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Micro-Trends Analytics: A Secret to Successful Digital Transformation for Telecom Operators



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The prevailing “OTT environment”, in which a general slowdown in revenue growth and profitability has been recognized among the telecom industry’s most pronounced challenges, poses a set of other new challenges for telecom operators in the SAMENA region. This new environment requires of telecom operators to redefine their strategic direction and priorities, introduce new operating models, drawing value from digital, and, most importantly, to transform themselves on all dimensions of the business. The latter is an imperative that requires holistically embracing digital transformation; a journey, which is as challenging to undertake as it is easy to talk about.

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Recognizing that companies across all industries are facing Amazonian competition, where fast data-driven organizations can rapidly expand both the scale and scope of their operations, there are some factors that help place context to the notion of digital transformation. For telecom operators, which also have not been immune to digital disruptions, such factors are of particular interest:

First movers scale quickly and capture significant market share, while fast followers instantly erode what is left of the margins, thus, leading to a winner takes it all effect. A case in point is Uber, which quickly scale, leaving no space for competitors! Companies that apply analytics to manage demand, optimize prices and deliver targeted value to their customers penetrate adjacent markets easily and cannibalize existing businesses. Think of Amazon’s growth from a book retailer to an everything retailer, including operating grocery stores. So, it appears that superior data management and granular analytics, when leveraged to penetrate into and disrupt seemingly unrelated businesses, can lead to a broader horizontal growth.

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For telecom operators of the region, operating in this multi-competitor environment, where not only multi-dimensional competition exists but where Administrations have defined new national digital development policies, presenting a new set of challenges, there is much to consider in order to revive and redefine the legacy role of being a mere network provider to that of a key enabler. Moreover, digitization does demand data-driven innovations to create new possibilities, whether on improving core operations, customer experience enhancement, or playing a central role in nation-building through sustainable investments in digital infrastructure. Telecom operators that adopt these digitization-centric new practices across their entire organizations could themselves become the disruptors vis-à-vis enablers instead of resting their fate in the hands of new digital disruptors. Considering telecom operators' main challenges — most of which, operationally speaking, revolve around dealing with shareholder value-generation and ARPU, neutralizing competitive pressures from over-the-top providers (OTTPs), keeping sustainable investments in the wake of exploding data traffic, and detecting as well as reacting to ever-evolving customer needs — unlocking the behavioral DNA of network end-uses offers unprecedented potential for tapping new growth

opportunities. And the idea for making this a reality is simple: deliver exceptional results by detecting and monitoring micro-trends in consumer behavior and use the micro-trends data to innovate and tailor the value to micro segments.

However, achieving this simple feat requires a highly complex, real-time data analysis capability. Such a capability, which may be analogous to word-pattern matching pioneered by Google, is available through Trendalyze, a time-series patterns search and monitoring platform, which can be customized to target selected applications. Prior to Trendalyze, time-series pattern analysis was the domain of data scientists. The technology has a highly scalable back-end that makes it particularly useful for developing IoT and time-series big data analysis, as well as deep learning and monitoring applications. Telecom operators, with millions of customers, already have a tremendous value locked into behavioral micro-trends, also called motifs. These can be unlocked and monetized through granular motif discovery and deep learning. Just as motif discovery has helped scientists to unlock the value in human DNA sequences, the Trendalyze innovative platform can help telecom operators to leverage similar methods and algorithms to unlock the behavioral DNA of each of their customers.

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Ultimately, motif search empowers professionals and subject matter experts to quickly identify micro-segments, purely based on behavioral patterns.

Behavioral patterns are more accurate and reliable as compared to traditional statistical scoring algorithms as they rest on the stability and predictability of human habits. If an end-user starts reducing his activity over time in a stable manner, it is highly likely that he will churn. Point-in-time events, such as not using SMS for 3 days, for example, are less likely to reveal potential churn as they do not capture the trend.

Micro-trends analytics is a new and emerging field that will prove to be integral to telecom operators' endeavors to digitally transform themselves. Using analytics like a microscope to unveil hidden opportunities across the entire value chain is what allows organizations to deliver superior customer experience and to ensure higher profitability in an age where data-driven competition is now an essential fact of an enterprise's life. 📊