

On the Precipice: Big Data Will Change Everything

Posted At : October 30, 2012 1:42 PM | Posted By : Lauren Jones

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As we wrap up our soon-to-be published report on Big Data, I can't help but think about how profoundly technology will change our world in the years ahead. Big Data will drive great changes, but what kind will depend on what we do with it. No agency can afford to do Big Data just for the sake of organizing their data. The cost of capturing, managing, processing, storing, and analyzing data is just too high to not have a sufficient payoff in terms of the value that the data produces.

It has to yield real, actionable results that create substantial value to be worth doing. For example:

- Finding a cure for cancer
- Discovering how best to manage diabetes to dramatically improve health and lower costs
- Finding energy sources in our galaxy
- Finding ways to avoiding loss of life from a natural disaster
- Identifying and capturing terrorist before they strikes, and
- Helping make American industries more competitive in world markets and creating jobs.

The value of big data is in the knowledge, wisdom, quality of decisions it enables, and the impact of actions that can be taken as a result of harnessing the power of data. Information is power in that it produces wisdom for good governance.



But the power that Big Data will create must be contemplated within an important cultural and ethical context. There is no doubt that Big Data analytics will and has already opened up a Pandora's box of ethical questions about the role of government. The recent public concerns about domestic use of drones and potential for infringement on the privacy, liberties, and constitutional rights of individual citizens, is an example. Michael Stonebraker, an MIT electrical engineering and computer science professor specializing in database research, also sees the dark side. "Privacy is going to be a huge issue [with big data] and it's largely going to be a political issue," he said in an InformationWeek article entitled "Why Big Is Bad When It Comes To Data" (July 19, 2012).

President Eisenhower foresaw this day and, in his farewell address to the nation on January 17, 1961, he expressed concern that our national resources of human innovation and science and technology, if left to market forces concerned only with maximizing profit with no regard for ethical, just, and righteous uses and the impact on generations to come, would cause the deterioration of the very things that have made this nation great. It serves us well to remember what he said:

"In...the technological revolution during recent decades,...research has become central, it also becomes more formalized, complex, and costly. A steadily increasing share is conducted for, by, or at the direction of, the Federal government.

Today, the solitary inventor, tinkering in his shop, has been overshadowed by task forces of scientists in

laboratories and testing fields. In the same fashion, the free university, historically the fountainhead of free ideas and scientific discovery, has experienced a revolution in the conduct of research. Partly because of the huge costs involved, a government contract becomes virtually a substitute for intellectual curiosity. For every old blackboard there are now hundreds of new electronic computers.

The prospect of domination of the nation's scholars by Federal employment, project allocations, and the power of money is ever present – and is gravely to be regarded.

Yet, in holding scientific research and discovery in respect, as we should, we must also be alert to the equal and opposite danger that public policy could itself become the captive of a scientific-technological elite. It is the task of statesmanship to mold, to balance, and to integrate these and other forces, new and old, within the principles of our democratic system – ever aiming toward the supreme goals of our free society.”

Recommendation: As vendors pursue federal big data business they stand on the precipice of a whole new world. No one can afford for them to get lost in the data and not be mindful of their responsibilities in shaping the future for upcoming generations. Vendors would be well-served, and will serve the federal government’s interests and that of the people it represents, by reading Eisenhower’s speech in full and keeping always in mind the things they were challenged and charged with in their college Business Ethics class.