

# Big Data Best Practices for the 21st Century

## INTRODUCTION

In just the last few years alone, more data has been created than in all of human history leading up to that point - a pace that is only going to get faster as time goes on. For many businesses, big data will be one of the best ways to improve efficiency and empower innovation moving into the next decade and beyond. However, the sheer volumes of data that you're dealing with will certainly present their fair share of challenges along the way.

To absolutely guarantee a successful rollout, your project teams MUST be able to address their most pressing challenges about big data projects as efficiently as possible. Luckily, you can use the following best practices to accomplish precisely that.

### Big Data Implementation Is About More Than Just IT

Let's make one thing abundantly clear: big data implementation isn't an IT practice, it's a business decision. It's a resource that should be deployed and utilized in a way that is aligned to fit your actual, specific business needs. You cannot afford to take the approach of "build it and the results will follow" any longer.

**Your information architecture will be impacted by big data in a wide range of different ways. The key to success involves understanding these means whenever possible.**

### Strengthen Your Core

The consequences of big data implementation mistakes are severe ones, indeed. Again, they won't just affect your IT department - missteps can and likely will affect the operational, business and revenue growth of ANY organization, no exceptions. To help make sure that this is the type of situation your

organization does NOT fall into, establish a Center of Excellence (CoE) to take the reins of the project. Likewise, you can also choose to outsource to experts (with Pegasus One being just one of many examples) that can devote the type of care and attention required to avoiding all of the problems relating to big data, while guiding your employees in effective use at the same time.

### Slow and Steady Wins the Race

When implementing a big data initiative, remember that what you are going through is a marathon - NOT a sprint. It is in your own best interest to start slow and remain that way, building by way of strategic decisions whenever required.

Begin with a proof of concept or pilot project. Choose an important area where you want to improve your decision making but one that won't greatly impact anything else.



Let this initial answer the business problem you are trying to solve. The project should be operationalized ONLY AFTER the findings have been proven valuable and feasible from the point of view of your business model, meet compliance demands, and are technologically sound. Anything less is only doing your employees - and your entire organization - a massive disservice.

### Your Goals Demand Collaboration

To put it simply, your data teams and your business units MUST work together during this process - otherwise, there is no real way for you to accomplish your business goals. Data scientists will conduct analysis using data and models, yes - but without input from business units, they will have no true understanding of what end users are actually trying to achieve - or how to make this possible.

To accomplish this, you're going to need to empower collaboration through communication wherever possible. If you have a data science team that says they built a great model and a marketing team that says the model doesn't work, you have either serious people gaps or communication gaps. Unless you make a true effort to close those gaps as quickly as you can, your project ultimately doesn't stand a chance.

### Results Matter

Confirmation bias-- the tendency to search for, interpret, favor, and recall information in a way that confirms your beliefs or hypotheses while giving disproportionately less attention to information that contradicts it -- influences the approach to problem solving as well as the way individuals view data and results. In absolutely no uncertain terms, this is something that you cannot afford during this time.

Never forget that analysis, at its core, is supposed to prove or disprove a hypothesis - nothing more.

Letting bias get in the way of that will only lead to incorrect conclusions, which ultimately means that you're getting farther away from what your end users really want to achieve - not closer to it.

### The Impact of Big Data

Your information architecture will be impacted by big data in a wide range of different ways. The key to success involves understanding these means whenever possible. The size, speed and even range of your data sources will need to be managed in a way that will likely require shifts to your information architecture. The important thing is to lean into this, not shy away from it.

CIOs and CTOs will need to be open to innovative forms of processing and hybrid approaches to accommodate the variety of data, structured and unstructured, internal and external. Your data will likely need to NOT be physically co-located. As many big data initiatives are at least initially experimental in nature, their architecture must be able to scale to support an unpredictable workload. There truly is no eliminating this, so you may as well get used to the idea now.

### Your Strategy Could Not Be More Important

The potential for big data analytics is immense, but without a strategy at the heart of it all your efforts will ultimately mean a whole lot less than you think. Don't waste any more time throwing random stones in the water. Define a clear big data analytics strategy as soon as possible and start working on it right away. Form the right data sets, employ perfect candidates for working on big data project, and use the latest technologies to achieve desired results.

### It's Not About Data - It's About the RIGHT Data

Finally, one of the most important things you can understand about big data implementations is that



the decisions you're making are only as good as the data you have available. To be as successful as you need to guarantee the results you demand, you must decide what questions you can answer and determine if any of these questions cannot be answered by the available data. If the latter is the case, the missing data must be acquired.

Sometimes it may not be obvious that you are missing important data. Go out of your way to guarantee that *what you think* the data can tell you is *accurate* by testing it and reviewing the results. You might be surprised.





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