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Network Services

Service Experience Engineering & Management: Helping Assure a Superior Customer Experience of the Network

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Communication services—and their supporting networks—have already been transformed from being merely an enabling capability for business transactions and entertainment to becoming a mission-critical element of many people’s daily lives and a major contributor to their sense of well-being. This is attested to by an ongoing surge of data consumption in multiple areas, including business, social and machine to machine interactions, as well as a pervasive adoption of intelligent devices, ranging from smartphones to tablets to wearables.

Communications service providers (CSPs) are at the center of this transformation, having the technical capabilities and the customer intimacy to exploit these trends. As Accenture research shows, consumers continue to trust CSPs to manage the personal customer data that is available through the network.¹

This rapid growth in network usage volume has consequences as well. CSPs are experiencing rapidly growing operations costs, due to the difficulty of maintaining service availability. They also face a high volume of customer claims and network repairs. In addition, they are finding it difficult to monetize the network due to the challenge of demonstrating adequate return on investment (ROI) from network investments. All these issues, if not addressed, can lead to poor network quality, reputational impact and failure to achieve a strong customer franchise.

In addition, CSPs also face at least one additional critical challenge. Assuring a strong customer franchise increasingly depends on providing a superior network experience for the customer; and the rapidly growing volume of network usage is making a superior customer experience much more difficult to sustain. Fifty percent of consumers are already facing connectivity issues daily or weekly.²

² Ibid.
The underlying problem is that traditional methods for measuring and assuring customers’ experience of the network have proven to be inadequate. While significant CAPEX is being invested in the network, there is little assurance that this expenditure can actually be correlated to the customer experience. Meanwhile, KPIs for service and experience assurance have ultimately proven unreliable: even if operational KPIs are rated as green, customers may still be reporting or having service issues.

If CSPs are to succeed in addressing the growing stresses customers are placing on the network, they must have adequate tools for a) measuring the network quality that is so essential to the customer experience, b) optimizing that quality, and c) maximizing the value of network investment.

To address these interrelated needs, Accenture offers Service Experience Engineering & Management (SEEM) Services. By providing an integrated approach to managing the network, network services and the consumer experience, SEEM offers CSPs a way to secure and maintain a growing percentage of Customer Lifetime Value.
SEEM: Overcoming the Traditional Limitations of Network Quality Management

Many of the challenges of assuring a superior service experience are due to the traditional limitations of network quality management:

• Optimization is limited to technical analysis and often leads to optimization decisions that fail to take into account the impact on business results, customer portfolio and overall service experience, leading to extra costs and a suboptimal overall decision. For example, optimization campaigns do not take into account the complex customer dimensions related to corporate customers and VIPs and their individual "service experience."

• Further, network optimization is not conducted on an end-to-end basis, but instead is vertically performed on network domains, without visibility on how full service quality is perceived as a whole and by each customer segment.

• In addition, there is also a high reliance on network performance and drive test data that is frequently limited in duration, with two weeks' worth of data often being typical. The insights generated as an outcome are processed manually by engineering and operations team members, resulting in actions that are not timely and more likely to result in errors on the network.

• Finally, network optimization is campaign based—that is, scheduled for one restricted area at a time, with no chance to react promptly to changes and customer issues. There is no possibility of real-time optimization that is based on traffic, or on the maximization of value through a superior customer service experience.

Through Service Experience Engineering & Management (SEEM), Accenture is providing CSPs with a means of overcoming these traditional limitations for management of the customer's network experience. SEEM addresses these issues through an innovative "Analytics as a Service" approach, which is used for data discovery, predictive analytics and network optimization. SEEM’s approach to analytics is always on, and is based on an automatic process for assessing ongoing customer experience, directly translating that customer experience into network optimization. In addition, SEEM automates the actions to be performed on the network, integrating with SON (Self Organizing Networks) and NFV Orchestration (Network Function Virtualization). This automation capability will be increasingly fundamental in managing the increasing complexity and volumes of network configuration activities.
SEEM requires transformation across three dimensions:
- Approach (Figure 1)
- Processes (Figure 2)
- Tools and capabilities (Figure 3)

As shown in Figure 1, legacy approaches to assuring network quality typically have taken place across a 6- to 12-month cycle. Network quality has been maintained by network engineers as a technical issue, with no direct connection into the experience of the customer.

Accenture's SEEM approach, by contrast, takes place in a closed-loop process. The use of data from network performance, network configuration, customer data and transactions, intelligent agents with access to customer devices provides basis for analytics and insights. This allows the customer experience to be continuously monitored and adjusted according to desired performance parameters that are geared to each category of customer. Network operations can therefore be optimized in real time.

Figure 1: Integrating the Customer Experience into Network Quality Assurance
Figure 2 shows how this continuous network management process is managed functionally through an enhanced operating model.

The network surveillance, performance management and configuration management processes, formerly stand-alone, are now integrated through a Service Experience Management function, overseen by Service Engineering according to specific parameters, and driving continuous network optimization and automatic configuration. This proactive configuration of the network provides an optimized service experience.

**Figure 2: An Integrated Process for Service Experience Management**
As shown in Figure 3, the SEEM solution is composed of both Accenture services and a cloud-based, multi-tenant multi-technology platform.

Services include:

1. Consulting/audit services for development of use cases and business cases and for definition of architecture.
2. System integration and operations for Customer Experience Management and Network Analytics solutions.
3. Experience Optimization as a Service, managing the process from Network Optimization to Customer Insights.

The SEEM technology platform, which adds on to Service Assurance, combines technologies that address multiple functions, including:

2. A SON dashboard and management platform.
3. Wireless diagnostics solution, management and integrated control.

As Figure 3 also shows, this platform is designed to be integrated as appropriate with existing telco Service Operations functions, including Service Quality Management, Customer Experience Management, Fault Management and Performance Management.

Working through a service layer, the insights generated by customer and network data allow CSPs to perform their own service engineering functions.
Thanks to this integrated approach, SEEM is able to:

- Combine strategic, long-term upgrade priorities with real-time analytical insights.
- Leverage powerful forecasting algorithms to predict future demand.
- Analyze each node independently to plan for upgrades where they are needed most.
- Understand customers’ quality of experience and maximize ROI in supporting that experience.

Figure 4 provides an example of the easy-to-use interfaces that empower the Service Engineering function to capture and act on critical Service Experience in a holistic way, including:

- Health Map, which consists of a geocoded cluster map that is color-coded according to Health versus Value status at the cluster, segment and service level.
- Log Analytics, a powerful tool for real time service troubleshooting.
- Predictions and Improvements, which provides forecasts and trends for selected network nodes, customer segments and services.
- Insight Monitoring, which offers configurable insights on the main factors influencing the health status.
- The SEEM Dashboard, a flexible and powerful console for end to end service experience management and optimization.

These tools provide managers in Operations, Engineering and Experience Management with a consistent framework for identifying trends, performing forecasts and enabling corrective actions.
As shown in figure below, SEEM offers a transformation roadmap for the process of managing both the network itself and the customer experience of the network.

- SEEM enables the functionality of the Network Operations Center (NOC) to be fully integrated with that of the Service Operations Center (SOC).

- It in turn allows the organization to expand the functionality of the SOC into a broadly based Customer Experience Management (CEM) function.

- Ultimately, it permits value-led transformation from CEM into a fully integrated approach to both Service Engineering and Experience Management.

Through this transformation, SEEM delivers continuous network optimization; a network utilization boost with service quality improvement; and ultimately, upsell and monetization of network services in direct proportion to customer requirements and needs.

Managing customers’ network experience effectively requires a transformation of the way the provider operates, including its organization, processes, technologies and people. Accenture has extensive experience working with network providers in managing complex, transformational change across all these dimensions. In addition, Accenture has command of the technologies that make possible a continuous, always-on approach to measurement of network quality and the customer experience, including powerful analytics and self-organizing networks.
SEEM enables providers to run network operations with analytics-driven, customer-centric insights. It offers a number of platform-driven engineering and operational services that help digital CSPs optimize their service performance, reduce their engineering and operational costs and optimize their network assets.

The SEEM solution has helped CSPs achieve significant improvements that have directly translated into benefits for the end user, including:

- Increased NPS through early identification and resolution of service issues and through measurement of the customer service experience, enabling engineering of the best possible experience per customer segment.

- Reduction in cost through direct network investment in target areas to specifically improve the service experience, while enhancing the ability to verify the effectiveness of network investment.

- Reduction in cost with increased quality through a) streamlining processes and organization, b) enabling a higher level of automation via tools, increasing proactive/preventive work versus reactive work, and d) reducing time to repair.

- Increased quality through measuring perceived quality before and after optimization activities, to ensure that optimization has an effect on the service experience.

- Increased quality with reduced cost through proactively and timely optimization of the network in order to ensure the best possible quality of experience.

One major European provider achieved significant benefit from applying the tools of SEEM in an NOC-to-SOC (Service Operations Center) transformation. Key results included:

- An 80-to-1 ratio from old NOC events to SOC events.
- Reduction of 70 percent in the escalation of trouble tickets.
- A 20 percent increase in service availability, measured as an average per cell.
- And, a significant increase in NPS.

In summary, SEEM enables providers to run network operations with analytics-driven, customer-centric insights. The platform-driven engineering and operational services comprising SEEM help digital CSPs optimize their network assets and service performance, while reducing their engineering and operational costs.
Evolving from a traditional service provider to a platform-based Interactive Digital Service Provider is a complex task. You want to minimize cost, minimize disruption, and get to the value... fast. But it’s also clear that what got you to where you are now, won’t get you to where you want to go.

Accenture has the industry expertise, digital insight, technology experience, ecosystem partners and end-to-end solutions to help build your next-generation network. We can help you make the move from a traditional network to a digital network, along multiple dimensions:

• From operating a hardware-based network... to operating a digital network platform using software.

• From working with a few hard-wired vendors... to creating an open environment that can be rapidly extended into new industries.

• From confronting regional limitations... to running a global network.

• From being constrained by corporate boundaries... to providing a seamless connection to third-party cloud ecosystems.

• From employing a workforce that “maintains”... to empowering a workforce that innovates.

• From being pigeonholed as a “dumb pipe”... to inventing the intelligent, self-learning digital platform that makes you the best choice for your customers in the future.

As you pursue the opportunities offered by Digital Network Transformation, insist on having a partner who understands the breadth of your requirements... and is fully equipped to help you turn your vision into reality.
For more information

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About Accenture

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