The New Frontier in Telecom Analytics: Get Better Insight Faster

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Peppers & Rogers Group

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Executive Summary

Telecom operators are under pressure to deliver, and deliver fast. There is tremendous focus on always-on mobile connectivity and access to information when and where we want it, both in the consumer and business worlds. Telecom operators see this new normal firsthand, providing data networks and technology convergence to bring information and access to their customers in the moment. As a result, it's become critical for operators to have the same type of fast access and interaction with their customer data and analytics. The current competitive landscape demands it.

Are traditional analytical models enough? No. If operators are changing the way they do business, this shift must apply to analytics as well. It's become imperative to monitor the instant changes in customers' behaviors and match them with the most relevant offer as soon as the customer needs it. This is achieved with a sophisticated blend of analytics and business sense.

This white paper explores the opportunities of two dynamic analytical capabilities: transactional behavioral analysis and capturing data potential. These tools give operators real-time insight about their customer activity so they can take action to be as agile as possible.

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Today: Descriptive and Predictive Modeling

Analytical modeling is widely used in the telecom industry to tackle difficult tasks such as churn prevention, increasing average revenue per user (ARPU) through cross/upsell, optimizing the customer experience, creating targeted campaigns by understanding customers' needs, and fulfilling those needs with the most relevant products and services—all to increase ROI while maintaining customer satisfaction. In addition, analytics helps to identify and segment groups of customers with similar characteristics, as well as provide marketers the insight required to craft marketing programs with differentiated offers for each of those groups. Analytics has become the backbone of CRM strategy through its ability to obtain valuable information from customer interactions and behavior, then convert it into customer loyalty and revenue uplift.

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Analytical models can be classified into two methodologies: descriptive modeling and predictive modeling. Descriptive models are basically segmentation models such as value, behavior, and needs that are developed from a high-level, strategic standpoint. Or, they're more detailed or focused segmentation approaches, such as RFM models (recency-frequency-monetary value), used to solve tactical issues. A commonly used example of strategic segmentation is value-based segmentation, where customers are grouped according to the revenue and profit they bring to the operator, then placed in a customer management and customer service tier according to these segments.

Predictive models are developed by applying advanced data mining techniques such as decision trees, regression, and neural networks to estimate what is likely to happen in the near future based on realized past events. The biggest area of use is churn prevention, which predicts which customers are likely to leave the operator by analyzing the difference between those who have left previously and those who stayed.

Another example of predictive modeling is propensity models, which are statistical methods used to identify the best-fit customers for a specific product or service in terms of likelihood to buy. Propensity models allow operators to increase the effectiveness of their campaigns by increasing the response rates and minimizing annoying their customers with irrelevant offers.

These analytics programs, accompanied by an effective customer contact strategy, are a valuable way to improve campaign efficiencies and communicate the right message to the right customers. They provide a good general picture about the customer (e.g., type of a customer), but lack a snapshot of the most updated customer status. Customers tend to make quick decisions, which are reflected in their daily transactions. Therefore, more immediate analysis of data becomes critical.

Figure 1: Time is of the Essence

Customer data is becoming more real time. Analytics must adapt to capture valuable insight.

Source: Peppers & Rogers Group

Tomorrow: The New Frontier in Analytics

Two new dynamic analytical capabilities—transactional behavioral analysis and capturing data potential—can give operators real-time insight about their customer activity. Tracking valuable customer information, such as recharge balance or daily usage, and understanding customers' real-time activity, presents huge potential revenue generation opportunities. These dynamic analytics enhance traditional data mining models by incorporating up-to-date information and exact offers that will fulfil customers' needs in near real time.

Dynamic Analytics Defined:

Transactional behavioral analysis: Groups and tracks customer characteristics and behaviors, then uses the information to target customers with appropriate offers and interactions.

Capturing data potential: The process of using real-time data to estimate customers' potential interest in a product or service.

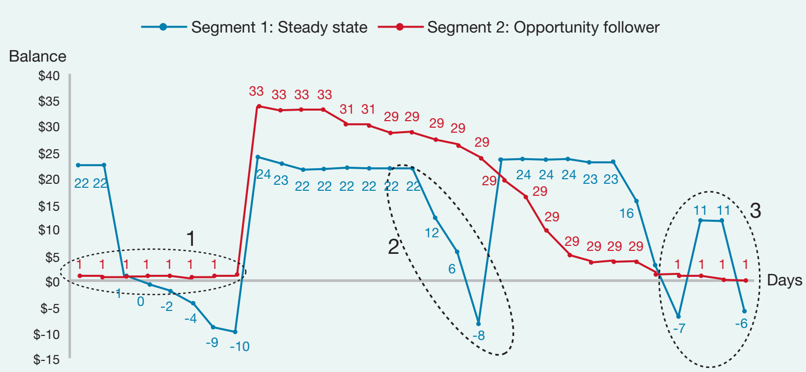
Transactional behavioral analysis

The first dynamic analytical capability, transactional behavioral analysis, groups customers by behavior patterns, then tracks their characteristics and attributes. This information is used to target customers with appropriate offers and interactions in an effort to keep and grow their business.

Take the "occasional user," for example. This customer group spends a small amount of money quickly (presumably buying mobile minutes), then stays inactive for long periods of time (see Figure 2). Knowing that this customer will purchase mobile minutes periodically (e.g., only when he needs to use his phone), it is fruitless to bother him with regular offers. Instead, it's better to send him small upsell offers while he's actively using his phone. Transactional behavioral analysis can help to identify similar profiles by deeply analyzing the trends within customer information, such as recharge, payment, usage, and so on. The biggest advantage of the methodology is the ability to determine the exact time of action and the details of the offer to be given based on moments of change.

Figure 2: Behavior Analysis

Behavioral changes are tracked to identify opportunities for real-time actions.



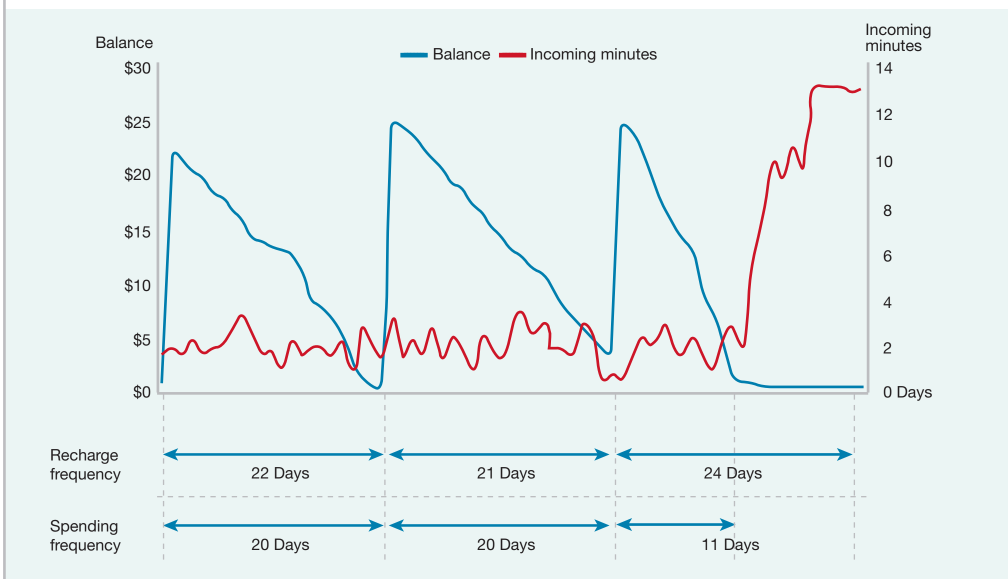
Patterns are analyzed over a longer period (1 month in the example) to identify customer characteristics and form tactical segments.

Source: Peppers & Rogers Group

Or consider a group of prepaid customers who consume their credits within 20 to 30 days and then they purchase more (called topping up). Pattern analysis reveals that these customers change their consumption pattern and begin to consume their credits in less than 10 days (see Figure 3). However, they continue to top-up with the same frequency. In addition, after consuming all their credits in 10 days there is also an increase in their incoming calls, which is a sign of "bipping." Bipping is when a customer runs out of minutes and requests the other person to call him. There is big revenue potential in this case. A top-up campaign giving a bonus within a limited time can move customers' top-up time to be more in line with their behavior, thus increasing revenue.

Figure 3: Top-Up Frequency

Behavioral pattern analysis shows an opportunity for a relevant campaign to help adjust customers' recharge days.



Source: Peppers & Rogers Group

The key success factor is the effectiveness of the campaign execution and response.

The key success factor in this type of approach is the effectiveness of the campaign execution and response. With many different customer profiles and scenarios, the measurement of the campaign responses and ROI allow operators to increase their use of successful campaigns while trying to improve the less effective ones. The resulting campaigns will produce strong business performance in terms of revenue uplift and churn reduction over the long term.

For example, one operator we worked with in Eastern Europe moved away from its traditional targeting approach, instead measuring the recharge and spending characteristics of its prepaid customer base. It then monitored irregular transactions, (e.g. slow down of recharge or speed up of spending etc.) on shorter intervals. With this information, it could anticipate the exact reason and best time to contact customers. The campaign resulted in a ROI of a few million dollars, plus an increase in customer satisfaction due to relevancy of offers.

Getting it done

How can companies recognize patterns among different groups of customers? Peppers & Rogers Group approaches the pattern recognition problem in a four-step, closed-loop approach that facilitates continuous improvement.

The first step is to hunt for patterns among your customers. This involves a current state assessment of customer segments and behavior, as well as conducting brainstorming workshops to develop potential pattern hypotheses. Next is to profile customer groups based on your hypotheses. You must analyze attributes of customers with internal data, then prioritize hypotheses based on this data along with external market research.

With priorities set, companies can design the most appropriate campaigns in terms of relevance, likelihood to respond, or value of the customer group. This includes relevant and timely offers in the most appropriate channels. Be sure to set KPIs and targets to track progress. But of course, you must take into account regulatory compliance and privacy issues so as not to destroy customer trust. A campaign that is perceived by customers as being intrusive or "Big Brother-like" will have a negative impact on relationship strength and profitability.

Finally comes the execution of the campaigns and customer outreach. Once campaigns are launched, they must be monitored for complaints and KPIs. After the campaign is over, there is valuable insight to be gained about the exercise. Be sure to conduct post take-up analysis, analyze gained insights, report campaign results to stakehoders, and design governance structure for continuous re-iteration.

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Capturing data potential

The second dynamic analytical approach is called capturing data potential (see Figure 4). With this methodology, companies use real-time data to estimate customers' potential interest in a product or service. We recommend starting with mobile data services, one of the biggest revenue streams for mobile telcos now and in the near future, based on ARPU levels. It's possible to increase data revenues by upgrading existing data customers' data usage, as well as realizing the untapped potential in non-users to increase data services penetration.

For existing customers, how many megabytes of data the customer has used is not a sole indicator of potential. Therefore, it's necessary to understand the motivation behind mobile

Figure 4: **Capturing Data Potential**

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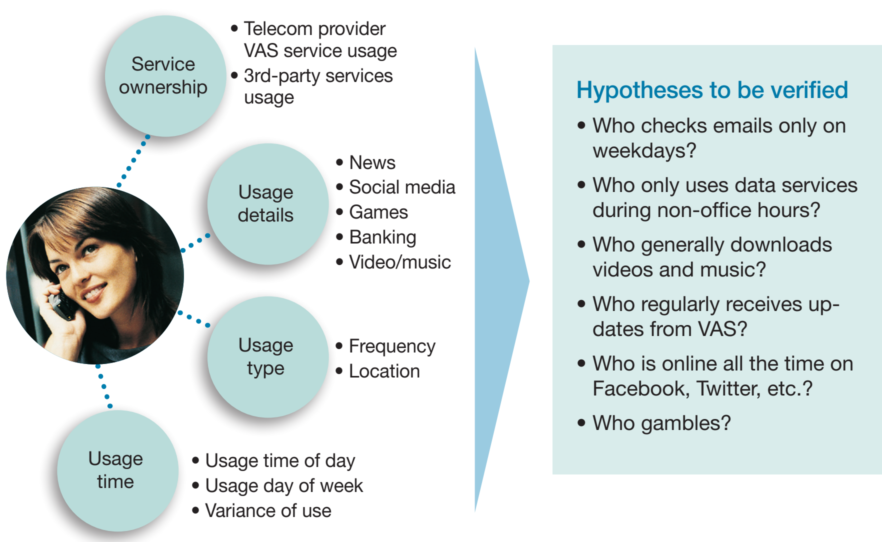

Source: Peppers & Rogers Group

data services usage. The underlying motivation can be business use, entertainment, information, etc. This kind of a classification is best supplied from analyzing the specific services and media customers use. The second step will be a detailed analysis of previous data usage patterns and generate usage profiles according to time of usage, such as day/night, weekend/weekday, or working hour/leisure users, according to usage frequency and recency. Customers' needs and behavior, along with handset capabilities and geographical presence, will also help determine the untapped potential for incremental usage.

For new customers, the critical indicators of potential will be their mobility and their geography, since there is no previous data usage knowledge about these customers. In addition, usage patterns of relatively traditional telco services such as voice and SMS will help the operator predict the need for data services. Also, by estimating customers' location information and change in location it's possible to identify their likelihood to use mobile data/Internet services, build target groups using that information, and then to introduce or promote data usage to those groups. It's important to emphasize in the campaign that the customers do not need the data itself, but the service being used by the data, such as social networks, Web browsing, or email. Therefore, the service offer should be based on the potential needs of each identified target group.

Customers' needs and behavior, along with handset capabilities and geography, will help determine untapped potential.

Many customers spend long hours commuting to work, for example. Those who take public transportation may want to read the news or check their messages. It is not so difficult for operators to find these customers in their database. Customers whose phones connect to multiple cell towers on weekdays between 7 a.m. and 9 a.m. represent these types of customers. Imagine a marketing campaign like this: "Do you want to read the news on your mobile phone? Simply pay $5 per month." This is more relevant and gives more context than a generic marketing message like, "Purchase 100 MB data package just for $5." Marketing based on customers' behaviors and needs enables operators to target the right customers at the right time with a relevant value proposition in an understandable way.

Conclusion

The examples contained in this paper are only an introduction to this new dynamic approach to telecom analytics. The opportunities to use transactional behavioral analysis and capture data potential are endless, and doing so can add millions of dollars of added value to operators. The balance between dynamic analytics and business perspective, supported with an effective execution mechanism, will be the new frontier of operators' future growth. ■

About the Authors

Yavuz Tunc is a senior analytics consultant at Peppers & Rogers Group. He has extensive experience in telecom analytics and marketing, enrolling in numerous projects leading customer strategy development. He is an expert in data mining, with emphasis on practical usage in CRM and campaign management. He led successful projects for leading operators, including churn management, segmentation, CRM roadmap development, customer experience and channel management. Combining data analysis with strong business perspective, he developed successful campaigns and marketing programs. *Contact him at yavuz.tunc@peppersandrogersgroup.com*

Omer Barbaros Yis is a customer portfolio management lead at Peppers & Rogers Group. He has extensive experience in telecom marketing strategy development. He is an expert in pricing, pattern recognition and innovative offer & promotion design and execution for both voice, data and vas products. He completed many projects in more than 15 countries providing him with a thorough global experience. His main responsibility is to develop intellectual property under customer portfolio management area that helps wireless companies to grow their revenues further in highly competitive markets. *Contact him at omer.yis@peppersandrogersgroup.com*

Engin Girişgen is a consultant at Peppers & Rogers Group. He is a seasoned management consultant who successfully delivered engagements for financial institutions and telecoms across MEA and Turkey. He took part in successful transformations of customer management with a calculated balance between analytics and business domains. His diverse track record includes uncovering and modeling customer non-payment patterns, leading loyalty platform development, structuring initiatives to enhance customer trust and segmenting customers. *Contact him at engin.girisgen@peppersandrogersgroup.com.*

About Peppers & Rogers Group

Peppers & Rogers Group is dedicated to helping its clients improve business performance by shifting focus from transactions to managing relationships. As products or services become commodities and globalization picks up speed, customers have become more demanding and harder to satisfy. They hold the keys to higher profit today and stronger enterprise value tomorrow. We help clients achieve these goals by building the right relationships with the right customers over the right channels.

We earn our keep by solving the business problems of our clients. By delivering a superior customer-based business strategy, we remove the organizational barriers that stand in the way of profitable customer relationships. We show clients where to focus resources and efforts to optimize customer experiences, reduce attrition, increase loyalty, create customer advocacy and mitigate risks.

Peppers & Rogers Group Analytics Practice provides clients with expertise across the entire value chain of analytics services, from creating strategies to developing solutions across numerous verticals and channels. Staffed by experienced analytics experts from a variety of industries, the practice brings together the art and science of customer strategy for actionable insights that drive business outcomes.

For more information, visit www.peppersandrogersgroup.com

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