

NOVEMBER 2015

**BIG DATA.** Over the past few years, we've heard the term so many times. Yet, there's not a common understanding of the why it's important, what's involved, and how to start using it right.

Most organizations aren't very good at data analytics.

So, I will start by recommending you watch the TED Talks "Big Data is Better Data" (bottom of page), read the Forbes article, "Big Data: 20 Mind-Boggling Facts Everyone Must Read" (bottom of page), and read Julia Smith's answer to my question below.

You'll learn a lot in less than 30 minutes.



## Q: What are the main types of data analytics projects?



"Excluding the large Business Intelligence (BI) implementations there are, in my opinion, seven newer types that fall within three main categories.

The projects fall into the categories based on the primary goal and target outcome.

These are:

- enabling analytics by delivering the data with new or improved technology
- applying analytics techniques to get answers and to drive new insights
- setting up the organization to prepare for an analytics culture shift.

## Examples of Technology-Focused Projects

- 1. Capturing external data feeds for information.** As everyone knows, there is a wealth of data sitting outside the walls of an organization on social media sites. While you can leverage existing external tools, some are bringing those feeds in-house, storing them, and running their own customized queries to find linkages. These projects tend to be fairly tentative 'toe-in-the-water' type efforts, generally run by the IT group at relatively low cost. While there are the obvious source feeds for specific purposes, you need to find the right specialized ones that will provide the greatest impact on your company's key strategic decisions.
- 2. Expanding analytical data warehouses.** While not always the case, there is a prevailing thought that running analytics requires a lot of data (hence the 'big' in 'big data'), new formats, and faster speed. Since a lot of the original database management systems were developed before these new requirements evolved, there needed to be new tools developed. Into this void stepped suppliers such as Hadoop, MapReduce, etc. As these tools became more available to the general public, many companies have launched projects to add these assets to their own tech stacks. These projects tend to be run by the IT group as well. However, there are companies that have installed all these new tools before talking with internal business partners to identify uses for them. These projects can have high costs as well as high expectations that aren't easily met without proper upfront strategy work.

## Examples of Applying Analytics Techniques

- 3. The "trust me, there's magic there" project.** The outcome of running analytics is often hard to predict so there tends to be resistance by senior executives. Understandably, they have difficulty spending a lot of money on projects where there's no reasonable way to estimate the ROI. To overcome this, consultants ask organizations to give them their data and to let them play with it, with the assumption that they may find new insights and demonstrate real value. In general, these initial projects tend to be offered at no charge as a low risk way to demonstrate what the right techniques and skills can deliver.
- 4. Bringing in big brains to figure out a problem.** As opposed to the 'discovery & showcase' approach, another project type involves using an internal and/or external data science team to apply their skills to solve a specific problem...an ongoing issue or an immediate short-term problem. There are three main types:
  - descriptive, e.g., "How many of our staff were sick last month, by floor?"
  - diagnostic, e.g., "Why were our wireless sales so far below the forecast?"
  - predictive, e.g., "If we don't fix this problem, how many customers will we lose?"

These projects require a clear outline of scope and objectives. And they will likely follow classic data science principles so you'll be able to finally see the application of statistics.

- 5. Making improvements with better insights.** One of the easiest ways to talk to non-technical, non-data science executives about analytics is to identify what decisions they make on an ongoing, repeatable basis. If you take the decision points and consider that any of them could potentially be enhanced by greater insights from the new data sources, techniques or tools, decision-makers begin identifying opportunities quickly. As well, many vendors have realized that their best shot at encapsulating value is to offer a Proof of Concept (POC) to test validity. Both need a tight IT-business partnership and a good upfront agreement covering how the results will be assessed and what comes afterward if the team achieves success.

### Examples of Establishing an Analytics Culture Shift

- 6. Rolling out visualization and self-serve tools.** Based on recent events, there seems to be many more attending from the business side than technology. And, they tend to be senior managers from a range of functional areas. There are many suppliers offering data visualization tools that provide sophisticated, beautiful graphs. In general, these tools make it easier for people to easily indulge their own curiosity and run analytics queries, develop reports, and produce graphics without waiting for IT to code it for them. Increasingly, for data integrity and governance reasons, there is a push to do this at the enterprise-wide level and the projects are similar to traditional tech rollouts, e.g., document requirements, design solution, test, train, conduct user acceptance, implement.
- 7. Establishing an analytics Centre of Excellence.** As organizations get more excited about the possibility of analytics, they will encounter a skill set gap that could be a constraint. A project devoted to the creation of a centre will generally follow the same steps as projects for other similar functions, e.g., determine mandate, determine the model, determine resource model, determine governance model. This type of project is more challenging because it requires a broader mix of skills (data scientists, technologists, business people) and more time.

This is not a complete list of big data or data analytics project types. It is my outline of some of the newer project types that are becoming more common. I hope this helps.”

----

*Julia Smith, a fellow [Alpha Insights Associate](#), has spent the last 18 years working with senior leaders to design, launch, and deliver large scale transformation programs. She has worked with many organizations including Accenture, AT&T, Bank of America, Bank of Montreal, CIBC, Citigroup, Deloitte, Fidelity, RBC, TD and UBS Wealth Management. For more information, email [jsmith@alphainsights.ca](mailto:jsmith@alphainsights.ca).*



HENRYDORTMANSASSOCIATES  
Management Consulting

*Alpha Insights is a network of advisors, analytics experts, and solution partners dedicated to helping clients “connect the dots.” Julia provides thought leadership on data privacy, data visualization, self-serve analytics tools, and data analytics projects.*

*This article originally appeared in [On the Line](#), November 19 2015.*

---

**TED Talks: [Big Data is Better Data](#)**

**By Kenneth Cukier**, Data Editor, The Economist

*“Big data is going to transform how we live, how we work and how we think. It is going to help us manage our careers and lead lives of satisfaction and hope and happiness and health, but in the past, we’ve often looked at information technology and our eyes have only seen the T, the technology, the hardware, because that’s what was physical. We now need to recast our gaze at the I, the information, which is less apparent, but in some ways a lot more important.”*

**FORBES ARTICLE: [Big Data: 20 Mind-Boggling Facts Everyone Must Read](#)**

**By Bernard Marr**, Contributor

*"But loads of people are still treating the concept of big data as something they can choose to ignore — when actually, they’re about to be run over by the steamroller that is big data."*

---