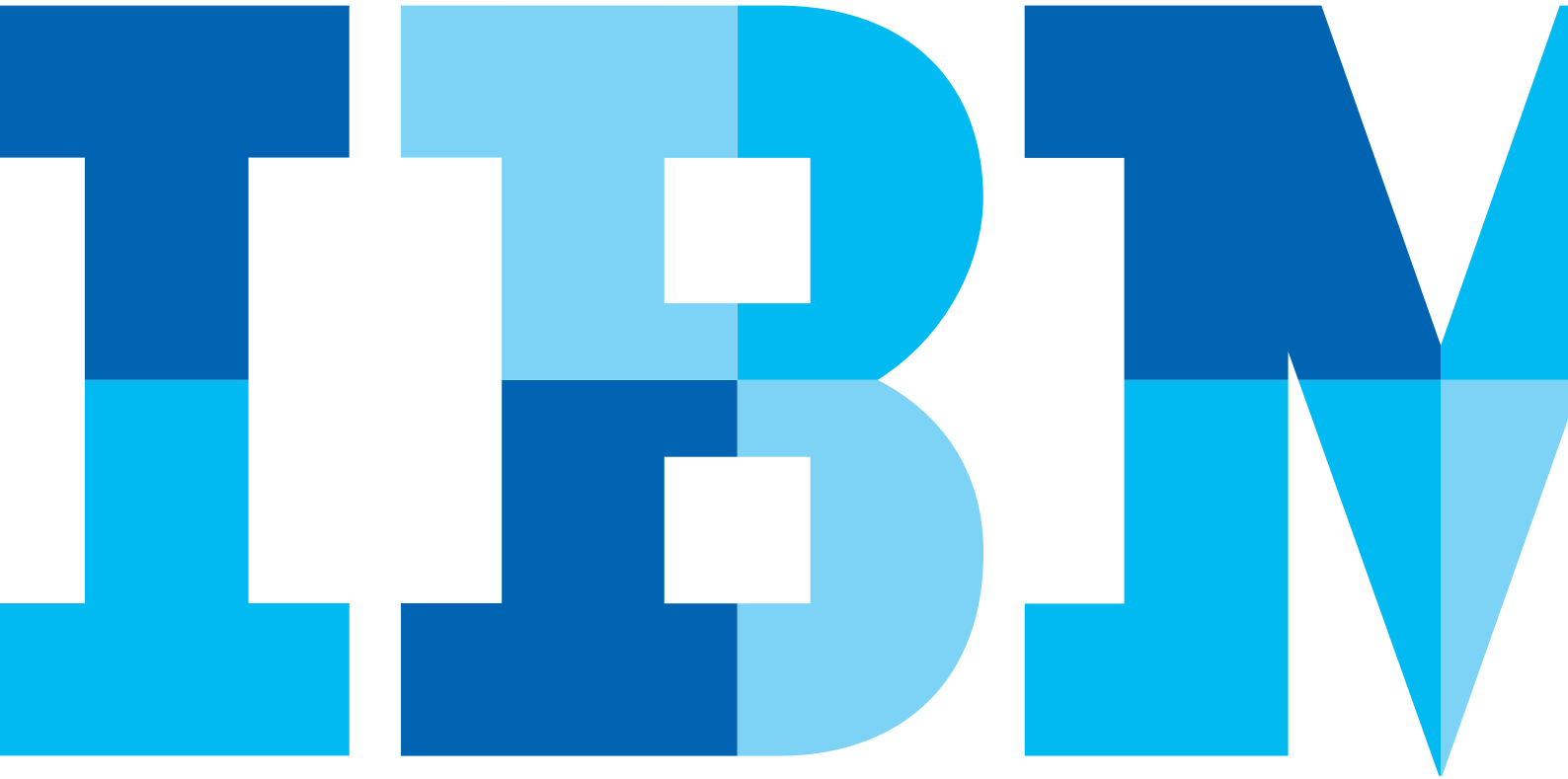# IBM Business Analytics for telcos

Leverage business intelligence, performance management and predictive analytics to increase revenue and improve operations

Overview

IBM® Business Analytics solutions make telecommunications service providers better equipped to leverage vast volumes of information to make more intelligent decisions and link top-level strategies with departmental plans. Wireline telcos, wireless network operators and cable operators can:

- Predict and prevent subscriber churn—while attracting new customers
- Leverage dashboards and scorecards to analyze financial and operational performance
- Optimize customer service and call center operations with dashboards and alerts
- Analyze cross-platform advertising performance to drive new revenue streams
- Improve asset utilization and optimize related labor costs

IBM Business Analytics solutions

IBM Business Analytics software delivers complete, consistent and accurate information that decision-makers in telecommunications companies trust to improve business performance. A comprehensive portfolio of business intelligence, advanced analytics, financial performance, predictive analytics and strategy management applications provides telco executives with clear, immediate and actionable insights into current performance and the ability to predict future outcomes.

Service providers rely on IBM Cognos® business intelligence (BI) and performance management software and IBM SPSS® predictive analytics software to minimize churn, improve effectiveness of operations, reduce costs and build longer-lasting and more profitable subscriber relationships.

Marketing, customer service, product management, operations and finance departments can analyze, understand and align based on insight derived from a wide range of historical and real-time information. IBM Business Analytics software helps network operators find meaning in otherwise isolated data systems via powerful data mining, planning and reporting tools.

Past, present and anticipated future performance is revealed relative to products, consumer interests, market behaviors, usage patterns and consumer affiliations. These insights allow service providers to monetize behavioral patterns in customer data, increase customer acquisition and retention, personalize offerings and better manage infrastructure investments to align resources with customer demand.

Connect operational details to business drivers

To analyze business trends and gain greater insights into operational performance, managers need the ability to connect operational details to business priorities. IBM Business Analytics solutions notify end users of exceptions and empower them to track material variances between actual and expected performance, understand strategic trends and monitor real-time events to enable time-sensitive action.

Rather than measuring performance in absolutes, business users can leverage critical business ratios and key performance indicators (KPIs) to gain a comprehensive overview of organizational efficiency. This type of tracking allows service providers to get answers to complex strategic questions, such as:

- *What is our revenue growth relative to market growth?*
- *Which services are underperforming? Or outperforming?*
- *Can we refocus our call center management to support more proactive outbound customer retention programs?*
- *Which of our sales regions are most likely to excel?*

Armed with this information, management gains the context they need for key decisions. With insight into the state of the market—and the organization's place within it—executives can reallocate projects and resources, identify poorly performing assets, measure the profitability of key accounts, rebalance the company's product mix, reprioritize expenditures and ensure that departments remain focused on value-added activities.

Data-driven decision-making based on accurate, timely and relevant reports allows telecommunications service providers to more effectively manage customer satisfaction and business performance. IBM Business Analytics software directly impacts a service provider's ability to drive informed decisions based on real-world information, instead of settling for a subjective decision-making process based on anecdotal information.

Whether you're trying to track and analyze revenue, identify top-performing sales reps or measure the effectiveness of marketing campaigns, you must first strengthen the link between strategy and frontline execution. IBM software gives you the power to do just that. Enterprise planning captures and manages expectations of sales and marketing performance, enterprise scorecarding monitors progress against your plan and BI lets you report, analyze and understand operational performance.

IBM offers analytics and a performance management platform complemented by foundational Performance Blueprints that provide the means for rapidly extending best practices throughout the organization and forging more effective, dynamic connections between strategy and execution.

IBM Business Analytics solutions help service providers plan, understand and manage financial and operational performance. With core capabilities including reporting, predictive analytics, dashboards, planning and scorecards, service providers can better understand performance and make more informed decisions.

IBM SPSS software enables a provider to capture a wide range of information and predict likely outcomes. With advance notice of predicted performance or outcomes, providers can reduce the latency of business decisions and execute carefully targeted business processes to improve operational efficiency. The following are just a few examples of IBM Business Analytics solutions designed for fixed and mobile network operators:

Predict and prevent subscriber churn— while attracting new customers

IBM Churn Prediction Analytics software delivers predictive intelligence and performance dashboards that allow telecommunications carriers and cable operators to align their processes around a common view of their most influential customers.

It applies a winning combination of executive-level dashboards and state-of-the-art predictive algorithms to provide telecommunications network operators with the customer insights needed to reduce churn and build longer-lasting— and more profitable—relationships with subscribers.

Organizations can monitor predictive analytics through operational dashboards for historical and time-sensitive KPIs and metrics. This solution combines IBM Cognos BI software with IBM SPSS predictive analytics software so service providers can predict customers likely to churn and measure the actual performance of retention efforts.

It allows telcos and cable providers to build stronger and longer-lasting subscriber relationships, inspire marketing innovation and deliver a measurable competitive advantage. This innovative solution helps service providers gain a competitive advantage by gaining swift answers to the following questions:

- *Which highly valued customers are most likely to churn?*
- *What is the current and future impact of their defections?*
- *How can we most effectively mitigate churn?*
- *What are our expected results from different levels of churn mitigation investments?*

It allows marketing, sales, customer service, operations, product management and finance departments to align their processes around a shared view of customers believed to be at a high likelihood of defection. This is a major paradigm shift and provides early adopters with a measurable competitive advantage in their markets.

IBM Churn Prediction Analytics helps communications service providers leverage BI and predictive analytics to identify likely churn candidates days or even weeks before they are likely to leave—so that high-value subscribers can be retained and nurtured. The ROI of before-versus-after performance is fairly easy to measure, and this solution allows service providers to dramatically reduce churn while at the same time reducing costs via more efficient retention campaign targeting.

Leverage dashboards and scorecards to analyze financial and operational performance

Do you want detailed, complete and consolidated information? IBM Business Analytics software can deliver it by automating all your core financial processes— budgeting, planning, consolidations, forecasting and reporting—and your organization ends its reliance on error-prone spreadsheet analysis. IBM Cognos BI software presents a unified view of revenues and expenses, and allows you to analyze your marketing budgets at the department, project or territorial expense level.

You'll always know where you stand against your plan with clear, concise and accurate information. And with robust modeling and improved forecasting, you can confidently predict your future. Scorecards can be created for CEOs and CFOs showing critical metrics, including:

- Profitability
- Revenues
- Expenses
- Revenue breakdowns by services
- Earnings before interest, taxes, depreciation and amortization (EBITDA)

Figure 1: Senior executives rely on dashboards for easy access to timely and actionable information.

Operational dashboards and scorecards can also be created for COOs and network operations, customer care and support executives that deliver snapshots of critical and timely metrics, including financial metrics, the number of activations and deactivations for a given time period, SLA performance, trouble tickets, new service activations and more. By analyzing trouble ticket metrics and SLA conformance metrics they can address some of the root cause of churn and improve customer satisfaction. Lastly, they can proactively monitor agent utilization levels to optimize performance.

With IBM Business Analytics software, service providers can track cost of sales against revenues—by customer, sales channel and region—and plan and optimize the allocation of resources to best support the business. You can identify your most profitable resellers, and you can track your distribution network to improve channel effectiveness. You can more efficiently manage revenue assurance by gauging the effectiveness of sales and marketing campaigns to get the most out of your budget.

You can ensure expectations for your sales and marketing teams are consistently applied, measured and reported on regardless of rep or region. Enterprise scorecards and dashboards ensure that everyone in your organization—from the boardroom to the sales representatives—shares the same information at the same time, all the time.
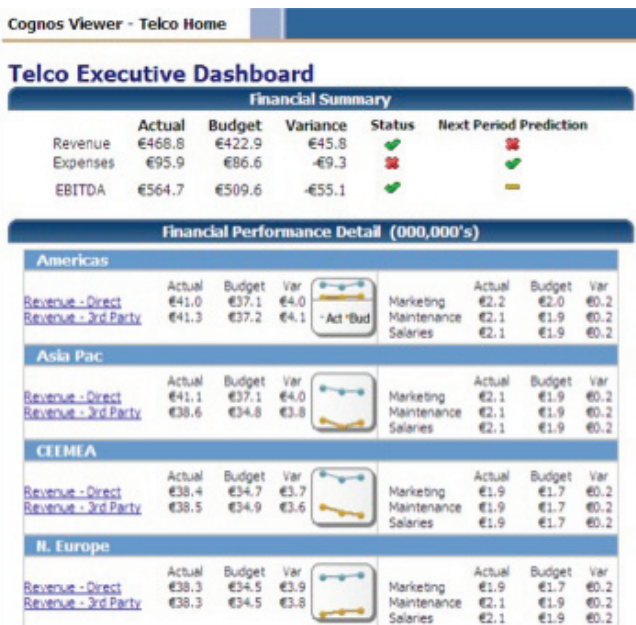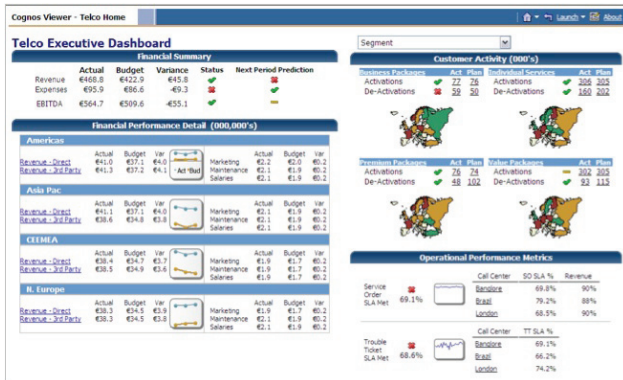
Figure 2: IBM Enterprise dashboards bring together financial information, churn/ acquisition performance and operational performance metrics to provide stakeholders with easy access to updated operational information.

Everyone can identify performance issues and focus on the areas crucial to your success. Managers can view and understand their performance against key indicators like sales, growth and market share, and then compare these indicators to call activity, reach, frequency and sales expenses. They can clearly see how their decisions and actions impact the overall strategy. Powerful analytics let anyone drill down into greater detail to find out what's affecting performance and collaborate for shared insight.

Optimize customer service and call center operations with dashboards and alerts

IBM Business Analytics software allows customer service and call center executives to measure and analyze key metrics to improve business operations. Call centers become more productive, customer satisfaction increases, problems are consistently identified and resolved earlier and service levels and response times are continuously optimized.

There are multitudes of metrics monitored in call centers, and most often, the metrics are monitored in isolation, appearing in after-the-fact reports from disparate systems, including the network infrastructure reports, customer relationship management (CRM) software, dispatch center and network monitoring systems.

Monitoring in such a fragmented, dispersed manner provides far fewer insights and fewer opportunities to respond quickly and decisively to fine-tune operations. For immediate, effective actions, there is a critical need for a manager to have simultaneous line-of-sight visibility across a vast array of key correlated metrics.

While traditional call center software applications capture statistics at a given moment in time, management needs the ability to manage at a higher level, identify trends and be able to drill-down into the data to integrate the business operations metrics so they can:

• Better control staffing costs
• Optimize agent utilization for inbound versus outbound activity
• Realize higher conversions, and increased campaign success
• Ensure timely, high-quality interactions with agents

For example, driving down caller-on-hold times is an important workforce metric, but call center reps supporting major strategic customers commonly need to comply with separate service level agreement metrics. Instead of focusing on a myopic view of standard metrics, management needs to see SLA metrics and hold times together in order to make the best resource allocation decisions. Although this information likely comes from separate systems, IBM Business Analytics can bring them together in a single, correlated dashboard view.

The IBM Cognos Call Center Operations and SLA Monitoring Blueprint allows call center management to view metrics and monitor up-to-the-moment call trends and dynamics, agent performance and SLA performance. Call center management, for example, can view metrics on up-to-the-moment call trends and dynamics, agent performance and SLA performance, and they can also receive alerts when certain thresholds have been met or exceeded.

Business analytics aligns with skills-based routing for agent optimization, allowing contact center managers to match carefully scheduled, highly skilled agents with demand to ensure that the right person is always available to answer customer questions—while at the same time avoiding the cost of overstaffing.

Detailed analysis of diverse metrics allows organizations to improve productivity. For example, if a call center operates around-the-clock and the call center manager carefully analyzes call volume and outbound calling metrics—and gains even one minute of productivity per hour for each agent—the call center will realize productivity gains that recoup the cost of 24 minutes each day for each full-time equivalent agent position.

IBM Business Analytics enables powerful analysis that can lead to dramatic productivity enhancements. In this example, if that 24 minutes of agent productivity per position is used for additional outbound calls to prevent churn or attract new customers, the call center can drive incremental revenue without an incremental investments in headcount.
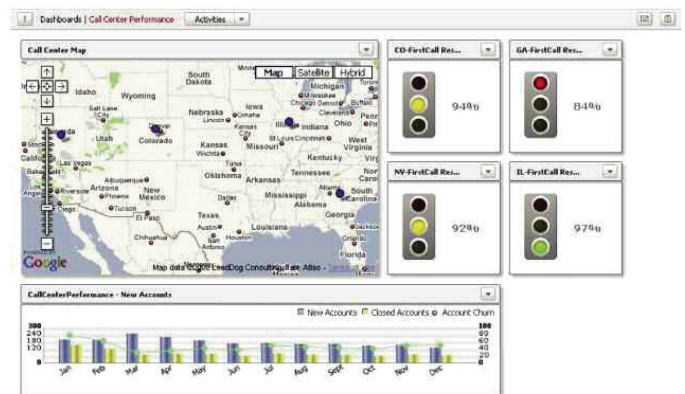

Figure 3: Service providers can create visual dashboards to efficiently monitor call center performance.

Analyze cross-platform advertising performance

As telecommunications service providers increasingly deliver content, the ability to leverage streaming media becomes crucial for driving increased revenues. IBM Business Analytics software allows service providers to efficiently measure advertising results so you can document the value of your network to advertising agencies and enterprise customers.

Analyzing advertising opportunities used to be a relatively straightforward process, but with the advent of streaming media and multimedia messaging, telcos face the challenge of demonstrating the relative ROI of new channels of distribution. SPSS predictive analysis software allows service providers to predict consumer response to advertising across channels, while Cognos BI measures actual performance against prediction as it occurs. This analysis helps service providers justify advertising spends to clients, and it provides non-emotional insights that help advertisers make informed decisions that leverage new media.

Network operators can provide media companies and enterprise customers with cross-channel, fact-based marketing insight that supports advertising sales. Predictive models quantify ROI on ad spends, and service providers can gain a competitive advantage by helping clients develop advertisement placement plans across multiple channels to achieve high-impact outcomes.

Cross-platform advertising analytics allows seamless campaign management for multimedia campaigns. Both advertising sales personnel and advertisers can share a view of how ad campaigns are being delivered and what the response is per delivery platform or channel. Real-time updates and alerts can be provided to allow for time sensitive adjustments and optimization of advertising delivery. Advertisers can quantify how different media are contributing to the overall campaign success against their marketing goals, allowing ad sales teams to support greater customer investments or adjust their price and bundle lower-performing ad inventory so that it can be sold.

Your sales force can therefore more effectively sell cross-platform advertisements and provide prospects with hard data that justifies advertising spends. You can also make more informed pricing decisions by analyzing inventory availability in real-time and offering promotions to maximize inventory utilization across multiple platforms.

As advertisers shift from traditional print and media programs to cross-platform media buys, cross-channel visibility into measurable results avoids siloed perspectives and helps advertisers justify new media advertising campaigns.

Improve asset utilization and optimize related labor costs

Telecommunications service providers face the challenge of efficiently managing deployed assets, and IBM Business Analytics software helps you monitor the health and productivity of your infrastructure equipment. It is integrated with IBM Maximo® Asset Management software and also leverages non-IBM asset management systems.

You can centrally view scorecards and dashboards with detailed information culled from multiple monitoring, financial management, human resources and asset management applications. Scorecards and dashboards also can provide field personnel with up-to-date information on deployed assets ranging from transformers to switches to cell towers to trucks.

Asset management dashboards can be utilized to enable informed tradeoffs decisions between when service will occur and how that service will impact total maintenance costs. For example, field service managers can evaluate the impact of servicing network assets using internal staff next month versus the cost of outsourcing asset maintenance or upgrades to complete the job sooner. Customer satisfaction can also be analyzed to influence the timeliness within the asset plans for equipment upgrades and deployments. Operations personnel can make smarter decisions about asset deployment and maintenance, and rely on asset optimization dashboards to drive more efficient asset utilization levels and an improved use of labor to achieve business goals.

Optimize operations through an information-led transformation

IBM's Information Agenda approach is an industry-specific approach for defining and implementing an information-led transformation. With a proven track record of helping network operators respond and adapt quickly to unpredictable, up-to-the-minute changes in their business, the IBM Information Agenda approach will help your business develop a customized roadmap in a matter of weeks.

With IBM Business Analytics software, network operators can begin the journey to an information-led transformation. They can implement a complete framework or pick and choose the IBM Business Analytics software products that best suit their business requirements, budget or existing systems.

IBM Business Analytics solutions help service providers transform their businesses by enabling new business models and service innovation, improving operational efficiencies while reducing costs and differentiating the customer experience. Network operators benefit from our deep telecom industry expertise, global delivery capabilities and comprehensive and proven end-to-end solutions.

Telecommunications service providers can leverage IBM Business Analytics software to capitalize on vast volumes of information to enable more intelligent decisions, and they can therefore become better able to link top-level strategies with departmental plans. With IBM Business Analytics software, service providers can leverage business intelligence, performance management and predictive analytics to increase revenues and improve operations.

Learn more about IBM Business Analytics for telcos

Read more about IBM Business Analytics for telecommunications. For demos, white papers, datasheets, blueprints and more please visit **ibm.com**/cognos/telecommunications.

About IBM Business Analytics for telecommunications

IBM Business Analytics software delivers complete, consistent and accurate information that decision-makers can trust to improve business performance. A comprehensive portfolio of business intelligence, advanced analytics, financial performance and strategy management and analytic applications gives you clear, immediate and actionable insights into current performance and the ability to predict future outcomes. Combined with rich industry solutions, proven best practices and professional services, organizations of every size can drive the highest IT productivity and deliver better business results. For more information, visit **ibm.com**/cognos/telecommunications.

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