

Data Science: A New Era for the Consulting Industry

Abstract

Consulting firms the world over, are looking to develop competencies that would create a definite competitive advantage for them in the market. The consulting sector is no longer immune to disruptive technologies that have significantly influenced other businesses, and is flooded with new players having a non-traditional approach toward consulting.

Globally, companies seeking a consulting firm's services not only demand greater specialization and transparency regarding the return on investment (ROI), but also insist on partnership through the implementation process.

This article explores the manner in which data science can help traditional consulting firms build IT competency to convince customers of the exclusivity of their service and the ability to deliver value, faster and quantitatively. We discuss how emerging technologies can help consulting firms transform their business model and operate in an effective, agile, and customer-centric manner.

Introduction

Data, information, knowledge, wisdom, and insight, in that order, form the individual layers of the pyramid of business knowledge. While fast data offers faster processing and shorter query times, big analytics renders a competitive scale to address enormous terabyte-scale data sets. These two forces together can convert data into information, and information into knowledge, in no time.

Fast data and big analytics have emerged as essentials for firms that need access to real-time data for strategic decision making. Organizations that execute data-driven decisions frequently, are not only faster than their market peers, but also execute decisions as advised by consulting firms. Integrating data science in the way consulting firms work drives better performance in an increasingly competitive environment with rising customer expectations.

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Disruptive Data Science: Why it Resonates with the Changing Requirements of the Consulting Sector

The consulting sector relies heavily on the analytical capabilities of a group of experts. These experts are skilled at conducting research and deriving interesting insights from a given set of data points, to help customers improve their businesses for better profitability and sustenance.

However, while consulting firms have helped their customers generate tremendous ROI and value through the traditional approach, they are aggressively trying to adapt to the rapidly changing technological landscape. With customers demanding greater control, transparency, and involvement in the research phase, the approach is sure to evolve into a more interactive and collaborative model. Customers are beginning to enjoy more freedom of choice while seeking consulting services with the advent of smaller boutique firms that have comparable knowledge and talent, and offer competitive services at relatively lower costs.

Traditionally, consulting firms worked independently and confidentially, affecting the manner in which the research findings were used to drive changes across the enterprise. The emphasis was on solving business problems in the stipulated timeframe to deliver the desired value. Here, the consultant's personal effectiveness and judgment were of vital importance. Moreover, in the absence of an objective mechanism, the project scope often remained unclear. On the other hand, companies were unable to implement the recommendations that consultants delivered at the end of a study and realized the need for external support to ensure a comprehensive adoption and implementation. More often than not, ineffective execution and other external factors hindered the possibility of creating significant business improvements and benefitting from the recommendations of the consulting firm. With all these factors setting the backdrop, consulting firms have begun to rely on technology tools and services, particularly data science, to clearly understand project expectations and benchmark outcomes.

As data science builds a 'knowledge democracy'—monopolized by big firms until recently—companies have started to seek more accountability and transparency in the overall engagement. The possibility of converting data into actionable insights has made it easier to break problems into smaller, more manageable units. Using analytics and graphical representations, consulting firms can structure the problem and define the scope in a shorter span of time. This will help better realization of the desired scope and output, enabling improved results. Data science applies wonderfully to 'partnering through implementation phases' as well.

For example, in the insurance industry, consulting firms are helping insurers renew their relationship with the insured through real-time analytics (fast data and visuals). Take the example of the auto insurance space. Insurance companies are leveraging advanced analytics to monitor and analyze real-time customer behavior data and use it to influence their driving habits. They achieved this by monitoring real-time customer behavior while driving and using analytics to build trends to know their vulnerability to accidents..

The two tiers of data science: Fast data and big analytics

With the advent of fast data, the focus has shifted from data storage and processing, to analyzing data at high speeds. Technology startups are now catering to the demand for faster disks and commercial technologies that offer superior energy efficiencies. This is important since energy costs typically drive one-third to half of the data center operating costs, and have a direct financial impact.

Big analytics forms the second tier of data science. At this level, the challenge is in creating algorithms that can address heavy data sets and tuning them to operate in a distributed fashion, across several machines to provide real-time insights. Currently, such advanced business analytics is at a nascent stage and is offered by niche firms or startups. We believe that very soon consulting companies will create Big Data-led offerings (in the form of reports, predictions, trends, and trend analysis) through fixed price, time, and material engagements.

How industry players are using data science

Data science has enabled an unprecedented access to knowledge that was earlier available to only niche consulting firms. Many startups or boutique consulting firms are exploring it to deliver value faster and more cost-effectively. These newer players in the market have immense potential to attract customer contracts, thereby securing a share in the pie.

In Figure 1, we present a framework that can be used to assess the data science maturity of consulting firms:

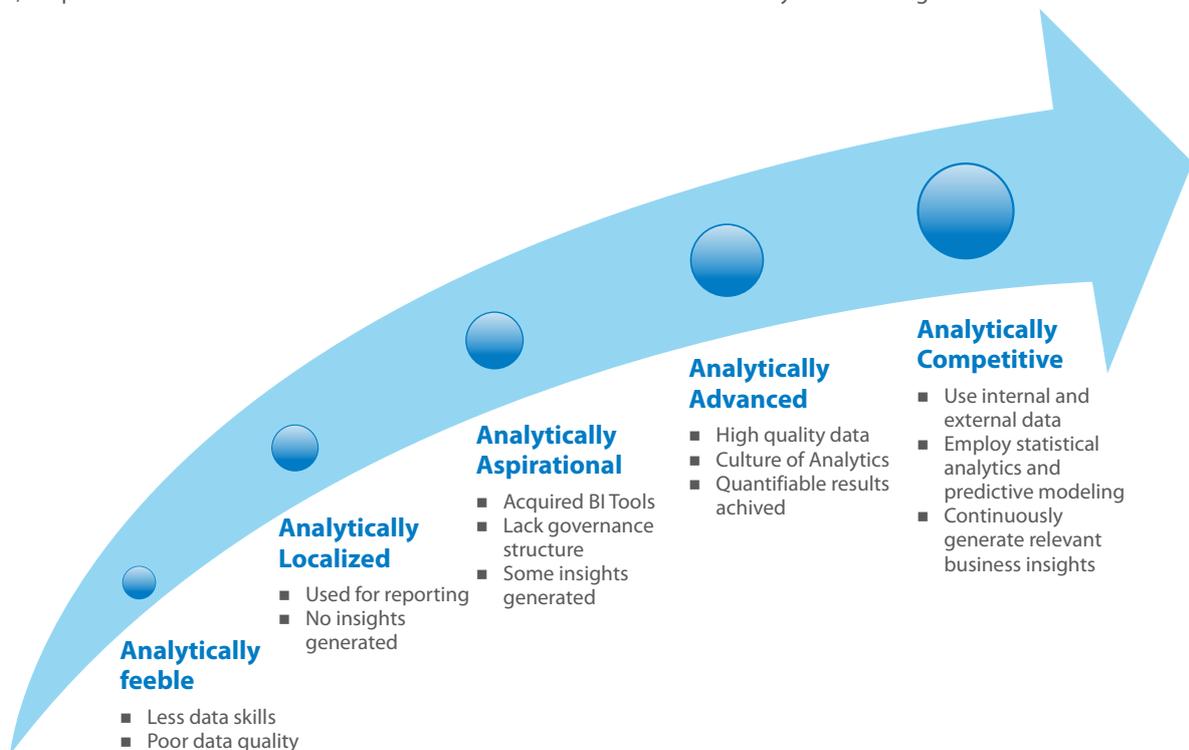


Figure 1: Data science maturity model for consulting firms

In practice, there are very few enterprises that are analytically competitive, though many organizations are gradually progressing toward that stage.

Generating business benefit through data science

Through data science, it is possible to generate ROI based consulting advice and 'partner through implementation' during customer studies. We must note that these strategies are only as good as the meaningful insights and actionable business benefits they generate. Interestingly, this application of data science is not an IT initiative alone: it amounts to business transformation. It would, therefore, be a huge risk for consulting firms to treat big analytics as part of their IT priorities and misalign with strategic business objectives.

Achieving analytical maturity

Here is what we recommend as the first steps to executing consulting projects using data science:

1. Establish a measurement strategy that is aligned with your business objectives.
2. Build domain experts who will integrate and visualize data.
3. Form teams of analytics experts and assign them to relevant projects. These experts should have the right mix of IT and domain knowledge.

Consulting experts need to establish critical skills to convert raw data into valuable information. Technical ability isn't the only thing required; the value of Big Data lies in its ability to generate actionable insights. These experts should be responsible for producing standard definitions, rules, and dimensions across the organization and making deeper analysis available through interactive reporting and/or analysis. Such a focus transforms data warehouses into tools to improve process efficiency across the whole value chain, contributing to a fact-based decision making culture. Such transformations are best curated by qualified data scientists or a chief data officer as they have the right overlap of business and data science knowledge.

Conclusion

The contradiction inherent in the Big Data revolution is that while it depends on sophisticated new technologies and tools in order to collect, store, and process information, technical capability isn't the real point. Rather, the value of data science lies in the actionable insights generated from this technology setup, while implementing consulting advice with customers and building transparency in the whole cycle of consulting studies. This shift in business models is already reflected in the way some of the newer consulting players are functioning as they are readily adopting next generation technologies to change the game.

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