Solution Brief

Business Impact

"Network data is the most underutilized and valuable resource in most CSPs. Using SAS advanced analytics can transform your business and bring you insights that weren't possible until now."

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Challenges

- **No advance notice of failures.** Today, alarms only indicate problems after the network has already failed.

- **Lack of network insight.** CSPs cannot analyze issues from a customer perspective – things such as handset performance and service quality.

- **Insufficient capacity planning.** Few CSPs use true forecasting; and with different mobile devices growing at different rates, it's difficult to make accurate plans.

- **High customer churn.** A variety of problems causes high customer churn: too many dropped calls, slow Internet speeds and poor customer service.

- **Ineffective marketing techniques.** Lacking network data, marketers may promote services or products their customers already have, or features that don't work in certain areas – while missing more promising opportunities.

How can we optimize network investments and transform the customer experience?

The Issue

Data is exploding in the communications industry – doubling every nine months. At the same time, networks are increasing in size and complexity. But revenue for communications service providers (CSPs) is not growing at the same rate. As a result, CSPs find it hard to invest in additional network capacity and engineers.

More than 50 percent of CSPs' budgets are spent on growing their networks, but few use analytics to guide capacity planning decisions. One reason is that CSPs operate in information silos. Customer management divisions are separate from network management, so it's impossible to know what each customer is experiencing at a detailed level. Studies and surveys show that churn is a direct result of CSPs not knowing their customers well. How can CSPs learn to do more with less? The answer is sophisticated analytics. Analytics can help CSPs make smarter decisions about their complex networks – and establish sustainable operational models that help to increase returns from network investments.

Our Approach

SAS helps CSPs unlock their most valuable asset – network data – and move it to the forefront of network engineering, customer care and marketing decisions. We approach this problem by providing a customer-centric approach to network analytics that helps you:

- **Reduce costs while improving the customer experience.** Quickly pinpoint issues at the cell or node level and predict network failures before they happen – so you can optimize the network from the customer's perspective and spend less time troubleshooting to resolve problems.

- **Make data-driven decisions about network quality, service assurance and capacity planning.** Optimize network investments based on handset insights or individual cell site busy hours. Know what traffic will move to LTE when upgraded, understand different busy hours per cell and anticipate network traffic upgrade impacts.

- **Reduce churn and increase net promoter scores.** Incorporate network data with day-to-day decisions of call center agents and marketers so you can match the right handset with the right customer and network. Understand how the handsets and services customers have now are actually working. And know if a customer needs a software upgrade or whether there's an issue with a particular cell.

- **Sell services and features that match customer usage.** Sell where you have capacity rather than in congested regions. Offer handsets that match usage – such as offering a QWERTY keyboard to heavy SMS users. And improve your overall results with better targeted marketing.

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THE POWER TO KNOW®

The SAS® Difference:
An end-to-end solution for big network data

SAS provides a breadth of analytics that can break down barriers between customer care, marketing and network operations. With SAS, you can:

- **See network performance in a new way.** SAS applies sophisticated analytics to traditional network data to pinpoint cells that are underperforming, then it lets you drill into the data to see if the problem happens only at specific times or on certain handsets. Switch engineers can use intuitive tools to visualize big data and uncover previously unknown issues.

- **Use statistical forecasting and network data to plan capacity.** Know what data needs to be collected, then apply analytics to it – so you can accurately forecast growth and plan capacity based on actual network and handset growth rates.

- **Get detailed, up-to-date knowledge to improve customer experience.** Use network data to show customer service reps each individual customer's quality of service. Know where each customer is using data and making calls, and understand the experience on those cells and handsets as compared to others.

- **Rely on network usage data to target your marketing.** Whether it's a faster speed for customers who like to watch movies or an international plan for a world traveler, SAS delivers the information you need to offer the right services to each customer – while reducing your costs and improving response rates.

SAS solutions combine data quality, advanced analytics and visual analytics with expertise obtained through many years of working with CSPs.

Case Study: Telecom Italia

Situation

As Italy's largest telecommunications provider, and with a notable presence in Latin America, Telecom Italia always looks for ways to improve customer experience. That means delivering the reliable service subscribers expect today – and knowing which offers they will expect tomorrow.

Solution

A network analytics solution from SAS includes SAS Visual Analytics, SAS Data Management and SAS Data Quality. The solution enables Telecom Italia to analyze customer behavior and create predictive models that forecast services and evaluate profitability.

Result

With SAS, executives can use a single screen to quickly compare competitive strengths and weaknesses. They can analyze a range of KPIs – such as accessibility and drop rate – at different levels of aggregation for both voice and data traffic. Analysts can evaluate coverage of specific areas and identify possible scenarios as "make" or "buy," prioritized by cost and benefit.

What if you could …

Ensure continually good service

What if you could prevent network failures before they happened?

Trust capacity planning to guide your decisions

What if you could perform true statistical forecasting down to the cell, node and handset capability level?

Provide a superior customer experience to everyone

What if you could address customer complaints to improve your net promoter score while reducing your costs?

Increase sales and become a market leader

What if you could know the next best offer and could present it at just the right time and on the right channel?

You can. SAS gives you THE POWER TO KNOW®

SAS facts

- SAS has been in business since 1976 and today has customers at more than 65,000 sites worldwide.

- SAS customers make up 91 of the top 100 companies on the 2013 FORTUNE Global 500® list.

- SAS combines big data analytics with industry-specific solutions to provide a detailed road map for solving CSPs' network and customer care challenges.

Learn more about SAS software and services for communications: sas.com/communications

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