THE BIG DEAL ABOUT BIG DATA pdf

1: Big Data Is a Big Deal

Big data can be daunting, but its analysis is making significant differences in organizations. By analyzing complex data sets across functional silos, organizations are gaining insights to help catalyze change, improve access to experts, speed onboarding, retain talent, and identify root causes for complicated issues.

Nov 20, at 3: Now, more than ever, companies are acquiring volumes of information from their operations that could prove highly valuable to their bottom line. Increased computing resources and processing power now give companies the capacity to parse such data in ways that were not cost effective or even feasible just 15 years ago. Mobile devices are expanding the way companies interact with consumers, and the Internet-of-Things IoT is expanding the world from which such data can be compiled. That said, neither is competition in the marketplace. Companies with the ability to process large volumes of data to analyze consumer preferences and trends faster than their competitors stand to gain a significant competitive advantage in the marketplace. Moreover, such companies can also use such data to gain efficiencies in their operations, further distancing them from their competition. Simply put, those companies that can unlock the secrets embodied in their big data sets may find themselves empowered by it. Unfortunately, those very advantages presented by Big Data also present significant iP protection risk. In the world of analytics, Big Data is not stagnant â€" the information is constantly changing. Being able to analyze large data sets is no easy task, and requires significant expertise and capital. It requires the development of algorithms, methodologies, and processes designed to accomplish the specific objective â€" ideas and concepts well worth protecting to maintain competitive advantage. Such ideas, however, have become far more difficult to protect under patent law. CLS Bank, the patent eligibility of such software inventions has become far more difficult to demonstrate. Companies have been forced to rethink patenting such inventions as a result. How can companies protect such valuable intellectual property capital? With the specter of patent ineligibility hovering over big data inventions, the first step is to view such inventions through the lens of trade secrets. In essence, a trade secret is any information that derives independent economic value by virtue of its not being known. Many states have adopted some version of the Uniform Trade Secrets Act, or otherwise have a body of common law that provides such protections to the trade secret owner. This includes physical as well as technical restrictions on access to such information to qualify for and maintain such trade secret status, at a minimum. Another step is to protect the expression of such ideas under copyright law. Although copyright attaches once the original work of authorship i. This type of protection may not protect the idea itself, but protects the expression of it in a manner that disincentives unauthorized copying. Where such code is accessible to contractors outside the company, then at a minimum, additional restrictions under the appropriate non-disclosure agreement will be necessary. Big Data is creating some significant advantages to those companies capable of exploiting it, but it does not come without its challenges. Being able to parse and exploit the large volumes of data companies are collecting is no easy task, but to remain competitive, companies need to not only implement technologies to exploit it, but protect the valuable intellectual capital created the process. In private practice for over 20 years, Tom is a sought-after technology lawyer who uses his industry experience as a former computer systems engineer to creatively counsel and help his clients navigate the complexities of law and technology in their business. News outlets reach out to Tom for his insight, and he has been quoted by national media organizations.

THE BIG DEAL ABOUT BIG DATA pdf

2: Big Data is a Big Deal | www.enganchecubano.com

Big data has become a big deal because when used to its full potential, it can help guide counties toward better resource management, healthier and safer communities, as well as improved citizen support and understanding.

The collection of data by the private and public sectors has become so ubiquitous that it seems no one even questions it anymore â€" whether it be the federal government gathering information allegedly for national security purposes or Facebook mining for marketing and sales reasons. This type of data collection is not new. Large companies have been doing it for years. What is new is how technology has made it possible for organizations of all sizes to not only collect data, but also to quickly â€" even instantly â€" analyze it to make fast, often real-time, decisions. But faculty are now leveraging the latest technology in their research and in the classroom, where students who once demonstrated disinterest in data now insist that their courses include discussion of marketing analyses. Those students are acting out of self-interest. They know that marketing managers are now expected to lead the quest for new and better data acquisition. For example, the original UCLA Anderson Forecast reports were done at night when economists could get time on a mainframe to parse information. But, as is becoming more obvious every day, that has changed. His participation is, in part, rooted in the respect he has for the work being done by UCLA Anderson faculty. Fagan cites three critical changes over the past decade that served as catalysts for the current big data tsunami. The more data one uses, the more machines one simply adds. This created an open standard and allowed companies other than Google to collect and analyze very large data sets in a less expensive way. As Fagan puts it, Hadoop democratized big data and created a competitive advantage for those diving into the data deep end. Now companies can just focus on applications. Their decisions now go beyond marketing products they think you might want. You can eliminate human beings for these types of decisions. But humans still have to make the big decisions. Humans are still needed to look at the creative and strategic issues. This is why we teach the subject. But, thankfully, humans are still needed to interpret and implement plans, even in the world of big data. That is where Anderson programs and classes on analytics and strategy have an important role to play. As an example, Hanssens notes how a movie studio would previously have to wait until opening weekend to gauge how it would ultimately perform at the box office. Now, studio executives can obtain very good readings of public interest in the movie several weeks before launch by carefully monitoring search and blog activity levels, leaving time for marketing intervention before opening weekend. The variety of data is also improving, says Hanssens. Data is no longer simply quantitative; i. It is now qualitative as well; through, say, audio and video data feeds. Even though air travel gets a bad rap these days, Hanssens, a frequent international traveler, believes that the data airlines collect actually has improved the customer experience. Ironically, Kelly believes that a shortage of aptitude in the field â€" and here he cites Hanssens as one of the true talents â€" is actually slowing the potential of data analytics. MarketShare was co-founded by Hanssens and utilizes some of the mathematical models Hanssens developed. Markman says that human capability converts recommendations from analytics and makes them actionable. Markman believes marketing professionals possess a skill set and intuition that take them only so far, with data now scaling their intuition by providing them with levels of information never before available.

THE BIG DEAL ABOUT BIG DATA pdf

3: A Kick In The Assets: The Big Deal About Big Data & IP | Above the Law

This is a basic schematic for what I think could function as a rudimentary Big Data market intelligence. When I sketched this out 4 years ago I pegged the hardware cost at close to $5 million.

The opportunity that data innovation presents the world is virtually unparalleled. Innovative software tools already are revolutionizing our lives in amazing ways. Understand the Language of Data To make the most of data, it helps to understand the language. The following is a glossary of terms to aid digital discourse: ABUNDANT DATA Once scarce, today the abundance of data has been made possible by a growing ability to gather meaningful forms of digital data in entirely new ways, combined with the plummeting costs of storing data, and new ways to create value from it. By combining models of intelligent behavior with expert knowledge, systems can better learn from examples and adapt to novel situations. Algorithms are used in almost every software program. Anomalies are also called outliers, exceptions, or contaminants in data and can often provide critical and useful information. It can be as simple as an incorrect street address, but bad data costs Fortune companies billions of dollars every year. BIG DATA Big data is an umbrella term that often refers to the process of applying computer analytics to massive quantities of data in order to discover new insights and improve decision-making. It often describes data sets that are so large in volume, so diverse in variety, and moving with such velocity that it is difficult to process using traditional data processing tools. A brontobyte is generally considered to be the equivalent of 1, yottabytes and is represented by a 1 followed by 27 zeros. CLOUD The cloud is a broad term that refers to any application, service, or data that is hosted remotely. In general, it is made possible by large groups of remote servers that are networked together to enable ubiquitous, on-demand network access to computing or storage resources. These systems are often able to learn and interact with people by combining information sources with context and insight. DARK DATA Dark data consists of unstructured and untapped data that is being stored, has not been analyzed or processed, and is believed to be neglected or underutilized in some way. DATA Data is information in a raw and unorganized form that can be digitally manipulated to represent conditions, objects, or ideas. Common types of data include sales figures, marketing research results, readings from weather sensors, or a list of cities and their populations. We now generate an estimated 2. It is often used to uncover hidden patterns or unknown correlations, and aid in decision-making. By defining at the start how specific data will be related to each other and put into motion, it is possible to design how the data will flow and control the flow of data to ensure it is protected throughout the system. DATA CENTER A data center is a physical facility that houses a large number of networked servers and data storage repositories typically used for remote storage and processing of large amounts of remotely accessible data. There are an estimated half a million data centers worldwide, many of which make up the cloud. It refers to the reliability, efficiency, and worthiness of the data for decision making, planning, or operations. DATA SCIENCE Data science is a discipline that incorporates statistics, data visualization, computer programming, data mining, machine learning, and database engineering in order to extract meaningful insights that can solve complex problems. Appropriate data security measures can help prevent data breaches, ensure data integrity, and protect privacy. It often involves a combined focus on people, processes, and technology. DATA SET A data set is a collection of related sets of information, typically separate elements, in a tabular form that can be manipulated as a unit. Research by Eric Brynjolfsson, an economist at the Sloan School of Management at the Massachusetts Institute of Technology, shows that companies that use data-directed decision-making enjoy a 5 percent to 6 percent boost in productivity. DATABASE A database is a large structured set of organized digital data designed so that the data within it can be rapidly searched, accessed, and updated. Data innovation is often described as a technology that enables disruptive shifts. To put it in context, today we create one exabyte of new information on a daily basis. HADOOP Hadoop is an open source software framework that was built to enable the processing and storage of huge amounts of data across distributed file systems. Because everything that can be connected, will be connected, some have more aptly described it as the Internet of Everything. By one estimate, we have only connected about 1 percent of the things in the world that can be connected. By , an estimated 50 billion

devices will be connected to the Internet. It can include basic summary information about the data like the author of the data, the date it was created, the file-size, and date last modified. It is numerically distant from the rest of the data and therefore, the outlier indicates that something is going on and generally therefore requires additional analysis. See also Anomaly detection. It can be simple, like identifying a repeating set of sequences within a DNA sequence, it can be finding a pattern in the way two data sets interact to discover whether there is a pattern connecting one event to another, or with the help of machine learning it can be looking for more complex patterns like finding numerical characters in a picture. A petabyte is roughly four times the amount of data contained in the Library of Congress. When data from the present can be compared to the past, it can often be used to help predict the future. It is often created, processed, stored, and analyzed within milliseconds. New data tools can help identify possible risks up front, better model an array of scenarios to help reduce the risk facing organizations, and monitor systems to identify problems if things begin to head off course. The cause is a root cause if once it is removed from a sequence of events, it prevents the undesirable event from repeating. Semi-structured data often uses tags or other data markers in what is sometimes knows as self-describing structure. It generally refers to data sizes small enough that a human could comprehend and analyze it. Terabyte hard drives can now be commonly found in home and work computers, or accessed via the cloud. To put it in context, a terabyte can store about hours of high-definition video. Text analytics is generally performed on natural language text like that contained in documents, transcripts, web postings, commentary, or forms. It can be useful for the summarization, discovery, or classification of content. It generally includes a timestamp and supports the daily operations of an organization. According to some estimates, unstructured information might account for more than 70 percent to 80 percent of all data in an organization. VARIETY Variety, one of the four Vs defining data innovation, represents the various kinds of data often from different sources that are combined and analyzed to produce insights. The variety of types of data that today are being processed in applications can include textual databases, transaction data, streaming data, images, audio, and video. For example, large data warehouses may receive billions of rows of new information each day. Time-sensitive data must be used as it is streamed in order to maximize its value. VOLUME Volume, one of the four Vs defining data innovation, refers to the amount of data processed â€” ranging from megabytes to brontobytes. As of , the World Wide Web is estimated to have reached 4 zettabytes. By , more than a zettabyte of data is projected to cross our networks globally on a daily basis.

THE BIG DEAL ABOUT BIG DATA pdf

4: The big deal about big data â€“ American City and County

Big Data Analytics is defined as "the process of examining large data sets that contain a variety of data types to uncover unknown correlations, hidden patterns, customer preferences, market trends, and other useful information".

Big data is certainly making a big impact. This is no less true in the world of biotechnology. A quick look at recent trends in the gathering, analysis and use of big data in biotech provides some insights. The efficiency with which we can gather this data has progressed at an astounding rate. Cost of sequencing a human genome since Source: NIH Other than genomics, different sources of data about our bodies â€" like proteomics, metabolomics, transcriptomics, epigenomics and others â€" are expanding rapidly and combining to create personalised biochemical fingerprints. Data from the Human Microbiome Project could dwarf the human genome â€" there are about 10x more bacteria than human cells living in your body. Also, an explosion in smart devices and sensors is making it easier to gather and distribute this data, often in real-time. For example, we have been working on the development of a novel biosensor platform for detection of glucose in saliva Figure 2 , with the potential to extend to other analytes. Devices like this offer enormous potential to provide previously untapped data about our bodies and behaviours. Increasing sequencing activity has led to an explosion of genomics data Figure 3 which has some researchers concerned about our ability to store and process it all. Increase in genomics data stored at the European Bioinformatics Institute Source: Nature But an even bigger challenge is meaningful analysis. The hype and then the spectacular failure of the use of Google data to predict flu prevalence is a good example of the potential pitfalls. On this front, the biotech world is beginning to partner with heavy-weights of big data â€" the likes of IBM Watson and Palantir â€" to provide much-needed analysis firepower. The big deal is that if we can effectively harness and analyse this data â€" and our ability to do so is improving every day â€" it could revolutionise healthcare. And that has the world of biotech very excited indeed. Much of the excitement centres around personalised medicine, where data about an individual is used to tailor their treatment. For example, since the Human Genome Project, some treatments for cancer have been tailored to the genetic profile of certain patients. The opportunity here for improved therapies and more efficient drug development is endless. But the impact of big data on biotech could be even further reaching. The application of deep machine-learning could enable rapid discovery and re-purposing of drugs without even stepping foot in a biology lab. Smart devices connected within the internet-of-things will stream data for the monitoring of clinical trials and remote healthcare. Data analysis will provide new insights around drug safety and improved pharmacovigilance. These are but a few applications and the list is constantly growing. The age of big data has undoubtedly arrived â€" and it is going to be a big deal for biotech. Share the good news.

THE BIG DEAL ABOUT BIG DATA pdf

5: The Big Deal with Big Data Isnâ€™t (Just) the Data - MIT Technology Review

So, what's the big deal about Big Data? The ability to comb through huge amounts of data enables data scientists to discover patterns and unexpected correlations that enable better, data-driven business decisions at every level of the organization.

The concept gained momentum in the early s when industry analyst Doug Laney articulated the now-mainstream definition of big data as the three Vs: Organizations collect data from a variety of sources, including business transactions, social media and information from sensor or machine-to-machine data. Data streams in at an unprecedented speed and must be dealt with in a timely manner. RFID tags, sensors and smart metering are driving the need to deal with torrents of data in near-real time. Data comes in all types of formats â€" from structured, numeric data in traditional databases to unstructured text documents, email, video, audio, stock ticker data and financial transactions. At SAS, we consider two additional dimensions when it comes to big data: In addition to the increasing velocities and varieties of data, data flows can be highly inconsistent with periodic peaks. Is something trending in social media? Daily, seasonal and event-triggered peak data loads can be challenging to manage. Even more so with unstructured data. This real-time tracking technology automatically generates 3-D data from the video of 14 cameras placed around the stadium to record every movement of the players. Why Is Big Data Important? You can take data from any source and analyze it to find answers that enable 1 cost reductions, 2 time reductions, 3 new product development and optimized offerings, and 4 smart decision making. When you combine big data with high-powered analytics, you can accomplish business-related tasks such as: Determining root causes of failures, issues and defects in near-real time. Recalculating entire risk portfolios in minutes. Detecting fraudulent behavior before it affects your organization. Data Integration Deja Vu: Big Data Reinvigorates DI To stay relevant, data integration needs to work with many different types and sources of data, while operating at different latencies â€" from real time to streaming. Learn how DI has evolved to meet modern requirements. A Comprehensive Approach to Big Data Governance Some analysts predict that data will soar to 10 times its volume by Along with this surge, big data governance issues will be more daunting than ever. Find out how a comprehensive platform from SAS â€" spanning data management and analytics â€" can help. Read paper Data lake and data warehouse â€" know the difference Is the term "data lake" just marketing hype? Or a new name for a data warehouse? Phil Simon sets the record straight about what a data lake is, how it works and when you might need one. Adding Hadoop to your Big Data Mix? SAS provides everything you need to get valuable insights from all that data. Learn more about big data solutions from SAS Who uses big data? Big data affects organizations across practically every industry. See how each industry can benefit from this onslaught of information. Banking With large amounts of information streaming in from countless sources, banks are faced with finding new and innovative ways to manage big data. Big data brings big insights, but it also requires financial institutions to stay one step ahead of the game with advanced analytics. Education Educators armed with data-driven insight can make a significant impact on school systems, students and curriculums. By analyzing big data, they can identify at-risk students, make sure students are making adequate progress, and can implement a better system for evaluation and support of teachers and principals.

6: What Is Big Data? | SAS US

Simply put, Big Data is the explosion of digitized data - created by people, machines, sensors, etc. - that acts as an audit trail, capturing what is happening in and amongst humans, machines.

How companies like Nike and Rent The Runway are leaders in using data to transform their business model in the application economy. By David Hodgson November 25, Underneath the varied landscape of the application economy the new raw material is data, and learning to mine and craft is the key to success. So what is this data and how can you transform your business? Structured versus unstructured data You often hear statements like 70 percent of business data is on the mainframe, or 80 percent of business data is structured data and only 20 percent is unstructured. Deriving value from unstructured data The companies that are differentiating themselves as we enter the application economy era are those that have learned to derive business value from unstructured data. This has been achieved largely by use of new analytical tools like Hadoop or also by combining analysis of unstructured data with their structured data in platforms such as Oracle, Teradata and DB2. These might be established companies re-enforcing their existing business models by using analytics and unstructured data to improve their operations. For example, banks can detect fraudulent activity from logs, geospatial data and buying pattern analysis. Another example could be a car company monitoring Twitter activity for a sentiment analysis around a new car model to predict potential recalls. Other established companies such as Nike have re-imagined their business model by aligning their sportswear to initiatives like health monitoring and data collection and analysis around the concepts known as the quantified self, biometric data and activity logging. And of course disruptive companies like Twitter, Rent The Runway and Kaggle thrive on generating and using data to create new business models that threaten the incumbents. Log data of various sorts, examples every company has are systems logs of user activity, system events and errors and comments in service desk tickets or customer surveys. Raw machine data from infrastructure like point of sale networks. Usually a subset of transaction data is loaded into formal databases but the other data items such as teller id might be useful data for analysis. Data from devices comprising the Internet of Things devices. This data source is still emerging and growing and the bulk of it will be outside your organization but today you might use RFID tracking, you might allow people to bring their own devices or you might have sensors in devices in a manufacturing facility. Collecting data from any of these sources could derive new business value if you set some data scientists on to it! Data you could add to you unstructured databases for almost zero cost: Social Data from Linked In, Facebook, Twitter or your own facility like Salesforce Chatter might be a rich source of market trend or sentiment data. Public Data from websites with APIs might be anything from weather reports, traffic data or government statistics. Then there is the textual data that could be mined from sources such as public financial listings and earnings reports. Where are you at with discovering what data you have and what new data you could collect? What percentage of your business data is unstructured? The answers to these questions could well be a leading indicator of your success in the application economy.

THE BIG DEAL ABOUT BIG DATA pdf

7: Whatâ€™s the big deal about big data? â€” Highlight

Because big data consists of a composite of different data types, the data of multiple departments is often used when generating insights. With insights that can in turn, help multiple departments, educating other departments on big data's utility and getting them to buy into collaboration is key.

Companies have never been in a better position to leverage the mountains of data available today to quickly gain insights for real business results. The technology that delivers this powerâ€”Big Dataâ€—is at work in virtually every sector of the economy: Retailers are now using predictive analytics to offer individual customers the up-sell or cross-sell items they are most likely to buy in real time, thereby increasing both sales and profits. Financial institutions are looking for anomalies in transaction patterns that can indicate fraud, again in real time. Healthcare providers are linking treatments to outcomes to determine which courses of action have the best results. These are just a few examples of the many, many operational and bottom line contributions Big Data is making to business. And those contributions multiply and expand when the data is virtualized. The ability to comb through huge amounts of data enables data scientists to discover patterns and unexpected correlations that enable better, data-driven business decisions at every level of the organization. This is what Big Data is all about. Relatively recent innovations in distributed computing and analytics are what make Big Data possible. The most important of these is a platform called Hadoop. Essentially, Hadoop has three key capabilities: It can handle both structured and unstructured data collected from many different and perhaps incompatible systems. It can enable distributed processing with commodity hardware, so the tasks running in parallel can be parceled out to many different servers. These three capabilities combine to give businesses higher-quality information because it comes from more sources at a faster pace. While this is certainly a viable option, VMware recommends a better option that delivers faster results: Virtualization technology has improved significantly in the last 10 years. This approach has both business and technical advantages: Faster time to results. A physical implementation involves ordering the appropriate hardware, waiting for it to arrive, completing the physical installation racking and cabling , installing the OS, and then configuring the network and the specific version of Hadoop itself so that everything will work. This is a process that can take weeks. In contrast, a virtual implementation can be completed in a few minutes. Virtualized Big Data can make use of the virtualization technology that is already deployed in the vast majority of data centers worldwide. Normally, managing Big Data infrastructure can be time consuming. However, with virtualized Big Data, the same virtualization management tools that administrators use to set up normal nodes and clusters are also used to set up the Big Data clusters, so the learning curve is significantly reduced. In other words, companies can gain all the benefits of Big Data using the resources they already have. The Hadoop platform is in a state of rapid evolution, with new capabilities appearing every few months. Adjusting to the changes that are bound to occur, or simply scaling up or down, is much simpler with virtual machines than it is with servers in the physical world, which may have to be physically replacedâ€”a time-consuming and costly process. And the added bonus of virtualized Big Data is that it can better address multitenancy issues. The fastest, most efficient and cost-effective way to achieve the benefits and insights Big Data can provide is through virtualization.

THE BIG DEAL ABOUT BIG DATA pdf

8: Big Data and Biotech - What Is The Big Deal?

"We're a believer in big data. I'm a believer in big data. I believe the data tells us something about our customers, that we ought to be able to then help meet a need they have by looking at how they're interacting financially.

The big deal about big data Leveraging big data takes collaboration and effort, but yields tremendous insights. Written by contributor 05 Mar The world generates a gargantuan amount of data every day â€" around 2. As digital devices of all shapes and sizes perform countless operations and transactions, they create data footprints that contribute to that daily total. Local governments possess and continually deploy many connected devices, such as utility meters, card readers, surveillance cameras and telematics-enabled vehicles. The data these devices yield can provide governments with invaluable insights. Governments that have leveraged this sort of data well have gained new abilities and have seen great results in their communities across their operations and budgets. But to be properly utilized, that data must be organized, analyzed and converted into actionable insights. The new normal The data that was generated about 10 to 20 years ago was straightforward. Raja gives the example of a single connected turbine, which can transmit 1 to 2 terabytes of data in one day. Connected cars, he adds, can generate new data every millisecond. Today, turbine and car data is more likely to be analyzed together, too. Since any sort of information in a digital format can be considered part of big data, it entails a variety of information ranging from structured data like geospatial coordinates or phone numbers to unstructured data like video clips or text messages. How do you drive intelligence, how do you drive actionable intelligence? Big data-related transportation initiatives of two large cities exemplify how working with big data can lead to insightful intelligence on transportation. The first step in making sense of that data though is actually gathering it. The art of data collection When Kansas City, Mo. To that end, the city worked with several technology companies and local contractors to install Wi-Fi access points and traffic video sensors across a block corridor of the streetcar route between mid and mid Sometimes, municipalities can receive data without installing infrastructure, as Louisville, Ky. In exchange, Waze gives the city access to a feed of anonymous data its users collect that shows traffic jams and alerts. That feed is then transmitted to an internal city server. Raja is quick to point out, however, that data obtained from sensors alone is meaningless in a big data context. Kansas City combines its video feed data with about 4, existing city data sets along with third-party data that Xaqt has access to, Bennett says. Louisville meanwhile, has traffic and collision data being fed into its server alongside its Waze data. But like raw ore obtained in mining, only so much can be done with raw data, even if sourced from different locations. The real value is obtained through refining those materials into valuable assets. The OPDA has data-driven performance agreements with each city department, and uses its dedicated statistics facility to analyze data, Black explains. Like Cincinnati, Louisville does all of its data analysis internally. For the Kentucky municipality though, this approach offers more than just dependability and manageability. Xaqt built the analytics platform that combines the Kansas City smart streetcar corridor infrastructure data alongside existing city data sets and third-party data. Kansas City has also used Xaqt for other data analysis throughout the city as well. The city has an office of performance management, an open data officer on staff and performs some of its own data analysis. Bennett predicts the city will do more performance measurements assessment in-house. Meanwhile, Xaqt has built several dashboards using data from the streetcar corridor project to better help Kansas City manage parking in real-time through insights in trends of parking violations, compliance, arrivals and occupancy, Crosby explains. The platform is also giving Kansas City the ability to predict the future. The city is undertaking a pilot project with 10 of its major streets in which data analysis techniques called predictive analytics will be used to predict potholes and forecast street maintenance. Tall grass, weeds and litter-related customer service complaints dropped 59 percent between fiscal year and Lean Six Sigma concepts are also applied to better city processes in a collaborative manner. Creating big data culture Because big data consists of a composite of different data types, the data of multiple departments is often used when generating insights. But a major step in creating a collaborative culture is creating a data governance policy, which Kansas City, Cincinnati and Louisville have in place. Key aspects of such a policy are including every department, accounting for internal

and public data storage, and covering data standards, privacy, classification, security and retention, Schnuerle advises. Educating the public to promote buy-in to big data initiatives is also key. Kansas City, Cincinnati and Louisville post lots of their analyzed data online for citizens of their communities to view. Like us on Facebook.

THE BIG DEAL ABOUT BIG DATA pdf

9: What's the Big Deal with Data? | BSA | The Software Alliance

We know that "big data" is a big buzzword for big business. However, with all of the data sources that entrepreneurs have available, what are the promises -- and potential pitfalls -- for.

Everyone seems to be talking about big data these days. Such analytics can improve learning and profitsâ€”but only if the organization has the right people and skills. Gail Dutton Big data can be daunting, but its analysis is making significant differences in organizations. By analyzing complex data sets across functional silos, organizations are gaining insights to help catalyze change, improve access to experts, speed onboarding, retain talent, and identify root causes for complicated issues. They often are those with depth and breadth of expertise, who influence others, know how the organization really works, and can reach beyond silos to accomplish results. By improving access to internal experts, the company was able to overcome bottlenecks and barriers more quickly than otherwise would have been possible and distribute information more effectively throughout the network. Halliburton worked with Activate Networks to improve communication among its global sites when a network analysis showed multiple clusters with few ties among them. Based on that analysis, Halliburton began strengthening cross-platform ties by creating mixed project teams, rotating well-connected individuals to other platforms, and creating an electronic expertise locator. Nine months later, connections had increased 25 percent and operational productivity 10 percent, costs caused by poor quality were slashed 66 percent, and customer dissatisfaction decreased 24 percent. New product revenue increased 22 percent. The improvements were attributed to the ability to make shared decisions more efficiently and to exchange best practices and innovations. Other organizations use big data analysis to retain talent. You can look at this over time and understand where an individual fits. Those who are becoming more isolated and less energized may be flight risks. Within 60 days, he says, it should be evident whether new executives are working closely with the necessary people and departments. DAU provides training for more than , active and reserve procurement and IT personnel throughout the U. Recognized as the best corporate university of by the Global Council of Corporate Universities, DAU worked with Knowledge Advisors to integrate data from multiple systemsâ€”including human resources, budgeting, and accountingâ€”with learning databases and student information. Key findings indicate that courseware quality is more important for younger learnersâ€”who prefer e-learningâ€”and for those with some graduate-level education, than for older learners, who prefer traditional classrooms and effective instructors. Guest speakers triggered higher levels of individual learning, which were reflected later in job impact and business results. Then, their root causes can be identified and any issues can be addressed. When finished, the linked system will operate like a talent management system for learning, linking to knowledge-sharing systems with features such as templates, regulations, and just-in-time training. This approach to big data analysis combines network science and behavioral science to improve collaboration and employee engagement. But even with advanced analytics, some data can remain unreachable. Physician narratives in medical records are a good example. These narratives are critical, particularly in difficult or chronic cases, yet require natural language analytics to unlock the information so it can be applied to other subsets of patients. Ultimately, big data analytics will increase in value as organizations deploy them to make cross-functional connections. These will foster insights that address the heart of issues that affect learning and, thus, productivity and profits. And that is a big deal. The majority of respondents 47 percent plan to invest in training to meet their capabilities gaps. Human Resources and Sales are seen as lagging in analytical skills when compared with other organizational functions. Assess your workforce for analytical capabilities and use that data to determine where to focus first. Any departments that fall well below where the acceptable level is should be dealt with first, but if all else is equal, work on increasing the analytical abilities of top leaders either through executive development or recruitment. To build analytical acumen, training should focus on using data to make better decisions rather than on specific tools and data-crunching techniquesâ€”although those are still important for some jobs. This type of training will help employees approach problems from a more empirical point of view. Some functions within your organization already may have the needed skills and can be tapped as subject matter experts to help educate

others. The hubbub regarding big data is mostly about that first word: If organizations are planning on making use of the enormous data sets available to them, infrastructure must be in place beforehand.

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