

Safaricom accelerates incident resolution with automation and AI/ML based analytics

- 25% reduction in average incident resolution time
- Complete process transformation
- Automated incident correlation and analysis with AI/ML

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“In the current global economy, businesses must be more adaptable and responsive to their customers’ needs to succeed. We at Safaricom are always open to ideas and innovations that can help us improve customer experience.

The complexity of our network has increased with the introduction of new technology layers including the launch of 5G and we saw increase in incident resolution times, impacting the satisfaction of both our customers and care engineers.

With our long-term partner Nokia, we were able to completely transform our incident resolution process and adopt new digital tools that leverage AI/ML, which resulted in an impressive 25% reduction in average incident resolution time.

I rate the results of this transformation project excellent.”

Godfrey Shikuku Abakalwa

Head of Converged Network Operations,
Safaricom Kenya



Safaricom is the leading telecommunications company in East Africa. Its purpose is to transform lives by connecting people to people, people to opportunities and people to information.

Safaricom has 33 million customers in total with 32 million subscribers in Kenya. It plays a critical role in the society, supporting over one million jobs both directly and indirectly.

In March 2021, Safaricom announced the launch of its 5G network.

Through Safaricom Foundation, the company invests in economic empowerment, education and health, supporting and partnering with communities to provide resources, opportunity and hope across Kenya.

Nokia is a key Radio Access Network (RAN) and digital care service provider for Safaricom.

Objective: reducing ticket handling time for faster incident resolution

Safaricom's network complexity has increased with the introduction of new technologies such as 5G.

In Safaricom's multi-layered environment, engineers were spending a lot of time in manual log collection as there was no centralized system that could collect the logs automatically. The operator also experienced delays in incident resolution. Care engineers had to go through the collected logs manually as they were essential for troubleshooting network issues, and the resulting delays in incident resolution started impacting customer experience.

Safaricom acknowledged the necessity to change their incident resolution process, and turned to Nokia for a solution.

The key objectives for Safaricom were:

- Reduce incident resolution time.
- Remove the burden of manual troubleshooting work so that care engineers can concentrate on more value-adding tasks.
- Become the customer experience leader in Kenya's competitive market.

Nokia worked together with Safaricom to design a more rigorous and innovative approach to incident resolution.



Solution: complete transformation of incident resolution process with help of AI/ML

Nokia's transformation project for Safaricom's incident resolution process consisted of two major parts:

Process and behavioral changes

– Nokia designed a comprehensive process for incident resolution with a set of proactive work instructions built on value stream mapping. The instructions explain in detail the correct actions and sequence of actions for both Nokia and Safaricom care engineers in different ticket handling scenarios, eliminating delays.

Case handling automation

– Nokia provides Digital Care Services for Safaricom. As part of the transformation project, Nokia

introduced Unified Troubleshooting Framework (UTF) for gathering insights with automated log collection based on network alarms and other defined data sources.

The UTF also features incident correlation and analytics with tools that leverage artificial intelligence (AI) and machine learning (ML). The framework was essential in making the log collection and related troubleshooting actions faster.

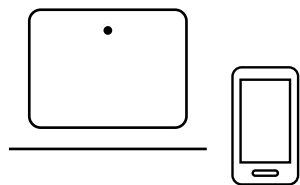
When a customer engineer enters a ticket in the Nokia support portal, Unified Troubleshooting Framework tags the incident and re-tags it again when an engineer has resolved the

ticket. This tagging allows AI/ML tools to run similar ticket searches, recognize patterns and anomalies as well as execute work flow optimization by suggesting the next best actions to the engineers.

Nokia care engineers can quickly troubleshoot tickets based on resolution of similar incidents instead of performing manual diagnostic and troubleshooting steps from scratch each time.

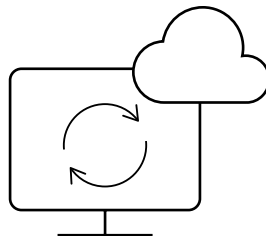
Additionally, care engineers can orchestrate all needed actions from a single user interface within the Nokia ticket handling tool.

1. Nokia support portal



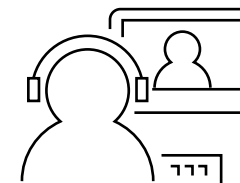
- Ticket entries

2. Unified Troubleshooting Framework



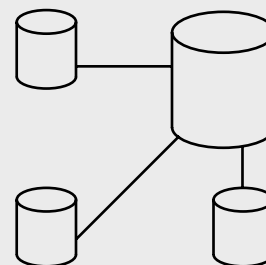
- Case tagging
- Automated log collection

3. Nokia care engineer



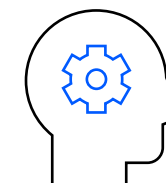
- Diagnosis with help of AI/ML

5. Knowledge management



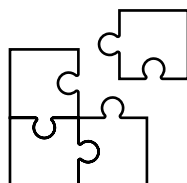
- Collection of applied troubleshooting steps and resolutions

4. Next best action engine



- Augmented troubleshooting
- Work flow optimization

6. Ticket resolution



- Solution provided to the customer
- Re-tagging of the case



Result: faster incident resolution with positive impact on customer and care engineer experience

Safaricom measured the success of this project based on the average time spent on incident resolution. The latest measurements show over 25% reduction in average incident resolution time.

With automated log collection and a unified view of contextualized network data, Nokia care engineers are able to identify issues and troubleshoot root causes faster. AI/ML-based predictive analytics can help mitigate incidents even before they impact mobile users.

The benefits also include complete transparency to the incident resolution

process as every step is executed in a digital environment, resulting in OPEX savings for the operator. Care engineers have become more productive when AI algorithms are tackling the most time-consuming part of their workload, letting them concentrate on more value-adding tasks.

For mobile subscribers, faster incident resolution translates into better customer experience and more trust towards the operator. After completing the transformation project, Safaricom has seen an improvement in its net promoter score based on feedback from subscribers.

25%

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At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering the future where networks meet cloud to realize the full potential of digital in every industry.

Through networks that sense, think and act, we work with our customers and partners to create the digital services and applications of the future.

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