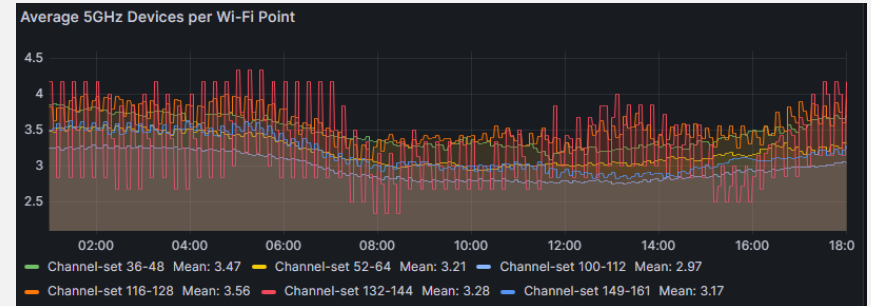
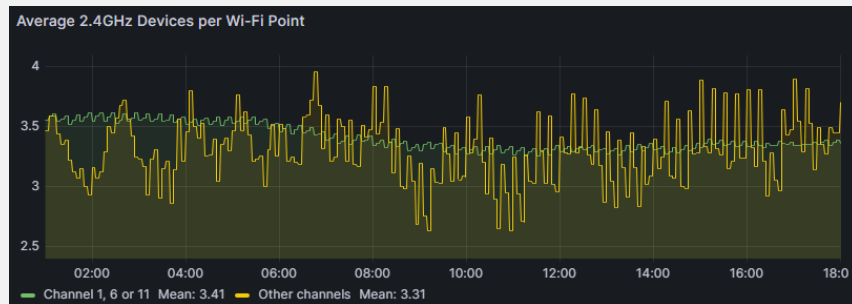
End-users' WiFi client stats

Find out what bands/channels the clients are using. How many clients on an AP?

- Home
Check single home network real time status
- Troubleshooting
Troubleshoot issues in a single home network
- Admin
Manage your deployment
- Analytics
Discover issues & monitor your network
- WiFi Optimization
Optimize your WiFi networks
- Marketplace
Discover our applications and bring new services to your network
- Network Monitoring
Monitor the WiFi performance through network wide metrics

- 1 Overview
- 2 Channel Management
- 3 Steers
- 4 Wi-Fi Performance
- 5 Devices
- 6 Cloud Connectivity
- 7 Quality Indicators

Number of clients per band

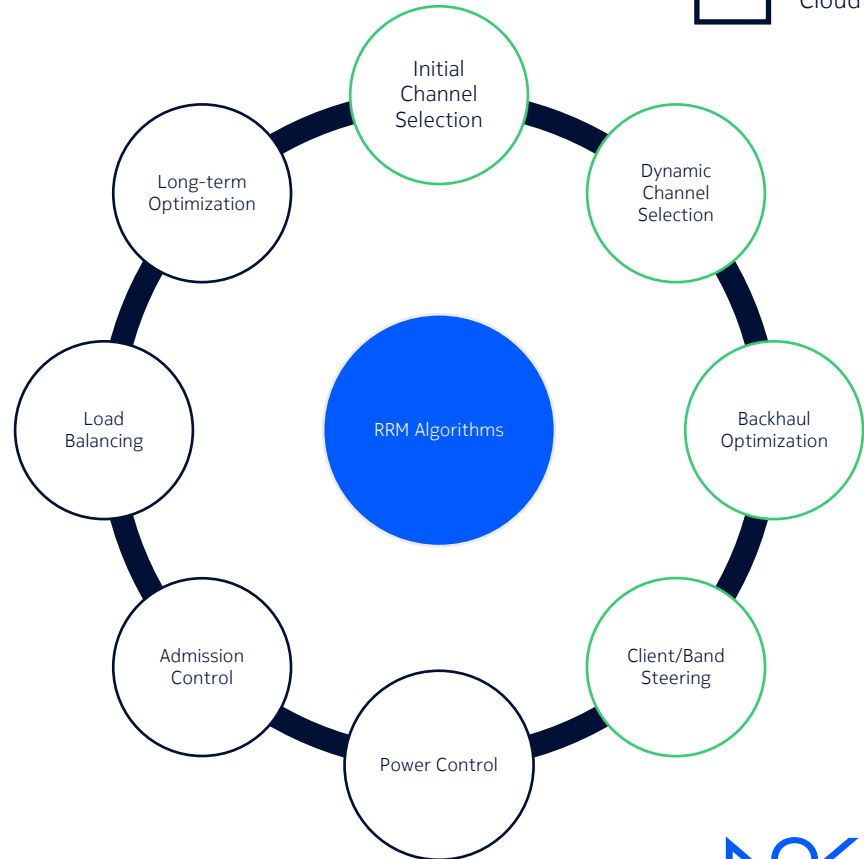


Corteca L2: Wi-Fi Optimization Radio Resource Management (RRM)

Nokia RRM algorithm suite



- Comprehensive suite of RRM algorithms
 - Local mesh middleware includes Edge Controller with core steering and channel selection;
 - Cloud adds intelligence (i.e., more advanced algorithms) and optimization
- Local (stand-alone, embedded):
 - Algorithms and intelligence built on top of EasyMesh standards
- Cloud (crowdsourced machine learning):
 - Introduces bias's based on local conditions
 - Grouping of Wi-Fi points to create cluster profiles with unique RRM parameters
 - Adjust RRM parameters dynamically via browser-based UI or API's



Channel selection algorithms

How Channel Selection is affected by Corteca License Type



Initial Channel Selection

When the Wi-Fi point boots up

Selects the best available channel:

- Based on usage/number by neighboring Wi-Fi points, as well as usage of adjacent channels in vicinity
- Factors in neighboring APs, proximity, channels used, received signal strengths from the Wi-Fi points (Cloud)
- Weights applied based on proximity of Wi-Fi points and connected clients (Cloud)

Dynamic Channel Selection

When configured congestion thresholds have exceeded

- Designed to only change channels when performance is severely degraded
- Ensures target channel has headroom to host moving Wi-Fi points traffic
- Hysteresis built in to avoid ping-pong situations and ripple effects through the network
- Configurable thresholds & periodicity (Cloud)

Channel Selection Long Term Optimization

Frequency planning based on machine learning algorithms

- LTO is a proactive, heuristics-based algorithm that balances load across channels in a local area to minimize service interruption
- LTO automatically groups Wi-Fi points using a clustering algorithm based on their relative RF proximity
- Historic data collection of high-volume WiFi usage (peak hours), both Nokia Wi-Fi points plus neighbor Wi-Fi points

Corteca Campaigns

- Firmware Lifecycle Management

Corteca Campaigns

Campaign is the ability to schedule operations on a set of devices.

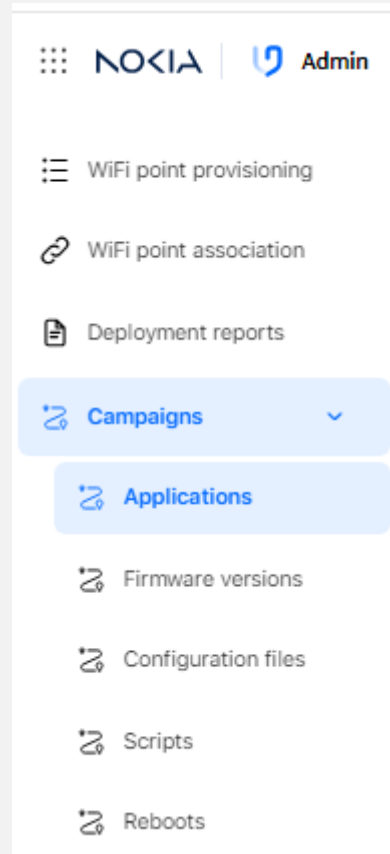
- The “set” of devices can be:
- all the devices registered with Corteca
- all devices of a particular model registered with Corteca
- A specific set of devices identified by their MACs (upload a file with list of MACs)

Campaigns can be configured to run operations:

- at a specific time within a specified time window (e.g., every night between 2:00am and 4:00am)
- after device reboot
- after first connection

The following operations can be performed using Campaigns:

- Upgrade device firmware
- Download Container Apps to device
- Download Configuration file to device
- Reboot device
- Run Script



Current FW version in the Deployment Report

Download the Deployment Report to check that all devices are running the latest firmware

Deployment reports

Status: All | Model: Select all | Software Version: Select all | Download

MAC	Home WiFi ID	Online status	Firmware version	Release Version	Model Name
B4-63-6F-A3-DC-01	B4-63-6F-A3-DC-01	TRUE	3TN00367IJKL03	1.2304.503	Nokia WiFi Beacon 10
28-74-F5-CF-4C-91	28-74-F5-CF-4C-91	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-E5-B3-71	28-74-F5-E5-B3-71	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-CF-28-E1	28-74-F5-CF-28-E1	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-94-41-E1	28-74-F5-94-41-E1	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
40-E1-E4-1B-B9-01	40-E1-E4-1B-B9-01	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
E0-1F-2B-05-4F-01	E0-1F-2B-05-4F-01	TRUE	3FE49062IJKL03	1.2304.503	Beacon 6
28-74-F5-CF-32-E1	38-A0-67-FC-DC-C1	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
38-A0-67-FB-43-81	38-A0-67-FB-43-81	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-97-4B-11	28-74-F5-97-4B-11	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
40-E1-E4-95-CC-A1	40-E1-E4-95-CC-A1	TRUE	3FE49062IJKL03	1.2304.503	Beacon 6
28-74-F5-E6-1C-B1	28-74-F5-E6-1C-B1	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-E6-24-F1	28-74-F5-E6-24-F1	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
40-E1-E4-95-42-D1	40-E1-E4-95-42-D1	TRUE	3FE49062IJKL03	1.2304.503	Beacon 6
B4-63-6F-A4-0E-51	B4-63-6F-A4-0E-51	TRUE	3TN00367IJKL03	1.2304.503	Nokia WiFi Beacon 10
B4-63-6F-73-BC-01	B4-63-6F-73-BC-01	TRUE	3TN00367IJKL03	1.2304.503	Nokia WiFi Beacon 10
38-A0-67-FC-42-91	38-A0-67-FC-42-91	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-CF-35-61	28-74-F5-CF-35-61	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-CF-27-51	28-74-F5-CF-35-61	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2
28-74-F5-CF-24-C1	28-74-F5-CF-24-C1	TRUE	3FE49334IJKL09	1.2304.509	Beacon 2

Row Labels	Count of MAC
Beacon 2	41492
1.2102.286	2
1.2103.403	15
1.2104.497	77
1.2204.504	10
1.2304.509	41214
1.2401.194	1
1.2402.307	4
1.2402.432	169
Beacon 3.1	15
1.2304.503	15
Nokia WiFi Beacon 10	1151
1.2303.421	19
1.2304.503	1114
1.2401.186	14
1.2402.303	1
1.2402.428	2
(blank)	1
Nokia WiFi Beacon 3.1	4661
1.2304.503	4356
1.2401.190	76
1.2401.323	172
1.2402.303	57
Grand Total	47319

Firmware Campaign using Corteca Admin dashboard

Nokia Root Beacon & Extender firmware can be upgraded via Corteca

1. Add new firmware image(s) for specific Beacon models
2. A campaign can support root and extenders of different models

The screenshot shows the Nokia Corteca Admin dashboard. The left sidebar contains a navigation menu with items: Provisioning, CustomerID association, Deployment reports, Campaigns (circled in red), Applications, Firmware versions (highlighted in blue with a red arrow), Configuration files, Scripts, Reboots, and Collapse menu. The main content area is titled 'Campaigns / Firmware versions' and displays a list of 'Available firmware versions'. The list includes:

- Beacon G6 - BBDR2503 CP (Nokia WiFi Beacon G6) - Updated on October 28, 2025
- Beacon 4 BBDR2503 BB (Nokia WiFi Beacon 4) - Updated on October 28, 2025
- test11 (BEACON 6 HA-0336G-A) - Updated on October 28, 2025
- Beacon 9JJMK31 (Nokia WiFi Beacon 9) - Updated on October 27, 2025
- Beacon 3.1-BBDR2503 (Nokia WiFi Beacon 3.1) - Updated on October 26, 2025

At the bottom right of the dashboard, there is a blue button labeled '+ Add new firmware version' with a red arrow pointing to it.

The screenshot shows the 'Add a new firmware version' dialog box. It contains the following fields and sections:

- Name:** Demo2_BG6+B3.1
- Description:** Demo2_BG6+B3.1
- Group of hardware models:** (empty)
- Hardware model:** Nokia WiFi Beacon G6
- Version:** 3FE49996JMJ28
- Firmware image:** A large blue box with an upload icon and the text 'Drop file here or click choose file button'.
- File information:** FE49996JMJ28, 46.254 MB, with a close button (X).
- Buttons:** Choose File, Cancel, and Delete.
- Hardware model:** Nokia WiFi Beacon 3.1
- Version:** 3TN00626JMJ28
- Firmware image:** A large blue box with an upload icon and the text 'Drop file here or click choose file button'.
- File information:** TN00626JMJ28, 43.650 MB, with a close button (X).
- Buttons:** Choose File, Cancel, and Delete.
- Footer:** + Add new hardware model, Save

Firmware Campaign using Corteca

Admin dashboard

1. Add a Rule for the firmware activation
2. Select CPEs to be updated (all, limited set, etc.)

The screenshot displays the Corteca Admin dashboard. On the left, under 'Campaigns / Firmware versions', there is a list of 'Available firmware versions'. A red arrow points to the first entry: 'Demo2_BG6+B3.1' for 'Nokia WiFi Beacon 3.1, Nokia WiFi Beacon G6', updated on November 06, 2025. On the right, the 'Add rules' dialog is open. It shows a rule named 'Demo2_BG6+B3.1' with a status toggle. Two radio buttons are selected: 'Target network device' and 'List of MAC addresses'. The 'Hardware model' is set to 'Nokia WiFi Beacon 3.1, Nokia WiFi Beacon G6'. The 'Target firmware version' is '3TN00626IJMJ28, 3FE49996IJMJ28'. A file upload area is present with the text 'Drop file here or click choose file button'. Below this, a file named 'BeaconG6+Beacon3.1_list.csv' (3.073 KB) is listed. At the bottom, there are 'Choose File' and 'Cancel' buttons, and two toggle switches for 'Scheduler' and 'Apply on boot', both of which are turned on. A note at the bottom states 'Need to select atleast one option'.

Firmware Campaign using Corteca Admin dashboard

Schedule when to Activate Firmware

1. When to Download Firmware to the CPE
2. When to Activate the firmware (service impact)
3. Timezone for the CPEs in this campaign

Add rules

Scheduler

Download firmware

Frequency
Every on at

Every day is the highest frequency allowed
Only one time selection per day

At 01:00 AM, only on Monday, Tuesday, Wednesday, Thursday, and Sunday

Duration
Duration time

Activate firmware Same scheduler as download

Frequency
Every on at

Every day is the highest frequency allowed
Only one time selection per day

At 03:00 AM, only on Sunday, Monday, Tuesday, Wednesday, and Thursday

Duration
Duration time

Timezone

Save

Configuration files Campaign

Admin dashboard

1. Create and upload a configuration file
2. Add a rule when to activate
 - Apply on boot
 - Based on a specific schedule
3. Select time duration
4. Select timezone

Add a new configuration file

Name: FN Beacon 19 Test | Version: CFPBCN004 | Description: Beacon 19 WebGUI Change

Conditions

Hardware model: Nokia WiFi Beacon 19

Configuration file

The configuration file name may need to match with the name defined by network device vendor

Drop file here or click choose file button

CFPBCN004 | 10,000 KB

Choose File | Cancel | Save

Campaigns / Configuration Files

Available configuration files

- FN Beacon 19 Test (Nokia WiFi Beacon 19) Updated on June 23, 2025
- CFPwild001 (Nokia WiFi Beacon 3.1) Updated on June 02, 2025
- WildanetTimers (Nokia WiFi Beacon 3.1) Updated on June 02, 2025
- MT G3.1 (Nokia WiFi Beacon G3.1) Updated on May 15, 2025
- MT test (Beacon G6) Updated on May 15, 2025

Add rules

Name: FN Beacon 19 Cfgfile Test | Configuration file: FN Beacon 19 Test | Status:

Target network devices

Hardware model | List of MAC addresses

Nokia WiFi Beacon 19

Drop file here or click choose file button

Choose File | Cancel

From firmware versions: any

Scheduler: | Apply on boot: (need to select atleast one option)

Scheduler

Frequency: Every Week on 5 items at 2 h

At 02:00 AM, only on Sunday, Monday, Tuesday, Wednesday, and Thursday

Duration

Duration time: 1 h

Timezone

America/Chicago

Add new configuration file

Scripts Campaign Admin dashboard

Upload a Javascript that will be executed periodically or upon certain event triggers

Add new script

Name
Set_TimeZone

Description
Set TimeZone to Americas/Chicago for specific test devices

Conditions

Hardware model
13 items selected

Applicable firmware versions
3FE49996JMJ28 (1.2502.328), 3FE49996JMJ50...

Script

Drop file here or click choose file button

SetBeaconTimeZone.zip 6.876 KB

Choose File Cancel

Input parameters

Input parameters needed by the script in JSON format

Save

Campaigns / Scripts

Available scripts

Set_TimeZone any
Set TimeZone to Americas/Chicago for a specific set of MACs

Add rules

Name
Set_TimeZone_Demo

Script name
Set_TimeZone

Status

Target network devices

Hardware model
any

List of MAC addresses

Drop file here or click choose file button

BeaconTest.csv 95.000 B

Choose File Cancel

Applicable firmware versions
any

Triggering events

Apply only on root network device

First connection
 Boot
 Scheduler

Timezone
America/Chicago

Speed & Latency Test Orchestration

- Create speed and/or latency test schedules
- Define the Wi-Fi points to use as probes
- Retrieve the compliance report

The screenshot displays the 'Speed & Latency test manager' interface. At the top, there is a search bar and a 'Search' button. A 'New schedule' button is located in the top right corner. Below these is a table with the following columns: Name, Test type, Frequency, and Status. The table contains five rows of test schedules.

Name	Test type	Frequency	Status
i6M21D-SpeedTest	Speed	At 5 minutes past the hour	Enabled
speed-beacon1.1	Speed	Every 40 minutes	Enabled
xs2428gb	Speed	Every 25 minutes	Enabled
latency-b6	Latency	Minutes 0 through 59 past the hour, at 12:00 PM, 01:00 PM, 02:00 PM, 03:00 PM, 04:00 PM, 05:00 PM, 06:00 PM, 07:00 PM, 08:00 PM, 09:00 PM, 10:00 PM, 11:00 PM, 12:00 AM, 01:00 AM, 02:00 AM, 03:00 AM, 04:00 AM, 05:00 AM, 06:00 AM, 07:00 AM, 08:00 AM, 09:00 AM, 10:00 AM, and 11:00 AM	Enabled
Beacon-G6-Speed	Speed	At 12:10 PM, 01:10 PM, 02:10 PM, 03:10 PM, 04:10 PM and 05:10 PM	Disabled

At the bottom right of the table, there is a pagination control showing 'Items per page' set to 5, '1 - 5 of 10' items, and navigation arrows.

Build No: 3FE49099HJK18 | Last Login 09-09-2022 15:42 GMT+02:00 | Terms of Service | Privacy Policy | © 2022 Nokia All rights reserved

Included in the Home Controller L1 license

A separate keycloak role to access

Corteca Support for Wi-Fi 7

WiFi 7 - Multi-Link Operations Support

Home troubleshooting dashboard

WiFi 7 MLO Configuration

	MLD MAC	Support
AA-FB-40-9E-4B-BB	EMLMR,EMLSR,STR,NSTR	
AA-FB-40-9E-4E-BC	EMLMR,EMLSR,STR,NSTR	

In a mesh config with MLO enabled, backhaul can use MLO. Screenshot below shows Beacon 19s using 5GHz and 6GHz for backhaul.

WiFi connection Active

Band	Phy rate	RSSI
5 GHz	2.9 Gbps	-54 dBm
6 GHz	3.8 Gbps	-56 dBm

	Current	1H 2026	
MLO Controls	MLO Fronthaul & Backhaul	MLO Fronthaul	MLO Backhaul
Corteca Console	View Only	Enable/Disable	Enable/Disable
Mobile App*	Enable/Disable	Enable/Disable	Hidden
WebUI*	Enable/Disable	Enable/Disable	Hidden

*Note: Device can be configured based on operator requirements to remove (hide) end user controls of MLO

WiFi 7 - Radio management page (L2)

Home troubleshooting dashboard

When the home network is based on WiFi7 enabled devices, there is a new card with MLD information, which includes the SSID, the MLD MAC and the mapping of BSSID and radio bands. If the network device supports MLO backhaul, MLO backhaul BSSID will be also shown in the page.

The screenshot displays the Nokia Troubleshooting dashboard. The left sidebar contains navigation options: Overview, Quality history, Network history, Recommendations, Channel usage, Advanced metrics, Radio management (selected), and Remote Logging. Under Radio management, there are two entries for 'Nokia WiFi Beacon 24' with MAC addresses 00-11-22-33-91-90 and 00-11-22-33-92-10. The main content area is divided into several sections:

- MLD information** (highlighted with a red border):

MLD MAC	02:11:22:33:92:00
SSID	NOKIA-9190
Affiliated AP	Band
00:11:22:33:92:19	2.4GHz
00:11:22:33:92:1a	5GHz LB
00:11:22:33:92:1b	5GHz HB
02:11:22:33:92:10	6GHz
- 5 GHz Low Settings** (Enabled):

BSSID	SSID
00:11:22:33:91:9a	NOKIA-9190
TX power	31 dBm
Channel	36 (5180 MHz)
Channel BW	160MHz channel
- 5 GHz High Settings** (Enabled):

BSSID	SSID
00:11:22:33:91:9b	NOKIA-9190
12:11:22:33:91:9b	FEVXzLIE
16:11:22:33:91:9b	FEVXzLIE
TX power	26 dBm
Channel	120 (5600 MHz)
Channel BW	160MHz channel
- 6 GHz Settings** (Enabled):

Corteca supports

- non-WiFi CPEs
- 3rd Party CPEs

Corteca supports non-WiFi CPEs: L2 ONT & FWA Receiver

Troubleshooting and Fiber access metrics

The screenshot displays the Nokia Corteca Troubleshooting interface. The top navigation bar includes the Nokia logo and the 'Troubleshooting' title. A left sidebar contains menu items: Overview, Network history, Recommendations, and Remote Logging. The main content area is divided into several sections:

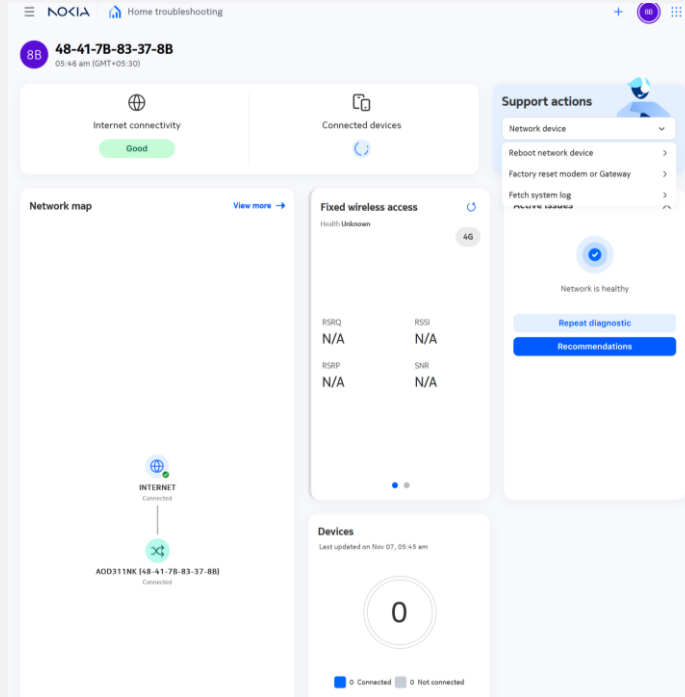
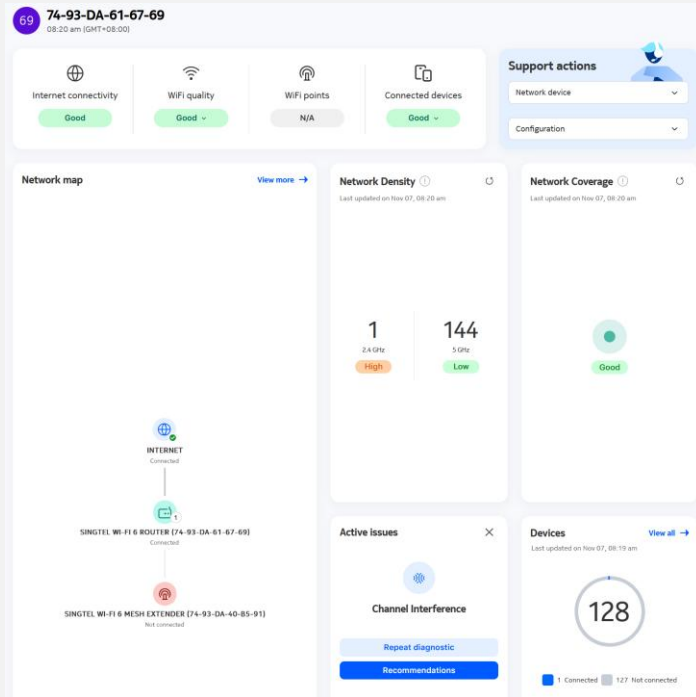
- Overview:** Features a 'Fiber access health' section with a green 'Health GOOD' indicator. Metrics include Rx signal level at -10.21 dBm, Tx signal level at 2.65 dBm, and Transceiver temperature at 46.50°C. Below this are 'Active problems (0)' (showing 'Network is healthy') and 'Problem history' (showing 'You're up to date, no new recommendations').
- Network history:** A table listing recent events.
- Support actions:** A list of actions such as 'Reboot network device', 'Factory reset modem or Gateway', 'Factory Reset WiFi Point', 'Fetch system log', and 'Reset Admin Password'.

At the bottom left, there is a 'Customer info' section with an 'End support session' button. A top right notification prompts the user to 'Check the home network in the Home dashboard'.

Time	Event	Description
Today 12:32 pm	Device	Diagnostics Successful.
Today 12:32 pm	Agent	Debug session was started by test
Today 12:32 pm	Device	Diagnostics Successful.

Corteca - 3rd Party Routers and FWA Receiver

3rd Party Fixed Wireless Access point



Appendix

Case A: 150k APs network - Nokia Beacons + Home Controller

Capability



Base benefits



End Benefits

Proactive optimization - RRM algorithms

Automatic optimization of the WiFi networks

WiFi Performance

- Aggregated throughput increase (i.e. increased capacity)
- Higher physical WiFi rates allocated
- Less noise and congestion events

Business metrics

- Reduction in total number of customer care calls (i.e. reduction in customer care costs)
- Increased NPS due to better user connectivity experience (i.e. potential higher ARPU)
- Reduction in churn due to better network quality (i.e. higher number of customers)
- Less field technician customer visits (i.e. reduction of field technician costs)

Reactive case handling - Real time visibility

Holistic view of the real time WiFi network status of a single Home

Solving customer tickets

- WiFi settings (passwords, SSIDs, etc.)
- Routers, WiFi Extenders onboarding
- Easy-to-solve performance issues (e.g. AP reboot, manual channel change, WiFi Extender wrongly positioned)

Business metrics

- Reduction in Average Handling Time (AHT) (i.e. reduction in customer care costs)
- Increased number of First Call Resolution (FCR) calls Time (i.e. reduction in customer care costs)
- Less field technician customer visits (i.e. reduction of field technician costs)

Enhanced visibility

Availability of metrics at different granularity levels from the aggregation at network level to a specific WiFi client's

Better knowledge

- About your customers (user profiling)
- About the quality delivered to your customers

Business metrics

- Increased NPS due to a better user knowledge (i.e. potential higher ARPU)
- More efficient marketing campaigns due to a better definition of the target (i.e. potential higher ARPU and lower marketing costs)

User facing apps

Expose WiFi management and diagnosis capabilities to the subscriber

Value added services

- DIY resolution of problems
- Parental control / Content filtering

Business metrics

- Reduction in total number of customer care calls (i.e. reduction in customer care costs)
- Less field technician customer visits (i.e. reduction of field technician costs)
- Introduction of value-added services experience (i.e. potential higher ARPU)

Case A: Benefits by using Home Controller L1 tools

150k APs network - Nokia Beacons + Home Controller

9 out of 10

Customers think that their WiFi experience has improved after installing Beacons

0.9% vs. 2.5%

Call Ratio

Customers with Beacons vs. ~2.5% customers with other modem / CPEs

8 out of 10

Customers did not have any need for support during / after installation

11 min vs. 22 min

Average handling time (per support call)

Reduced from 22mins

Qualitative feedback

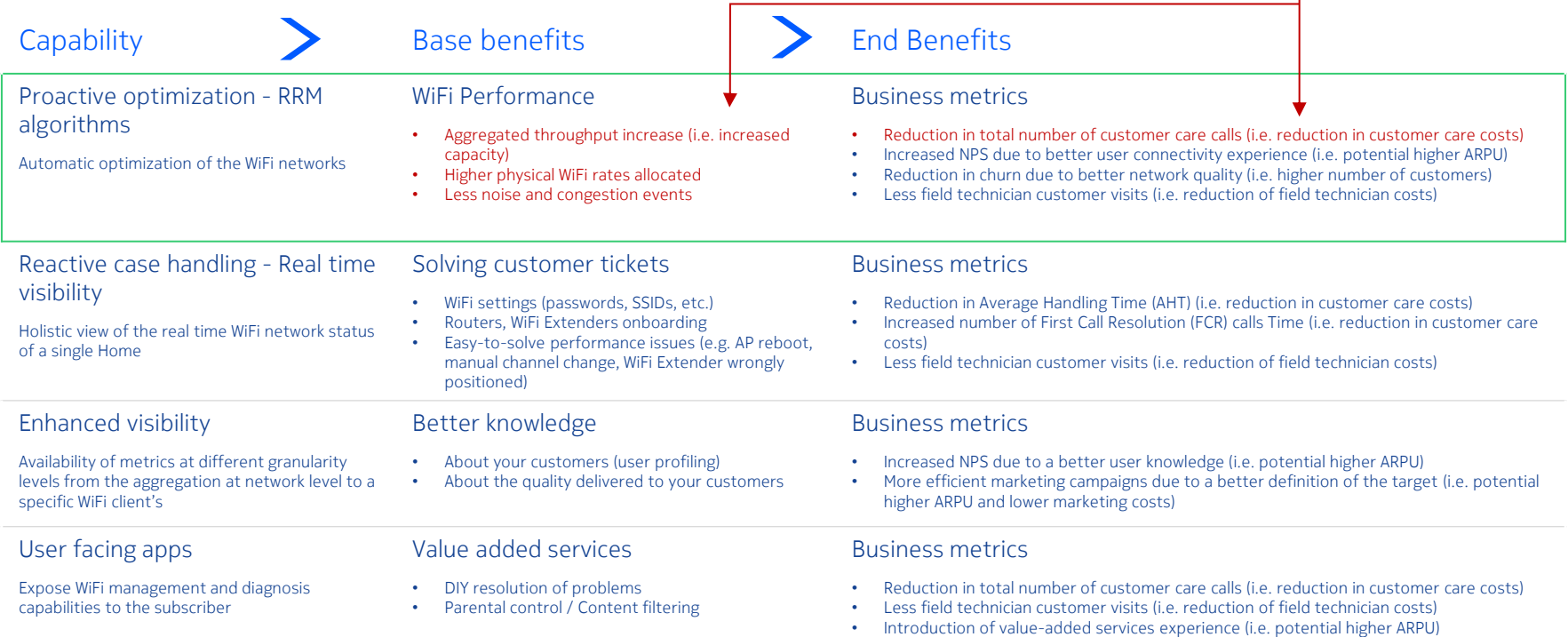
We have recently begun tracking the difference in customers satisfaction in our monthly Customer Satisfactory Analysis.

Although we do not have much data yet, it looks like satisfaction has increased on all parameters:

- Satisfied with my internet
- Value for money
- WiFi stability
- WiFi coverage

Case B: 1M live network – 3rd party CPEs

Only RRM algorithms related benefits are being evaluated in "Customer X" (i.e. WiFi Performance improvements & reduction of calls)



Case B: Activation of RRM algorithms (Home Controller L2)

3rd party CPEs: Activation of "CPE B" units and band steering in 90K "CPE B"s & 115k "CPE A" and "CPE C" FUT

AP Throughput

By activating band steering
(from 50k to 115k routers)
only in 31% of "CPE A" base

+23%

AP Throughput

By activating band
steering **only in 15% of**
"CPE B" base

+16%

5GHz utilisation

By activating band steering
(from 50k to 115k routers)
only in 31% of "CPE A" base

+30%

Noise events

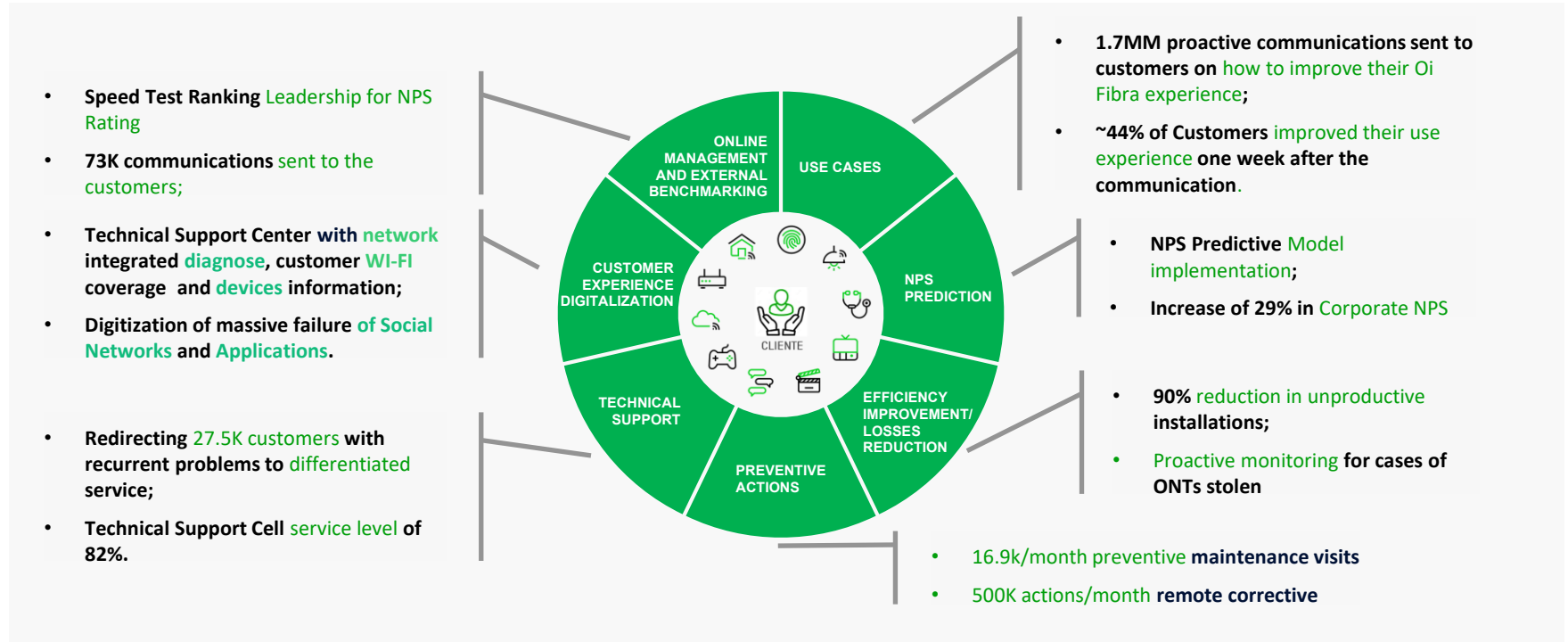
By activating channel
management in recently
updated 40k "CPE C"
routers

-65%

22% of WiFi related customer complaints in "CPE B" base after activation of RRM (source "Customer X")

CEC – Customer Experience Center

Main results of the first half of the year



Source: Oi

NOKIA