

Preface

Why I am writing this blog entry now?

I am guessing in part that many companies out there would like to engage around Big Data, however back in the Fall of 2011 Big Data was not really on their radar screen, so therefore they did not put it into their 2012 IT budgets.

As we enter into the Fall of 2012, I would encourage companies to look at their remaining YE budgets that have not been spent, as well as planning for Big Data projects in 2013. So, net net this is a heads up to start planning **now** around Big Data. In regards to why you should invest in Big Data please read the following:

This blog entry is targeted at both users (customers) and implementers (Business Partners/Technology companies) of Big Data.

Below are the top 3 questions I hear all the time from business partners and customers alike. I wanted to take a moment to address each one. Before I do that however, I wanted to flash back to 1995. I was responsible for building a channel around our new e-commerce offering called Net.Commerce (today know as IBM WebSphere E-Commerce). I was meeting with a very large retailer who had thousands of brick and mortar stores. The person I was interfacing with from the company asked the following question?

“Why would I want a single store front on the web, when I already have thousands of physical store fronts?”

More on this later... but let's get to the heart of the matter. See below.

The Top 3 questions surrounding Big Data:

1) Is Big Data real or is it hype?

First off, I am hoping this question is somewhat behind us now, however I realize for some of you that is not the case.

So, let's look at this question from a couple of different angles. First, let's assume for the moment Big Data is 50% hype. So there is a 50% short fall. If Big Data is projected to provide a 20% up lift to businesses, that still translates to a 10% up lift. If you could improve your business by 10% in the next year or two wouldn't you take that step?

I would beg to differ with those people who say Big Data is all hype. Would so many people around the world be focusing time and money around this one area if that were the case? Venture firms are funding Big Data companies, in a way I have not seen them fund, since the early Internet days. The hiring around Hadoop is growing in leaps and bounds, in what many still call a down economy.

What other signs do I look at? Let me answer that with a question first.

What do these four technologies have in common (GPS, The Internet, Cell Phone and Jet Propulsion)? They were all started/created by the U.S. Department of Defense. Why is that important, because DOD has a proven track record of recognizing the importance of key technologies and guess what, they have fully embraced Big Data.

I know you are now saying, but Bruce, Big Data is new, I am still not sure about it. The truth is **Big Data is not new**. Google, Yahoo!, Facebook, E-bay and others have been using Big Data for years, since 2004 (MapReduce). So the fact those major social media players have been successful using this technology, is yet another proof point of the validity of this technology we call Big Data.

Now let's look at it from a scientific point of view. Most of you have heard of the famous equation $e = mc^2$. Where e = energy and m = mass. Rewritten $m = e/c^2$. So with all of the energy (resources) being applied to Big Data it will generate Big mass (Massive opportunities, solutions and productivity).

I could go on and on around this front, but to net it out Big Data is here to stay and having an impact already. There are many implementations of Big Data out there and thousands more in the pipeline. Below is just one example:



Vestas

A global wind energy company based in Denmark

Business Challenge

- Improve placement of wind turbines – save time, increase output, extend service life

Project objectives

- Leverage large volume of weather data (2.8 PB today; ~16 PB by 2015)
- **Reduce modeling time from weeks to hours.**
- Optimize ongoing operations.

Why IBM?

- Domain expertise
- Reliability, security, scalability, and integrated solution
- Standard enterprise software support
- Single-vendor for software, hardware, storage, support

The Solution:

- IBM InfoSphere BigInsights Enterprise Edition
- IBM xSeries hardware



2) How do I use Big Data?

Many people seem to be getting hung up on this very point, how do I use Big Data. Because of the scope of problems Big Data can address, I could argue this is a non-issue. Let me discuss an example to explain in more detail why I make this statement.

This example is around the cell phone. Having lived in South Florida back in the day, I was able to get the first hand held cell phone from Motorola. For those of you that had it as well back then, you had it later in time, unless you happened to live in Los Angeles or South Florida, as that is where some of the first cell towers were planted in the ground. Any way, someone asked me why I had gotten it.

Answers could have been:

- 1) I wanted it for business
- 2) It seemed cool to have
- 3) This way my girlfriend could always reach me

However, the answer I gave was because it is the **future**. I for one do not like playing catch up, why do it if you do not have to? I embraced early on what I could see as very important technology. Now of course your average 10 year old carries a cell phone.



The same is true today for Big Data, it is not so important what your first use case is but rather getting starting with Big Data today, so you are prepared for many uses in the future and not playing catch up.

The other advice around Big Data usage; start with a small project, you do not need to build Rome overnight. Work backwards; find a business problem you are trying to solve and apply the technology and data sets against it.

BTW if you belong to the LinkedIn group listed below in this blog; you would see every day many ways to leverage this technology we call Big Data.

Oh, yes before I forget below are some common use cases:

- | | | | |
|---|---|---|---|
|  | Fraud Detection & Modeling |  | Smart Grid / Smarter Utilities |
|  | 360° View of the Customer |  | Cyber Security |
|  | Email / Call Center Transcript Analysis |  | Risk Modeling & Management |
|  | Call Detail Record Analysis |  | Threat Detection / Multi-modal Surveillance |
|  | RFID Tracking & Analytics |  | Geo-marketing |

3) Why do I want to use Big Data?

Gartner predicts that “Big Data will deliver transformational benefits to enterprises within 2 to 5 years, and by 2015 will enable enterprises adopting this technology to outperform competitors by 20% in every available financial metric.”

(<http://whatsthebigdata.com/2012/08/05/gartner-on-big-data/>)

Unfortunately, many people/entities in both public and private sector will not see these benefits. Why you ask? For the typical reasons:

- 1) Lack of execution (i.e. can not make up their minds if Big Data is real)
- 2) The “we will wait” until Big Data is perfected (News Alert, technology is never perfected, but it is very useable and productive even in the early stages)
- 3) The need to create the ultimate Big Data solution (i.e. the five year project that took us 10 years to develop)

What are the benefits of Big Data?

There are two major ones:

- 1) Through Big Data Exploration and Discovery; Solve Complex Problems and Gain Insight Never Thought Possible
- 2) Speed

The first one is about Big Data being game changing technology. It will be the technology used to solve “Big World Problems” and that work is under way today.

The second item is so important, but rarely talked about in regards to Big Data. When is the last time you heard someone say any of the following:

- a) My laptop is too fast, I wish someone could slow it down
- b) The download only took 2 seconds, I am bummed
- c) I needed an answer ASAP, but I got it too fast

The net is most people want speed in almost all cases. Why? Speed is a key element of productivity. Everyone and everything wants to be more productive. Speed is also required in mission critical use cases like in the medical field, where getting a diagnoses back in 1 day vs. a year can mean life or death.

Below is an example of a use case involving Streaming Computing, how can you not like those results?



Asian Telco reduces billing costs and improves customer satisfaction

Capabilities:
Stream Computing
Analytic Accelerators

Real-time mediation and analysis of
6B CDRs per day

Data processing time reduced from
12 hrs to 1 sec

Hardware cost reduced to 1/8th

Proactively address issues
(e.g. dropped calls) impacting customer satisfaction.

Why do you want to use Big Data? You need to figure that out for yourself, but my advice is do not wait too long to come to a conclusion, your competition nor society at large is waiting.

If you want to be better contented into the whole Big Data scene and learn more about how people are thinking about and using Big Data, please feel free to join the LinkedIn group directly below.

http://www.linkedin.com/groups/IBM-big-data-4014567?goback=%2Eanp_4014567_1316101001036_1

But let's end this story where it started back in 1995:

I was meeting with a very large retailer who had thousands of brick and mortar stores. The person I was interfacing with from the company asked the following question?

“Why would I want a single store front on the web, when I already have thousands of physical store fronts?”

If you have to ask that question in regards to Big Data, you will not be the next Amazon...