

Table of Contents

Introduction.....3

Importance of analytics3

Analytics will enable competitive edge through powerful insights across
verticals5

Mega trends in the era of Big Data6

Data-Driven innovation framework..... 10

Impact of data-driven innovation..... 11

About LatentView Analytics 14

About Frost & Sullivan..... 14

Introduction

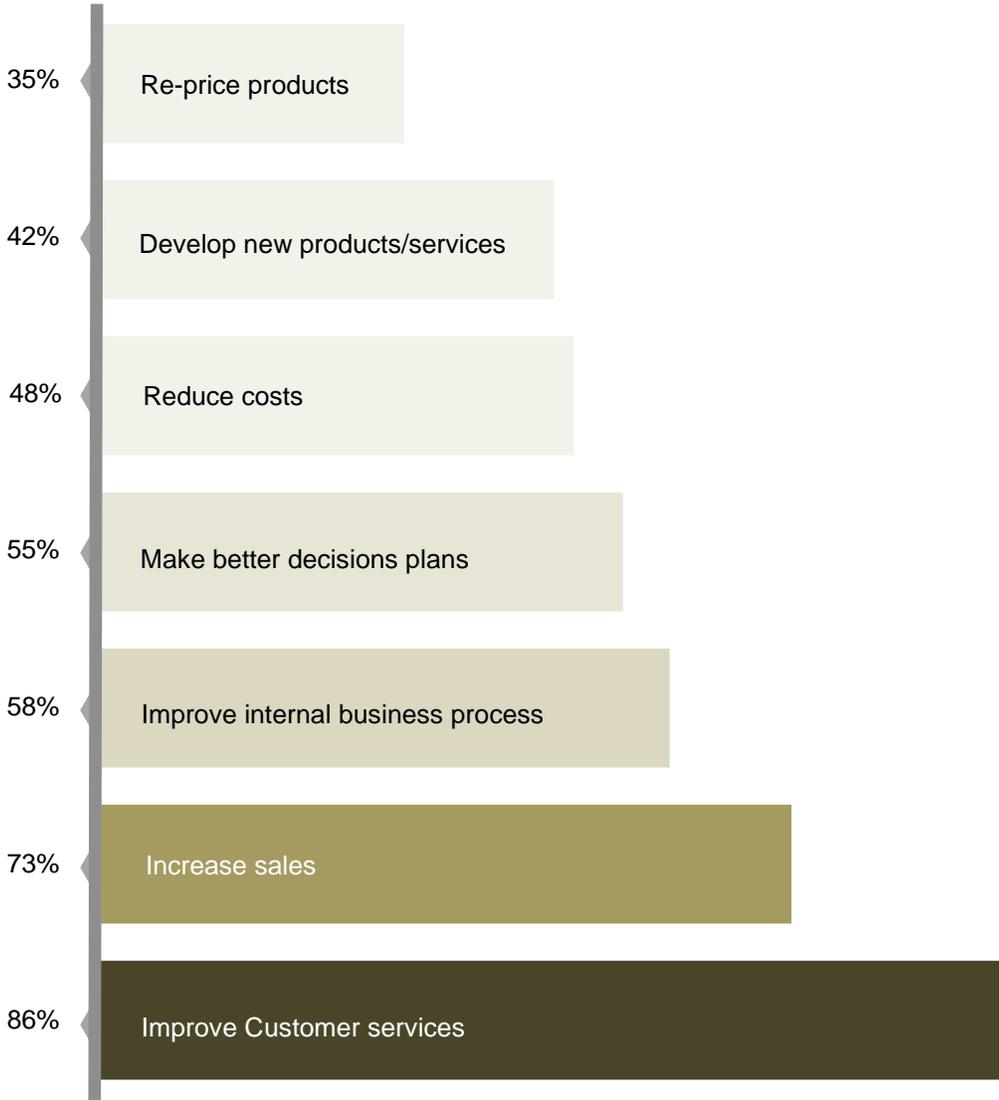
Future-forward organizations riding the wave of digital transformation invest to leverage data for gaining competitive advantage. Irrespective of the industry, data is the most crucial component providing deep consumer understanding. The enormous magnitude of data generated every day holds potential to solve some of the most complex business challenges the world faces today. Integrating and synthesizing fragmented data from disparate systems can help organizations and brands get a 360 degree view of their business, customers and their preferences. This helps in decision making and formulating strategy focused on reducing customer attrition and enhancing customer experience seamlessly across channels.

Importance of analytics

An increasingly acute challenge for businesses is the need to make quick decisions. As hyper-competition increases the likelihood that a market niche will be pursued almost immediately, businesses must assess, analyze and decide on a competitive response at record speed, at times measured in hours.

Accumulating, preparing and analyzing data consumes most of the decision-making process. Frost & Sullivan's analysis indicates that data-devoted tasks consume up to 90% of the time devoted to making a business decision. This is an extreme use of resources, and is only getting worse, as analytics platforms make accessing ever larger pools of data possible. If a company wants to make decisions quickly, and integrate the available data into its decision deliberations then the key is implementing an analytics platform. Frost & Sullivan has observed the following key drivers for enterprises to adopt analytics solutions:

Exhibit 1: Key drivers for implementing analytics



Source: Big Data and Analytics Survey, Frost & Sullivan, 2017

Analytics will enable competitive edge through powerful insights across verticals

Healthcare: Frost & Sullivan analysis reveals that analytics will disrupt the healthcare space, and transform the process of patient engagement and diagnosis. Diagnosis will be largely automated, saving practitioner time and enhancing accuracy.

Media: The advertising and media space will require the adoption of analytics in order to stay agile and competitive. Analytics will help provide data on consumer sentiment, emotions, preferences and behaviors that will help media companies decide on content, trends and strategy. Social media analytics will enable marketers to tune in to the “voice of the customer.” identify influencers and instances of consumption.

Retail: It will be imperative for retailers to adopt analytics in order to stay competitive. Metrics such as footfalls, dwell time, store conversion, traffic maps help a retailer optimize product mix, store layout, advertising and staffing with a view to maximizing returns on investment (ROI). These metrics will become increasingly sophisticated over time.

Frost & Sullivan analysis reveals that CRM will increasingly adopt analytics, in order to improve organizational performance, reduce human interface, lower costs and improve efficiencies. Automated conversational platforms with increasing levels of sophistication will be increasingly adopted. However, customer care systems should be connected to organizational decision-makers from inception in order to be optimally designed and obtain the greatest returns.

Above all, there is a greater play globally in the form of mega trends which will influence the way organizations do business, consumers interact with products, and the way the world as a marketplace evolves.

Mega trends in the era of Big Data

Mega trends are transformative global forces that define the future world with their far-reaching impact on businesses, societies, economies, cultures, and personal lives. Frost & Sullivan has identified three mega trends that will have a profound impact on the way data is consumed, analyzed, and structured for business use.

Innovation to Zero

Innovation to Zero is a mega vision incorporated across various industries and business processes. It implies the desire for perfection – a zero-concept world with a vision of zero carbon emissions, zero crime rates, zero accidents, and carbon-neutral cities. Innovation to Zero is steered by a large pool of data that is converted into actionable insights that give enterprises and governments the most important dimension – predictability, helping to minimize the errors to zero.

Innovation to Zero will also have a prominent place in the future of various industries. For example, in the retail sector, we are likely to see zero-carbon shops or shops practicing zero design-to-shelve response time. Shops could also practice zero shrinkage, which is a complete absence of loss of inventory due to shoplifting, employee theft, vendor fraud, or administration error. The data collected from various touch points and channels when streamlined and interconnected with each other give incredible inputs/insights to the store and online managers to create this 'Zero' ecosystem.

Convergence of Digital, Physical & Biological Worlds

The convergence of the digital and physical worlds, such as in the retail sector, is creating a hybrid shopping experience. Brick and mortar retailers are responding to the e-commerce challenge by embracing technology, such as real time in-store video analysis or on-floor VR platform, that enhances their physical assets and creates a seamless, immersive, and multisensory shopping experience.

Data from the physical and biological world helps connect/ communicate with the digital world, connecting all three. The result of this convergence is

“We are at the beginning of a global transformation that is characterized by the convergence of digital, physical, and biological technologies in ways that are changing both the world around us and our very idea of what it means to be human. The changes are historic in terms of their size, speed, and scope.”

- *Klaus Schwab,
founder of World
Economic Forum*

the rise of integrated business and operational models in line with the bricks and clicks mega trend.

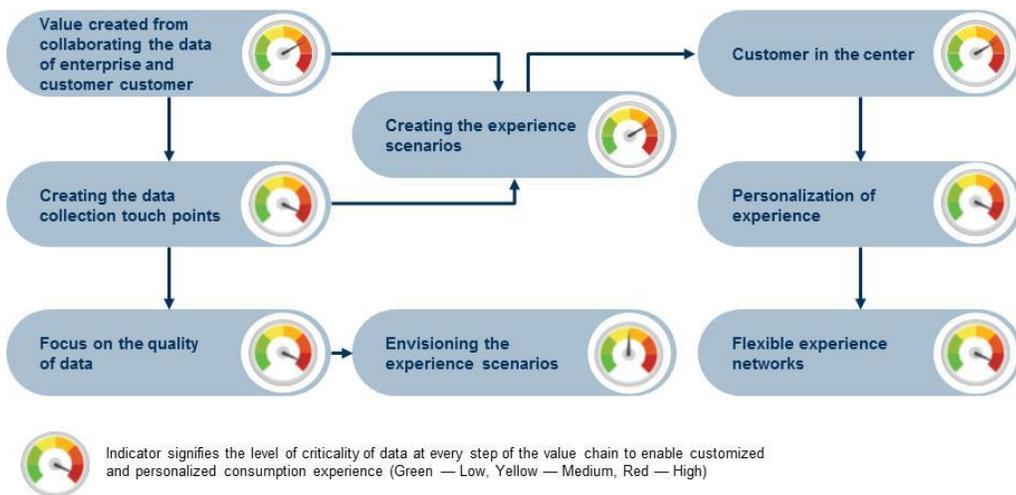
Shopping is becoming a multisensory, blended reality experience that is augmented by technological developments ranging from basic in-store Wi-Fi to high-quality audio, video, mobile apps, augmented reality in the form of smart mirrors, touch interfaces, and proximity technologies. Analyzing this data through millions of hours of footage, analyzing shopping patterns (online and offline), and careful customer journey mapping is crucial to discerning the right product/marketing mix.

Co-creation of Value (N=1, R=G)

N=1, R=G, a concept shaped by C.K. Prahalad in “The new age of innovation” said that value is created through access to shareholder knowledge and information. This knowledge is powerful when developing a brand and creating a platform to customize services/products on a large scale and on-the-go as well.

N=1 (personal solutions to customers): in the current world, every customer is unique and wants a customized experience at every touch point with the organization, be it online or a physical store. For this kind of mass customization, an organization needs implausible amount of data and flexibility in the real time. To create new and personalized customer experiences, the companies have to create a real-time engagement between them and the customers. This helps in co-creating value.

R=G (Sharing of resources, through grouping/collaboration): a single resource does not possess all the information, skills or resources to create value for the customer. The global access to information and resources need to be pooled in through collaboration or sharing. Exhibit 2 explains how data is absolutely crucial at every step of the value chain in the organization to enable the customized and personalized consumption.

Exhibit 2: Role of data in C.K. Prahalad's Co-creation Model

With overarching megatrends, businesses need to pay closer attention to their customers, competitors and collaborators across the value chain.

Top industry trends driving analytics adoption

Mobile first Strategy: with more than four billion active mobile users across the globe, enterprises see mobile as a major source of consumer data. Mobile is a one-to-one communication platform that customizes the enterprises' offerings on-the-go.

Growth of XaaS: enterprises appreciate cloud computing as the most affordable, value for investment, and a platform to store and experiment with data. Currently, SMEs use on-demand analytics solutions (through cloud platforms) to structure, analyze and monetize data.

Machine Learning and Artificial Intelligence: a machine/applications' ability to learn and grow is through capturing the data, structuring it and leveraging analytics to make meaningful decisions from it. Analytics shall be the backbone of enterprises using AI and ML techniques to create data flow and decision flow processes.

Digital Twins, IoT and Automation: IoT (Internet of Things) devices offer connectivity and integration of various technologies and devices. With the proliferation of IoT devices, digital twins are swiftly following suit in terms of rapid market penetration. Digital twins are insightful counterparts of actual physical assets or service in an organization. Combining the potential of both IoT and Digital Twins, users have the access to real-time data about how their products are functioning and can make insightful decisions. The use of edge analytics – e.g. real time analysis of sensor data- also enables product optimization and prevents undesirable outcomes through predictive analysis. Added to this machine learning and artificial intelligence allows for the digital twins to proactively analyze the data in motion and apply automated corrective solutions.

Augmented Analytics: The ever-challenging concerns around extracting actionable, meaningful and mission-critical insights from organizational data are alleviated by the adoption of Augmented Analytics thereby providing dynamic attention to real-time business problems. Augmented analytics combines the powerful data outputs of both machine learning and natural language generation to deliver highly efficient insights for business intelligence.

Augmented Reality (AR): Augmented Reality superimposes virtual data as an overlay over the user's natural environment, thereby enhancing the perception of the real world. The physical environment is augmented with the help of computer graphics, sounds and tactical feedbacks to produce audiovisual and haptic experience. AR coupled with data analytics helps to eliminate human cognitive limitations in data perception, offers scope for dynamic projection, interactive filtering and dashboard visualization.

Data-Driven innovation framework

With a rapid increase in the volume of data captured from different data sources in structured, unstructured, and semi-structured forms, enterprises are increasingly focusing on software platforms that can integrate the data in one place and process it for analytics applications. Based on the type of data and kind of output that an organization wants to leverage (required decision making capabilities), the platform is chosen and the data flow framework is created by the analytics solution provider. A data-driven innovation framework is critical for customer-focused organizations implementing analytics.

Exhibit 3: Data-Driven innovation framework

	Visualize	<ul style="list-style-type: none"> • Understand the basis of an innovation-based growth model • Set an agenda for innovation based growth model depending on line of business
	Find	<ul style="list-style-type: none"> • Find the right areas to focus on and invest in with mega trends that are in line with business • Focus on leveraging the core strength
	Build	<ul style="list-style-type: none"> • Understand the market scenario, current data points available and try to integrate with future megatrends • Create a scalable and market flexible business model with data as the epi-center of the model
	Customize	<ul style="list-style-type: none"> • Create a value proposition unique to the brand/line of business • With data available, co-create value through customizations for customers, integrations and sharing data with other stakeholders
	Communicate	<ul style="list-style-type: none"> • Using the right mix of communication channels, spread the innovation capabilities – especially within the organization and to the stakeholder

It is imperative that organizations make the right investment choice, one that helps to strengthen their core focus while building a market-centric and scalable data model. Options that are customized to business-line and stakeholder benefit would enhance the value of the innovation model. The innovation framework built and used should be such that it spreads across the entire organization (incl. stakeholders) and enables different verticals to gain benefits based on their requirements.

Impact of data-driven innovation

Every industry leverages data to grow – from understanding customer behavior in the retail industry to predicting the probability of a disease in the patient, to remote controlling a car. Here are a few use cases where data focused innovation is driving the business or solving an industry issue.

Industry	Use case/Example	Business Impact	Growth opportunities	Potential ROI
Education	Personalized education based on student's capabilities, which are collected and quantified in real time when he/she interacts with digital tools.	★ ★ ★	Very high	
Manufacturing	Usage of M2M data and IoT for digital manufacturing. E.g. using NFC devices for observing the movements of machinery on shop floors.	★ ★ ★	High	
Energy	Data collected from smart grid meters combined with predictive analytics help understand when and where the demand would come, and channelize the power accordingly.	★	Medium	
Retail	Based on the periodic data collected from past experiences and customer demographics, a virtual shopping environment is created.	★ ★	Very High	
Healthcare	Large amounts of data collected is used to improve patient care, reduce cost, predict the diseases outbreak in advance and finally help doctors to make informed decisions thus reducing the human error.	★ ★ ★	High	
Government	Data collected through the IoT devices used in the smart cities to monitor traffic, waste management, public transport and other smart city initiatives help to improve the citizens' quality of life.	★ ★	Medium	

Business Impact: ★ Low ★ ★ Medium ★ ★ ★ High

Potential ROI: Low Medium High

Frost & Sullivan conducted a survey in 2017 to understand the impact big data and analytics on various enterprise functions.

Exhibit 4: Functional Impact of Big Data & Analytics



* Rest not quantified

A few challenges restrict the adoption of technology while the market is experiencing some technology convergence. To be effective, strategic plans for enterprises should be championed by an executive to gain cross-organizational support; they also require the right analytics solution partner.

Exhibit 5: Key Challenges in implementing analytics solutions



How LatentView Analytics is helping clients drive innovation using data

Frost & Sullivan sees LatentView Analytics as one of the leading analytics services providers in the market. LatentView Analytics is helping clients harness the power of Artificial Intelligence and Machine Learning to transform their business processes, drive innovation and enhance customer experience. It offers a gamut of pre-built analytics solutions across industries and functional domain. LatentView Analytics has the right mix of people, technology and work experience to handle both structured and unstructured data to deliver value to clients. Examples of how LatentView Analytics enabled its clients to drive innovation leveraging data:

- *Leading snacks manufacturer reduced innovation cycle time by 1.5x, identified 20 flavors at a fraction of ideation cost and gained a big first-mover advantage*
- *US based bakery chain reduced time to market by 2x, identified emerging trends early on increasing product sales and ticket sizes by using social analytics*
- *Leading home appliances maker accelerated product innovation cycle by clear understanding of purchase drivers and market sentiments*
- *A telecom service provider used insights from social data analytics to compare purchase drivers for its brand and triggers for customer churn to competitors*
- *Leading beverages company increased its market share by 2-5% across products by identifying new consumption 'hot spots' and activating of occasion-based marketing messages*

About LatentView Analytics

LatentView Analytics is a leading global analytics services provider, delivering solutions that help companies drive digital transformation and use data to gain a competitive advantage. With analytics solutions that provide a 360-degree view of the digital consumer, fuel machine learning capabilities and support artificial intelligence initiatives., LatentView enables leading global brands to predict new revenue streams, anticipate product trends, improve customer retention, optimize investment decisions and turn unstructured data into a valuable business asset. LatentView Analytics is a trusted partner to enterprises worldwide, including more than two dozen Fortune 500 companies in the retail, consumer packaged goods, financial services, technology, and media & entertainment verticals. LatentView Analytics has a global presence and has been recognized by Gartner as a 'Cool Vendor' and 'Analytics Solutions Provider 2017' by Frost & Sullivan.

To know how LatentView Analytics can help you drive innovation using data, e-mail sales@latentview.com

www.latentview.com

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, works in collaboration with clients to leverage visionary innovation that addresses the global challenges and related growth opportunities that will make or break today's market participants. For more than 50 years, Frost & Sullivan has been developing growth strategies for the Global 1000, emerging businesses, the public sector and the investment community.



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