NASSCOM® APPLICATION, INNOVATION AND **MATURITY OF INDIAN ANALYTICS**

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NASSCOM®

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FOREWORD

90%

of the world's data was created in the last two years

1,40,000 to 1,90,0<u>00</u>

shortage of specialists with analytical expertise in the US alone For businesses these are times of exponential change. Customer connected by smartphones, high-speed mobile networks and social media platforms are forcing them to engage and react in real-time. The explosion of data means that new skill have to be acquired to integrate multiple data sets and derive insights from within it. Ever-changing regulatory frameworks further add to the complexity. Companies that lead the curve are the ones who have welcomed and embraced change.

Moreover, in the age of social sharing, businesses are awash with more data than they once dreamed possible, giving birth to the need for hyper-personalisation, where campaigns are focused on data related to consumers' behaviour, rather than just their demographic and psychographic data.

With the explosion in data, rises the importance of analytics. Experts believe that 90% of the world's data was created in the last two years. A Bain and Company Survey from 2014 reports that companies using data well are twice as likely to be in the top quartile of financial performance within their industries.

Businesses are clear that they need the right set of products, tools and techniques to manage the data. But more so, they need the right type of talent to provide relevant insights. The shortage of the right talent also stems from the fact that analytics solutions are now accepted by several industries,

growing from being accepted only in industries like BFSI, retail, etc.

The talent shortage is acute and according to a report by McKinsey Global Institute 2014, United States alone faces a shortage of 1,40,000 to 1,90,000 specialists with analytical expertise. India is strongly positioned to take advantage of these needs and help global and Indian firms with reliable and actionable insight-based analytical solutions. The formidable position of Indian analytics solution providers on the global space is attributed to a large talent pool and rich experience gathered over the years.

NASSCOM and Hansa Cequity have put in a dedicated effort to map the analytics maturity of Indian firms and how these offerings and capabilities can be used to leverage the data revolution as it unveils itself. We trust you will find this report useful. As always, we welcome your feedback, suggestions and comments.

R. Chandrasekhar President, NASSCOM **S. Swaminathan & Ajay Kelkar** Co-founders, Hansa Cequity

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MARKET SIZE

Global market size for various analytic capabilities:

Category	Sub-category	2014	2019 Forecast	CAGR 2014 - 2019
Total market size	Products and capabilities	\$96 billion		
Business analytics	Query, reporting and analysis tools, content analytics, data warehousing platform	\$41.0 billion	\$67 billion	10.3%.
CRM analytics	Sales analytics, customer analytics, contact centre analytics, marketing analytics, web and social media analytics	\$4.2 billion	\$7.7 billion	12.83%
Supply chain analytics	Supply chain planning and procurement, sales and operations, manufacturing, logistics	\$2.5 billion	\$4.8 billion	34.5%
Risk analytics	Risk calculation engines, score cards	\$6.9 billion	\$13 billion	13.5%
Location analytics	Geo-coding, geo-mapping	\$6.8 billion	\$11.8 billion	11.6%

India dominates the supplier landscape catering to a large part of the total demand. Given its headstart, mature delivery models and domain expertise, India would maintain its dominance in the near to medium term.

Source: Markets and Markets Reports, NASSCOM Blueocean MI Report 2014

An analytics centered culture

Analytics capabilities are being increasingly used across industries at various levels by companies in India and globally.

Customer analytics is mission critical to businesses that want to succeed in the future. Research has shown that loyal customers are worth up to 10 times as much as their first purchase

To succeed companies should focus their analytics energies on areas such as Customer insights and segmentation. Customer engagement. Customer service and support

Six drivers of analytics



Exponential increase in data generation



Increased affordability of analytical tools



Companies using data well, lead the financial performance within their industries.



Lower data storage costs fuels the growth



Ease of data consolidation



Easy availability of talent

New technology drives analytics adoption

Increased adoption of analytics offered by Software as a Service (SaaS) models

Leveraging unstructured data through text analytics

Mobile analytics expected to unlock significant value for organisations



KEY BUSINESS-SIDE TRENDS

Trends in the analytics landscape are going to change significantly in the next decade.

Business-side trends will be driven by:

Increased C-suite attention

- Top-performing organizations show a 5x higher usage of analytics as opposed to low performers
- High performing CXOs will need to learn ways to integrate analytics-based decision making

Competitive and margin pressures

- Analytics is fast moving from a discretionary spend category to an integral tool for competitive Differentiation
- Achieving competitive differentiation, growing revenue and cost reduction emerged as the top 3 challenges faced by organisations
- Organisations that proactively use data generated insight appear to identify and predict trends better and are quick to adopt industry practices thus giving them a competitive edge

Increased regulatory and compliance requirement

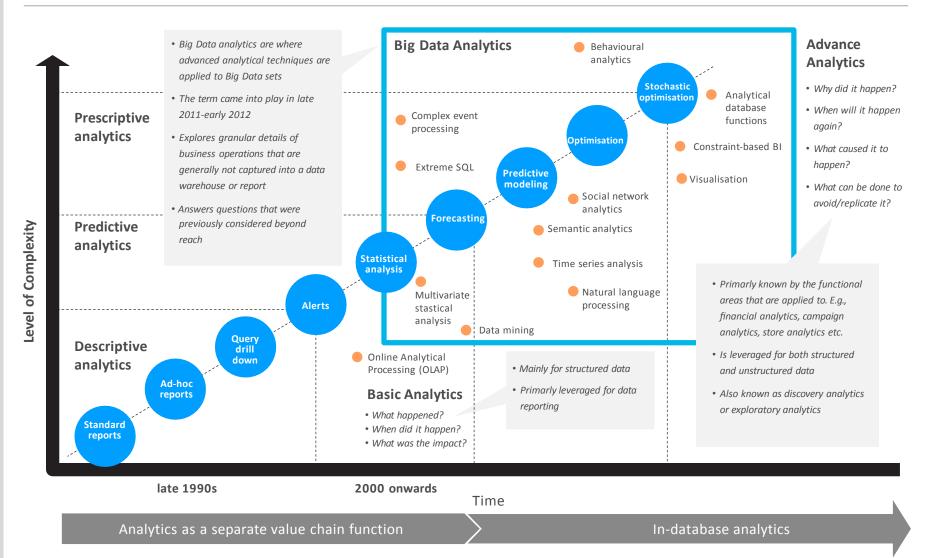
- Increased pressure for regulatory compliance and greater transparency in sectors like banking, insurance and healthcare is expected to increase the demand for analytics
- Inadequacy of in-house and centers to adapt to complex risk compliance norms like Basel III and Solvency II, could led to greater demand for thirdparty services

Increased availability of talent

- As importance of analytics is growing exponentially, it is attracting talent from other streams who consider analytics as a long-term career option
- Companies are hiring students from various streams and giving them in-house or outsourced training for faster deployment

Source: Avendus Capital, Analytics Outsourcing 2012, Sep 2012

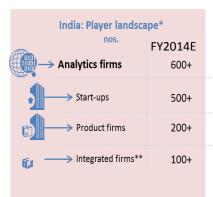
EVOLUTION OF ANALYTICS



Exponential growth in data volume, variety and velocity has facilitated the progress of analytics for better and more informed business insights

APPLICATION, INNOVATION AND MATURITY OF INDIAN ANALYTICS

Analytics market in India is expected to grow 22.8% from 2014 to 2019.



A total of more than
250 case studies
were submitted by
organisations representing
providers, GICs and many
Indian buyer organisations.

Analytics capabilities and products offered by Indian firms are now highly mature. These solutions have over the years scaled up from descriptive analytics capabilities being used for reporting and business intelligence, to predictive modeling and later moving to prescriptive ones. It's no surprise then that the analytics market in India is expected to grow at an impressive CAGR of 22.8% from 2014 to 2019.

NASSCOM, in partnership with Hansa Cequity, undertook an exercise to understand the maturity of analytics in India.

Due to the wide spectrum of analytics solutions, which make it difficult for businesses to build capabilities across the board, there is a need to explore possibilities of cross-leveraging of different capabilities being built in the country.

This study also provides a platform to recognise the most innovative Indian analytics organisations that are creating immense business impact or value for its stakeholders.

Submissions, in the form of case studies, were sought from Consumer/User firms of analytics solutions, Global-in-house Centres, Service providers & Product organizations in the area of Big Data and Analytics. The submissions were under four major business application areas viz., customer experience, revenue improvement, cost andoperational efficiencies, and risk and compliance management classified into descriptive, predictive, and prescriptive analytics.

Whilst, the work undertaken could be for a domestic consumer or a global customer/principal, the work undertaken should have leveraged Indian capabilities.

A total of more than 250 case studies were submitted by organisations representing providers, GICs and many Indian buyer organisations. The case studies provided a perspective on the application, innovation of the maturity of the work undertaken for different industries spanning BFSI, retail, agriculture, automotive, healthcare, telecom and a range of others.

Product firms redefining core offerings and exploring service differentiators in conventional and emerging business models

A large number of the submissions received were applied in India, especially by the Government or related agencies. The subsequent slides detail out the most innovative case studies we received as part of this initiative.

Notes:

- #: Represents only outsourcing services market
- *: The break-up given includes over-laps; hence a direct total can't be calculated
- **: Top 100 IT-BPM firms who offer analytics services and products Source: NASSCOM

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Nasscom acknowledges the commitment and efforts put in by its eminent panel in helping review and rate these case studies.







ANALYTICS IN MINING

With energy demands growing and the resources required for this energy production becoming harder and harder to locate, analytics will be imperative in our efforts to meet future resource demands.

Organisations should be looking to invest in their analytic capabilities now, allowing them to make the most of current deposits as well as assist in finding new deposits.

Key areas of analytics applications:

- Reducing the time taken to locate natural resources
- Reduced the costs associated with locating natural resources
- Increasing the efficiency of both new and old deposits

Predictive Maintenance of Trucks for a Mining Major

Organisation

Absolutdata

Client

Mining major

Vertical

Mining

Geography

United States

Category

Predictive

SITUATION

SOLUTION

- Identify failure risk by predicting engine failure
- Change engine oil at the 'optimum time' using predictive maintenance
- Decrease false alarm rates for operational efficiencies
- Used terabytes of truck sensor's data along with truck's operations and alarms data
- Merged data sources using Big Data, applied machine learning algorithms such as gradient boosted regression and cluster analysis
- Used sentiment analysis and word cloud inputs to further refine the models
- Alarms categorised into 5 categories, with critical alarms forming only 6% of the alarms as against 24%
- 3-5 days of savings on every oil change leading to engine oil savings
- Engine replacement costs down by 50%



ANALYTICS IN ENERGY AND UTILITIES

Initiatives such as Automated Meter Infrastructure (AMI) and Smart Grid are sometimes likened to bringing the utility industry into the Internet age. Enabling direct communication with metering devices opens up a realm of possibilities for understanding usage patterns that were not even registered. The ability to measure and analyze data about energy distribution and consumption on a more granular basis—in time and in detail—can unlock significant value.

- Unbilled consumption identified by following the 'meter-to-cash' trail can generate incremental revenue.
- Detection of theft and fraud in the grid can reveal lost revenue.
- Proactive maintenance of expensive transformers and other such heavy equipment in the grid can save millions of dollars by postponing replacement to the future.

Key areas of analytics applications:

- Demand response
- Revenue management
- Fraud and loss prevention
- Energy efficiency
- Compliance
- Asset maintenance and management
- Customer care and management
- Forecasting and load management

Prediction of Wind Energy Production

Organisation

Business Brio

Client

An energy company

Vertical

Wind Energy

Geography

Netherlands

Category

Predictive

SITUATION

SOLUTION

RESULTS

- Challenges in accurate prediction of wind energy generation at a particular point of time due to very stochastic nature of wind energy generation
- This prediction is critical to save conventional energy due to 8/12 hour lag in ramp-up/down of conventional plants
- Regression and time series method to predict wind energy generation in shorter time horizon (<= 8 hrs)
- Artificial neural network and ensemble with (ordinary linear regression) to forecast for medium time horizon (>8 and <24 hrs)

 Forecasted wind energy supply in a power grid for understanding the need of conventional energy as controlled input with 84% and 76% accuracy in cases of short term and medium term prediction respectively.

Demand Forecasting Model

Organisation

L&T Technology Services

Client

A State electricity board in India

Vertical

Power and Utilities

Geography

India

Category

Predictive

SITUATION

SOLUTION

RESULTS

- Need for accurate models for forecasting power demand
- Huge gaps in load requirement vs the installed power generation capacity

- Parametric modeling based demand prediction by integrating various datasets
- Real time monitoring of key parameters through customised dashboards to aid planning/decision making
- Flexible and efficient planning and policy making for different customer types
- Evaluation of power requirement for particular events

/seasons for efficient planning

• Reduced load shedding instances leading to increase in customer satisfaction

Smart Meter



NASSCOM®

Organisation

Siemens

Client

Electric, Water and Gas Utilities

Vertical

Energy

Geography

Global

Category

Descriptive

SITUATION

SOLUTION

RESULTS

 Utility firms need to modernise and improve speed of processing sensor data coupled with the ability to solve critical issues, while maximising operational efficiency in order to address business needs

- Deployed EnergyIP a solution to deliver accurate energy and implement data analytics like proactive outage management, revenue protection and customer engagement
- Scaled up 50 million meters while reducing business risk and provide flexibility to changing business requirements
- Sustained meter read processing of over 400 million intervals per hour, completing processing in under six hours, exceeding the daily handling criteria to scale to 50 million meters

• Customers have been able to significantly reduce onsite field maintenance. In one case, a firm managed to save about USD 1.6 Mn in just a year and a half.

Real-time ETA and Seat Availability in Cluster Buses



Organisation

DIMTS

Client

DIMTS

Vertical

Transport

Geography

India

Category

Predictive

SITUATION

SOLUTION

- Uncertainty of bus arrival timings at bus stops
- Difficult to find out whether buses on same route taking equal or more time to complete trips
- No seat availability information at bus stops for next buses
- No user-friendly interface to get arrival time and seat occupancy to plan bus travel efficiently
- Real time ETA is based on historical data, other buses data on same route, and current bus speed
- Linear regression equation build to predict ETA
- Seat Availability uses live electronic ticketing machine data and time series forecasting model to predict boarding pattern of commuters
- Live ETA Information available for 12K+ daily trips at commuters' fingertips to make travel easy
- Seat occupancy data helps user to know occupancy status
- Pooch-O mobile app (Android/IOS) facilitates real-time ETA and seat occupancy status in buses
- Improved revenue, enhanced commuter experience

Platform for Real-time Demand Predictions

Organisation

StatLabs

Client

Government of ME country

Vertical

Transport

Geoography

Middle East

Category

Predictive

SITUATION

SOLUTION

RESULTS

 Predict real-time demand for taxis and deploy taxis accordingly

• Implemented PRESTO SOPXL—a big data Predictive Analytics platform with separate modules for sales and revenue analytics, demand forecasting and demand planning by incorporating the power of Hadoop based Big Data platform, PMML compliant scoring engine and web-based presentation layer for visualisation and reporting

- Increased the number of trips per taxi each day by approximately 20.5% since 2014
- Improved zone-wise trip pricing and customer satisfaction by meeting demand real-time
- Increased the gross margin by 14% within two quarters by increasing number of trips per taxi

Self Service IoT Analytics in Power Generation



Organisation

Rolta India

Client

Leading power generation company

Vertical

Power Generation & Utilities

Geography

Asia

Category

Prescriptive

SITUATION

SOLUTION

- Predict incipient failures, that, in turn enables, prevent forced outages, thereby resulting in increased productivity, safety and substantial cost savings
- An end-to-end cross functional view of power generation value chain by integrating engineering, enterprise, operational and geospatial data across 24 power plants
- Develop analytics algorithms and data models
- Blue print source systems, process tags, connectors, infrastructure and configure/customise for meta data mapping and KPIs
- Built-in contextual collaboration and recommendations to help users take decisions quickly
- 200+ real-time/ETL based connectors with a universal connector framework
- Potential savings of millions and at an average of up to \$1 mn per asset per annum





ANALYTICS IN HEALTHCARE

Healthcare organisations are increasingly using analytics to consume, unlock and apply new insights from information. New methods of analytics can be used to drive clinical and operational improvements to meet business challenges. From a traditional baseline of transaction monitoring using basic reporting tools, analytics in healthcare is moving towards predictive models, dynamic fraud detection and predictive patient behaviour.

Key areas of analytics applications:

Business goals

Specific objectives that can be addressed by analytics

Improve clinical effectiveness and member/patient satisfaction

- •Improve clinical quality of care
- •Improve patient safety and reduce medical errors
- •Improve wellness, prevention and disease management
- •Understand physician profiles and clinical performance
- •Improve customer satisfaction, acquisition and retention

Improve operational effectiveness

- •Reduce costs and increase efficiency
- •Optimise catchment area and network management
- •Improve pay for performance and accountability
- •Increase operating speed and adaptability

Improve financial and administrative performance

- Increase revenue and ROI
- •Improve utilisation
- •Optimise supply chain and human capital management
- •Improve risk management and regulatory compliance
- •Reduced fraud and abuse

Stop the Rapid Spread of Infectious Diseases

Organisation

HP Analytics

Client

Healthcare Org

Vertical

Healthcare

Geography

Global

Category

Descriptive

SITUATION

SOLUTION

- How to predict, prevent, and improve health outcomes resulting from human-to-human spread of diseases on real-time basis?
- How to get richer insights into health risks, treatment options, and clinical operations?
- Combined social media, mobility, analytics and cloud to converge data streams including electronic health records, patient location, public health data, social media and clinical knowledge.
- The app helps to understand the current health status, review hourly and daily risk profile based on exposure of participants
- Real-time situational awareness of potential crisis
- Early detection can aid in advancing public health
- Government/ NGO's increase operational efficiency and lower costs
- Pharmaceutical cos and hospitals can innovate

Prevent healthcare cost arising from preventable hospitalization



Organisation

EXL Service

Client

US based healthcare provider

Vertical

Pharmaceutical

Geography

United States

Category

Predictive

SITUATION

SOLUTION

- Reduce significant annual healthcare cost for US based network of healthcare providers
- Healthcare costs caused by "preventable" hospitalization run into billions
- Developed an advanced machine learning algorithm to predict "number of days that each member is expected to spend in hospital in next 12 months" leveraging their past healthcare data
- Formed a large number of interaction terms (~1.4
 MM) using ~45 attributes
- Reduce hospitalization costs by preventing predicted short-term hospital stays
- Make better budgeting decisions by predicting the number of days for long term hospitalization
- Improve patient satisfaction by avoiding unnecessary hospitalization

Patient Sentiment Analysis

Organisation

Saama Technologies

Client

Large healthcare provider

Vertical

Healthcare

Geography

United States

Category

Descriptive

SITUATION

SOLUTION

- USA's largest hospital system was looking at lagging patient experience indicators
- Current cycle time of information was 8-12 weeks
- The hospital system had no competitive advantage and had no help in maximising their reimbursements
- Used NLP, scoring algorithms, Big Data Analytics to customise an innovative patient experience solution
- Used Predictive modeling to map all the data, merge comprehensive healthcare data from internal and external sources, mined 200+ social media sites to tap patient voice
- With real-time scores on patient experience, healthcare organisations can evaluate and optimise new patient engagement strategies
- Improved overall patient care value chain including improved patient sentiment and experience levels leading to happier patients and overall a better healthcare system





ANALYTICS IN BANKING

Analytic solutions have grown tremendously over the last decade, in terms of their sophistication and the resulting business impact they create. There are a range of analytics solutions that banks are deploying today. While basic reporting continues to be must-haves for banks, advanced predictive and prescriptive analytics are now starting to generate powerful insights.

Banking segments with significant use of analytics

Consumer behaviour and marketing	Risk, fraud and AML/KYC	Product and portfolio optimisation
 Consumer lifetime value (CLV) Customer profitability dashboards Drill-down reporting by customer Campaign analytics 	 Value at Risk (Va) calculation (historical /non-parametric) Suspicious activity reporting and customer risk scoring Account validation against watch-lists Risk alerts at customer/geography/ product level 	 Detailed asset-level reporting Portfolio dashboards Static analysis of portfolio to estimate capital requirements Collateral analytics Collections delinquency
Customer segmentation Channel mix modeling Conversion and engagement by channel and segment Silent and proactive chum Next best offer Trigger-based cross sell Bundled pricing Social media listening and measurement	 Value at Risk (Va) calculation (variance-covariance and Monte Carlo simulation) Behavioural PD, LGD and EAD modeling Stress testing against multiple macroeconomic scenarios Pattern recognition and machine learning to predict fraud Test and review current risk thresholds 	 Simulations to predict default or repayment risk based on lagging and leading indicators Stress testing and mandated or customised scenarios Determining regulatory and economic capital based on credit portfolio mode Credit limit management

Organisation

Axis Bank

Client

Axis Bank

Vertical

Banking

Geography

India

Category

Predictive

SITUATION

SOLUTION

- Usage of best-in-class credit risk model for underwriting
- Integrate mathematical outcome with local intelligence
- Better risk outcome compared to industry risk levels
- Creation of flexible and scaleable underwriting decision hub
- The hub is a culmination of statistical model and information flow from multi-bureau connectors, controlled for credit policies

- Overall GNPA has come down by 80% and delinquency rates compared to industry is at 25%
- 60% reduction in time to process application and 91% of the application is within TAT





Citibank

Client

Citibank

Vertical

Banking

Geography

India

Category

Predictive

SITUATION

SOLUTION

RESULTS

 Minimise surplus cash level in ATMs as significant opportunity cost is incurred in keeping idle cash in ATMs

- Accurate prediction of daily cash demand at individual ATMs
- Optimisation of ATM loading schedule to reduce EOD balances, subject to network level constraints

 Bringing down the surplus cash level (taken as ratio of EOD balance to daily cash demand) has resulted in an opportunity cost save of 17%

Customer Centricity

Organisation

HDFC Bank

Client

HDFC Bank

Vertical

Banking

Geography

India

Category

Predictive

SITUATION

SOLUTION

RESULTS

- Identify the right customer with the right product and communicate it through the right channel at the right time
- Build propensity scores for estimating the likelihood of buying a product based on historical data of customers of the same profile
- Creating logical segments to identify potential baskets of products based on profile and transaction behaviour
- Enabling event triggers and structured campaign activity

 Customers who are analytically recommended and are campaigned to, show 2x – 4x higher conversions

Mortgage Survival Model

Organisation

WNS Global Services

Client

Leading US Bank

Vertical

Banking

Geography

United States

Category

Predictive

SITUATION

SOLUTION

RESULTS

- Mortgage customers who had trouble in repayment due to job loss, recession, illness etc. were offered modification in payment, term and rate
- Predict the probability of survival of those customers for the next 12 months

A 12 month probability of survival was generated using:

- Univariate analysis of categorical and continuous variables
- Stepwise Cox proportional hazard regression was run for all significant variables
- Survival model accurately predicted the default and the difference in actual vs predicted was 2% overall
- Customer attrition was reduced by 12% within a 12 month timeframe

Application Scorecard for MSME Businesses

Organisation

YES Bank

Client

YES Bank

Vertical

Banking

Geography

India

Category

Predictive

SITUATION

SOLUTION

- Credit appraisal mechanism of subjective decision is a deterrent to grow SME Loans
- Bank intended to develop a solution which would aid in objective decision making in credit appraisal of granular MSME customers
- Product developed is an Application Scorecard for MSME customers
- A hybrid scorecard with a mix of expert judgemental scorecard and statistical validation was developed

- Reduced turnaround time by 43%
- Decentralised delegation improved bank's efficiencies in the credit appraisal process by 31%
- Risk weight reduction with use of scorecard is 25%





ANALYTICS IN TELECOM

Telecom analytics encompass sophisticated Business Intelligence (BI) technologies that are packaged to satisfy the complex requirements of telecom organisations.

These include increasing sales, reducing churn and fraud, improving risk management and decreasing operational costs. Analytics solutions usually extend beyond the capabilities of regular BI solutions for reporting and dashboarding to include capabilities ranging from ad-hoc querying and multi-dimensional analyses to predictive and descriptive modeling, data mining, text analytics, forecasting and optimisation.

The adoption of analytics in telecommunications is intended to improve visibility into core operations, internal processes and market conditions, discern trends and establish forecasts. Future analytics will also include data from systems beyond traditional billing and mediation sources.

These will include deep packet inspection, home subscriber server, video optimisation equipment and on-device clients, among others.

Key areas of analytics applications:

Network Data Analysis

- Proactive network monitoring
- Capacity planning
- Revenue assurance
- Network & Route Optimization

Subscriber Data Analysis

- Subscriber profiling
- Social network modeling and analysis
- Personalised advertising
- Upselling and innovative tariffs
- Churn management
- New services & pricing

Mobile Money Life Cycle Analysis

Organisation **ABIBA Systems** Client SITUATION Telecom operator in Africa Vertical **SOLUTION** Telecom Geography **RESULTS Africa** Category **Predictive**

- Increase mobile money subscriptions
- Increase revenues from existing customers
- Reduce overall mobile money acquisition cost

- Increase in subscriptions achieved through influencer models, acquisition score predictions
- Increase in revenues of existing customers attained through behavioural models, win back score predictions, upsell/cross-sell score predictions

- 25% increment in acquisition of mobile money subscribers compared to the last 3 months average
- Odds of finding acquisition increased from 1 in 275 to 1 in 79





ANALYTICS IN INSURANCE

Insurance companies have long understood the importance of analytics. Today, the shifting competitive landscape and customer demands are pressuring industry players to better personalise their products, services and interactions. Advanced analytics can provide novel solutions to these challenges.

Every day, senior executives in the insurance industry must make complex, business-critical decisions that take into account a wide array of performance metrics and market intelligence.

Facing rigorous regulation and complex information-rich value chains, insurance companies have an absolute need for detailed, granular knowledge of what is happening in their operations, together with an ability to analyse this information in real-time to investigate specific events, emerging trends and future what-if scenarios.

Key areas of analytics applications:

- Customer acquisition Prospect scoring models can be very successful in improving the efficiency of customer acquisition activities
- Customer retention Predict likelihood of customers churning or lapsing and help monitor portfolio quality over time
- Cross-sell/upsell Target customers with the right cross-sell and upsell offers at the right time
- Premium pricing
- Insurance fraud detection
- Customer lifetime value

Automated System for Fraud Identification

Organisation

AXA Business Services

Client

AXA Entities

Vertical

Insurance

SOLUTION

RESULTS

Geography

Global

Category

Predictive

- Identify fraud using an automated system with minimum misclassification rate thereby optimising investigation cost
- Build a counter fraud, abuse and waste analytical model using historical claims data
- Develop business rules to filter fraudulent claims and behaviours from the predicted model
- Detect individual abnormal patterns
- Discover associative link analysis to understand known and predicted fraud

 Huge amount of savings on claim investigation spend

Prediction of Early Claim Propensity

Organisation

Max Life Insurance

Client

Max Life Insurance

Vertical

Insurance

Geography

India

Category

Predictive

SITUATION

SOLUTION

RESULTS

- Determine predictors of early claim using the information that is available at the time of policy issuance and provide risk scores
- Scores will be used to optimise the underwriter's time bandwidth by providing him the most risky policy for assessment

Predictive models were built for each sources like Agency, Banca, Third Party Distributors etc. using:

- Bi-variate screening and variable reduction
- Model build and validation (decision trees, random forest, logistic)
- Annual savings of Rs.18-20 crores (potential claim payouts) as fraudulent policies are being weeded out even before they are insured
- Drastic reduction in actual/expected claims ratio to acceptable levels resulting in increased statutory profits by a few crore rupees

Improve Insurance Premium Renewal Rate

Organisation

Minacs

Client

Top life insurer

Vertical

Insurance

Geography

Global

Category

Predictive

SITUATION

SOLUTION

- Improve renewal rate by arresting lapsation
- To reduce cost of operation
- To enhance customer experience (indirect)

- Predictive risk scoring
- Response mining to determine 'eagerness pulse'
- Modified dialling process and multi-channel campaign approach implementation
- 4%-5% month-on-month renewal lift from 72% baseline
- 44%-47% effort reduction resulted 27%-30% cost saving
- Improved C-SAT score (NPS score improved by 6%)

Customer Engagement

Organisation

Axtria

Client

Auto insurance

Vertical

Insurance

Geography

Global

Category

Prescriptive

SITUATION

SOLUTION

- Analyse, integrate and utilise unstructured, semi-structured and structured data to generate customer insights and increase customer engagement
- Establish a cloud-based big data infrastructure by integrating data from multiple sources
- Perform real-time data quality audit
- Develop applications for customer services
- Design customer engagement models and solutions
- Increased the revenue generation by 21%
- Increased the accuracy of driving score and usage based insurance premiums by 24%
- Enhanced applications and services helped in reducing the marketing efforts by 40%

Predict Pure Premium Amount

Organisation

NIIT Technologies

Client

A P&C insurance company

Vertical

Insurance

Geography

United States

Category

Prescriptive

SITUATION

SOLUTION

- Real-time pricing—should the pricing be aggressive (low price) or conservative (high price)?
- Long turnaround times to underwrite policies
- Inability to detect consumer fraudulent behaviour using information gathered from quote applications
- Historic BOP data and loss history data for 10 years was used and a model is develop that predicts the chances of claims (leading to loss) for the policies
- The model was then verified against the loss of data for 2014
- Identify policy risks which have low frequency and high severity
- Product customisation to suit the prospective customers
- Reduced time for policy origination
- Assist in the policy pricing decision
- Potential cost saving of \$5 mn yearly

Insurance Solution for Delhi Earthquake Risk





- Traditional insurance products may not work as the government needs resources for all kind of recovery operations after a disaster
- Insurance claims settlement can be quite complex and take a long time before funds are available due to lack of adequate resources for recovery operations after a disaster
- 'Cat in the Box' triggers payout to the client when the centre of an earthquake of certain magnitude or greater occurs in a predefined box around Delhi
- Stochastic simulation to produce a probabilistic earthquake catalogue
- Better natural catastrophe risk management in the Delhi region. This solution will shortly be discussed with concerned stakeholders
- Enable quick payout by government agencies after a catastrophic event to facilitate fund relief and recovery operation
- Better management of Government funds





ANALYTICS IN AVIATION AND AEROSPACE

Interestingly, the aviation sector is one of the strong proponents of capturing the data at every touch point starting from the design of aeroplane engines, dynamic data collection on engine performance to voice recording of the cabin crew in the black box. Most of the airlines religiously capture passenger information, booking/reservations transactions, various operational costs, cargo information, flight data, sales data, promotions data, flights routes and flights schedule to name a few. Innovative use of the data combined with analytics can uncover crucial insights needed to manage customer satisfaction, deal with dynamic fuel prices and underutilised capacity.

Nowadays, analytics territory is not just limited to airlines but has been spread to airports, aircraft manufacturers, suppliers, governments and others in the global aviation space.

Key areas of analytics applications:

- Route optimisation
- Dynamic pricing
- eReputation
- Aircraft maintenance
- Real-time health monitoring of aircraft
- Operational analytics

Data-driven Forecasting for a Leading ME Airlines

Organisation **TCG Digital Solutions** Client SITUATION A leading ME airlines Vertical **SOLUTION Aviation** Geography **RESULTS Middle East** Category

Predictive

- Lack of a scientific revenue forecasting process became a bottleneck for driving efficiencies
- Multiple factors like fuel costs, seasonal changes, competitive landscape impacted ticket pricing and made it difficult to manage revenue forecasting with reasonable amount of accuracy
- Scientific data-driven forecasting solution with a basket of algorithms
- Recommendations engine that selects the 'bestfit' statistical model for a given scenario
- Auto feed of forecast output to reporting systems
- Provided 'what-if' scenario planning capabilities
- Better operational decision making, driving efficient revenue budgeting and optimal resource planning
- Dynamic forecasting reports to help strategic decisions at different commercial levels

Analytics Solution for a Leading Aircraft Engine Supplier Firm



Organisation

Genpact

Client

A leading aircraft engine supplier firm

Vertical

Aerospace

Geography

Worldwide

Category

Prescriptive

SITUATION

SOLUTION

- Approximately 1 TB of data is generated during flight operations and testing
- Need to leverage flight operations and testing data to reduce total cost of operations
- Engine data was consolidated with engine service data to develop failure forecasting based on time-to-failure models
- New engine retirement logic to prevent failures during flight operations and service scheduling logic to optimise service costs
- Smarter algorithms, cutting-edge tools and analytical models enabled the client to increase contract profitability and to calculate safety stocks
- 82% reduction in stock outs and 26% reduction in inventory costs
- Over \$200 mn savings for the client in 3 years





RETAIL / CPG / ECOMMERCE / CONSUMER DURABLES

Analytics have become one of the most powerful tools available to retailers, and are being used for a broad variety of purposes. Aggressive adoption and exploitation of analytics has led to competitive advantage among some of the world's most successful retailers. The analytical focus of retailers should also be influenced by their economic environments. Loyalty, product selection, and clienteling analytics are typically focused on growing revenues in periods of economic growth. In difficult economic times, however, hard-pressed retailers are more likely to pursue applications such as price optimization, promotion effectiveness, marketing mix allocation, and labor force analytics, each of which can reduce costs and improve profitability relatively quickly and with relatively low investment.

Since integration is critical for advanced analytics, most sophisticated retailers have built an enterprise data warehouse for key analytical applications to draw from.

Key areas of analytics applications:

- Develop close relationships with customers based on a deep understanding of their behaviors and needs
- Deliver the targeted advertising, promotions and product offers to customers that will motivate them to buy
- Balance inventory with demand so you're never out of stock or carrying excess inventory
- Charge exactly the price that customers are willing to pay at any moment
- Determine the best use of marketing investments
- Locate stores, distribution centers, and other facilities in optimal locations

Social Media Analytics

Organisation

Capgemini

Client

Leading FMCG company in India

Vertical

CPG

Geography

Global

Category

Prescriptive

SITUATION

SOLUTION

- The client wanted to leverage social media to dentify indicators for evaluating brand performance, measure effectiveness of campaigns, identify key influencers across product categories, measure social brand equity and conduct a competitive analysis across social media
- Structured as a series of analytical sprints with well-defined deliverables—share of voice analysis, influencer analysis, sentiment analysis, product improvement/new product development, consumption drivers, real-time social media monitoring and analysis of events/campaigns
- Increased reach on social media channels
- Social media analytics helped improve message content
- Actual assessment of social brand equity in comparison to competitors
- Customer engagement improved by 7% and brand image by 4%
- Improved customer satisfaction

Analytics Driven Personalisation and Recommendation Engine

Organisation

Happiest Minds Technologies

Client

Leading US apparel retailer

Vertical

Retail

Geography

United States

Category

Predictive

SITUATION

SOLUTION

RESULTS

 Client was facing challenges with low understanding of their customer, resulting in poor response in mass marketing and low cross-sell/ upsell ratios, low repeat purchases and diminished customer loyalty

- Near real time personalisation and product recommendation engine
- Multichannel optimisation (kiosks, web, mobile)

- 10-12% improvement in conversion for frequently bought strategy
- Multi million dollars in incremental revenue from kiosks based on recommender algorithms

DemandPlanner – Daily SKU Demand Forecasting

SITUATION

SOLUTION

RESULTS

Organisation SIRIA App

SIBIA Analytics

Client

Retail Chains (Pharma, Apparel, Grocery)

Vertical

Retail

Geography

India
United States

Category

Predictive

- To optimize inventory and procurement, knowledge of accurate future demand is imperative for retailer
- With a huge number of SKUs across hundreds of stores, accurate forecasting had become a mammoth task
- A forecasting engine that creates SKU-Store forecasts for thousand of cases and optimises from a battery of models
- The forecast, procurement plans and many sales intelligence reports are made available online in our SaaS platform

- Forecast accuracy achieved 85% -98% in production period
- Inventory cost saving up to 20%
- On demand, SaaS model for evry size of retailers

Matrimony.com's Intelligent Matchmaking Algorithm

Organisation

Matrimony.com

Client

Matrimony.com

Vertical

eConsumer

Geography

Worldwide

Category

Prescriptive

SITUATION

SOLUTION

- A typical customer spends anywhere between 3-6 months to find his/her perfect match, by sifting through millions of matches available
- This limits customer engagement i.e. limited profile views, limited customer communication, more time taken, more searches etc.
- MIMA is an unsupervised machine learning algorithm whose objective is to learn from current set of customer experiences/choices, prepare probable expectation criteria for each member, compare that expectation with available profiles, score the comparisons and present the best matches therein
- As a result of implementing MIMA, there has been a 28% jump in the customer interactions
- The number of profiles viewed by an average user has increased by about close to 53%
- 50% increase in entries to 'Success Stories' since full implementation

Market Mix Model





- Measure ROI and contribution of online and offline channels by quantifying the effect of each of client's 10 channels in influencing the different moments of truth in the shopper journey
- Operationalise an accepted and standardised cross media optimisation approach and scale it across markets
- Modeled complex relations using 5 different techniques multivariate adaptive regression splines, generalised additive models, N-Parameter logistic regression, polynomial functions and power curves
- Developed Bayesian Belief Network based approach to model
- Developed over 3 million models in less than 2 months and finalised a highly robust ensemble mode
- The models are 'live' in select regions currently and are being implemented in other geographies. The results beat the expectation in terms of increase in traffic (~1%), revenue impact (~1.1%) and reduction in marketing budget (0.65%)
- Reduced overall time to measure ATL marketing effectiveness by more than 80%
- Enabled standardisation of Marketing ROI measurement across business lines and regions

Personalising Offerings to Customer Needs

Organisation

Manthan Software Services

Client

A Leading Retail Group

Vertical

Retail

Geography
India

RESULTS

Category

Prescriptive

 Improve customer engagement and loyalty through better understanding of customer behaviour and using the customer-centric insights to improve retail execution

Knowledge of customer behaviour was enhanced through:

- Advanced customer segmentation
- Propensity modeling to understand region and storewise buying patterns
- Churn modeling and assortment tuning
- Realised a 7-9% reduction in out of stocks
- Recovered an average 5-7% in lost sales
- Achieved a 10-12% reduction in churn

Omni-channel Supply Chain Simulation and Optimisation

Target Corporation

Client

Target Corporation

Vertical

Retail

SOLUTION

RESULTS

 Improving operational effectiveness of omnichannel supply chain operations through high level financial analysis is not sufficient

 In-vivo test & learn is also not always possible or financially expedient

 An open source based sand box for in-vitro analysis contains math programming models for optimal design of the supply chain network and multi-echelon inventory planning

• The designs obtained are stress tested through a custom built simulation engine

• The sand box analysis prescribes appropriate network structures and inventory strategies to meet seasonal requirements

 Provides insights to operationalise a network structure that both leverages and caters to the physical and electronic sales channels

 Reduces network costs significantly while meeting stringent speed to customer metrics

Category

Geography

Prescriptive

United States

Home Appliances Spare Part Recommender

Organisation **Robert Bosch Engineering** and Business Solutions Client **SITUATION** An appliances company Vertical **SOLUTION Consumer durables** Geography **RESULTS** Global Category

Prescriptive

- Time taken by technicians to identify the correct resolution and to repair the problem is very high
- Longer repair resolution time affects customer satisfaction level

 An automated recommendation system to recommend the right spare part to be carried by the technician for a given customer complaint

- Reduction in repair resolution time
- Reduction in carrying cost
- Optimal stock combinations of spare parts

Market Mix Models

Organisation

Analytic Edge

Client

Health & beauty care manufacturer

Vertical

CPG

Geography

Global

Category

Prescriptive

SITUATION

SOLUTION

RESULTS

- Quantify the impact of digital/new age media; taking into effect the interactions with other traditional media and in-store advertising.
- Calculate return on marketing investment for new age media.

• Solution was developed using genetic algorithm and latent variable modeling to ascertain the hidden interaction 'attribution' between various media elements and how they in turn affect 'sales'

- Direct media effects contribution is in line with generic marketing mix models
- Re-evaluation of cross media effects show a boost of ~11% contribution from new age media



ANALYTICS IN ALL OTHER INDUSTRIES

Analytics is playing a critical role for NGOs, for various government departments, for transport facilities and other organisations. It is helping these organisations that have entered the analytics landscape very recently, with data-driven decision making.

Key areas of analytics applications:

- Donor profiling
- Route optimisation
- Citizen profiling

Compensation Modeler

Organisation

ADP India

Client

Multiple clients

Vertical

Multiple

Geography

Global

Category

Prescriptive

SITUATION

SOLUTION

- 'Develop a compensation planner to model various what-if scenarios of compensation without having to go outside the Human Capital Management system' Solution Optimisation algorithms for deciding optimal hikes while being inline with organisation's compensation philosophy and budget'
- Optimisation algorithms for deciding optimal hikes while being inline with organisation's compensation philosophy
- Decision support with inline analytics (eg. Budget utilisation, red and green circled employees)
- Determine compensation awards scientifically without bias
- Helps clients to adhere to the compensation philosophy of the organisation
- Improves efficiency during the compensation review cycle

Recruitment Analysis





- Difficulty in interpreting the 'real' requirements behind a JD. Many needs and requirements are not explicitly stated in the JD
- Reduce time wasted in searching for the appropriate resumes

A custom built product: Recruiter's Delight was deployed to:

- Semantic matching of resumes with a JD
- Applying shortlisting context by observing all the screen-rejections done by the hiring manager
- Overlaying the shortlisting context with the hiring context by observing historic hiring patterns

- Improved speed of hiring by 200%
- Cut cost of hiring by 50%

Improve Outcomes of Fund Raising

Organisation

Annik Systems

Client

American NGO

Vertical

Not for profit

Geography

Global

Category

Descriptive

SITUATION

SOLUTION

- Multiple non-profits are competing for the same dollars and resources, futhermore economic uncertainty has reduced the overall commitment to giving
- Increasingly challenged to do more and to prove the effectiveness of their efforts with limited, less predictable resources
- Identify donors with low engagement and higher propensity to lapse
- Gain a deep dive understanding of donors, their behaviours and characteristics
- Data integration from multiple sources like donor transactional data, demographic data 3rd party data
- Enabled donor segmentation to understand gift giving potential and donor engagement

- Identified opportunities worth \$ 50 Mn
- Overall donations increased by 7%

Demand Forecast Accuracy

Organisation

Bridgei2i Analytics Solutions

Client

A technology company

SITUATION

SOLUTION

RESULTS

Vertical

Technology

Geography

Global

Category

Predictive

Low accuracy in demand forecasting due to:

- High SKU count (40,000)
- Volatile demand
- Short product lifecycle

- Built a demand planning system to calibrate the optimal inventory requirement
- Powerful forecast models for 'Big Deal' planning and volatile SKUs
- Improved forecast accuracy of the demand planning process by 20%
- Improved lead-time attainment by 10%
- Reduce inventory targets by 15%

Personal Business Analytics Platform for 'Reasons to Call'

Organisation

FirstRain India

Client

Technology solutions company

Vertical

Technology and Consulting

Geography

Global

Category

Descriptive

SITUATION

SOLUTION

- Client needed to better understand the intersection of the priorities of these new buyers and the new solution categories they are participating in
- Drive 'insight driven communication' with customers and prospects
- Developed a unique machine learning and big data analytics technologies, personalized consumer level UX layer, to ensure the user's experience is immediately relevant to their business responsibilities
- The personalised insights give sales reps a real-time understanding of the customer's business and the market environment, the customer, and their company
- Increased revenue through improved quality and frequency of customer engagement spotting more opportunities through persistent business relevant prompts

Patent Analytics App



Organisation

Gramener

Client

Multiple

Vertical

Technology & Consulting

Geography

Global

Category

Descriptive

SITUATION

SOLUTION

- Understanding patent portfolios and the cluttered nature and quantity of available patent data are big challenges for innovation
- The changing technological landscape and patent litigation world, delayed insight generation mechanism may no longer serve a business right
- Developed a network-based approach using citation, classifications, inventors, patent owners, patent families, technology linkages to group patents
- The exploratory analytics platform enables to both IP specialists and business users to easily explore the data from high to granular levels
- Temporal analysis, citation analysis, grant rate and patent life analysis were among the others
- Handle large data corpus and reduce insight generation timelines
- Improve decision making with faster turnaround times in report creations and reduce error-prone manual processes

Big Data Enabled Architecture and Platform

Organisation

GrayMatter Software Services

Client

Government of a South Asian country

Vertical

Government

Geography

India

Category

Descriptive

SITUATION

SOLUTION

RESULTS

- No conceivable storage platform was available to manage 1.3 billion records and 37TB of data per month including unstructured data like biometrics and transactional data from multiple sources
- Lack of tool for data agrregation

Solution was to built a complex Big Data
 Architecture with with 150 nodes using MapR
 distribution and Pentaho's PDI for data integration
 and data processing in Hadoop

- More than 5,000 vendor agencies are using this platform today seamlessly and successfully
- Authentication of user information executed successfully which was a fundamental need

Real-time Trade Monitoring for a Leading Stock Exchange of India

Organisation

Hitachi India

Client

Leading Stock Exchange of India

Vertical

Stock Exchange

Geography

India

Category

Descriptive

SITUATION

SOLUTION

- Existing systems had limitations to perform real-time monitoring of extremely high data volumes
- Growing volumes and tight monitoring requirements straining already slow legacy systems
- Developed a platform-based solution that intercepts the trading data from various systems for real-time anomaly at the rate of 0.2 Million TPS per market
- GUI based Advanced rule engine—to manage rules dynamically and ease of operation
- Improved agility for dynamic rule management for alternate analysis scenario
- Existing design capable of handling 4X volume growth and further scalable for unlimited growth
- Reduced cost of rule management significantly—estimated more than 60%

Fraud Analytics



Organisation

Capgemini

Client

Government

Vertical

Government

Geography

India

Category

Prescriptive

SITUATION

SOLUTION

- Millions of transactions running into billions of rupees in sales, purchase and revenue
- Multiple connections between traders making a very complex network
- Many circular transaction between traders, several of these are legitimate. However, few circular trades are part of carousel fraud
- No out-of-the-box algorithm available within the existing technology stack to identify this type of fraud
- Developed a proprietary algorithm to detect carousel fraud and put in place a process to score and flag suspicious transactions
- Algorithm coded using existing technology stack, avoiding the need to purchase specialised software or technology modules
- Interactive interface that allows investigators to view and process flagged transactions
- Drill-down on transactions involving up to 6 levels
- Increased control to prevent fraud
- Stop infusion of fraudulent money into system
- Data driven strategy to target specific profiles of traders more effectively
- Higher and more effective utilisation for field task officers
- Expedite resolution of appeal and litigation cases which were stuck due to lack of evidence

Software Licensing Piracy

Organisation

Ideal Analytics

Client

An MNC

Vertical

Technology

Geography

Worldwide

Category

Prescriptive

SITUATION

SOLUTION

- Leakage from software licensing piracy due to lack of methods to physically monitor and identify users, is resulting in reduction of top line
- Developed a model by checking discrepancies between inferred usage and actual number of purchases with the aid of public information on social media, variety of job portals, and other topic-specific social groups
- Statistically estimate number of active users (within the licensee company), number of user licenses, type of usage and gaps in licenses purchased
- Data from the pre-sales for creating target groups converging to customers and then the follow up process in customer lifecycle management (CLM) enabled higher sales volume around 20% increase in revenue for the client

Reducing Customer Churn

Organisation

Hexaware Technologies

Client

A UK customer

Vertical

Services

Geography

UK

Category

Predictive

SITUATION

SOLUTION

- The client faced a problem of high customer churn rates
- Improve win back rates through deeper understanding of customers
- Develop churn prediction model-based on customer demographics, relationship and transactional behaviours
- Developed a retention prediction model augmented with variables derived from the unstructured sources, to identify lead indicators of potential customer churn in the next 30 days
- Substantial lift (9% improvement from baseline) in identification of potential churn customers
- Deeper understanding of customer issues and patterns leading to better win back rates (improved from 55% to 68%)
- Net bad churn reduced by 2% from 10% down to 8% in 3 months of implementing enhanced model



ANALYTICS IN HOSPITALITY

Over the past few years, hotel companies have been investing in reporting and business intelligence technology solutions to improve decision making. More recently, a number of companies have been designing strategic initiatives to move toward a more consistent use of data across the enterprise. But few companies have developed an analytical capability to manage the vast quantity of information available.

Every hotelier will have different objectives in how they want to leverage existing data, acquire new data and use it in combination for improved results. But for most hoteliers data remains an underused and underappreciated asset. Hoteliers capture loyalty information, for example, but few go beyond loyalty tiers in how they consistently view and take action with their guests.

With analytics, hoteliers can use the data they capture to go beyond their traditional loyalty programs and deepen their knowledge of guests—to develop a more granular understanding of segment behaviour, needs, and expectations; identify profitable customer segments and their buying preferences; and identify opportunities to attract new guests.

Key areas of analytics applications:

- Dynamic pricing of room rates
- Work force analytics
- Operation and supply chain analytics
- Customer loyalty
- Customer profiling
- eReputation

Improve RevPAR for a Hotel Chain

Organisation

eClerx Services

Client

A top UK Hotel Chain

Vertical

Hospitality

Geography

UK

Category

Prescriptive

SITUATION

SOLUTION

RESULTS

- Client was not able to capture the right share of demand which was generated by an event around each hotel location due to lack of effective pricing in a highly competitive environment
- Gathered and analysed data around hotel attributes, competition, event so as to model demand
- Database was designed with business rules to store the data post cleansing for an efficient ETL
- Solution enables revenue maximisation for hotels by recommending optimum stay prices on a daily basis for stay dates during an event
- Model demonstrated potential revenue increase of at least 11% YoY which amounts to £ 122,000 per hotel by recommending optimum prices everyday by analysing competitor prices, booking capacity and event impact to maximise overall revenue for any given booking date



ANALYTICS IN AGRICULTURE

World's demand for food will grow significantly over the next several decades as a result of population growth and a burgeoning middle class in the developing world. Farmers have traditionally relied on intuition and experience. Yet agriculture is ultimately driven by the mathematics of science; balancing the pH levels of soil, the rate of nitrogen depletion and many other factors for optimum growth of grains and produce. Inputs of seed, fertilizer, water and sunlight, produce an output of crops that must be harvested at the right time using a precise mix of equipment and labor. Protein and dairy industries must also balance a myriad of factors to optimise yields from their livestock.

The goal is to use information technology to harness the vast amount of structured and unstructured data now available through field and equipment sensors, and from third-party data sources, to provide fact and math-based decision support to augment traditional farmer intuition and experience. New technologies, such as predictive analytics and commodity price optimisation can also help the agri businesses anticipate and adjust profitably to the marketplace, weather and other conditions that typically leave farmers vulnerable.

Key areas of analytics applications:

- Geo-mapping of crop growers
- Commodity price optimisation
- Crop yield estimation
- Field force effectiveness

Predicting Reserve Price for Tea

Organisation

Mjunction Services

Client

Multiple

Vertical

Agriculture

Geography

India

Category

Predictive

SITUATION

SOLUTION

RESULTS

- Tea pricing is controlled strongly by 'Tea Tasters' whose tongues determine the starting auction price
- As a company trying to bring transparency and disintermediate as much as possible by using analytics and technology
- Built a hedonic regression forecasting model based on weekly data for the past 5 years from Guwahati and Siliquri Tea Boards
- This was inspired by Ashenfelter's model for wine prices in France

- Achieved 90% prediction for the top 25% of the varieties
- This itself was sufficient to help us Position ourselves as a premium auction vendor for specific brands to the Tea Board

Kg2ton - Crop Production Management System



Organisation

iConcept Software Services

Client

International agricultural co-op group

Vertical

Agriculture

Geography

Worldwide

Category

Descriptive

SITUATION

SOLUTION

RESULTS

- Crop production activities captured in farms in the form of hard copies are usually impacted by inaccuracies in inputs, data receipt delays and additional re-entries for analysis
- Digital data capture using mobile devices can benefit from tagging of location, date and time, data validations during entry and near real-time availability of field data for decision making
- Crop production management system, Kg2Ton, helps enterprises identify growers, capture real-time data from the field and assess the crop yield estimations

• Improved operations in land mapping, area sown, input usage, crop health, critical farming practices, yield assessment, quality assessment, harvest and farm-handling, transportation, weather forecast and *field force activities*





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StatLabs

Stat Decision Labs is a provider for integrated data mining and mobility solutions that helps organisations anticipate business opportunities, empower action and drive impact. For more information please visit www.statanalytics.com



Swiss Re

Swiss Re Shared Services
Private Ltd. in Bangalore is
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Target

Target Corporation is an American retailing company. It is the second-largest discount retailer in the United States. For more information please visit www.target.com



WNS

WNS is a global business processes outsourcing company providing research and customer analytics, customer care outsourcing and other services. For more information please visit www.wns.com



YES Bank

YES Bank is a state-of-the-art high quality, customer-centric, service-driven bank. For more information please visit www.yesbank.in

ABOUT HANSA CEQUITY



With a data-driven marketing thinking and strategy, Hansa Cequity helps companies build intelligent, intuitive and real-time customer relationships. We enable this by leveraging the power of technology through proprietary and best-in-class marketing automation and analytics platforms.



Our data consultants understand and unify data from multiple sources. Our analysts and customer marketing specialists glean out insights and understanding of our client's customers or prospects. Our campaign management and digital marketing consultants then move in to create meaningful engagement opportunities in a multi-channel environment.

Helping India's leading companies with their customer marketing efforts:



www.cequitysolutions.com



AUTHORS



MohanaKrishnan P, *Director, NASSCOM.* Mohan leads the strategic Analytics & Business Process initiatives of NASSCOM. In this role, he is responsible for developing the ecosystem, strengthening the enablers and to position India as THE destination choice in the area of Analytics & Business Process. He brings in over 19 years of experience and working with various stakeholders in developing and implementing strategies and initiatives in outsourcing for many large global organisations.



Ajay Kelkar, Cofounder & COO, Hansa Cequity. With over 24 years of work experience across brands such as P&G, PepsiCo, Shopper's Stop and HDFC Bank, Ajay is the Co-promoter & Chief Operating Officer of Hansa Cequity. As the Chief Marketing Officer at HDFC Bank, he led the bank's marketing team on the pioneering path of analytics driven, data-led marketing. The bank executed a unique data-based strategy and this led to huge ROI in cross-sell and upsell.



Sampath Rengachari, EVP Marketing, Hansa Cequity.
Sampath is a successful strategy, marketing and operations professional with 25 years of experience in handling global markets in IT services. His strengths include stating a long term vision and building an organisation to meet the vision. Sampath has proven entrepreneurial abilities in business models, client management, new service offerings using out-of-the box methods to meet organisational objectives.



Nishad Ramachandran, SVP, Digital Experience Group, Hansa Cequity. Nishad has over two decades of experience across traditional advertising, CRM, digital and social media marketing. He believes all advertising is converging around a digital marketing hub. He has worked on award winning campaigns with leading brands like HSBC, Shoppers' Stop, Asian Paints, Unilever and Axis Bank. He was on the jury of the 55th Cannes International Advertising Festival.



Sumantra Bhattacharya, Consultant – Analytics, Hansa Cequity. Sumantra is part of the consulting and analytics solutions practices of Hansa Cequity. In this role, he is responsible for engaging organisations in advanced consulting solutions for customer and marketing analytics He brings in 9 + years of experience in areas of descriptive, predictive and prescriptive analytics across insurance, media and retail sectors.



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Rakesh Bhookya, Management Trainee, Hansa Cequity
Rakesh is part of the client management practices who is
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