Digital transformation represents a comprehensive approach of modernizing fixed and wireless networks, enabling operators to readily introduce advanced services and streamlining business processes. The advent of disruptive technologies, messaging services and products, has eliminated many of the traditional distinctions between wireless, cable, internet, and local and long-distance communication services.

Some key market trends are:
- Convergence of discreet markets
- Exponential growth of data volumes
- Digitization: More services moving to cloud
- New customer behavior patterns

Key objectives
- Faster time to market
- Improved business process management
- Reduce costs and improved time-to-market
- Consolidation of partner landscape
- Excellence in operation support and customer experience

Solution themes
- Business agility
- Partner ecosystem
- Competitive differentiation
- Integrated service delivery approach
- Cost management

Perceived challenges
- Multiple partners for different services
- Hand-over and ownership issues for services delivered
- Time to market for changes in the IT system
- Long change cycle times
- Differentiated customer experience

Telecom service providers operate in a highly competitive market that requires bringing innovative services to market faster while reducing cost and complexities. Analytics and virtualization are the top innovation drivers—connectivity and insights continue to be at the epicenter for growth, innovation, and disruption for virtually any industry.

CSPs are embracing digital initiatives that are reshaping the operating models through deep transformation of infrastructure, process, skills, culture and leadership, to deliver truly digital experiences to their customer. Technologies like 5G and IOT will continue to shape up as major disruptors that would make it imperative for CSPs to seek insights that enhance the convergence across their network, business support systems and operations.
Operational analytics and business insights

The key element of every business is operations, and operational analytics focuses on improving existing operations through insights. Making the right decision requires timely information and having deep insight into the entire process flow. Operational analytics helps turn huge volumes of data into understandable, actionable insights for more effective and efficient problem resolution. Operational analytics helps detect early patterns of data that predict issues before they arise and proactively addresses them for improving the overall experience in business.

The insights gained through analytics can be leveraged to address the revenue and cost side of the business by identifying the areas of opportunity and improvement. The best insights are actionable and prescriptive, and they can be used for immediate action that will address the key performance parameter of the business.

Analytics is one of the key enablers of digital transformation and data analytics is critical for continuous improvements, balanced utilization and in identifying new opportunities. Accomplishing business insights through operational analytics involves the following:

**Transaction monitoring**, also known as business transaction management, is the supervision of critical business applications and services by auditing the individual transactions that flow across the application infrastructure. The telecom industry has a large customer base and the needs of the customers are constantly evolving.

**Transaction management** requires IT organizations address key challenges, such as, tracking transaction status and health, reporting on business metrics embedded in transaction content, and managing transaction errors.

**Business KPIs and BLA** enable an organization to measure and monitor its performance on a strategic and operational level. The KPIs are also known as the ‘lead indicators’ as they help indicate the happenings in advance. Based on the strategic goals of a company, target values for KPIs are set. Comparing actual KPI values to these targets identifies shortcomings immediately and shows improvement potentials for business processes at the same time. This is vital for every company.

**Business intelligence** is focused on reporting and querying, and advanced analytics is about optimizing, correlating, and predicting the next best action or the next most-likely action. Due to the heavy competition, the industry is highly dynamic and challenging. In such a scenario, each decision taken becomes more crucial. So, it is very important for the CSP to take decisions based on extensive data analytics to ensure efficient and effective use of business resources.

Fully exploiting data and analytics requires three mutually supportive capabilities:

- CSPs must be able to identify, combine, and manage multiple sources of data.
- They need the ability to build advanced-analytics models for predicting and optimizing outcomes.
- Continuous transformation based on the insight-driven decision-making.

“Digital transformation covers internal transformation initiatives aimed at increasing efficiency and agility through automation, and external initiatives where the focus is on improving customer experience, providing a digital omni-channel experience and delivering new digital services” — Tm Forum
Our solution for operational analytics and business insights is designed to achieve convergence of business and IT goals. Wipro’s Digital Operations Cockpit’s Business Transaction Management (BTM) efficiently helps organizations resolve the above challenges by providing them an in-depth capability in key areas such as transaction visibility, business KPI (Key Performance Indicators) monitoring and proactive exception management. Business managers through their business operations team can monitor all critical transactions which have revenue impact.

Using Wipro Holmes’ analytics capabilities and available data in Hadoop Database Lake, Holmes automation studio platform provides advanced intelligence in monitoring, troubleshooting, auto ticket logging, business transaction monitoring, proactive ticket handling, log analysis and self-heal capabilities.

Fig 1 – Single view of customer services

Our solution is built on the principles of Simplification, Flexibility, Agility, Scalability, Performance and Zero-touch. Our Architecture framework allows for Real Time integration of streaming data to enable near real-time Analytics and Insights. This helps us identify the Business and Operation issues before they impact the customer.

Wipro’s Digital Operations Cockpit leverages the event and system logs to build in the Analytics, to perform Root Cause Analysis, predict the most likely issue trigger point, and also plan for the system surge during peak based on established pattern.
Data operations

Intuitive and business aligned dashboard helps in visually analyzing the data. Users can create and distribute an interactive and shareable dashboard, which depicts the trends, variations, and density of the data in the form of graphs and charts. The software allows data blending and real-time collaboration, so that users can consume the data via web or mobile app.

Business objective

- To predict in real-time the batch delays and failures based on data and infra monitoring

Benefit

- Drills down into batch performance issues to find job and step level bottlenecks in seconds

Expected outputs

- Forecast platform upgrade needs and SLA risks from data volume and complexity trends

Fig 2 - Data operations dashboard

Our solution framework embraces the concepts of robust, scalable and reliable platforms to achieve a higher level of data maturity. It helps while migrating, building and delivering an Integrated Data Layer to realize a core Decision support system. This provides valuable insights related to trends, errors, exceptions, delayed activities and service disruptions.

“You can have data without information, but you cannot have information without data.”
- Daniel Keys Moran
About the authors

Kishore Janardhan Hegde, General Manager, Communications, Wipro Limited.

Kishore heads the nex-gen service solutions as a practice. He has around 24 years of experience working with various service providers across global delivery and solutions. He is primarily working on building IPs, leveraging Wipro’s champion IP Holmes, and building solutions using IPs across Wipro.

Ahilaadevi Thirunavu, Managing Consultant, Communications, Wipro Limited.

Ahilaa is part of the nex-gen service solutions CoE. She has around 19 years of experience working with various customers and solutions.
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For more information, please write to us at info@wipro.com