THE ANALYTICS IMPERATIVE FOR TELECOM

The industry is at an unprecedented point of inflection. Margins are being squeezed by increasing competition and rising costs of programming. Over-the-top (OTT) business models are threatening to cannibalize and commoditize brand position.

Multidevice consumption options are proliferating. Data usage and availability of data is exploding. New IoT devices are disrupting consumer touchpoints. All this digital transformation threatens companies' direct relationships with their customers.

As a result, many service providers are consolidating and will continue to merge, acquire, and partner. Other companies are redefining their strategic identities by expanding their offerings and exploring adjacencies. Still others are slimming down their core business, betting on their pipe for data only.

These moves are necessary to survive but not sufficient to thrive.

Analytics must become a core competency that can propel companies to new levels of excellence and value creation.

Analytics are the Currency of the Future

In the battle to remain relevant and competitive, telcos have a significant opportunity to outflank their competition by unlocking the power of analytics.

Analytics are no longer bound by the traditional Business Intelligence group serving up day-old information. Today's business environment demands actionable insights delivered at the point of decision, with more speed.

Multitudes of small investment decisions are made daily by every part of the business... Where do we focus on customer churn? How much should we spend on promotions? How do we optimize field staffing levels?

Analytical insight provides a foundation for a more informed investment decision. Big data, data science, machine learning, and mobility are just a few of the modern capabilities that can be leveraged to drive value creation in operations and customer experience. The upside potential is seemingly limitless.
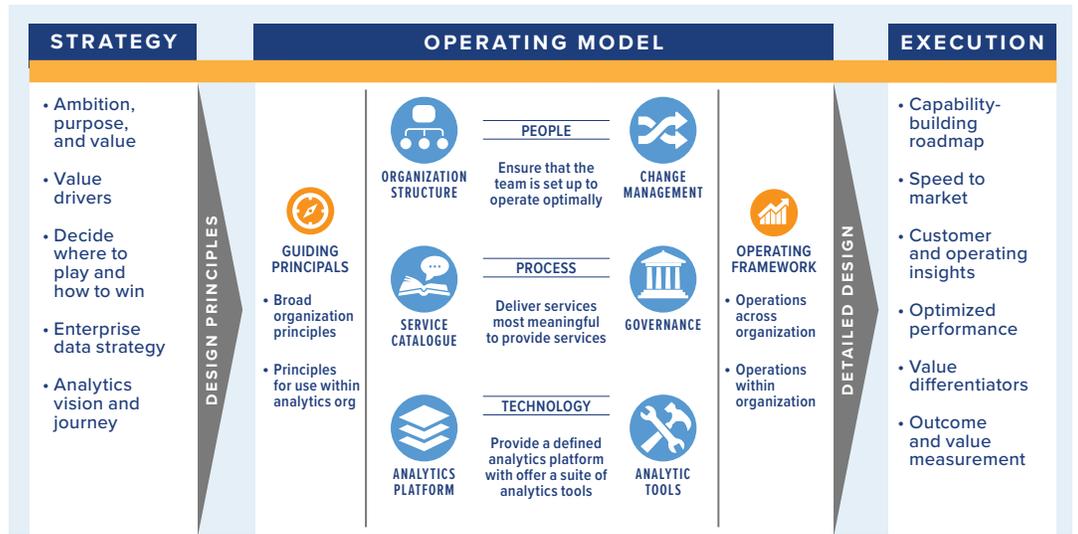
The goal is to deliver outcomes by transforming data into insights.

DATA > ANALYTICS > INSIGHTS > OUTCOMES

Realizing the promise and power of analytics requires a new analytics operating model.

ANALYTICS OPERATING MODEL

STRATEGY	OPERATING MODEL			EXECUTION

DESIGN PRINCIPLES

DETAILED DESIGN

STRATEGY
- Ambition, purpose, and value
- Value drivers
- Decide where to play and how to win
- Enterprise data strategy
- Analytics vision and journey

GUIDING PRINCIPALS
- Broad organization principles
- Principles for use within analytics org

ORGANIZATION STRUCTURE

PEOPLE
Ensure that the team is set up to operate optimally

CHANGE MANAGEMENT

SERVICE CATALOGUE

PROCESS
Deliver services most meaningful to provide services

GOVERNANCE

ANALYTICS PLATFORM

TECHNOLOGY
Provide a defined analytics platform with offer a suite of analytics tools

ANALYTIC TOOLS

OPERATING FRAMEWORK
- Operations across organization
- Operations within organization

EXECUTION
- Capability-building roadmap
- Speed to market
- Customer and operating insights
- Optimized performance
- Value differentiators
- Outcome and value measurement

The analytics operating model accounts for how next-generation analytics are applied within the organization to support desired performance outcomes.

The model provides a framework to integrate the governance, structure, talent, and capabilities required for an insight-driven organization.

The promises of the next-generation analytics organization are many, and yet the journey to define and implement a next-generation analytics operating model will differ for every organization based on their analytics maturity.
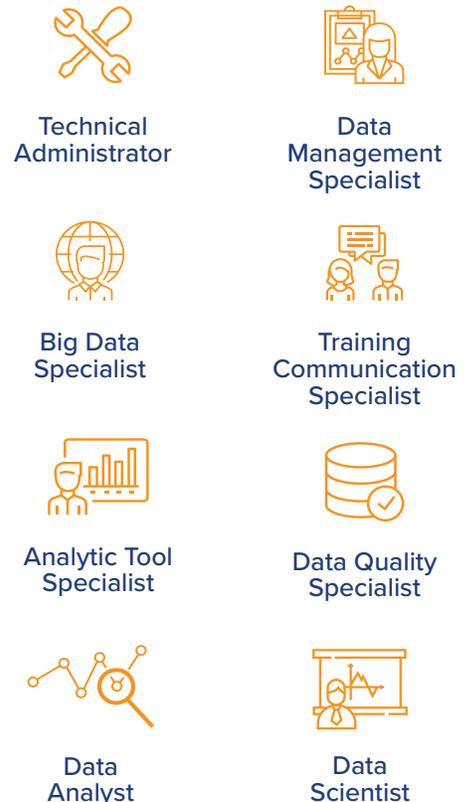
Following are the top 9 action items for telcos to consider in their journeys to becoming next-generation analytics organizations:

#1. Develop Inter-Disciplinary, High-Performing Analytics Talent

The best next-generation analytics organizations balance functional expertise, data analysis, and business instinct to deliver insight to business problems. Roles can include data scientist, analytics modeler, visualization expert, business analyst, and business domain expert.

By themselves, big data, artificial intelligence, or mobility are unlikely to be valuable. Only when combined with business acumen, managerial, and analytics skills do the technologies become valuable. Organizations must evolve their analytics teams to ensure that all required skill sets are accounted for.

Talent can reside across organization silos and should not be confined to an IT function. On the other hand, if analysts are too deeply embedded in business functions, they can be biased towards their leadership's thinking. Regardless, the culture must focus on common sense and business goals instead of wonky, data-driven analysis.

Technical Administrator

Data Management Specialist

Big Data Specialist

Training Communication Specialist

Analytic Tool Specialist

Data Quality Specialist

Data Analyst

Data Scientist

#2. Shore Up the Data Foundation

—

New digital capabilities and advanced analytics are only as valuable as the data foundation they rely on. Some organizations need to start by building out their basic source information and enriching it with reference data and context to make it meaningful.
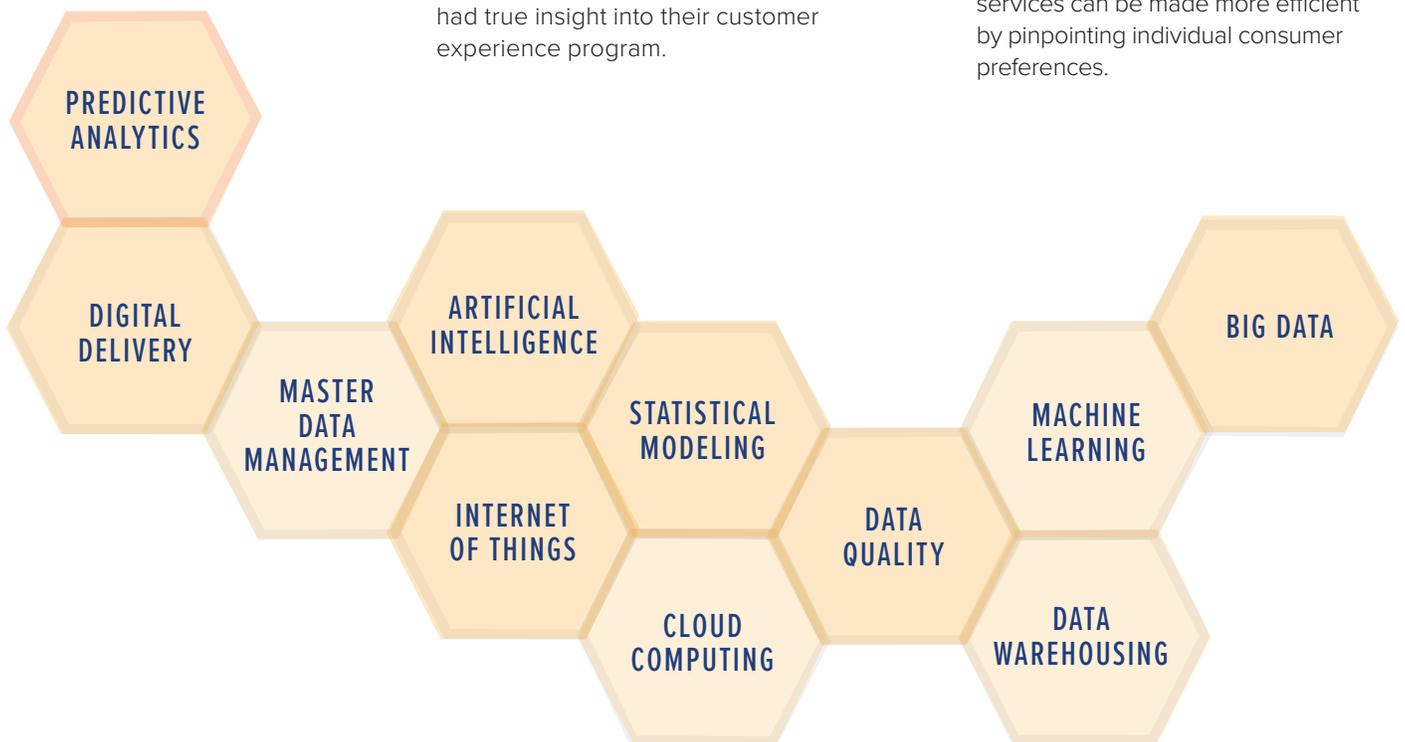
Consider the case of a large service provider that wanted to measure and predict the success of their customer experience initiatives. They wanted to know which combination of customer-facing initiatives were moving the needle, but that question couldn't be answered without some basic data wrangling. Work had to be done to make call data usable, linking segments of a call together into a single call record. Then the organization had to decide which of the seven definitions of first call resolution (FCR) they would use. And so on. It took 3 months of foundational data work before they had true insight into their customer experience program.

#3. Incorporate Big Data Sources into Analytics

—

With the advent of big data technologies, previously unavailable data sources are now fodder for analytics. Viewership, multidevice, IoT, telemetry, usage, and clickstream data need to be considered. But as with structured data in the past, making sense of this data requires enrichment of it to make meaning.

With viewership data, for example, how is watching a show defined? Is it when the channel is active? What happens with a customer is viewing content from the DVR versus live?

Companies should be looking to enhance knowledge of their customers with understanding of what they're viewing and how they're browsing. Segmentation, retention strategies, and upsell strategies can all be improved with more perspective on customer behavior. The development of new products and services can be made more efficient by pinpointing individual consumer preferences.

PREDICTIVE ANALYTICS

DIGITAL DELIVERY

MASTER DATA MANAGEMENT

ARTIFICIAL INTELLIGENCE

STATISTICAL MODELING

BIG DATA

MACHINE LEARNING

INTERNET OF THINGS

DATA QUALITY

CLOUD COMPUTING

DATA WAREHOUSING

## #4. Embrace Governance but Avoid the Big "G"

What's more common than having a gap in foundational data is having TOO MUCH data everywhere. And not a drop of information to drink. Data governance is critical to keep pace with the deluge of data, apps, platforms, and technologies. Poor data quality leads to a loss of trust in the data – and the impact is high, ranging from inaccurate decision-making to tarnished reputations.

In another company, executives became aware of increasing escalations regarding the Science Channel. It took a data forensics team to untangle a web of data that controlled which channels customers see on their TVs.

Customers who were supposed to get the Science Channel didn't. And customers who weren't supposed to get the HBO channel did. It all ended up being a data governance problem. Some parts of the company defined channel packages differently than others.

But governance is the "G" word in many organizations because data governance programs try to boil the ocean. Starting by governing a small set of the most critical KPIs (there are about 40 for most service providers) results in a higher success rate for data governance initiatives.

What's more common than having a gap in foundational data is having TOO MUCH data everywhere. And not a drop of information to drink.

MORE APPS	MORE PLATFORMS	MORE DATA	MORE TECHNOLOGY	MORE CHANGE
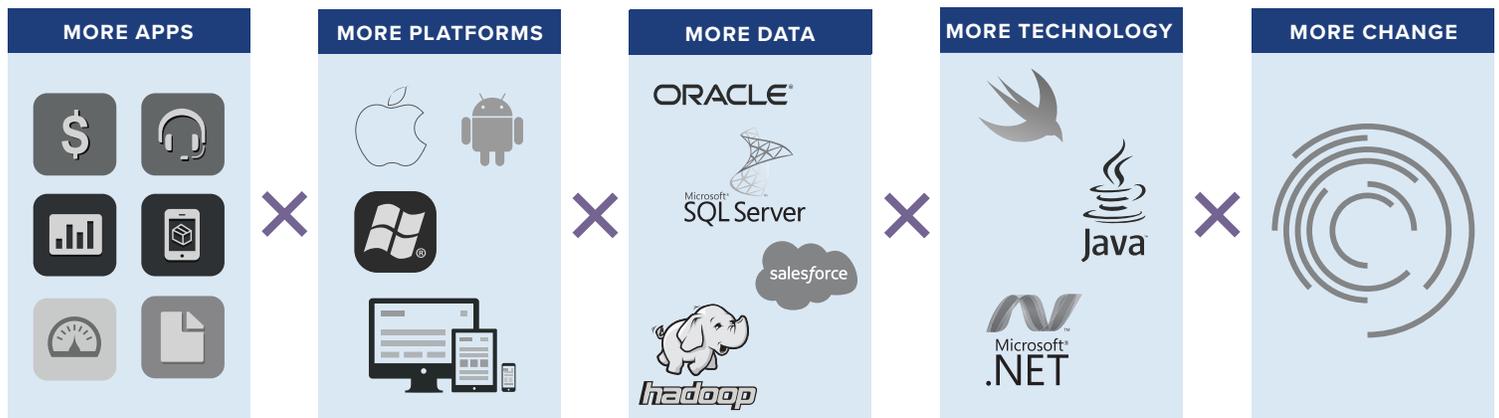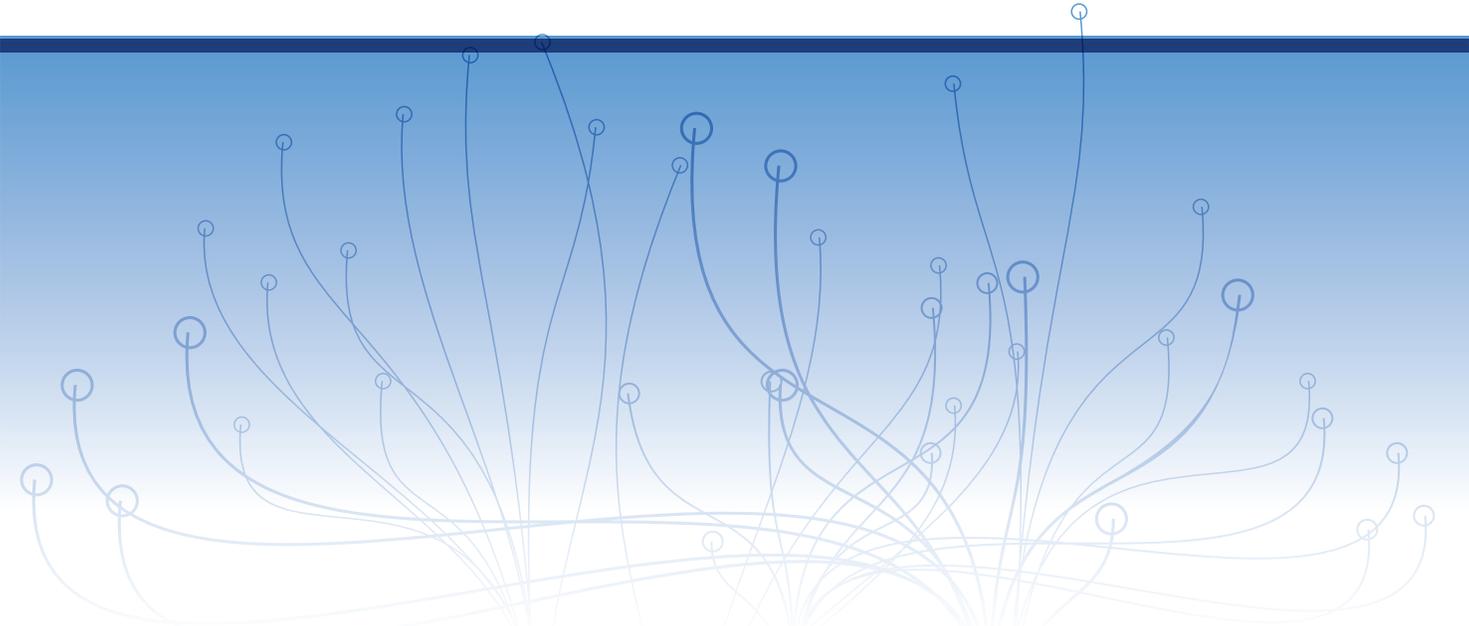
#5. Leverage Big Data AND Big Data Technologies

The 21st century started the era of big data and big data technologies. These offerings not only enable business growth through analytics, but also make available low-cost technology solutions for companies with legacy, small, structured data.

Existing Enterprise Data Warehouses (EDW) are reaching capacity quicker than ever. Ever increasing data growth, doubling every two years, is now limiting what can be added to data warehouses. The increase in data volume has also increased processing times and maxed out load windows. Long load times are hindering the ability to deliver critical business information in a timely fashion.

Investing in additional EDW resources to increase capacity is an option, but offloading data and processing to big data platforms is a more cost-effective solution. The promise of big data is not just new insights—it's also better, cheaper, faster technology for data processing and storage.

#6. Deliver Data at the Point of Decision

Business users expect the right data, at the right time, at the point of decision. This means insight must be available on any device. Just as organizations are focused on delivering an omnichannel experience to their customers, analytics organizations need to focus on an omnichannel experience for their users.

Telcos have been slow to adopt mobile platforms internally and externally. For those that are just beginning the mobile journey, start with frontline employees. Rolling out coaching and measurement tools to managers in call centers, stores, and field offices has paid instant dividends for several large service providers. Supervisors can get out of their offices and on the floors, phones, and trucks with their employees.

The good news is that most business intelligence platforms now include native mobile apps, making multidevice delivery of analytics simpler than in the past. There is still work, however, to upskill analytics staff. The new Analytics Operating Model includes skills like user interface and user experience design that must be considered.

#7. Embed Analytics in Operations

Traditionally, analytics have required humans to define a specific problem, program specific algorithms, interpret the results, and perform an action. It is no longer sufficient to produce advanced analytics that require human interpretation and then human action to change the business. Organizations that want to see measurable business results must focus on embedding analytics and insights into their day-to-day operations to enable insight-driven decision making.

A large service provider is performing near real-time customer segmentation, using operational data such as recent calls into the call center to enhance the customer segment. These real-time segments are integrated into the call routing system, sending the most valuable and most at risk customers to white-glove agents. They doubled the retention rate of high value customers with this strategy. While changing the segmentation algorithm still requires human intervention, it can be updated with immediate impact to the segmentation engine.

Embedding analytics into systems and process not only means greater speed of business impact, but also makes it more difficult for decision-makers to avoid using analytics— usually a good thing.

#8. Machine Learning with an Eye on Artificial Intelligence

With recent technological improvements, artificial intelligence (AI), machine learning (ML), and deep learning (DL) are now able to take analytics accuracy for predictive and prescriptive analytics to a new level.

At the crux of artificial intelligence is the ability to learn. This is where machine learning enters the picture. Machine learning at its core is algorithms that process data, create results, and use the results as feedback to adjust parameters to the algorithm in efforts to increase accuracy.

Machine learning can be applied to customer retention and network health. Historically, retention analysis has been tied to parameters such as rate changes, service requests/truck rolls, and tenure. The weighting of each parameter was predefined and programmed into the algorithm. With machine learning, companies can now add parameters to the predictive analysis while allowing the algorithms to learn and adjust weighting factors to increase accuracy. This improves the likelihood of giving discount offers only to those customers who are about to churn.

#9. Accelerate Digital Transformation

Responding to digital disruption isn't about creating a list of digitization priorities; it's about identifying vulnerabilities and value-creation opportunities.

For service providers, going digital can mean moving the network into an IT-centric and more software-driven environment. It can mean completely digitizing front ends, making self-service the norm for customers. It can mean building a true omnichannel experience for customers, where they can interact with the company on whatever mix of channels they choose. It can mean developing products that are completely software generated.

Investing in digital transformation is NOT optional. Analytics drive a wise investment in the digital strategy.

Next-Generation Analytics Operating Model – The Playbook

———

Now, more than ever, you have the technology capabilities to turn your data into a valuable asset, gaining better insight about your customers and your business. You are ready to start creating the next-generation analytic operating model. But where do you start?

The Next-Generation Analytics Operating Model Playbook outlines the high-level 9 steps on the journey to next-generation analytics. You may be on the journey already, or you may be just beginning. Regardless, the promise of increased value from analytics is real.

THE PLAYBOOK

Focus on value-based outcomes

Establish an analytics vision: Define next-generation analytic capabilities and use cases.

Develop a value-based, capability-building roadmap: Align value drivers with outcomes and digital roadmap.

Deliver value at speed: Close gaps quickly, deliver well, drive demand.

Adopt an end-to-end data view

Develop a holistic, end-to-end view: Establish an enterprise data strategy that integrates data governance, data quality, and data management with the analytic capability roadmap.

Develop next-generation analytics platform: Leverage existing data assets and investments, integrate big data and advanced analytic capabilities.

Close the last mile to outcomes: Integrate analytics into process and align insights to decision.

Evangelize a cultural shift to insight

Optimize the analytics operating model: Tailor to organization maturity level, business model.

Build a championship roster: Attract, retain, and develop balanced analytics talent.

Educate and empower: Demonstrate the realm of possibilities, drive new behaviors.