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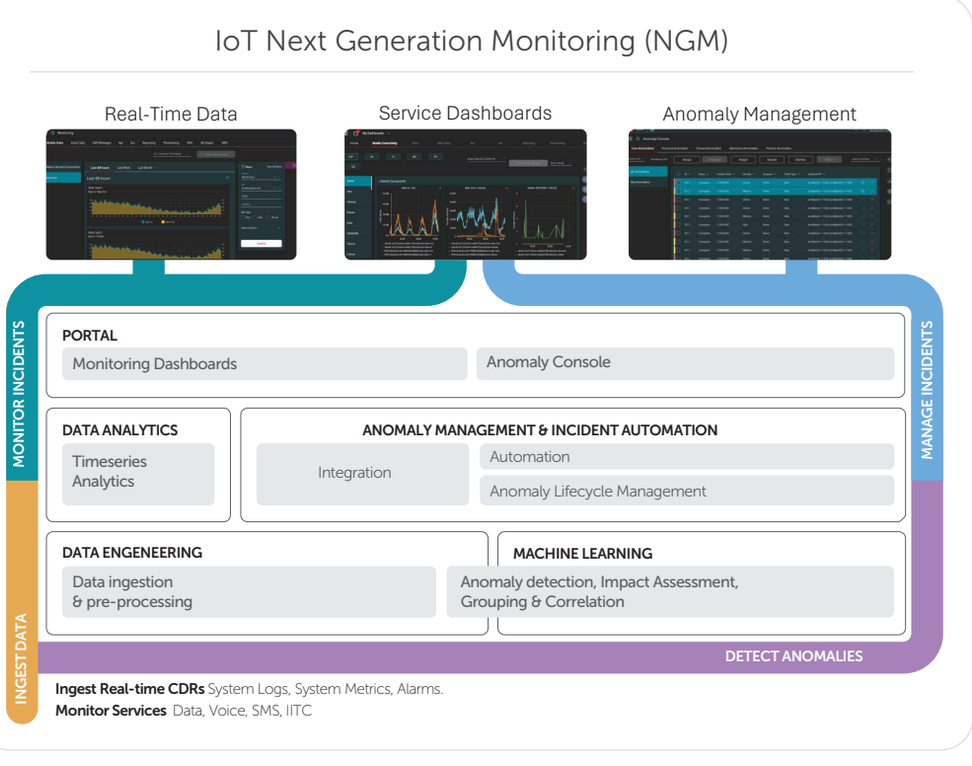
CASE STUDY

# IoT Next Generation Monitoring (NGM)

## The journey to a self-healing network

As a leader in managed IoT connectivity, Vodafone connects over 200 million devices across 580 networks in 190 countries and growing. Ensuring highly available, high-quality connectivity is essential, particularly as the volume of connected devices and demand for strict SLAs continues to grow.

In response and for future proofness, Vodafone Group IoT and Celfocus partnered to evolve Vodafone into a cognitive service assurance approach, leveraging AI and Machine Learning (ML) to enable significant operational improvements.




## CHALLENGE

To sustain its leading position and cope with the market evolution, Vodafone needed to move from an already underperforming legacy service monitoring to a new, future-proof intelligent assurance solution for its global network, to detect service anomalies faster and better for a higher service quality and customer satisfaction.

## SOLUTION

NGM is a cloud-agnostic, highly scalable real-time platform with sub-second data pipelines, running on AWS. It features machine-learning-based anomaly detection and a simplified monitoring console to support incident resolution. NGM comprises data streaming applications, microservices, and visualisation engines, and is fully DevOps-enabled with Infrastructure-as-code and CI/CD. It identifies service anomalies and likely root causes in near real time, based on customer traffic behaviour in IoT services.

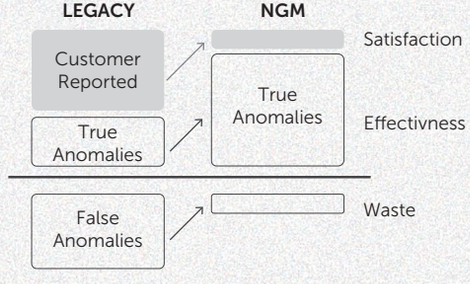
## BENEFITS

**Faster,** with service anomaly detection under 5min, down from over 30min.

**Better,** with under 5% false positives down from over 80% on legacy, and lower true-positives missed.

**Intelligent,** with ML-based adaption to service usage, instead of legacy human-set thresholds.

**Higher** service quality and efficiency with reduction of customer-reported incidents.




### Real-time & highly scalable

**Real-Time Monitoring**
- **2.5B+** data events/day
- **30K** data events/sec peak

**Anomaly Detection**
- Tracking over 100K+ time-series

Making Data Actionable.
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