We challenge quiz





Predictive Analytics Marketing

Work force Analytics -Need of the hour Human Resources

Impact of Analytics in Operations Operations

Mr. Anant Tambade Tata Consultancy Services Exclusive Interview

-Big Query Google's answer to big data

About Us



OUR VISION

"To nurture thought leaders and practitioners through inventive education"

CORE VALUES

Breakthrough Thinking and Breakthrough Execution

Result Oriented, Process Driven Work Ethic

We Link and Care

Passion

"The illiterate of this century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn." - Alvin Toffler

At WeSchool, we are deeply inspired by these words of this great American writer and futurist. Undoubtedly, being convinced of the need for a radical change in management education, we decided to tread the path that leads to corporate revolution.

Emerging unarticulated needs and realities need a new approach both in terms of thought as well as action. Cross disciplinary learning, discovering, scrutinizing, prototyping, learning to create and destroy-the mind's eye needs to be nurtured and differently so.

We school has chosen the 'design thinking' approach towards management education. All our efforts and manifestations as a result stem from the integration of design thinking into management education. We dream to create an environment conducive to experiential learning.





Message from the Group Director

Dear Readers,

It gives me great pride to introduce Samvad's edition every month. Our Samvad team's efforts seem to be paying off and our readers seem to be hooked onto our magazine. At WeSchool we try to acquire as much knowledge as we can and we try and share it with everyone.



Prof. Dr. Uday Salunkhe, Group Director

As we begin a new journey with 2013, I sincerely hope that Samvad will reach new heights with the unmatched enthusiasm and talent of the entire Samvad Team.

Here at WeSchool, we believe in the concept of AAA: Acquire Apply and Assimilate. The knowledge that you have acquired over the last couple of months will be applied somewhere down the line. When you carry out a process repeatedly it becomes ingrained in you and eventually tends to come out effortlessly. This is when you have really assimilated all the knowledge that you have gathered.

At WeSchool, we aspire to be the best and to be unique, and we expect nothing but the extraordinary from all those who join our college. From the point of view of our magazine, we look forward to having more readers and having more contributions from our new readers.

Samvad is a platform to share and acquire knowledge and develop ourselves into integrative managers. It is our earnest desire to disseminate our knowledge and experience with not only WeSchool students, but also the society at large.

Wishing everyone a very happy and prosperous new year.

Prof. Dr. Uday Salunkhe, Group Director





From the Editor's Desk

Dear Readers,

Welcome to the December Issue of Samvad! The final issue for the year 2012!

As we step into 2013, we promise to bring you the best that Samvad has offered till date. With ten issues successfully published, we are proud to live up to the expectations of all. The response to Samvad has been overwhelming and the support and appreciation that we have received has truly encouraged and motivated us to work towards bringing out a better magazine every month. With renewed vigour and passion, we bring to you the December Issue of Samvad which revolves around the theme of "Analytics".

With WeSchool having courses pertaining to all spheres of management, it was natural for us to cater to all kinds of readers. And that has made us one of the few magazines in the country which invites articles from all spheres of management giving a complete holistic view.

We work on the platform of "*Igniting Thoughts of Tomorrow*" and we will constantly strive to provide articles which are thought provoking and at the same time adding value to your management education.

We hope you stay with us, read with us, share with us and grow with us! Hope you have a great time reading Samvad!

Last but definitely not the least, *we wish every reader a very successful and peaceful year ahead!*

Best Wishes, Team Samvad.

> "For last year's words belong to last year's language And next year's words await another voice."

> > T. S. Eliot.





Acknowledgments

Team Samvad would like to extend their heartfelt thanks to certain key members of the WeSchool family for their special efforts towards the making of this magazine.

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We deeply appreciate the help and support given to us by both **Prof. Amarkant Jain** and **Prof. Deepa Dixit**. Their insight and expertise is our driving force to ensure the sustainability of our magazine.

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We are grateful for the help and support lent to us by **Prof. Chitralekha Kumar** during the making of our magazine. Her readiness to help and encouragement went a long way in the successful completion of this issue.

We are indebted to **Prof. Jalpa Thakker** for all her help and guidance in the making of Samvad. Her insight and suggestions have been of tremendous benefit to us. The Samvad Team would truly be incomplete without her.







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Welingkar Education



WeAct

Round Table Conferences at WeSchool for Corporate Exposure

With a view to get the first year students acquainted with the corporate world and give them first hand experience in managing an event, WeSchool conducted Round Table Conferences in the Marketing, Human Resource, Finance, Operations domain. Industry Stalwarts, Entrepreneurs were invited to the WeSchool campus to discuss and give their views on a particular given topic. These Round Table Conferences gave an opportunity to the students of WeSchool to interact with



the corporate who hold an eminent position in the industry. It was an opportunity for them to understand the various company requirements, the traits required for managerial competencies and to be well versed with the happenings in the industry.



A Round table Conference was organized by PGDM Rural Management, 2012 – 2014 batch on 1st December, 2012. The event was inaugurated by Prof. Kanu Doshi; Dean of Finance at WeSchool. This event saw participation from various senior professionals from Banking and Finance, Agri—Business, IT & Telecom, Automotive, Design and Innovation and Development. Yuva Mitra and AFARM are the NGO's who have their presence in the ru-

ral areas and working for holistic development also graced the occasion. The topic for the RTC was "Emerging Economy: Evolving Role of a Rural Manager". Various opinions and views were shared at the Round Table Conference. It helped the students to gain insights on the importance Rural Management and understanding the rural environment. It also helped the students to understand the traits required to be an efficient rural manager and the various challenges that one will come across while working in this sector.



Tata Consultancy Services

<u>An Interview with Mr. Anant Tambade</u>

By: Stita Misra & Aniruddha Kulkarni

1) Please share with us your background and experience?

I am a Usability Expert with more than 13 years experience in fields of interface design, architecture, product design, packaging and branding. In my experience of varying disciplines of Design namely Product, Interface and Architecture, I have delivered innovative and usable solutions using User Centered Design methodologies.

I have hence gained insights in all phases of product development life cycles and have efficiently managed and delivered widely used solutions.

2) How has Analytics evolved over the last decade?

Analytics has evolved from a reporting tool which generated data sheets and charts to a tool which analyses data and other inputs to predict trends, leverage information to create effective communications, provide intelligence on consumer behavior, and measure user experience of products and services.

It is no more just a statistical data generator but, an effective way to manage business operations, get valuable insights, predict consumer behavior and create future strategies.

3) How would you define web analytics?

Web analytics is an advanced tool being used by businesses to analyse data generated from various business processes to take important decisions and create new strategies for growth. It is a tool to aggregate data in a highly efficient way to provide crucial insights into effective-ness of strategies, processes and operations.

4) What is the role that Analytics play in your current organization?

Analytics is becoming the most important tool being used not only by the senior management but, also by members of the organizations at lower levels. It is no more a requirement but a necessity for the organization.

Analytics is driving the way employees and managers are doing their daily tasks. It is a tool to provide vital information on the health of the business and effectiveness of new strategies.





WeChat

5) What is the importance of Web Analytics & User Experience in the organization today?

User experience is slowly getting acknowledged as something which not only makes things look and feel good but, also something with improves customer satisfaction and generate long tem loyalty.

The consumers are getting exposed to advanced technologies and highly gratifying experiences hence, the demand for a similar experiences from any products or services has become a norm.

Our organization has consciously recognized this change and has developed effective analytics tool to generate important information on consumer insights and future plans.

Analytics is helping the management to fathom the efficacy of the desired User experience of consumers.

6) What is the future of MBA students in the field of Analytics?

MBA Students have a huge opportunity lying ahead of them not only from the perspective of employment but, also a large amount of avenues are available to utilize expertise in Analytics.

They can leverage this opportunity by understanding the fundamental business needs of various organizations and the role Analytics play in enabling the organizations to fulfill these needs.

They should not miss this opportunity as the future for analytics is not a short one but it is a sustainable long term need. Businesses varying in sizes and geographies are relying a lot on people who have the knowledge and expertise in this domain.

It is niche and will stay the same for a long time...

7) What are the major challenges that you have faced in your career?

Some of the crucial challenges faced by me in the recent times are:

- Paucity of quality manpower having an ability to work on important projects. This is especially true with the quality of fresh graduates.

- Awareness about Usability and User Experience amongst the Jr. and Sr. Management personnel.

- The width of knowledge is growing due to the information boom but, lack of depth in this knowledge is a big challenge.

- A will to change products and services design to improve User experience. The willingness is still limited to incremental changes.





Tata Consultancy Services

8) According to you, what are the Traits for being a successful analyst?

Some of the traits of being a successful analyst are:

- Deeper understanding of business needs and processes.

- Ability to use tools for qualitative and quantitative research. This can be coupled with knowledge about contextual inquiry.

- Ability to synthesise analytical information from the perspective of business profitability and continuous growth.

- An open mind to learn and a spirit to accept newer challenges.

9) How are teams commonly using analytics to measure the effectiveness of the user experience their product/service is providing?

Teams across the globe are using analytics as eyes and ears of businesses to improve User experience for their customers.

Quick corrections in wrongly executed business decisions are saving huge losses to organizations not only from the financial perspective but also from the brand loyalty erosion.

The data, charts and trends generated through analytics is helping teams to leverage the same in creating innovative communication and marketing strategies. (E.g. cross selling of products and services)

10) What can User Experience learn from Web Analytics? What can Web Analytics learn from User Experience?

User experience can learn to iterate the UX (User Experience) strategies based on learnings from the Analytics. It is the Scorecard for efficacy of UX design.

Usefulness of Web analytics is one of the critical success factors for its effectiveness and this can be only achieved through a well designed User experience for the analytics solution.



Image Source: http://economictimes.indiatimes.com/photo/14853556.cms





WeChat



Image Source: http://www.fwisd.org/adq/PublishingImages/red%20arrow.JPG

11) According to you what is the Future of analytics?

Analytics will become a basic necessity for any business to achieve desired growth.

In the near future augmented reality coupled with business intelligence will generate highly useful insights for businesses.

The predictive analytics being used by majority of large businesses is already showing signs of maturity and promises a availability of a tool for effective synthesis required for taking crucial business decisions.

The accuracy of analytics will also improve drastically aiding in improving the efficiency and effectiveness by many notches.

12) Which advice / recommendation would you give to a web analytics professional?

Do not rely only on data but utilise analytics as a tool to acheive desired business growth.

As it is rightly said, " It is not important how good a tool is but, it is more important to develop a high quality skill to use it to its maximum potential by applying a innovative mind and extreme dedication"

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Next Big Thing

<u>Analytics – Is it the next big thing?</u>

By: Parikshit Vashist, PGDM-FS (2012-2014), SIMSR, Mumbai

In a world generating increasing amounts of data, the person most in demand in organizations across countries is the business analyst, who can sift through all the data and obtain an insight to enhance the organization's performance. "What gets measured, gets managed" this quote by the late management guru, Peter Drucker, represents why most companies invest in analytics.

In the running of every business, a huge amount of data is generated. Until a few years ago, in many companies, much of this data would lie unused, while the organizations would focus primarily on market analysis and consumer behavior patterns. But what happens to all that information that is generated? What if someone were to sit down and look at all that data and try to analyze how the information could be used to enhance performance of the company?



Image Source: http://www.shutterstock.co.in

This is how organizations started realizing the importance of Business Analytics – using all that information to aid in improving performance and help decision making. Throughout the world, companies are now beginning to understand that the most important part of the business is analyzing its aspects and figuring out how to make them all work towards enhancing and streamlining the various processes. And the way to do it is to sift through the massive amounts of data that accumulates in the business processes, and cull out the most important bits.

In technical terms, Business Analytics refers to the skills, technologies, applications and practices for continuous iterative exploration and investigation of past business performance to gain insight and drive business planning. It focuses on developing new insights and understanding of business performance based on data and statistical methods.

Business Analytics makes extensive use of data, statistical and quantitative analysis, explanatory and predictive modeling, and fact-based management to drive decision making. Analytics may be used as input for human decisions or may drive fully automated decisions.





General Management

The field of Business Analytics has pretty much always been around. "Companies like Capital One, which is a highly rigorous analytical company, started using analytics nearly 10 to 15 years ago. But it is becoming popular only now because people have started noticing the success of these companies after they used analytics as a competitive strategy". Now a lot more companies have started systematically capturing data, which they believe contain vital information that will help them in various facets of business, like planning strategies, etc, and are using analytics, as they now feel that it helps hugely in decision making.

Another example of a company reaping profits solely based on the predictive powers of Business Analytics is the well known stationery and office super store Staples. Staples over years discovered that the best way to grow its business and build loyalty was to analyze the purchasing patterns of its core customers and target them with relevant, profit generating offers. To do that, Staples used and is still using Business Analytics for predictive modeling and customer insight to fine-tune its marketing campaigns.



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Broadly speaking, there are three types of analytics:

•*Descriptive Analytics:* In this branch, insight is gained from historical data with reporting, scorecards, clustering, etc.

•*Predictive Analytics:* This branch of analytics consists of predictive modeling using statistical and machine learning techniques.

•*Prescriptive Analytics:* Here, optimization techniques, simulation models, etc are used to aid decision making.



Next Big Thing

Basic domains within Analytics are:

- •Retail sales analytics
- •Financial services analytics
- Risk & Credit analytics
- •Talent analytics
- Marketing analytics
- •Behavioral analytics
- •Collections analytics
- •Fraud analytics
- •Pricing analytics
- Telecommunications
- •Supply Chain analytics
- •Transportation analytics



Image Source: http://www.google.com

What Analytics entails:

There is a lot of jargon on analytics that keep doing the rounds, like business intelligence and Big Data, but at the end of the day, it is all about figuring out what kind of data there is and making sense of it all in a business context. However, prediction analytics is not a pure science. "Usually this is more useful for larger firms than SMEs or start-ups.

For such big organizations, a very large amount of data is generated every day, and analyzing it and coming up with prediction is usually probabilistic in nature. With the advent of cloud technology, it is easier for companies to store a large amount of data for analysis. This data can be in supply chain, social media or even sports.

Is there any future in Analytics?

As far as today's world is concerned, with the massive amounts of data generated every second across the world, Business Analytics is going to become absolutely vital. The role of a business analyst is going to become increasingly critical in the next couple of years. "But that said, any person who's looking for a job opportunity in any kind of business must have some ability to be able to analyze data.





General Management



Image Source: http://www.google.com

It is not about sophisticated way of doing it, but they should have some idea of the structure, the methodology behind it all. At the end of the day, however high end an analytical tool or software you may use, it's only going to end up analyzing what you ask it to. So it's increasingly important for most business students, and even more so if you're looking for a career in Business Analytics.

Business schools must pay attention and focus on this stream, and they must equip the students with the right skill set for them to have a basic idea about data and its analysis, whatever stream they are in. Of course, there will certainly be a lot of on-the-job learning, and obviously every job and every business is different, their approach, their analysis, even their data will be different. But it is incredibly important that going forward in a world as complex as ours, one knows what the markets are like and the underlying patterns there, and that can come about only if you're able to analyze the available data properly and utilize it in a productive fashion; it will only provide more support to decision making in any process, be it supply chain or consumer behavior or marketing or anything else.

> "War is ninety percent information". -Napoleon Bonaparte (French Military and Political Leader)

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Big Data Analysis

BigQuery: Google's step towards Big Data Analysis

By: Prashant Varma, PGDM-BD (2012-2014), WeSchool

There is so much data and so little business intelligence. This is so true in this information age where 2.5 quintillion bytes of data get added each day. In this scenario the companies either get buried by this avalanche of big data or use expensive technology tools to mine its riches. This ability to access and analyze endless sources and types of structured and unstructured details is revolutionizing marketing and transforming entire business. Large corporations have invested armies of data specialists and huge sums of money in big data hence they are able to make highly data driven business decisions, and respond and adapt to changing market conditions more quickly than their competitors. However there are many companies which cannot afford to invest the bulk. Google hopes to help those kinds of companies with their data analysis by offering up their servers as alternatives.

Google sits on masses of traffic and advertising data, and has decided that it should take advantage of its expertise in building the infrastructure to handle those petabytes of information to offer a data analytics service in its cloud. In November, Google offered a limited number of developers access to some of its most powerful data analysis software, part of what Google uses to index the internet, in a product called BigQuery.



Image Source: http://www.bigqueue.com

Google's BigQuery product lets companies upload their information to Google and then perform business analytics in the cloud. BigQuery enables businesses and developers to gain realtime business insights from massive amounts of data without any upfront hardware or software investments. BigQuery is accessible via a simple UI or REST interface. It lets the companies take advantage of Google's massive compute power, store as much data as needed and pay only for what they use. The data is protected with multiple layers of security, replicated across multiple data centres and can be easily exported. BigQuery also gives the companies the ability to run SQL based queries against many terabytes of data.



General Management

They can also combine data across different databases using JOIN queries. Companies can use it in-house for their own analytics, or they can build services on top of the product.

It is common to have problem that take half a day to analyse. But Google's BigQuery is very powerful. It is capable of returning a query with five terabytes of data in 15 seconds which is about 10 times faster than the speed of many corporate data systems. A company using BigQuery has to have data stored in the cloud data system, which costs 12 cents a gigabyte a month, for up to two terabytes, or 2,000 gigabytes. Above that, prices are negotiated with Google. BigQuery analysis costs 3.5 cents a gigabyte of data processed. Amazon, Google's competitor which is also considered the leader in online data storage and computing on the other hand charges 12.5 cents for a gigabyte of storage, with prices dropping for larger volumes or limited service guarantees.

The Web has always been a great leveller, and new Web-enabled technologies are putting more and more big data capabilities into small businesses' hands. BigQuery is doing the same but it is unclear, how central the enterprise market is to Google, where over 95 percent of revenue still comes from advertisements aimed almost exclusively at consumers.

Well! The opportunities are endless.

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III natality	repository_fork	STRING
III shakespeare	repository has wiki	BOOLEAN
III ugrams	repository homepage	STRING
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Image Source: http://www.bigqueue.com

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Breather

Eight levels of analytics

Not all analytics are created equal. Like most software solutions, you'll find a range of capabilities with analytics, from the simplest to the most advanced. In the spectrum shown here, your competitive advantage increases with the degree of intelligence.

1. STANDARD REPORTS

Answer the questions: What happened? When did it happen? Example: Monthly or quarterly financial reports.

We all know about these. They're generated on a regular basis and describe just "what happened" in a particular area. They're useful to some extent, but not for making long-term decisions.





2. AD HOC REPORTS

Answer the questions: How many? How often? Where? Example: Custom reports that describe the number of hospital patients for every diagnosis code for each day of the week.

At their best, ad hoc reports let you ask the questions and request a couple of custom reports to find the answers.

3. QUERY DRILLDOWN (OR OLAP)

Answers the questions: Where exactly is the problem? How do I find the answers?

Example: Sort and explore data about different types of cell phone users and their calling behaviors.

Query drilldown allows for a little bit of discovery. OLAP lets you manipulate the data yourself to find out how many, what color and where.



4. ALERTS

Answer the questions: When should I react? What actions are needed now? Example: Sales executives receive alerts when sales targets are falling behind. With alerts, you can learn when you have a problem and be notified when something similar happens again in the future. Alerts can appear via e-mail, RSS feeds or as red dials on a scorecard or dashboard.





Breather

5. STATISTICAL ANALYSIS

Answers the questions: Why is this happening? What opportunities am I missing?

Example: Banks can discover why an increasing number of customers are refinancing their homes.

Here we can begin to run some complex analytics, like frequency models and regression analysis. We can begin to look at why things are happening using the stored data and then begin to answer questions based on the data.





6. FORECASTING

Answers the questions: What if these trends continue? How much is needed? When will it be needed?

Example: Retailers can predict how demand for individual products will vary from store to store.

Forecasting is one of the hottest markets – and hottest analytical applications – right now. It applies everywhere. In particular, forecasting demand helps supply just enough inventory, so you don't run out or have too much.

7. PREDICTIVE MODELING

Answers the questions: What will happen next? How will it affect my business?

Example: Hotels and casinos can predict which VIP customers will be more interested in particular vacation packages.

If you have 10 million customers and want to do a marketing campaign, who's most likely to respond? How do you segment that group? And how do you determine who's most likely to leave your organization? Predictive modeling provides





8. OPTIMIZATION

Answers the question: How do we do things better? What is the best decision for a complex problem?

Example: Given business priorities, resource constraints and available technology, determine the best way to optimize your IT platform to satisfy the needs of every user.

Optimization supports innovation. It takes your resources and needs into consideration and helps you find the best possible way to accomplish your goals.

The best analytics for your business problem

The majority of analytic offerings available today fall into one of the first four areas, which report historical data on what happened in the past but no insight about the future. For simple business problems, these analytic solutions will be all you need. But if you're asking more complex questions or looking for predictive insight, you need to look at the second half of the spectrum. Even better, if you can learn to use these technologies together and identify what type of analytics to use for every individual situation, you'll really be increasing your chances for true business intelligence.

Velingkar Education



HR Analytics

HR Analytics

By: Shilpa Saboo, MBA (2012-2014), SCMHRD, Pune

"In God we trust. All others must bring data" - W. Edwards Deming

Rather than blindly following the most popular or loudest opinion, data should be used to question, inform, and shape one's perspective. It increases and enhances one's understanding so as to bring credibility to an argument.

Today, organizations have tremendously huge amounts of data with them which they can use effectively to predict workforce trends, reduce risks and increase returns, according to a study. Key business drivers can be identified to ensure efficient allocation of resources. HR has not had a traditional depth of experience in making fact-based decisions. Given the importance of people and talent for the success of an organization, it's time for organizational leaders to move beyond gut instincts and wisdom in making workforce decisions. Using analytics in HR to show business impact and predict future performance is slated to become the next trend in the profession.

Analytics is becoming critical in making more effective decisions in domains of HR like workforce planning, recruitment, compensation, development programs, incentive structuring, deploying critical talent and succession planning. HR analytics will can be made useful if it extends beyond reporting what is (the present) or what was (the past) to predicting and analyzing what will be (the future).

One of the greatest challenges today is to get all systems in one place so as to ensure their communication with each other in an efficient manner. Multiple HR platforms are a huge undertaking for big companies and their integration is all the more difficult. The best way to go about it is to carry out the analytics work behind the scenes and expose the output directly to leaders rather than exciting them about analytics at the outset and spending months/years to integrate data which will reduce their excitement very quickly.

A flexible and responsive set of processes is required to routinely and easily extract, clean, transform and integrate the information as well as to react to the constant changes in the data. This requires an effective information supply chain that pushes actionable information to managers and employees where and when they need it during the execution of their normal work.





Human Resources

Currently, organizations have amassed large quantities of workforce data from their enterprise resource planning (ERP) and using workforce analytics will engage the workforce which will be able to thrive in tough conditions. Moving from a reporting culture of filing reports to an analytics culture of creating and using actionable data requires companies to define analytic goals precisely. Building a sustainable and scalable analytics capability may not happen quickly and will take time but once in place, it will make workforce decision-making easier and effective.



Some practical problems faced by many organizations in using HR Analytics is to manage data from multiple countries, poor data analysis and communication skills and in-

Image Source: fsn.co.uk

ability to match data across various sources. These act as major challenges. An organizational culture endorsing HR analytics at the highest level and communicating this widely to the bot-tom level provides a committed, supportive and engaged workforce.

It is not necessary for organizations to examine the entire HR data. A beginning with one HR process (such as an employee opinion survey) or a piece of talent management data can have an important impact on business outcome. True analytics that drives the business and shows a real return-on-investment is about linking HR data using cause-effect statistics to practical business outcomes.

Common metrics being measured in any company includes engagement, performance, attrition/retention, headcount, diversity, and compensation. Most existing systems allow monthly reporting and historical data; very few are able to provide real-time information. This limitation forces executives and leaders to be more reactive than proactive or predictive. Analytics is a rigorous and systematic approach to defining workforce and business problems and testing successful solutions which are critical to competitive success enabling organizations to achieve its highest potential.

Technically, analytics will help an HR Manager to set clearly defined and measureable objectives, determine near-term and long-term skill sets that are needed by the organization, identify the most efficient behavioral qualities across various business areas, measure Key Performance Indicators (KPIs), benchmark organizational performance internally and cross-industry. In this way, positive effects on the bottom-line can be seen.





HR Analytics

Falling technology and data storage and management costs make sophisticated workforce analyses faster, cheaper, and more broadly available. Software-as-a-Service (SaaS) technology and Cloud Computing are the latest solutions which are easily scalable and accessible to companies of almost any size.

Analytics is an advantage not only for large organizations. Small businesses can also leverage from it equally. In case of small firms, the focus is typically on individual performance, thus developing a performance-based culture using performance management tools.

A comprehensive road-map to conduct HR Analytics includes determining critical outcomes, creating cross-functional data team, assessing measures of critical outcomes, conducting objective analysis of data, building and executing the program, measure the progress and re-prioritize the outcomes; in the stated order. Many organizations follow this approach and its proper implementation is the key initiative to making HR a strategic function in any organization.

Analytical tools enable HR professionals to comprehend the overall performance of an individual employee as well as the company. The analytics that a company chooses, decide the analysis on HR programs and the workforce performance. It integrates critical data from across the enterprise value chain transforming silos of information into relevant, timely, and actionable insight so as to help managers take



Image Source: http://mortenkamp.wordpress.com



Image Source: higher-reason.com

the most responsible and the best possible strategic decisions for the organization.

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Human Resources

Work Force Analytics : Need Of The Hour

By: Avdhut Patane, MMS (2012-2014), SIMSREE

No dimension of an enterprise is more important than its people. It is the most decisive, and usually the most expensive factor needed for success. Fortunes are not made from products. Any product is really the sum and substance of intangibles—human ideas, transformed into something tangible—a commodity.

Workforce Analytics is the comprehensive and continu-ous assembly and evaluation of data on "who is doing what?" and "how well?" in organizations across the country and around the world. It is a strategy implemented to extract maximum out of the workforce. It is not only

about monitoring the performance but also about analyzing and motivating it. It is a technology to gain visibility into the organization's largest single expense—the flexible workforce. Workforce analytics enables companies to identify human capital needs before they even arise and efficiently allocate resources globally to staff projects appropriately.



Image Source: www-935.ibm.com/services

For any business function to perform outstandingly, it is important to match the goal of the organization with the goal of that particular function. Any organization looks forward to earning maximum returns on minimum investments. From the chart we can see that only 3% of HR's are not involved in corporate strategy, for which we need the exact data of human capital which the analytics systems can provide accurately and easily. In workforce analytics, data is used to find out the effectiveness of particular investments made in some strategic moves.



Some of the strategic advantages are:

- •Monitoring various performance initiatives
- •Measuring returns on particular initiatives
- •Identifying Critical Business Matrices
- •Procuring accurate data with ease





Work Force Analytics

Determine Critical Outcomes:

An organization must first determine the top two to three most critical outcomes on which to focus. For example, outcomes such as productivity, turnover and customer satisfaction are the most commonly desired ones—but these are not the end of the list. Financial indicators, costs and safety-related data are all outcomes that can be connected to employees.

Create a Cross Functional Data team:

Next, the need to identify various owners of the outcome data shall arise. The data owners become the key members of a cross-functional data team (CFDT) that needs to be organized. This team should consist of measurement expert, key line-of-business leaders or metric owners, and HR leadership.

Assess outcome measures:

This step gets into the details of the actual analysis process, but several measurement characteristics of each outcome measure must be assessed. We need to consider the frequency of measurement, the level and organizational owner of that measurement in order to ensure its accountability .

Analyze data & Build programmes:

Analyzing includes finding the statistical relationship between various components. It can include structural equations or modeling. The statistical component of this step accomplishes three things:

1. Understanding the relationship between employee initiatives, skills, behaviors, attitudes and meaningful business outcomes.

2. Prioritizing types of interventions (i.e. determine where to spend time, money).

3. Calculating expected ROI to determine levels of investments and returns To execute this we need to build program by the help of software people.

Measure and adjust:

In the last step, re-measurement to assess progress and calculation of actual return-oninvestment is important. Business leaders understand the importance of goal setting and measurement. They also understand the importance of creating a culture of measurement and accountability. Like other organizational decisions, leaders should make slight adjustments to initiatives along the way based on regular measurement





Human Resources



From the results we can see that the impact of HR analytics systems has been seen on various functions which in turn can impact the productivity directly. Overall, the implications are significant. Organizations are making fundamental decisions about their human capital— the resident knowledge, talent, skills, and intellectual property of their employees— without the benefit of processes and technologies that can provide a consistent method for collecting and analyzing data.

This puts HR professionals at a distinct disadvantage in corporate boardrooms. Understanding the often-shifting requirements of human capital and their relationship with long-term business strategy is a senior executive conversation and one that should be couched in a rigorous, fact-based analysis of workforce performance. This could well prove to be challenging for most HR professionals, since only a small percentage are currently using sophisticated analytics to assess human capital performance.

An economy that has never been more complicated demands a more comprehen-sive commitment to measuring the most fundamental ingredient in the success or failure of any enterprise: people.





Financial Analytics

Financial Analytics

By: Sahil Kasat, Pratik Shah, PGDM E-Biz(2012-2014), WeSchool

Introduction

In today's ever-changing business environment, financial executives are exploring ways in which the financial function can bring greater value to their organizations. They are now focusing on effective way of providing the information that internal management needs to more effectively "run" the business.

Financial executives must now think beyond the traditional financial information contained in general ledger systems and consider how best to provide for the comprehensive measures and analytical methods needed to drive decisions throughout complex, dynamic companies.

Data analytics is the method of using raw data by extensive use of statistical and quantitative analysis for the purpose of drawing business-related conclusions and for predicting business outcomes. The banking and financial sectors, one of the earliest adopters of knowledge services, are the largest user of analytics, followed by the retail, healthcare and pharmaceutical sector.

Below table shows what types of questions can analytics answer for an organisation.



http://www.google/images.com

To achieve these objectives, accounting, finance, tax and other financial areas are developing data warehouses combined with advanced analytics to serve the needs of the entire enterprise. We refer to this advanced decision support capability for finance as financial analytics.

What is Financial Analytics?

Financial analytics is a set of tools or a system that can be used to increase a company's financial productivity, specifically its profitability. It works through assessing all relevant information related to business so that a financially beneficial decision can be made. Leading banks use





Finance

business analytics to predict and prevent credit fraud, saving millions. Retailers use business analytics to predict the best location for stores and how to stock them. Pharmaceutical firms use it to get life-saving drugs to market more quickly. Even sports teams are getting in on the action, using business analytics to determine both game strategy and optimal ticket prices.

Need of Financial Analytics

Financial uncertainty can't be avoided. But uncertainty from fluctuations in the value of complex financial instruments can be measured, managed, and leveraged to your company's advantage. This is where Financial Analytics comes into picture.

The financial services sector has gone through unprecedented change in the last few years. Customers are expecting a more personalised service from their banks. According to the EMCsponsored IDC Digital Universe study, the world's data is doubling every two years with 1.8 trillion gigabytes expected to be created in 2011. A challenge for the industry is, therefore, how to use the breadth and depth of data available to satisfy more demanding regulators, but also improve services for customers.

"Advances in financial theory and technology, globalization of financial markets, price volatility, regulatory changes, risk aversion of managers, and increased quantitative sophistication among investment and business professionals have created a greater need for the analytics.

Role of Analytics in Business process for prediction

In the mid-nineties, Companies began implementing supply chain management (SCM), customer relationship management (CRM) and other sophisticated system solutions to optimize their end-to-end operations as well as began strengthening their relationships with customers and suppliers. All of this contributed to a complex information environment that forces organizations to adopt a new level of integration across the entire value chain.

Additionally, organizations realized there is

an overlap in the analytical processes of the



Image Source: www.pwc.com

Recent developments in financial analytics have been made in these areas of "overlap." For example, by combining traditional financial measures (revenue and cost) with CRM information (customer history) and applying predictive modelling tools and techniques, companies can now project the future profitability associated with an individual customer or household.

December Issue, 2012. Samvad

organization.



Financial Analytics

Role of Analytics in Stock Market Prediction

Predicting stock market movements is a challenge for investors due to lack of consistent prediction methods. However, research shows that there is a strong relationship between news stories and stock price movements. Predicting the stock price movements based on news items is gaining increased importance in the text mining community.

Role of Analytics Fraud Detection

Financial institutions lose millions of dollars to fraud every year. In banking, fraud arises as a result of stolen credit cards, forged checks, misleading accounting practices, etc. Financial services firms need to have improved analytical capabilities to reduce fraud levels and the associated costs.

A common thread in the above three application scenarios is a proper blend of structured analytics and various forms of unstructured analytics. A well-blended solution is much better than traditional analytics solutions.

Role of Analytics in Credit strategy and risk management

Analytics is used for credit-scoring build a regression model and calculate the Gini coefficient using the SAS language to create a credit strategy for a bank so that they can reduce risk as much as possible.

Where India is in Analytics

The table shows some of the acquisitions by India companies in analytics which is expected to

uisitions by Indian comm

reach \$1.15 Bn by 2015. It shows how much growth is still to be unlocked.

Conclusion

Today's complex information environment is forcing organizations to reach for a new level of integrated financial analytics to stay competitive in the marketplace.

With integrated financial analytics, organizations are able to aggregate, analyze and share information from and with sources inside and outside the organization. As the role of the finance function continues to evolve, financial analytics will be actively used throughout the organization.

Acquisit	10115 DY 11	idian companies in analytics	space
Date	Acquire r	Target	Acquisi- tion size (\$ mn)
Mar `07	WNS	Marketics Technologies, an offshore analytics services provider	65
Oct `07	Cogni- zant	MarketRx, a US-based analytics solutions provider	135
Sept `11	Genpact	US-based Symphony Marketing Solutions	43
Sept `11	Genpact	EmPower Research, a re- search & media monitoring company	NA
Apr `12	Wipro	Promax Application Group, an Australian analytics firm	36.5

Image Source: http://www.business-standard.com/india/





Finance

Dismal Performance Of IPO'S In India

By: Chaitanya Gandhi , MMS (2012-2014), JBIMS

The performances of Initial Public Offerings that have been floated in the past few years have raised many concerns. An empirical study shows that there were 118 IPOs listed in the last three years. Out of these, 72 issues are trading below their issue price. The prices of 25 stocks fell between 25% and 50%, whereas price of 21 stocks has fallen by 50%-75%. There has been a furore in SEBI over this dismal performance more than 60% of the IPOs.

IPOs in India have reduced from an investment product which used to sell after intense valuation, research and in-depth return potentiality analysis to an investment product which sells because of expertise in public relations. There are quite a few scripts in which this phenomenon can be observed.

Reliance Power



Image source: www.moneycontrol.com

Reliance Power was issued at Rs. 450 in February, 2008. Today it is valued at Rs. 92. In the five year period it has reduced by about 80%.

As can be seen, Reliance Power has declined at a much higher rate as compared to the market indices. In fact, it has underperformed as compared to the Power Index as well.





IPO Analysis

Index	Levels at the time of Issue	Current Levels	Change %
Sensex	17,500	19,000	8.57%
Nifty	2,700	2,300	-14.81%
Power	3,670	1,950	-46.87%
Index			

Image source: www.moneycontrol.com

DB Realty



Image source: www.moneycontrol.com

DB Realty was issued at Rs. 468 in February, 2010. Today it is valued at Rs. 152. In the three year period it has reduced by about 68%.

Index	Levels at the time of Issue	Current Levels	Change %
Sensex	16,500	19,000	15.15%
Nifty	2,500	2,300	-8.00%
Realty In- dex	3,300	2,050	-37.88%

Image source: www.moneycontrol.com





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Punjab & Sind Bank



Image source: www.moneycontrol.com

Punjab & Sind Bank was issued at Rs. 120 in December, 2010. Today it is valued at Rs. 71. In the two year period it has reduced by about 41%.

Index	Levels at the time of Issue	Current Levels	Change %
Sensex	20,000	19,000	-5.00%
Nifty	2,850	2,300	-19.30%
Bankex	13,000	14,000	7.69%

Image source: www.moneycontrol.com

Hence even Punjab & Sind Bank has declined at a much higher rate as compared to the market indices.

As can be seen the above cases, the stock prices have declined more than the index and hence more than the average decline in the market. This is because the stocks were highly overpriced in the first place. The prices rarely justified the potential of the company as can be deduced from observation. This results in the distortion of the information resulting in massive losses to the investors.

The root cause of this evil is lack of effective investor education and absence of stricter due diligence by the merchant bankers. In this respect U.K.Sinha, Chairman, SEBI said "Some of those IPOs gave us the impression that due diligence was not being done. There were assertions being made about physical assets being in place and those physical assets were found to be never there to begin with."



IPO Analysis

SEBI (Securities Exchange Board of India) is the regulating body which has the onus to ensure the investor protection and promote the investor education. Currently SEBI is taking measures in this respect by appealing and enforcing the merchant bankers and the investment bankers to adopt stricter norms of valuations and due diligence, imposing hefty fines on the miscreants etc.



Image Source: http://bullshouse.com/blog/

The need of the hour is to promote the investor awareness by including the basic knowledge dissemination at the earliest stage. The basic course on financial markets must be incorporated in the school curriculum so that the citizens of the country are made aware of the basic model of the system. This will result in an increase in the average level of awareness amongst the citizens and deter the ponzi schemes for good.

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Finance

Risk Analytics alive- helping great organizations excel

By: Yogesh Athale, PGDBM(2012-2014), SIMSREE Shruti Patil, MMS(2012-2014), SIMSREE

Analytics is a powerful tool that can help real businesses gain the hindsight, insight, and foresight needed to solve complex problems that seem intractable.

Its uses are myriad, and its applications span the enterprise. Analytics can be applied to better understand and manage business areas such as:

- •Customer relationship management
- •Financial management and planning
- •Risk and compliance management

•Supply chain management

Workforce management



IBM CRM Solutions
Image Source: www.topnews.in

NEED FOR A RISK ANALYTICS PLATFORM (RAP)

In recent years securities trading has been undergoing radical change due to both the availability of new technologies and changes in the regulatory environment. Decimalization, direct market access, rise in the number of ECNs (Electronic Communication Networks) in securities exchanges around the world and increases in the number of new, tradable financial instruments have all contributed to the explosion in the volume of securities data available.

Advances in network and server technologies and in software have made possible the dramatic rise in the rate at which new data is delivered to trading desks. More data is available, along with a better analytical capability to transform data into actionable information, which in turn increases demand for more data at faster rates.

Consequently, the rate at which trading and portfolio decisions are made has risen significantly with profound implications on the business process infrastructure. Model-driven, quantitative trading applications are replacing conventional trading desks. The search for profits is leading to investments that accelerate trading decisions, pre-trade analytics and trade order generation. However, this acceleration is not, as of yet, accompanied by a similar development in the infrastructure supporting risk monitoring and controls.

The efficacy of risk controls and other trade cycle monitoring functions may suffer in two ways. The data necessary for event-driven analysis may not become available within the tolerable latency window that renders analysis or reporting meaningful. In addition, the entire data set available for risk analytics and exposure monitoring becomes stale and does not represent an



Analyze to Excel

accurate view of exposure that automated trading (including algorithmic trading) introduces.

It may not be necessary to have the risk control cycle coupled tightly with trade order cycle events. However, it is becoming clear to the buy-side and sell-side firms that the risk monitoring and control must have access to the same integrated, continually updated data through the trading cycle.

The explosion in the number of trades to executing trading/hedging strategies due to algorithmic trading is changing the temporal relationships within the trade cycle, and this points to a tighter coupling between pre-trade analysis, post-trade analysis and risk monitoring.

As the manner in which new data is captured, distributed, analyzed and presented in trading platforms changes with dramatic shifts in data volumes and flow rates, the manner in which risk management process captures and uses data must also change. The risk controls process should be able to peek into the data and trade order flow stream at a much earlier period and additional "checks and balances" might have to be developed that overlap with the trade order cycle.

Risk Analytics Platform (RAP) is designed to pull the risk monitoring and analytics life cycle much closer to the trade order life cycle and make available to the risk management function

the same trade and risk data of the trading system in the same timeframes of the pre-trade analysis, trade order generation and execution.

FUNCTIONING OF A RISK ANALYTICS PLAT-FORM (RAP)

A Risk Analytics Platform captures high frequency data in cache databases and stores long-term trend data in a scalable, high capacity, vectorbased, cluster-aware shared data repository for complex analysis to support different user applications with different data availability analytical requirements,



Image Source: w.dnbtransunion.com/images/Edate_archi.gif

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without reliance on data movement between different application environments. Live market data can be delivered through a validation and transformation process that is either in place or can be designed using technology from partner community. The market and reference data that is delivered in files is maintained in a file system and load process is managed by RAP.

During Pre-Trade Analysis it captures real-time data at rates that vary based on source and asset class. The analysis includes pricing calculations, determining trade order and bid/ask prices and trade order routing strategy using algorithmic models. Most users develop their own proprietary code with their own algorithms and occasionally use models provided by prime brokers.

The data capture rates for Risk Analytics Platform range from 120,000 inserts/sec to 1 million inserts/sec on 64-bit server platforms depending on configuration, operating system and processor family. The typical pre-trade analytic queries with native SQL performance ranges from 20-30 milliseconds to 400 milliseconds varying with server configuration. C/C++ applications using stored procedures or native API are considerably faster and can be multi-threaded.

The Post-trade Analysis is assessment of the efficacy of executed trades after trade execution notices are received. The analysis encompasses transaction cost analysis, execution efficiency (Best time vs. Best price vs. Order Strategy) and performance in terms of contribution margin.

THE ROAD AHEAD

The definition of Profit in Capital Markets is undergoing an unprecedented change, to a great extent driven by initiatives such as Basel II. Institutions are expected to report profit as risk-adjusted returns on capital; this raises the standards on the risk monitoring function. The requirements are tighter on not only monitoring and measuring market risk accurately and more frequently, but on capital reserves as well.



Image Source: http://www.sas.com/offices/

In such a Dynamic environment, Risk Analytics Platform services time-critical data to applications that support trading, portfolio and risk decisions. It is indispensible to seamlessly perform fundamental functions such as Pre-trade Analysis and Post-trade Analysis, and can be a critical factor for the timely handling of Transactions worth Billions of Dollars which may be instrumental in changing the fate of an organization in today's disruptive, highly competitive world.

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WeChallenge

- 1) In the context of web-analytics, what is a click-path?
- 2) Identify the web-analytics software from the logo seen below.



3) Identify the gentleman seen below in the context of analytics.



4) What did Google acquire in April 2005 to form Google Analytics?

- 5) In the context of web-analytics, what is the 'Hotel Problem'?
- 6) Pick the odd one out of the following giving appropriate justification for doing so:

Piwick, Mint, Sawmill, Urchin, Tealeaf





WeChallenge

- 7) By what name do we know the ad-monitoring and analysis division of TAM Media Research, India?
- 8) The founder of which research giant invested in the world's first television metering device?
- 9) On 1 June 2012, what was the Google Web Optimizer rebranded as?
- 10) In the context of web-analytics, what refers to the percentage of visitors who enter a page of a site and leave the site rather than continue viewing other pages within the same site?
- 11) What is a term used to describe a collection of data sets which are so large and complex that it becomes difficult to process using on-hand database management tools or traditional data processing applications ?
- 12) What is the term used to describe the process that attempts to discover patterns in large data sets ?
- 13) Which is the most widely used website statistics service in the world?
- 14) Which company acquired UK-based analytics firm Coalition Development Ltd , along with its subsidiaries, for about £29 million (Rs. 250 crore) in 2012?
- 15) Which company acquired US-based Decision Resources Group (DRG) for \$635 million in 2012, which provides proprietary research on healthcare trends, clinical research and mergers & acquisitions in the bio-pharma Industry?





Trivia

- Amitabh Kant, the then Joint Secretary under the Union Ministry of Tourism, is credited to have officially branded and promoted the "Incredible India" campaign first in 2002.
- Seen below is a still from a TVC of Madhya Pradesh Tourism conceived and created by O&M.



Image Source: http://ashokaholidays.blogspot.in/2010/12/mpajab-hai-sabse-gazab-hai-but.html

- The Tourism Bureau of Taiwan has adopted "the heart of Asia" as its campaign slogan.
- It is estimated that the city of Chennai, India's health capital attracts about 45 percent of health tourists from abroad arriving in the country and 30 to 40 percent of domestic health tourists.
- Deccan Odyssey is the joint venture of the Government of Maharashtra and the Union Ministry of Railways modelled on the 'Palace on Wheels' to boost tourism on the Konkan route of the Indian Railways. The duration of the journey is 7 nights, starting every Wednesday from Mumbai.
- There are 29 UNESCO World Heritage Sites in India as of November 2012. The Western Ghats have been the latest (2012) addition to the list
- In the context of Tourism industry, the term MICE stands for Meetings, Incentives, Conferences and Exhibitions.
- Expedia is an Internet-based travel website based in the US with localised sites for 22 countries. It was founded as a division of Microsoft Corp. in 1996 and spun-off in 1999. In December 2011, TripAdvisor was spun off from Expedia in a public offering.





Results

The much awaited results of the "WeSchool" Challenge is right here! WeSchool Challenge Competition :

- Saurabh Pramanick, PGDM-BD, 2012-2014, WeSchool, Mumbai
- Vidhisha Gune, MMS (2012-2014), WeSchool, Mumbai
- Kaustubh V. Kokane, MMS (2012-2014), WeSchool, Mumbai
- Shailesh Bhadra, PGDM (2011-2013), WeSchool, Mumbai

Congratulations and thank you for writing to us!

- Parikshit Vashist, PGDM-FS (2012-2014), SIMSR
- Prashant Varma, PGDM-BD (2012-2014), WeSchool
- Shilpa Saboo, MBA (2012-2014), SCMHRD Pune
- Avdhut Patane, MMS (2012-2014), SIMSREE
- Sahil Kasat, Pratik Shah, PGDM E-Biz(2012-2014), WeSchool
- Chaitanya Gandhi , MMS (2012-2014), JBIMS
- Yogesh Athale, PGDBM(2012-2014), SIMSREE Shruti Patil, MMS(2012-2014), SIMSREE
- Siddesh Undirwadkar, MMS (2012-2014), WeSchool
- Dinesh Kumar Nuti, Master of Management (2012-2014), SJSOM-IIT-B
- Manish Arora, MBA(2012-2014), DoMS, IIT-Roorkee
- Malvika Vakil, MBA(2012-2014), SIBM, Pune



Data Analytics

A new tool for competition

By: Siddesh Undirwadkar, MMS (2012-2014), WeSchool

What is Data Analytics?

Data Analytics, also referred to as Big Data is the new tool for competing using extensive analytics. Analytics can also be termed as fact based decision making, replacing the traditional decision making approaches. Data analytics make use of Quantitative or Statistical techniques to solve the business problems. However, the scope of Data Analytics goes far beyond only solving the problems.

Image Source: http://www.dashboardinsight.com

Analytics have extended

their reach to be a major contributor to modern day decision making and a new way of competing. Data Analytics are being used to drive all decisions and innovations in all aspects of business from Supply Chain Management to Financial Services and also Manufacturing Process optimization.

The traditional ways of competing in the business are increasingly turning obsolete. The traditional ways of competing depended on differentiated products, high performance processes of business, geographical advantage and some of the unique proprietary technologies. The only factor that holds some significance is highly effective business processes and ability to tune these processes for maximum profitability and effectiveness. Data analytics helps to extract key insights and make decisions based on existing business data. The knowledge of this fact has forced all industries to consider Data Analytics as a necessary inclusion in their decision making process. As Rob Neyer of ESPN has quoted, "In business, the question isn't whether or not you'll jump in to Analytics, the question is when". Companies in the top third of their industry in the use of data-driven decision making were, on average, 5% more productive and 6% more profitable than their competitors.

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Operations

The Use of Data Analytics

Data Analytics is increasingly being used in many businesses as a Decision making tool. The sudden surge in the availability of business transaction data has enabled the companies to delve in their data to gain insights. The availability of Data has increased due to increasing use of ERP systems and websites. As of 2012, about 2.5 Exabyte's of data are accumulated each day, and that number is doubling every 40 months. The increasing use of internet has increased the availability of data. It has also enabled easy access and storage of transaction data by a company. This gives companies an opportunity to work with many petabytes of data in a single data set from the internet as well as its own internal sources.



Image Source: http://spotfire.tibco.com/blog

For instance, it is estimated that Wal-Mart collects more than 2.5 petabytes of data every hour from its customer transactions. The analytical software makers have also risen and so have the companies providing the analytical services. Statistically oriented software firms like SAS, IBM and SPSS are churning out new developments every year. Database and enterprise vendors like Oracle, Teradata and SAP are enhancing functionalities to provide the analytical abilities. The developments in required Hardware are also advanced.

Analytics can support all the business processes. However the companies today are focusing on one of the attribute at which they have to be better than anyone else in the industry. We may call this factor as the differentiating factor. For instance, for an Insurance company, the differentiating factor may be the ability to identify the profitable customers and designing the suitable products for them at optimum price. For ecommerce companies like Flipkart.com, the differentiating ability will be to identifying the customer taste and liking and suggesting the products to them at best prices. For Facebook and LinkedIn, the analytics are used to suggest friends to the millions of its users. The Analytical ability need not always be used for only the differentiating factor. It can be used to make the best decisions. Decisions like selecting a location of store or a factory can be done analytically. Important decisions like merger and acquisitions can also be taken based on systematic data analysis behind it.

Data Analytics in Retail Operations

Retail is an industry that changes constantly at a faster rate. Increasing competition, a wide array of product offerings, increasing customer sophistication, multiple touch points to the customer, and consumer complexity are just a few of the many examples that constitute a dynamic and constant state of change in the area of retail sales. As the population continues to increase and consumers are presented with more choices, the numerous challenges that a retailer faces become more pervasive. To stay competitive, retailers must take an analytical, guided, and prescriptive approach to better understand their business and anticipate customer behavior.



A new tool for competition

Data Analytics in Supply Chain

The Supply chain forms a critical part of most of the businesses. Some businesses like manufacturing and ecommerce are completely dependent on the optimum use of their supply chain. The supply chain can be optimized, improved and made customer centric using Data Analytics. It helps serve the customers better and work with the suppliers more effectively. The supply chain has its roots in the use of quantitative analysis to optimize logistics. The best user of data analytics is Wal-Mart. The company collects all the data about its sales and inventory at a single database. The data is then analysed to optimize the processes. The Wal-Mart supply chain data is also made available to its suppliers. Wal-Mart buys products from thousands of suppliers across several countries. The supplier's data about the movement of the supplies is collected and analysed. Data consists of daily sales, purchase orders, invoices, claims and returns. Wal-mart also collects data about its consumers. This helps it to analyse the data and ensure that customers have the products they want, when they want them and at right price. Thus it has an advantage over its competitors.

In case of E-commerce companies like Amazon.com, the supply chain is of importance to manage a constant flow of new products, suppliers, customers and promotions. It needs to track if the products are getting delivered to the customers at promised time. Amazon.com uses data analytics to plan the supply chain when it launches a new product category. It uses it to further optimize order quantities to satisfy constraints and minimize holding, shipping and inventor costs.



Image Source: http://hereandnow.wbur.orga.com





Operations

One more company using Data analytics in its supply chain is Dell Computers. Through an innovative Data Analytics and data warehouse architecture, Dell was able to streamline management of big data to facilitate global enterprise-level decision making use of data analytics is helping Dell to increase productivity and business agility. They gather, analyze, and monetize the data flowing in from social media sites and other external context sources.

The Dell BI and data warehouse architecture is also enabling Dell to heighten order-processing efficiency. By developing new BI applications that integrate with order management systems, Dell is enhancing customer satisfaction. It has reduced shipment time by 33 percent, decreased overdue orders by 60 percent, and diminished their backlog. The Dell team is also using fresh insights to help improve product quality. They developed analytic models for predicting potential product issues that might require them to replace defective parts as much as up to after the first 60 days of use. As a result, the company can alert component manufacturers and help prevent defective parts from being installed in Dell products. Dell has saved more than US\$2 million so far by avoiding part replacement.



Image Source: http://blogs.ubc.ca

Future of Data Analytics in Competition

Data Analytics has surely changed the ways of competition. We observe that as the knowledge of analytical method spreads across business, more and more businesses are willing to invest in the analytical methods. The analytical methods are here to stay and will replace the traditional method of decision making based on intuition and gut feeling. With the explosion of data within the companies, the analytics will only improve and reach efficiency. The fact not to be overlooked however is that the shift to Data Analytics needs to begin throughout a business and the people have to be made to change their outlook to an analytics oriented one. Applying such attitudes in every aspect of business is most important.



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Analytics in operations management

Impact of Analytics in Operations

By: Dinesh Kumar Nuti, Master of Management (2012-2014), SJSOM-IIT-B

Introduction

In today's competitive scenario where even a minute drawback or lag in the processes is being observed as a lost opportunity for the businesses, the business leaders have become concerned with the processes and their outcomes to counter their contemporaries. Managing the operations of a business has become the quintessential requirement of today's business. The keyword which has emerged in operations management called the 'Supply chain' has become the crux of the entire business. Managing the complex supply chains has become a challenging task to the present day managers. Identifying an issue in a supply chain is just a rudimentary step towards improving it; rather, the most crucial step to resolve the issue is the analysis, be it qualitative or quantitative. In addition to identifying the issues, the focus now is on continuous improvement. Cutting costs and reducing the lead times in the supply chain are the two continuous objectives on which the present day businesses are centralized. To assess the performance of the supply chain and improve the profitability by working on these two objectives, continuous analysis of quantitative data and qualitative reasoning is required. This highlights the importance of Analytics in the improvement of supply chain performance.

Support of Information Systems (IS) to Analysis

Manpower, machinery, servers etc. can be identified as the chief resources in any organization. But, the hidden resource, which is playing a pivotal role for assessing and enhancing the performance of the supply chain, is Information/Data. Analysis of this information provides a clear idea on where there is a lag in the supply chain and where the costs can be reduced. Information management in the supply chain involves collection, analysis and handling of the information. The present day businesses are employing the Information Systems (IS) support which not only provides the moderating effect but also ensures the fast movement of information for a highly responsive supply chain. IS has provided the organizations with the analytical tools which lead to superior business performance through data driven intelligence.

Role of Analytics in efficient and responsive supply chains

Efficient supply chain is employed to deliver products that have predictable demand patterns at the lowest possible costs by controlling the synchronization of flow while achieving targeted service levels. This supply chain is employed to provide make-to-stock items. This type of supply chain is common in automobile industry where the demand for a vehicle is predictable and any change in the demand pattern can be conveniently addressed by the manufacturer as it takes considerable time. It is relatively easier to analyze the historical data of a product and make decisions accordingly as the patterns are expected to remain consistent over time.





Operations

Responsive Supply chain is employed to deliver products in an unpredictable environment i.e. in the condition of both the extremes of stock-out and excess inventory. This type of supply chain is common in the retail and consumer goods industries where the shelf-life of the product is very low and the aisles are frequently required to replenish with new goods. from the customer end to the supplier end.

Impact of Business Analytics on Supply Chain

Analytics combines technology with human effort to identify trends, perform comparisons and highlight opportunities to reduce costs and lead times in supply chain functions. The existing ERP/SCM systems have been satiating the companies with loads of data.



Image Source: <u>http://profitpt.com/pdf/</u>

But they reflect only what has already happened instead of what will happen. Adding analytical capability can provide the predictive analysis like demand forecasting that yields better and more-informed decisions. Organizations have become adept in using ERP/SCM systems to collect huge amounts of data, create reports and automate the transactions involving the members of supply chain. But, Business Analytics (BA) enhances the value of SCM/ERP investments by integrating data from these transactional systems with downstream consumption data to upstream supply data, removing inaccuracies, providing analytical insights and establishing trends to understand the implicit drivers of costs and revenue.

BA uses certain approaches, tools and organizational procedures in complement with one another to acquire and analyze information and predict the possible outcomes in any of the four areas of Supply Chain Operations Reference (SCOR) model – Plan, Source, Make, and Deliver. A research model which is built based on the analytics of SCOR model is presented in Fig. 1. This model analyzes the relationships between BA in SCM and the performance in the SCOR areas of Plan, Supply, Make, and Deliver, considering Business Process Orientation (BPO) and IS support as the moderators of this relationship. BPO is a process oriented approach of thinking, working and making improvements in the processes.

Growing importance of Analytics in Operations Research

Analytics have proven to be highly effective in improving the performance of the processes and supply chains of the organizations as a whole in the recent years. In the past, decisions were made based on intuition and experience; the present day organizations prefer data driven decision making to intuition as it provides a solid validation and in-depth analysis of the issues. It is not a metaphor to state that in future, an organization's performance would be dictated by how effectively it uses the analytics in making decisions.





Big Data

<u>BIG Data</u>

By: Manish Arora, MBA(2012-2014), DoMS, IIT-Roorkee

"Big data" refers to datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze. There has been a growing consensus in the industry to define big data, by three V's-

•Volume - the magnitude of data has to be large, in petabytes not just gigabytes

•Velocity - the data has to be frequent, daily or even real-time



•Variety - the data is typically (but not always) unstructured (like videos, tweets, chats)

Image source: www.datasciencecentral.com

Big Data is not to be confused with large amount of data. One of the most important distinctions between big data and large datasets is the speed at which the data must be captured and available for analysis. Following example from Forbes illustrates the point:"When you walk through the airport and they take pictures of everybody in the security line to match every face through facial recognition, they have to do that almost in real-time. That becomes a big data problem. If I am a bank and looking at a vast number of credit scores and histories, and I don't need to provide an answer in five seconds but can do it next day, then that is not a big data problem."





Marketing

Sources of big data:

The companies have been overwhelmed with data; this data pertains to customer purchases, preferences, etc. Growing e-commerce industry is adding more to it in form of purchase orders, digital images, logs, videos, etc. Social media is also contributing in increasing the amount of data available for analysis. Daily over 200 million Twitter posts, and Facebook messages are generated for analysis of marketers. Smartphones, tablets have also contributed by allowing people easy access to information anywhere and everywhere. This is just tip of the iceberg, our big data is not limited to these sources.



Examples of big data:

- •Walmart handles more than 1 million customer transactions every hour.
- •Facebook handles 40 billion photos from its user base.

What's so BIG about big data anyway? Look at following salient points to understand it:

•According to The Global Language Monitor, "Big Data is the **biggest buzzword**. It has been called the key to new waves of productivity growth....".

•Large companies across the globe have scored early successes in their use of big data. Some companies have been using data extensively and effectively to their advantage. For instance, **Amazon uses customer data to power its recommendation engine** "you may also like ..." based on a type of predictive modeling technique called collaborative filtering. Similarly **Wal-Mart was an early adopter of vendor-managed inventory to optimize the supply chain**.



Big Data



•To drive efficiency and quality, it is estimated that the potential value from data in the sector could be more than \$300 billion in value every year, twothirds of which would be in the form of reducing national health care expenditures by about 8 percent.

 In the developed economies of Europe, it is estimated that government administration could save more than €100 billion (\$149 billion) in operational efficiency improvements alone by using big

data. This estimate does not include big data levers that could reduce fraud, errors, and tax gaps (i.e., the gap between potential and actual tax revenue).

Why talk about big data now?

The history of IT investment and innovation and its impact on competitiveness and productivity strongly suggest that big data can have similar power to transform our lives. The same preconditions that enabled IT to power productivity are in place for big data. Research shows that there are two essential preconditions for IT to affect labor productivity. The first is capital deepening—in other words, the IT investments that give workers better and faster tools to do their jobs. The second is investment in human capital and organizational change-i.e., managerial innovations that complement IT investments in order to drive labor productivity gains.

Big data retail levers can be grouped by function

Function	Big data lever
Marketing	 Cross-selling
	 Location based marketing
	 In-store behavior analysis
	 Customer micro-segmentation
	 Sentiment analysis
	 Enhancing the multichannel consumer experience
Merchandising	 Assortment optimization
(7.)	 Pricing optimization
	 Placement and design optimization
Operations	 Performance transparency
	 Labor inputs optimization
Supply chain	Inventory management
	 Distribution and logistics
	optimization
	 Informing supplier negotiations
New business models	 Price comparison services
	 Web-based markets

SOURCE: McKinsey Global Institute analysis

Image source: www.mckinsey.com





Marketing



Image source: blogs.sap.com

Implications for business

- Better Segmentation and targeting: Big data allows even-narrower customer segmentation and therefore much more precisely tailored products or services.
- New product development: With more data about user preferences and needs big data is helping companies come up with right products.
- Big data can augment or even replace management: With use of big data controlled experiments could be carried out to make better management decisions. For e.g.: data from sensors could be used to control and self regulate processes reducing staffing costs by 10 to 25 percent while increasing production.
- Real time customization: Accessing information on a user in real-time would help companies offer better deals.
- Big data can increase transparency: Making relevant data more accessible can increase efficiency, cut time of production and thus reduce cost.

Use of big data could be divided into three major blocs:

- Data: Collect data from internal and external sources to understand what is happening to your operations or your customer.
- Modeling: Use the data to get workable models that can either help you predict better or allow you to optimize better in terms of your business.
- Transform: Use data and models to your advantage. This is all about empowering the managers with the tools to make use of data and models. Train and provide them with their artillery for effective decision making.





Predictive Analytics

Predictive Analytics

By: Malvika Vakil, MBA(2012-2014), SIBM, Pune

Predictive analytics uses confirmed relationships between explanatory and criterion variables from past occurrences to predict future outcomes. The predictions are most often values suggesting the likelihood a particular behaviour or event will take place in the future. Predictive models work by analysing past performance to assess how likely a customer is to exhibit a specific behaviour in the future. Predictive models often perform calculations during live transactions, for example, to evaluate the risk or opportunity of a given customer or transaction when an ATM or credit card is used.

Need for Predicative Analytics

Some of the developments that stimulated the application of data mining and predictive analytics.

Increased data from many sources: Data today is available at a plethora of outlets including retail point-of-sale purchases, online transactions, medical, educational and governmental records, global positioning systems, RFID (radio frequency identification devices), wireless electronic data sensors, and so on. Today, it costs very little to collect data since it is a by-product of information technology developments. And once data are collected, it also costs very little to store in data warehouses.

Lower cost of electronic communications: Historically data stored in different locations was seldom shared – it was examined on site which limited its value. But today with the internet and related communications technology the cost of transferring data is minimal. Improved client/user interfaces have increased accessibility to software that executes predictive analytics. It is no longer necessary to write computer instructions and hope no mistakes are made. This improves accessibility but opens the door for incorrect application of the methods. Thus, extensive training is needed to ensure that appropriate tool is applied, decision rules are properly selected, and findings are correctly interpreted.



Image source: spotfire.tibco.com







Image source: http://www.predictiveanalyticsworld.com/

Predictive Analytics with Data Mining: How It Works

Here are a few specifics about how Predictive Analytics actually works.

Predictors Rank the Customers to Guide Marketing

Predictive analytics' central building block is the predictor, a single value measured for each customer. For example, recency, which is based on the number of weeks since the customer's last purchase, has higher values for more recent customers. This predictor is usually a reliable campaign response predictor: the organisation will receive more responses from those customers more highly ranked by recency. For each prediction goal, there are an abundance of predictors that will help organisations rank their customer database. For example, consider a customer's online behaviour: Customers who spend less time logged on may be less likely to renew their annual subscription. In this case, retention campaigns can be cost-effectively targeted to

customers with a low monthly usage predictor value.

Combined Predictors Means Smarter Rankings

It turns out that organisations can do even better by using more than one predictor at a time, combining them with a model.

One way to combine two predictors is with a formula, such as simply adding them together. If both recency and personal income influence the chance that a customer will respond to a mailing, a good predictor may be: recency + personal income. If recency is twice as important, give it twice the weight: 2 x recency + personal income.



Image source: www.dunnsolutions.com



Predictive Analytics

The Computer Makes the Model from Organisation's Customer Data

The real trick is to find the best predictive model. This is a difficult problem, since there are so many options. There are many kinds of models, such as linear formulas and business rules. And, for each kind of model, there are all the weights or rules or other mechanics that determine precisely how the predictors are combined.



A profit curve (shown above)

estimates the profit the organisation will receive from a campaign guided by predictive analytics, depending on how many prospects they contact. The profit this curve predicts depends on the ranking of your customers given by a predictive model, the cost per contact (e.g., printing and mailing costs), and the average profit per respondent.

As shown by the upper line, the more customers the organisation contacts, the greater is their profit, up to a point. This predicted profit line rises initially, since organisation will contact customers more likely to respond first. After exhausting those highly ranked, though, contacting the remaining customers will only serve to decrease the profit. You'll probably want to stop your campaign at the high profit peak, although that choice may depend on your longer-term marketing strategies.





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Marketing

Conclusions

A careful combination of predictors performs better customer prediction by considering multiple aspects of customers and their behaviours. Predictive analytics finds the right way to combine predictors by building a model optimized according to your customer data. Predictive analytics builds models automatically, but the overall business process to direct and integrate predictive analytics is by no means

facebook data 500+ Terabytes Per Day

Image source: www.greenm3.com

automatic -- it truly needs the marketer's marketing expertise.

Predictive Analysis and its applications:

Marketing and Sales

Organisations can use information from their large databases to understand customer behaviour and predict future purchasing patterns. For example, overnight package shipper FedEx uses predictive analytics to develop models that predict how customers will respond to price changes and new services, which customers are likely to switch to a competitor, and how much revenue will be generated by new storefront or drop-box locations. For retailers, areas where predictive analytics show the most promise for include predicting merchandise assortment and depth, deciding store layout, determining pricing strategies, controlling inventory and shrink-



Image source: marksmith.ventanaresearch.com

Welingkar Education

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age, effectiveness of promotions and coupons and understanding how sounds (music in clothing stores) and scents (food smells in supermarkets) influence purchase likelihood.

Advertising

Recent studies show that almost 60 percent of customers search online before making a purchase, and of those – 66 percent say they regularly use TV and the internet simultaneously. That is, they sit in front of their televisions and use their laptops. Studies also show that once online, 80 percent of internet traffic begins at a search engine.



Predictive Analytics

Thus, search engines are where the customer is "connecting the dots" and if companies are not there, customers will not see them and they will be less likely to become engaged with the companies offline.

Marketing Research and Business Intelligence

Businesses are using predictive analytics to determine likely responses to advertising messages, distribution alternatives, and pricing strategies. This includes not only whether customers are likely to show an interest in a product or service, but the rate at which inquiries, web site visits



Image source: spotfire.tibco.com

or store visits are converted into actual sales. This is particularly true as marketing researchers learn how to utilize both structured and unstructured data in their models.

Likely future developments

So what does the future hold for the emerging field of predictive analytics? Data will continue to increase exponentially, but data quality will need to improve. Indeed, it appears evident that it will continue to increase substantially. The task ahead then is to ensure the quality of data increases. Researchers will need to improve their quantitative skills. But this will not diminish the role of qualitative skills. In fact, successful application of quantitative techniques will be based upon improved qualitative research. Academic and industry researchers will need to understand and apply the most rigorous scientific methods to ensure the reliability and validity of their approaches, and achieve the predictive accuracy necessary to be globally competitive. By doing so, the large amounts of information available can be used to create knowledge instead of information overload.

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WeCare

Exploring the Grass roots initiative.

Students at WeSchool in association with Yuvak Biradri (Bharat), an NGO undertook a week long research based project called "Exploring the Grassroots"

This project was aimed at understanding the life and culture of the people in rural areas. In addition to this, the students focused their attention to understand the various government schemes implemented at the grass root level such as National Health Mission, Mahatma Gandhi National Rural Employment Scheme, Integrated Child Development Scheme, National Horticulture Mission and so on.

There were four districts that were covered in Maharashtra, i.e. Jalgaon, Kolhapur, Satara and



Meeting with Gram Panchayat of Gulumb Village

Dahanu. The students got an opportunity to interact with the Gram Panchayat and understand their working. The students also conducted "Innovation Workshop for the Rural Youth" in the villages. Such interaction and understanding gave them a confidence boost to strive for a change in the society. Workshops were also conducted in a D.Ed school to tell them and give information on the Right to Education Act. They undertook tree plantation as well. The students, based on this learning also wrote a research paper

which will be evaluated by Dr. Sten Ekman, faculty at Malardalen University in Sweden and Dr. Anna Ekman. This week long exposure gave students the chance to interact with the villagers, farmers, Various Self Help Groups (SHG), sugar industry owner, Block Development Officers and also to understand the various schemes and the various aspects of the same.



Innovation Workshop with Youth - Gulumb Village





Call for Articles

We invite articles for the January 2013 Issue of Samvad. The Theme for the next month: January 2013 - **"Entrepreneurship"** The articles can be from Finance, Marketing, Human Resources, Operations or General Management domains.

Submission Guidelines:

- Word limit: 1000 words or a maximum of 4 pages with relevant images.
- Cover page should include your name, institute name, course details & contact no.
- The references for the images used in the article should be mentioned clearly and explicitly below the images.
- Send in your article in .doc or .docx format, Font size: 12, Font: Constantia, Line spacing: 1.05' to samvad.we@gmail.com. Deadline for submission of articles : 25th January, 2013
- Please name your file as: <YourName>_<title>_<MBA vertical> e.g. Marketing/Finance
- Subject line: <YourName>_<InstituteName>_<Year>
- Ensure that there is no plagiarism and all references are clearly mentioned.
- Like our Fb pg: Samvad.WeSchool.Student.Magazine.
- Follow us on Twitter: @Samvad_We

WeChallenge

Submission Guidelines:

- Winners to be decided on basis of the time by which we receive your entries.
 - 1. First place for entries before 13/01/2013
 - 2. Second place for entries before 16/01/2013
 - 3. Third place for entries before 20/01/2013
- Send in your entries to samvad.we@gmail.com
- Please mention your name, institute name, course details & contact number in the mail.





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The Harp Of India

Why hang'st thou lonely on yon withered bough?

Unstrung for ever, must thou there remain; Thy music once was sweet - who hears it now? Why doth the breeze sigh over thee in vain? Silence hath bound thee with her fatal chain; Neglected, mute, and desolate art thou, Like ruined monument on desert plain: O! many a hand more worthy far than mine Once thy harmonious chords to sweetness gave, And many a wreath for them did Fame entwine Of flowers still blooming on the minstrel's grave: Those hands are cold - but if thy notes divine May be by mortal wakened once again, Harp of my country, let me strike the strain!

Henry Louis Vivian Derozio

Image Copyright: Aniruddha Kulkarni

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