

Analytics in Real Estate

Debdoot Das

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I. Introduction

Real Estate Industry has been always discussed in different forums, articles, conferences, and media about how the trend is moving, what is going to be the growth, etc. This article does not discuss any of them. The primary focus of this case study is to provide a generic overview of Analytics and its use in the Real Estate Industry.

This Case Study is written for generic understanding of the Real Estate Analytics and should not be used for any predictive analysis.

Business Analytics:

Analytics has been defined as “the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions”

Some authors view analytics as a subset of business intelligence (BI): “a set of technologies and processes that use data to understand and analyse business performance” and “includes both data access and reporting, and analytics”

Analytics has been used by various industries in various levels of advancement. Each industry extracts different business values with the help of analytics.

In Retail industry, analytics provides a great benefit in terms of enhancing customer experience, which in turn provides better business performance and hence improved financial performance.

Under Hospitality segments, companies like JW Marriott optimized their yield and increase customer satisfaction with analytics.

In recent times, we have seen enormous benefits reaped by the E-commerce industry by Maximizing profitability and Cost Effectiveness approach with the help of Analytics. Even for applications like Hotstar or Amazon prime provides list of recommended movies based on individual viewers taste and inventory conditions.

Banking and Credit card divisions also take use of analytics to Improve marketing campaign effectiveness and take corrective measures for risk mitigation.

Other industries like Telecom, IT, etc are also using analytics in their day to day business operations for improved business performance and more importantly to be fit to continue their race in the ever-changing dynamic business scenarios.

In the changing business scenarios, we need to understand customer preferences and when they are planning to leave, which transactions are not real, what can be the success factor of new product, etc. The ultimate differentiator in business scenario is when we identify all relevant data points and can successfully infer from them to shape outcomes.

In today's Super Dynamic Environment, the market forces are shaping a new client agenda impacting individuals, institutions and entire industries. Radical increase in digital content fuels growth in digitized industries, markets and segment. Social Media Explosion is changing how individuals and institutions engage, interact and collaborate. Realtime and predictive analytics creating business insight from massively available data. With the use of the mobile revolution, connectivity, access and participation of people and things, exploding with the proliferation of mobile and smart devices.

Analytics has brought various path breaking benefits to each of the business units irrespective of its industry. 4 major areas of business where Analytics has become indispensable in business scenarios:

1. Forecasting

Analytics helps in Leveraging the past data in order to provide better awareness of decision making about the outcomes

2. Text Analytics

Customer sentiments and market sentiments can be captured from social media analytics with the help of text analytics.

3. Data Mining

Data points of records can be mined with respect to spending patterns.

4. Optimization

Analytics helps in achieving the optimal results by analysing the humongous data bases and identify the desirable decisions.

Analytics not only benefit a lean / specific segment in the organization, but it impacts all levels which are connected by goals, metrics, people and performance.

If we plot competitive advantage on Y axis and Degree of Intelligence on X, we would see the analytics maturity journey of the organization will start from standard reports (basic stage) to predictive modelling (advanced stage). More Competitive advantages in higher stages of analytics maturity. Standard reports will provide the record of “what has happened”, whereas predictive modelling will indicate “what will happen next”. Advance analytics focusses on predictive and prescriptive approach. The organization goes through series of maturity stages to reach the stochastic optimization. It starts with reports and then passes through Query drill down, alerts, statistical analysis, forecasting, modelling, optimization. Advancement of maturity of the organization over each stage needs to be very delicately handled by a specialized analytics team. The question starts with “What happened” on standard reporting outcomes and goes till “How can we achieve the best outcome including the effects of variability” during Stochastic optimization.



The Analytics team mainly comprises of the Business analyst, Data Miner statistician, IT/System management and the Business Manager. The Business analyst performs the Data exploration, Data visualization and report creation. The Data miner performs the exploratory analysis, descriptive segmentation and predictive modelling. The key outcomes provided by the Systems management are model validation followed by deployment of the model and monitoring of the model. The manager takes the decision and evaluates the process and the ROI.

The business intelligence maturity and business value creation are positively correlated. The greater business intelligence maturity in the organization, the more business value will be enhanced.

If we have to visualize it graphically, the maturity stages can be categorised as Individual gain, where limited access to same information, which provided Limited ROI. Next level onwards, Departmental gains started flowing in, where the ROI is high and Optimum information usage at business level. Final stage, the enterprise starts to gain highest ROI, where optimum usage of information takes place at enterprise level.

Now a days getting access to data base has been a cake walk, thanks to the various modes of communications like, Email, Portals, Social networking, viral marketing, search engine optimizations, knowledge bases, user communications, customer relevant data, mobile web, SMS services, etc. Information flows from data bases to Data warehouses and data mining to finally knowledge.

II. Analytics in Real Estate

Even though the Real estate sector is the new entrant to the Analytics domain; it is growing at an exponential speed. The property industry is the latest to deploy the predictive device — and make sense of the endless stream of data entering the system every minute.

Previously in Real Estate, traditional approach was followed where data used to be collected and retrospective analysis was performed to understand the what went wrong. But in today's scenarios, developers use analytics to judge the property market conditions, forecast the prices, impact of demographic changes, etc. Developers have started recognizing the impact of predicting analysis compared to post-mortem of data.

As per the news article published in The Economic Times, developers like Lodha Group & DLF Rental arm has already started venturing into Analytics for their real estate division.

New and innovative IT technologies have not only helped organizations to build dynamic business models but also to effectively manage human resources and optimize business expenditures.

Among the different offered technologies, the one which got maximum recognition in Real Estate Industry around the globe is “Big Data”.

Businesses understood that in the changing business environment, humongous data points are generated from various data sources and it is not practically possible to analyse the same with existing systems. It will not only increase the employee costs, financial costs and manpower but also there are no certainty on the accurate outcome. Whereas, in case of Big Data, the analysis of heavier data points becomes automated. This not only helps the developers with precise market predictions but also helps the customers in taking conscious decisions.

For a customer opting to buy a residential product, information like availability of nearby school, hospital, super mart, etc is now on a whisker.

Even Real Estate Regulatory Authority (RERA) authorities of respective states have multiple levels of data capturing mechanism which are processed and analysed for desired results. Data available with respective RERA websites of respective states are not only useful for developers and governing bodies but also of immense use for existing and prospective customers.

III. Advantages of Analytics in Real Estate Industry

1. Risk mitigation

Analytics works as a risk mitigation tool to not only developers but also for channel partners. With the help of analytical tools, organizations / developers can cull out information w.r.t land age, building feasibility, redevelopment history, owner profile, etc which helps them to identify proper valuation of the property and can guide with accurate recommendation. Analytics helps in getting the correct valuation and reduction in artificially inflated one.

Even with Channel partners, analytics provides a wide range of information with which they can help the prospective client to meet their respective preferences.

2. Better customer commitment

With the help of analytics, customers are now offered what they need. Channel partners and real estate organizations can also gauge the customer requirement and can better engagement with them as per their preferences. Previously we have seen in various projects across the world that customer site visit conversion to sales is the biggest worry for any developer. With analytics the same is now being address in much structured way.

3. Faster and accurate decision making

With the help of big data, large data sets are processed within short span of time frame and provide accurate information for decision making. Both developers and customers can process information at much faster pace and can take decisions. Developers can optimize business health by taking appropriate decisions, whereas customers can take decisions to buy / sale after analysing particular property based on respective preferences. For a customer information like demographics, crime rates, education institutions, convenient stores, etc are of much importance other than the commercial quotations before the customer takes the decision of going ahead with the deal. Analytics makes it faster by providing the required information at real time basis.

4. Improve market intelligence

With the help of social media analytics, market information is available with developers, channel partners and even customers at their fingertips. Developers and channel partners can analyses large set of customer data and their preferences from Social media and can place their product for offering based on the customer preferences. On other hand, customer can also extract large set of data points from publicly available information regarding a project from social media pages. IPCs provide developers / customers with their latest survey reports, stock reports, real time dashboards, commercial or residential sector launches and sales, supply & vacancy trends, etc. which empowers them with data democratization and helps to increase the sales numbers. Now a days even banks use analytics to understand the market and customize products based on customer need and developer offerings.

IV. Conclusion

Analytics is a gigantic topic and its benefits are humongous across all industries. The article tries to capture the essence of it, but it's just the tip of the iceberg.

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