DXC Technology

Reinforced Network Practice can Catapult DXC Technology to the Forefront of Excellence

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ISG Provider Lens™

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Background

DXC Technology presents a matured enterprise network services and solutions practice that supports around 600 large-scale enterprises with more than 2,500 network professionals spread across 17 countries, managing several thousand network elements and connections. The company parallelly operates its corporate and data center network, enabling it to test its solutions internally before deployment, reducing the time to market. The capability helps DXC to manage its over 50 global data centers and around 200 global corporate sites. DXC showcases over 20 different network products and offerings, which have been developed following a Scaled Agile Framework (SAFe) approach. The company has adopted a "follow the sun" approach to garner innovation and streamline delivery. Its network innovation and delivery centers in Costa Rica, Slovakia, Bulgaria, India, the Philippines and Malaysia portray a standardized flow of processes, ensuring paramount customer experience.

Briefing Notes

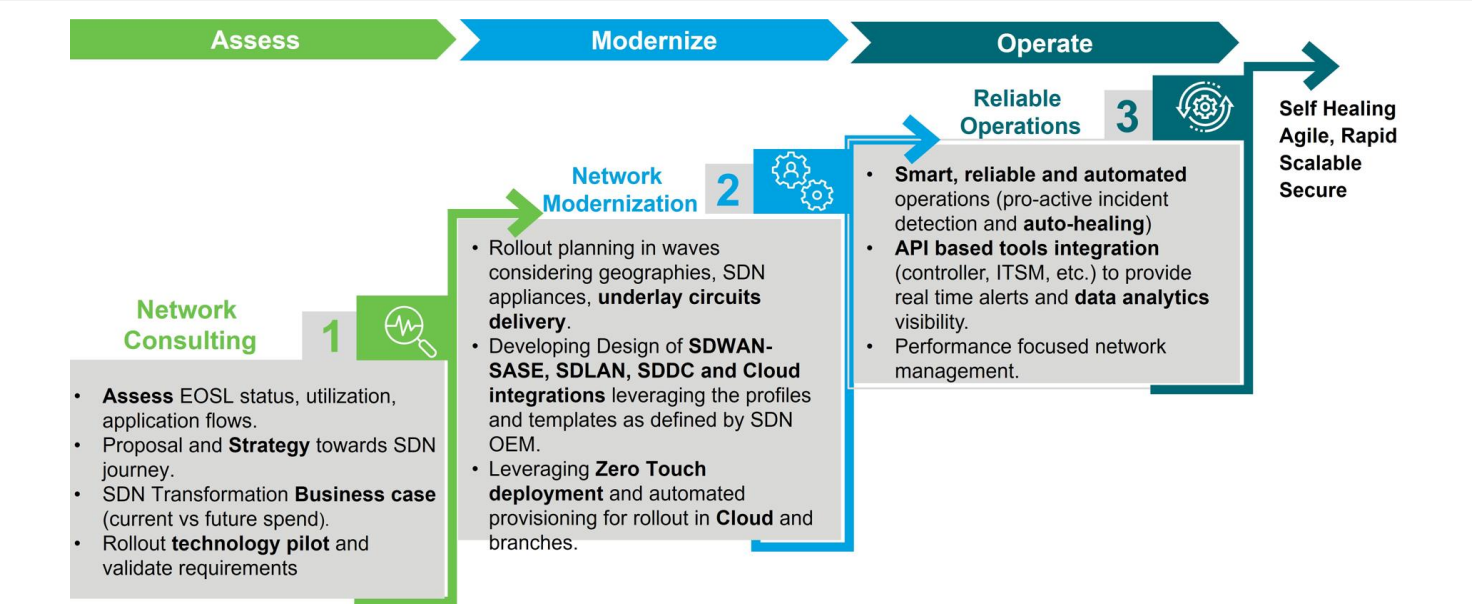
Senior executives from DXC Technology briefed ISG on the company's network engineering capabilities. The team briefed the ISG analysts on the growth of the overall network business, touching upon their differentiation, capabilities, key assets, and accelerators. DXC has been positioning its global offerings in the market in a way that showcases how they are interlinked with its OEM partners. Its network global growth program focuses on proactively reaching out to existing accounts and talking to them about the modernization journey. ISG witnesses a shift in mindset from the enterprise decision-making perspective. Despite the options of software-defined wide area network (SD-WAN), enterprises tend to opt for multiprotocol label switching (MPLS) and Internet-based architecture and, hence, there was an uptake in MPLS plus Internet nomenclatures. Moreover, there has been a rise in the adoption of complete Internet-based architecture. DXC has been active in this space with several internal use cases around Internet-first approach at data centers, which catapulted it to the forefront in meeting the new demands of customers. Thus, the company could abandon older vanity matrices to keep itself relevant to the enterprise business outcome and move to newer technologies.

All-inclusive Network Transformation Portfolio

The company has segmented its offerings into three key areas: consulting and advisory, network modernization and reliability operations spanning consulting, implementation and managed services. After the initial design and PoC, the modernization activities involve several functions, including optimizing the underlays in SD-WAN, automated provisioning and segmentation, such as moving to a software-defined local area network (SD-LAN) and rolling out software-defined data centers (SDDCs). The DXC team assesses the customer's infrastructure and network assets and provides a road map for technology adoption, including developing PoCs and solution designs. This paves the way to network modernization, which is directed toward hand-holding the customer across its journey along its digital transformation ambitions.

DXC's priority has been to improve customer experience and be relevant to the customer's business outcome. Consistently, the company hosts clients regularly at its network innovation and delivery centers, enabling it to identify

Figure 1: DXC Technology's network transformation services portfolio



Source: DXC Technology

enterprise-level challenges at the grassroots level. Clients' requirements from different verticals have been converging along a few aspects such as user experience and security. The global market witnessed a surge in demand for Internet and most of DXC's enterprise clients have been accepting to move to an Internet-only connectivity model.

DXC's network modernization strategy aims to enable agility, speed and flexibility at scale. The company focuses on driving more reliable operations to support clients with digital and business transformation taxonomy. The network consulting and advisory practice, as a part of this, assesses the current state of the infrastructure or the network, which is used to define a business case. This, in turn, would initiate the software defined networking (SDN) journey that drives the business outcome requirement. The company uses a wide range of modernized vendor-agnostic transport and up-to-the-minute software-defined capabilities around SD-WAN, SD-LAN, SDDC, cloud networking and private wireless. Central orchestration can deliver these at scale, enabling the right multicloud or hybrid-cloud architecture. On the other hand, the reliability operations are focused on smart automation directed toward auto-detection of incidents and resolution of incidents with the help of API-based tools and runbook integration. Also, the tools that drive operational improvement support the ITSM functions on the back end. Real-time AI-driven analytics enhances visibility, which is helpful in the case of environments, such as on-premises or cloud data centers.

Paving the Way for Next-generation Offerings

- **Trailblazing to new-age network cyber-resilience:** One of the major concerns of enterprise customers is getting the security elements entrenched in their IT and OT environments. Instilling security in the customer network with better user experience and reduced cost has been a requirement for most enterprise customers. This, together with a zero-touch wraparound has been a major differentiating factor for DXC, which has led to faster rollouts. Its use cases and PoCs around SD-WAN, SD-LAN and Wi-Fi 6 have been built around zero touch, which will reduce the time to market. Furthermore, the company has developed a data-driven model directed toward providing transparency to different cross

sections of stakeholders, ranging from traditional and virtual carriers to enterprises. From the data flowing through the network, the model generates insights into various enterprise segments, such as awareness of activities on the application side.

- **Proliferating data-driven decision making:** DXC strategizes to design and use intent-based networks to push the boundaries of innovation and enable the network to behave in a desired manner, driven by information. Consistently, the DXC methodologies look beyond techniques such as runbook automation. When a problem is detected in the network, a script can be run in the back end, runbook automation can be performed and an alert can be triggered. These functions can be executed with DevOps-based scripts — a strategy several systems integrators adopt to step forward toward intent-based networking. DXC, on the other hand, visualizes intent-based networks through a network digital twin as a foundation of technologies that can unearth a lot of information, which were previously unavailable, such as changes in a routing table or the possibility of detecting changes in traffic patterns (such as asymmetric routing by the network traffic).

- **Sharpened focus on the tooling management platform:** The native technology partner orchestrations have been integrated with its network management platforms. The network standard reference architecture contains multiple OEM appliances and DXC-owned monitoring and management tools for underlay and overlay management control. The architecture is interlinked with Platform X, which can be represented as the ITSM control plane. The control plane uses API interfacing to provide all the Internet Protocols (IPs) and processes, such as incident correlation and change management. This is coupled with DXC's applied intelligence environment known as the data hub, which collates data and provides AI-driven analytics.

- **Accelerators to catapult to upper echelons of network services business:** DXC has been investing continuously to fortify its set of accelerators, including EoX Advisor, Modernization Director and the Network Digital Twin. The EoX Advisor is used for end-of-life analysis, which performs analysis across multiple vendor products such as Cisco, Aruba and Checkpoint and others. The inventory database from the configuration management database (CMDB) is put in this accelerator, which, in turn, produces the complete analysis of the hardware and software within a few minutes and builds a future blueprint for technology and product refresh. The Modernization Director, on the other hand, helps drive the transformation programs across multiple sites and data centers. DXC's modernization journey involves two main phases: enablement of the core infrastructure, which the orchestrator or the data center governs, and the rollout of the sites. Understanding the client's current infrastructure condition includes several activities such as mapping to the new infrastructure with data gathering, site design, bill of materials (BOM) procurement, design preparation, build test, turnup, cutover and handover. Suppose the customer has a few hundred sites that need to be migrated within a stipulated time frame. In that case, the inbuilt intelligence of the Modernization Director defines when the site should initiate the migration process, depending upon their change, freeze plan or business peak plan. Last, the network digital twin is used for network discovery and troubleshooting. DXC collects information from the site and the network endpoints through offline surveys. The level of information is further enriched by the digital twin, which can also discover a lot of information from a configuration standpoint, and L2/L3 connection standpoint. The accelerators also include several AI-based robots and AI-based advisors for operations functions.

- **Harboring zero touch in private wireless solutions:** DXC Signal is a proprietary offering on the private wireless side, developed in partnership with Nokia, which has been flawlessly executed with zero-touch deployment

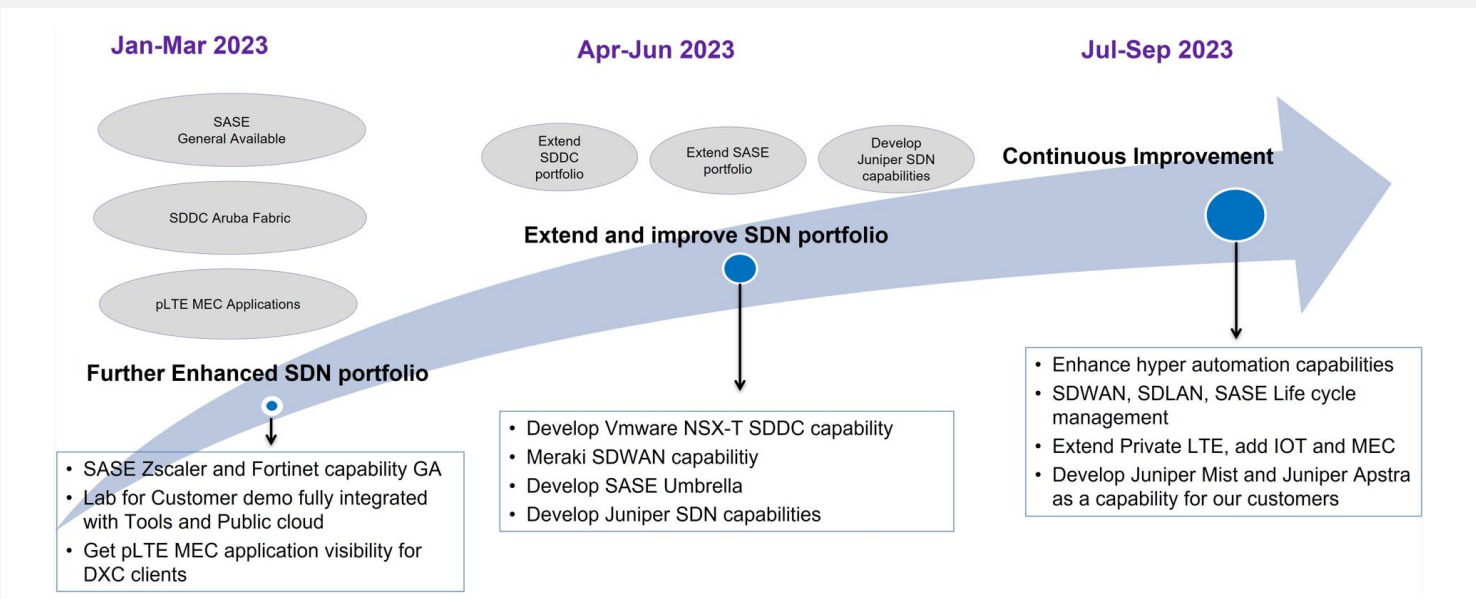
and automated software updates. The company has already implemented it for a few energy and oil and gas customers to roll out private LTE or wireless networks for their large industrial and plant sites. The clients, as a result, were able to realize the provisioning of outdoor coverage for all the large facilities (up to 50 acres). The implementation improved safety and the ease of network access, during critical activities such as nuclear refilling and refinery maintenance, while reducing monthly costs by up to 20 percent. Last, the solution improves network access security using Nokia LTE SIM and Nokia Digital Automation Cloud (NDAC)-based authentication algorithms.

Robust Road Map Fortifying Systems Integration Paraphernalia

DXC is committed to enabling SDN services for its enterprise clients while leveraging the potential of software-defined solutions for its more than 50 data centers across the globe. The company has deployed Cisco ACI with Network-as-a-Service (NaaS) capabilities in its DC Group One in the Americas, which drives faster deployment. Similarly, its DC Group Two across EMEA and APAC has been empowered with more than 12,000 programmable interfaces and centralized policy management across 230 devices. The company also plans to integrate the Aruba CX 10000 series of devices across more than 40 data centers as part of its road map to bolster its software-defined everything (SDx) dexterity, providing cloud-based orchestration policy management and accelerating provisioning for client-to-site infrastructure.

The DXC offerings road map represents a continuous cycle of development and evolution. The company plans to extend its SDN capabilities around SDDC by adding VMware solutions, followed by the expansion of the SD-WAN portfolio with Cisco Meraki and Juniper solutions. On the secure access service edge (SASE) front, DXC is working toward integrating the Cisco umbrella, which will also encompass private wireless. The company tends to fortify its network solutions by adding more application services in the cross-stacked EXE and adding features in the mix. In the year's second half, the company will focus on the edge computing and IoT aspects along with SD-LAN and data center automation around Juniper Apstra.

Figure 2: Planned road map of network services portfolio



Source: DXC Technology

Key Takeaways

DXC's network practice has been a scion of its all-encompassing digital and software capabilities, which, in turn, has been considered with reverence by large enterprise customers. Its coterie of certified full-stack network engineers brings in a unique combination of software-defined and traditional networking capabilities, skilled and equipped with the underlying information and knowledge from the in-house tools and AI-driven solutions. Moreover, the company has effectually leveraged automation to fast-forward activities such as troubleshooting and deriving information about the health of devices, CPU utilization, memory utilization and traffic within minutes. This has been instrumental in solidifying its stand in the quest toward intent-based networks. The company has been actively identifying its shortcomings from a market penetration perspective. DXC identified a requirement from the manufacturing industry, which warranted integration of the manufacturing plants and sites into the IT network, a segment that has been unexplored by DXC so far. Furthermore, it has strategized activities for further integration of its solutions in the SMEs segment, driven by Cisco Meraki elements. Overall, the company is suitably placed to emerge as a market maven in the network transformation outsourcing space, adopting intrepid solution development and precociously upskilling its workforce.

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Avimanyu Basu is a Senior Lead Analyst specializing in cross-vertical research focusing on disruptive innovations and convergence technologies aligned with digital transformation of enterprises. Avimanyu authored studies focusing on digital disruptions and its influence on engineering service providers along with several blogs. With almost 8 years of experience in market research and consulting, Avimanyu has provided strategic recommendations to both public and private sector clients across Europe, Middle East and Asia Pacific. Prior to ISG, Avimanyu has worked with Frost & Sullivan, Infiniti Research and Zinnov in a number of assignments involving competitive benchmarking, market sizing, market penetration and segmentation.

Summary Facts

DXC TECHNOLOGY

Headquarters

Ashburn, Virginia, U.S.

Revenue

US $16.27B (2022)

Markets

North America, Europe and APAC

Industry Groups

Telecommunication, Networks, Engineering and Cybersecurity

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