

Technology Sector

In 2024, **stc** reaffirmed its position as a leader in Kuwait's digital transformation through groundbreaking technological advances and strategic initiatives that enable seamless connectivity, data transmission, and innovative service offerings. As part of the company's commitment to innovation and excellence, **stc** continued to enhance its technological infrastructure and deliver cutting-edge solutions to meet evolving market demands, enabling the next wave of digital transformation.

The technology sector at **stc** is the engine of the digital transformation process that adopts emerging technologies like artificial intelligence, cloud computing, and IoT to enhance operational efficiency and customer experience. The Technology sector has helped **stc** to maintain its competitive position in a fast-paced industry while meeting the growing demands of consumers and businesses for faster, more reliable, and innovative communication services.

Driving 5G Advances

Testing 10Gbps utilizing the 6GHz IMT (6425-7125MHz) spectrum

This breakthrough, conducted in collaboration with the Communication and Information Technology Regulatory Authority (CITRA), positions **stc** at the forefront of 5G-Advanced technology. By leveraging the globally recognized 6GHz band, the company is poised to expand mobile capacity and enable innovative services such as immersive AR/VR/XR experiences, 5G private wireless networks for enterprises, and advanced connectivity solutions for intelligent connected vehicles. This initiative aligns with Kuwait's Vision 2035, reinforcing **stc**'s commitment to fostering a digitally empowered society.

'One Core' Mobile VPN solution

This solution provides secure access to both public and private networks without the need for manual logins or extra authentication, reflects our ongoing efforts to enable digital transformation in Kuwait.

Expanding Connectivity with Innovative Solutions

Finalization of Proof of Concept (PoC) for a new Long Reach microwave technology

This technology is designed to enhance high-capacity backhauling with speeds of up to 5Gbps over distances of up to 8 kilometers. This technology addresses connectivity challenges in remote and rural areas, providing reliable, high-speed 5G services to underserved communities. By overcoming geographical barriers, **stc** ensures greater inclusivity in its digital transformation journey.

Additionally, **stc** continues to push the boundaries of innovation with its telecom cloud platform, which supports the future evolution of its 5G network. The platform incorporates ARM-based CPU architecture, providing high computing efficiency and reducing power consumption.

Fixed Wireless Access (FWA) solutions and unique quality

This is considered a cornerstone for strengthening its position as a pioneer in providing ICT solutions and exceptional customer experience.

Automation in Network Operations

Automation has become a cornerstone of **stc**'s daily network operations, achieving 99.99% network availability. Key achievements include:

Automated Trouble Ticketing

Alarm systems now automatically create trouble tickets, and the system immediately dispatches teams to resolve the issues, reducing human intervention and expediting problem resolution.

Rapid Resolution for Key Sites

Automation has enabled resolution times to be less than one hour for critical hub and VIP sites, ensuring consistent and reliable service for high-priority locations.

AABD Pro Implementation

stc introduced Auto Alarm Behavior Discovery (AABD) Pro, the first AI-powered tool in the Middle East designed to manage alarms across multiple domain technologies (wireless, IP-RAN, and microwave). The introduction of AABD Pro demonstrates **stc**'s commitment to leveraging advanced technologies to drive efficiency and elevate customer experience.

Enhanced Troubleshooting with AI and ML

AABD Pro leverages Artificial Intelligence (AI) and Machine Learning (ML) to identify the root cause of network faults across domains, eliminating the inefficiencies of domain-specific troubleshooting. This innovation drastically reduces resolution times, simplifies troubleshooting, and improves customer satisfaction.

Proactive and Efficient Issue Resolution

AABD Pro ensures the correct teams are dispatched immediately, minimizing downtime and enhancing service reliability. By analyzing network behavior patterns, it predicts and prevents future disruptions, creating a proactive approach to network management.

Optimizing Alarm Management with BOTs

The implementation of BOTs in the fixed network has significantly improved operational efficiency by:

Reducing Workload

BOTs help filter and optimize alarm handling, ensuring that only relevant issues are flagged for action.

Accurate Issue Identification

This optimization minimizes unnecessary interventions and focuses resources on resolving the most critical issues.

Sustainability Initiatives in Energy Management

Lithium Battery Deployment

Since 2017, **stc** has integrated lithium batteries into the network to replace traditional lead-acid batteries, particularly at diesel generator sites, which have been widely adopted across the network due to numerous benefits.

Inverter Air Conditioners

stc has implemented inverter ACs to improve energy efficiency and reduce greenhouse gas emissions. Unlike traditional ACs that frequently turn on and off, inverter ACs adjust compressor speeds to maintain the desired temperature.

On-Grid Conversions

A 10% reduction in diesel generators has been achieved by converting them to on-grid power sources. This transition decreases fuel dependency, reduces emissions, and supports environmental sustainability.

DCIM – Data Center Intelligent Management

stc has implemented Data Center Intelligent Management (DCIM) to enable remote monitoring and management of exchanges, core rooms, and data centers. This enhances operational visibility and ensures real-time insights into critical infrastructure.

In-House Automation Initiatives

Automating Down Sites SMS and Reports

stc developed an in-house system to automate network operations reports and SMS notifications for downed sites, streamlining communication and response times.

Energy Consumption Dashboard

An in-house dashboard was created to monitor energy consumption in data centers, providing actionable insights to optimize energy use and support sustainability goals.

Reduction in Daily Network Trouble Tickets and Enhanced Customer Satisfaction

The Network Operations team achieved a significant milestone by reducing the daily trouble tickets and customer complaints from an average of 35 per day to less than 10 per day.

Achieving Top-Ranked 5G Network Quality in Kuwait

The Network Operations team secured the top rank for 5G radio quality in Kuwait, outperforming competitors, due to Network Optimization and Technology Deployment in addition to undertaking proactive Maintenance and Issue Resolution.

This achievement showcases the in-house efforts to maintain exceptional 5G network quality and reliability, solidifying **stc**'s leadership in telecom services.

Smart Lock Implementation

Over the past two years, network team deployed more than 1,400 smart locks across its network to combat theft, vandalism, and unauthorized access. These locks provide enhanced security for critical assets, ensuring operational integrity and asset protection.

Awards & Recognitions



"ICT – Telecommunications Award – Kuwait", at the Middle East Technology Excellence Awards.



"FWA Overall Experience Award" at the SAMENA Council's Leadership & Excellence (LEAD) Awards."



"The Outstanding Network Operations Award" in the Digital Transformation Innovation category at Huawei's Operations Transformation Forum held in Turkey in November 2024.

Strategic Outlook for 2025

Going forward, **stc** will keep exploring new areas of improvement for its business model that best serves its technological advances including, but not limited to, strategic initiatives and partnerships with major industries. This convergence enables the creation of tailored solutions and next-generation services as well as driving innovation, which will position **stc** as a central player in the digital transformation across various sectors.

