

# Big Data Analytics in Telecom Sector- A Brief Overview

The market penetration of telecom products and services, and expansion of social networks over the last decade has made Big Data a reality today – The three V's; *Volume, Variety, and Velocity* of data continue to hit new highs, wherein it is becoming more and more difficult to rely on traditional database management systems. We are seeing smart organizations beginning to lean on flat file systems such as Hadoop. The story does not end here, because the availability of large amounts of unstructured and/or semi-structured data begs the question- What are we going to do with it?

Here we'll see an overview of how the telecom sector can utilize Big Data and Analytics techniques together to answer this very question.

Thanks to telecommunication networks and proliferation of smart phones (and tablets) Communication Service Providers (CSPs) can track their customers' movements, preferences and behaviors, which will help CSPs achieve three objectives-

- Delivering smarter services to their consumer base to generate greater revenue
- Transform operations procedure and planning to provide service excellence
- Build smarter networks to better customer experience

Achieving these milestones will in turn

- Increase revenue
- Reduce customer churn
- Decrease operations cost

A few concrete examples of business cases where Big Data Analytics will have a major impact are-

- Pro-active Call Centers
  - Identifying and resolving service issues in moments
  - Proactively managing customer experience and churn
  - Maximizing revenue from existing customer base
  - Lowering average call handling times and network operating cost
- Smarter Campaigns

- Traditional Campaigns are based on customer profiles and demographics, but using Big Data Analytics it is possible to provide
  - Real time contextual, targeted marketing offers which will increase acceptance rates leading to more revenue
  - Knowing and provide tailor made solutions will Reduce Churn
  - Increase customer satisfaction and generate loyalty
  - Reducing time and cost of campaign generation
- Network Analytics
  - With Network Analytics the CSPs get measurements and real time metrics necessary to manage their network, optimize network spend, and identify scopes of monetization
    - Identifying and resolving network bottlenecks in minutes
    - Planning for capacity escalation if and when required based on metrics to improve service quality
    - Optimize investment in new networks to have maximum impact by luring in big spending customers
    - Improving quality of service thereby decreasing churn
- Location based services
  - Customers demand best deals and service from CSPs based on their location, while protecting their privacy
    - Using mobile profiles, digital behavior and tracking on the move lifestyles CSPs can create targeted offers for its customers
    - Amalgamate Telecom service with Mobile payments, ticketing, traffic control
    - Using location data CSPs can also plan to expand their network in targeted areas as well improve quality (higher price) in specific high spend regions

To summarize, Big Data Analytics is a must to understand and appreciate the telecom clientele. With customers living second lives on the digital front, it makes sense to use that data to leverage ones business. Furthermore, Big Data is here to stay in the Telecommunications Sector- Why not make the most of it?