What will Business Intelligence (BI) look like by year 2020? BI will become an innovation engine for transforming information to deliver intelligent business models. This vision will be realized through the pervasive application of BI as a decision-centric discipline across the organization to improve business outcomes. Certainly if the past ten years are an indicator, more changes and innovations will be the norm. The only thing certain about the future of BI is that it will always be changing. There is no escaping the fact that BI as a discipline, and the nature of business as a whole, has changed significantly in the last decade. What has not changed is the fundamental role of BI. BI still needs to provide insight to the rest of the organization, ensure effective control and risk management and drive business decisions to improve efficiency and effectiveness to deliver better financial and operational outcomes. Today, BI capabilities are not capitalized or adopted to generate the potential insight for driving effective decision making and value across the enterprise. While many organizations have taken major steps to better manage data and information to gain insights, the challenge remains for businesses to create value from data to support the decision making process. This is the very area where BI of the future can make a difference in enabling an enterprise to make intelligent decisions. Looking ahead, we expect the objectives to remain the same. What will be different is how information will be managed, delivered, and consumed. This is our vision for 2020: An Intelligent Enterprise.

» That has a clear line of sight between business objectives and the information required to make value creating decisions
» Meets the information needs of all stakeholders in the organizations
» Integrates holistic top-down approach, aligned with strategic and tactical objectives
» Integrates Key Performance Indicators (KPIs), metrics, measures, reporting, analytics, processes, and enabling data and technology
» Standardizes data into a unified data platform to leverage for the entire organization, providing multiple views of the same trusted data
In the past few years, executives began to discover that concentrating on traditional technologies, ERP, and process improvements, along with the increased desire for data does not necessarily arm them with information required to manage the business. In today’s business environment, there is plenty of BI produced and available. Customers are demanding better products and services and the landscape of BI technologies expands. At the same time the ability to cost effectively store vast amounts of data is enormous. Companies have to respond quickly to the needs which results in an ever-expanding wide range of metrics every day. We experience companies having hundreds of reports, metrics, and KPIs that are all defined as “key” but cannot all be equally qualified as “key.” Is it important to strike the right BI balance to create an intelligent organization. In our view timely, accurate, and aligned BI delivers a number of leadership advantages:

» Core metrics: getting the business to focus. Having less metrics that are accurate, available, and reliable, it becomes clear what really matters in the business and how they can make a contribution;

» Quality of decisions: it drives better business decisions by providing knowledgeable workers with current information for analysis to arrive at a better informed decision;

» Focus and energy: it keeps the energy of the organization focused on what is important and aligned with the business strategy.
Today’s businesses are shaped by the global business environment and are enabled by ever-improving technological advances. Across the world, organizations are coming up against forces that influence their business strategy and information needs. BI must easily respond to the changing environment to properly support the speed of business changes.

Businesses have seen significant turmoil and massive changes over the past decade influenced by globalization; disruptive technology advancements; and changes in the operational, finance, regulatory, and economic landscape. Businesses turn to process standardization, reorganizations, and system integrations to achieve the objectives of improving efficiency, and increasing effectiveness. In addition, the methods used by organizations to manage data and information to gain business insights and intelligence has undergone a major transformation. Along this journey, many organizations have moved up the maturity curve from knowing “What happened?” to “Why did it happen?” with root cause, driver, and trends analysis. In some cases, predicting “what will happen?” makes it possible for the masses to access information in an easy and user intuitive way.

- Is this the end state of BI?
- Is there room for further innovation?
- What will BI look like in a decade?

To answer these questions effectively, the drivers of change that are likely to shape the 2020’s business ecosystem need to be understood. In addition, the impact of these drivers on how information is managed, delivered, and consumed to improve business insight and performance must be understood as well. Welcome to 2020.

The pace of globalization continues
Day by day, we are moving closer to the reality that the world is flat. Globalization and financial liberalization continue to drive the evolution of markets. In this environment, users in the business community speak different languages, work in different currencies, use different date and time formats, and expect different reporting views. Over the past decade, many organizations focused on enabling a multinational reporting and analytics environment in order to adapt to a global environment. These efforts have been focused an enterprise perspective with a North American/European centric view around product and services.

Today, an economic shift in Asia and Latin America from export-led to consumption-led economies is reshaping global markets and business models. This is driving a global objective of creating a consistent view of global business and economic reality and requires managing the business and social environment like never before.

Complexity and rise of regulation
Today’s economic climate has created an unexpected burden of ongoing risk management and the accompanying controls environment. The pace of globalization will likely continue and make the global economic environment more complex. This will result in a rise in international regulatory policies to enhance the benefits and lessen the costs of integration into the world economy. The shift of economic power from West to East brings with it higher uncertainty. To create a conducive environment for business success, increased transparency of information, proactive management of risks, and more flexible business processes are required. Instead of the notion that “We want to catch you doing something wrong,” compliance functions will be seen more and more as the facilitator of “doing things right and doing the right thing.” Organizations will need to build the capacity to anticipate and adapt to new regulations as just another part of everyday business which could...
become an organization’s competitive advantage. This requires compliance-based objectives that lessen risk to be embedded as part of the enterprise BI strategy.

Significant growth in population
Current projections show a continued increase in population in the near future, with the global population expected to reach between 7.5 billion and 10.5 billion by 2020. Similar to the economic shift, the demographics will shift from developed regions to the developing regions. Population growth exerts a positive influence on economic development with changes in consumption, productivity, and demand for products and services. Business leaders are largely aware of the role that demographics can play in a changing world but challenges remain regarding how to approach demographic shift in their business planning.

Power of technology
Over the past two decades, technology had an enormous impact in transforming personal life, business, and society. With today’s speed of innovation and introduction of mobile technology, portable devices, network sensors, and GPS mapping technologies offer everyone access to global information and communication at any time, in any location connecting suppliers, customers, and businesses. High-performance data visualizations, information access at the speed of thought, and supercomputing capabilities are the standard. As technology continues to evolve, more and more work that is currently done by mankind will be undertaken by machine-kind. Organizations will increasingly standardize systems and processes to make the most of opportunities that information technology provides. This transformation will continue to drive the evolution of information management, analysis, and delivery capabilities.
Looking ahead, the drive to a globalized world fueled by ever-increasing power of technology in light of regulatory challenges and population growth will focus business leaders on using data and information as a competitive advantage more than ever before in order to drive growth and improve productivity. The most critical changes and impact on the BI landscape will be significant.

**Mobile BI**
An increasing mobile world with mobile intelligence fueled by lightning-fast connections, supercomputing platforms, and storage capabilities is poised to revolutionize business models; revenue channels; and the way organizations deliver, consume, and act on information. With the ability to access information at any time, in any location, on a handheld device, consumers and enterprises will be able to make more and more decisions quickly and easily. BI technologies will need to take advantage of the mobile platform to deliver and present targeted information in a concise, relevant, and user-friendly way leveraging interactive and visual capabilities. Next-generation mobility devices will continue to reshape how business information is delivered and accessed. Organizations should plan to have a forward-looking mobile BI strategy to accommodate this change.

**BI in the cloud**
Software as a Service (SaaS) is an excellent solution to the problem of exponential information growth where storage is a virtual reality. The term “cloud” will have disappeared from the phrase “cloud computing” by 2020, because the majority of computing will simply be done in the cloud. BI in a SaaS environment will provide users with self-service access to internal company data for use in reporting and analysis. This will transform BI from sets of stand-alone products to enterprise services that make BI pervasive and easier to use.

**Social intelligence**
The emergence of social media and other Web 2.0 technologies over the last decade has presented organizations of all sizes and types with new opportunities for growth, as well as risks to identify and mitigate. This momentum around social media will continue to transform the business strategies and models. New risks will be introduced from an internal and external perspective that are reputational, regulatory, legal, and financial in nature. To achieve a 360 degree view of business, integration of social media with the enterprise BI landscape (i.e., combining qualitative with quantitative data) will be required to gain competitive insight. Today, integration of data from social media is a blind spot for many organizations. In the coming decade, social media will become part of organizations’ overall business strategy, paving the way towards a true enterprise engagement platform where businesses, partners, and customers connect to shape business models. Depending on the organization’s goals, social media integration will be a key cornerstone for all enterprise BI strategies.

**BI for big data – Data everywhere**
The beauty of the increasingly digital landscape is that every single digital interaction that occurs (in blogs, chats, video, e-mail, and social) brings fresh insights to decision makers. By 2020, the sheer volume of digital information across diverse sources is predicted to increase to 35 trillion gigabytes—much of it coming from blogs, globalization efforts, population growth, social media, Internet search, and sensor networks. Add increased data velocity to changing data feeds and the challenges become greater to exploit the value of data for decision-making. An organization must develop an effective strategy for acquiring, organizing, and analyzing big data. New and innovative ways will evolve to analyze, model, visualize, and extract value from big data to formulate insights to complex problems, both current and anticipated future. Advancements in data analysis tools and techniques with do-it-yourself analytics will help more people analyze and forecast than ever before, leading to further innovation. Big data will lead to a more interconnected world between government, public, business, and geographies calling for information management strategies at a global level with universal data access.
Information management
Big data will fundamentally change the way information is managed and used. One of the key challenges organizations face today with data and systems is the nonintegrated or siloed nature. The entrance of ERP point applications and cloud-based solutions resulted in more silos than ever in processes, data, and information. To drive a high-performance business environment, organizations cannot rely on proliferation of Excel® spreadsheets, multiple data sources, and different data sets. To manage data effectively, organizations need to transform their portfolio of systems and applications in order to harness insights from internal and external sources effectively to improve business performance, internal operations, and developing innovative products and services with competitive advantage.

Convergence of markets from globalization providing similar products and services to similar customers with similar operating models will lead to convergence of data requirements across organizations underpinned by standard data sets. To meet the evolving internal and external analysis needs, innovative ways of capturing and processing data will emerge fueled by technology inventions.

Emergence of artificial intelligence
Today, BI accomplishes problem solving by using reports, analytics, and data visualizations to analyze or explore data to help guide decisions. This process naturally incorporates learning and reasoning into the problem-solving process. It is not too far away when an intelligent tool can follow the same process, evaluate any number of solutions, and learn from the results at each step to arrive at the right answer. As a result of the convergence of language interpretation, mobile access, search-driven approach combined with unstructured data analytics (e.g., text, video, voice), predictive analytics and supported by collaborative processes and technology will pave the way for today’s artificial intelligence to become tomorrow’s BI.

Democratization of BI
By 2020, the BI landscape could change dramatically. BI and analytics could be embedded directly into operational applications and processes that drive the business. This integrated analytics and reporting approach will eliminate time, effort, and cost created by separate BI applications/solutions and will make BI available for masses.

For management to have real-time view of the business, real-time dashboards will become reality. The challenges that face BI today around replication of rules, security across systems, data extraction, transformation, reconciliation, latency, and reporting tools will be in the past. The information you need will find you rather than you finding information based on roles, i.e., where you expect it—within the application, in context, and at your fingertips. BI will no longer be a domain that will be contained within the analyst community, but will gain wider adoption among the public demand.

Convergence of BI
A holistic view on enterprise data has become a core asset for every organization. Today, enterprise data in the form of various data sets or data sources serves as one of foundational layers in building a data warehouse/business intelligence application. This is primarily driven by the fact that ERP systems are for real-time transactional processing and data warehouse systems are for analytical processing and are more concerned with historical data not only within a business process context but also combining the effect of the total business environment. We expect to see a convergence of transactional and analytical processing through the revolution of in-memory technologies across all computing platforms.

Analytics – from back office to boardroom
Analytics, the next progression of BI, is beginning to grow as a function, with more organizations and industries joining the wave. Simply put, analytics can help an organization perform better and differentiate themselves, creating a competitive advantage. Today, decision making is primarily based on information residing in scorecards, dashboards, and reports that shed light on how business is performing against predetermined targets. For sustained competitive differentiation, organizations will have to move towards modeling their business based on complex relationships from just tracking progress to understand the business scenarios, drivers, and predictive outcomes to guide decision making. We will see analytics emerge as a core enterprise function to deliver better business insights that improve decisions to drive business strategy and manage performance.
Next Generation of BI tools

To achieve the ideal state of business intelligence for tomorrow, organizations of all shapes and sizes need leadership and technology that understands the business, information, and process landscape to consolidate data and generate insight across the enterprise. With this in place, the BI tools of tomorrow will need to integrate with all systems, applications, and data sources. At the heart of this integration effort is the need to drive communication, collaboration, and data access throughout the enterprise in such a way that the barriers separating departments and functions can be removed. Explosion of big data will have put new emphasis on scalability, performance, and reliability of BI tools. Innovations in server capacity, storage CPU, memory, and high-speed network bandwidth have contributed to the emergence of a new generation of software that provides real-time analytics. BI tools of the future will become an extension of day-to-day applications fueling data democratization for all—giving end users more direct access to data and easy-to-use BI tools. Simplicity, intuitiveness, and quickness will be the theme. Given the speed and ease, the new generation of BI tools will put power back into the hands of users. Innovation in new-generation BI tools will shift towards scenario planning, data discovery, predictive analytics, data integration, connectivity, collaboration, visualization, user interfaces, and interactive capabilities.
To meet the challenges of 2020, the groundwork needs to be done now.

With the economic shift comes information shift, a shift that will use information to drive cultural and business transformations towards an intelligent enterprise. Competitiveness in the pace of globalization will be aided by the ability to exchange and collaborate on information rapidly and virtually making BI part of the ongoing business process and not an afterthought. The result is increasing demand for data and information requirements anywhere through any device or platform at any time. Organizations should rethink their BI strategies to account for the BI 2020 landscape described above from an enterprise level to a global level with the objective of creating a consistent view of global business and economic reality and manage the business and social environment like never before.
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