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HUFF POST BOOKS

Boston Gets Big Data

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The following is excerpted from "Too Big to Ignore: The Business Case for Big Data." John Wiley & Sons will be publishing this in early March of 2013.

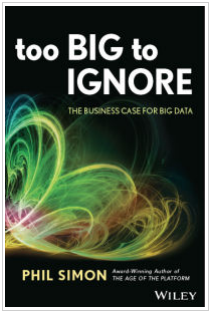
At some point in the past few years, Thomas M. Menino (Boston's longest-serving mayor) realized that it was no longer 1950. Perhaps he was hobnobbing with some techies from MIT at dinner one night. Whatever his motivation, he decided that there just had to be a better, more cost-effective way to maintain and fix the city's roads. Maybe smartphones could help the city take a more proactive approach to road maintenance. To that end, in July 2012, the Mayor's Office of New Urban Mechanics launched a new project called Street Bump, an app that:

Allows drivers to automatically report the road hazards to the city as soon as they hear that unfortunate "thud," with their smartphones doing all the work.

The app's developers say their work has already sparked interest from other cities in the U.S., Europe, Africa and elsewhere that are imagining other ways to harness the technology.

Before they even start their trip, drivers using Street Bump fire up the app, then set their smartphones either on the dashboard or in a cup holder. The app takes care of the rest, using the phone's accelerometer -- a motion detector -- to sense when a bump is hit. GPS records the location, and the phone transmits it to a remote server hosted by Amazon Inc.'s Web services division.

But that's not the end of the story. It turned out that the first version of the app reported far too many false positives (i.e., phantom potholes). This finding no doubt gave ammunition to the many naysayers who believe that technology will never be able to do what people can and that things are just fine as they are, thank you. Street Bump 1.0 "collected lots of data but couldn't differentiate between potholes and other bumps." After all, your smartphone or cell phone isn't inert; it moves in the car naturally because the car is moving. And what about the scores of people whose phones "move" because they check their messages at a stoplight?



To their credit, Menino and his motley crew weren't entirely discouraged by this initial setback. In their gut, they knew that they were on to something. The idea and potential of the Street Bump app were worth pursuing and refining, even if the first version was a bit lacking. Plus, they have plenty of examples from which to learn. It's not like the iPad, iPod, and iPhone haven't evolved over time.

Enter InnoCentive Inc., a Massachusetts-based firm that specializes in open innovation and crowdsourcing. (We'll return to these concepts in Chapters 4 and 5.) The City of Boston contracted InnoCentive to improve Street Bump and reduce the number of false positives. The company accepted the challenge and essentially turned it into a contest, a process sometimes called gamification. InnoCentive offered a network of 400,000 experts a share of $25,000 in prize money donated by Liberty Mutual.

Almost immediately, the ideas to improve Street Bump poured in from unexpected places. Ultimately, the best suggestions came from:

- A group of hackers in Somerville, Massachusetts, that promotes community education and research
- The head of the mathematics department at Grand Valley State University in Allendale, Mich.
- An anonymous software engineer

The result: Street Bump 2.0 is hardly perfect, but it represents a colossal improvement over its predecessor. As of this writing, the Street Bump website reports that 115,333 bumps have been detected. What's more, it's a quantum leap over the manual,

antiquated method of reporting potholes no doubt still being used by countless public works departments throughout the country and the world. And future versions of Street Bump will only get better. Specifically, they may include early earthquake detection capability and different uses for police departments.

Street Bump is not the only example of an organization embracing Big Data, new technologies, and, arguably most important, an entirely new mind-set. With the app, the City of Boston was acting less like a government agency and more like, well, a progressive business. It was downright refreshing to see.

Crowdsourcing roadside maintenance isn't just cool. Increasingly, projects like Street Bump are resulting in substantial savings. And the public sector isn't alone here. As we've already seen with examples like Major League Baseball (MLB) and car insurance, Big Data is transforming many industries and functions within organizations.

Chapter 5 will provide three in-depth case studies of organizations leading the Big Data revolution.

To order the book on Amazon, click here.

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