

Opening Statement
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Committee on Science, Space, and Technology
Next Generation Computing and Big Data Analytics

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I'd like to thank both Chairman Bucshon and Chairman Massie for holding this joint hearing. And thank you to all of our witnesses for being here today.

This morning's hearing provides us with the opportunity to discuss one of the newest buzz-words in Washington and around the world -- "big data."

This buzz-word is not an exaggeration: A computer that used to take up the space of this entire room now fits in the palm of your hand. It is remarkable.

Just as computers have gotten immensely smaller, they have also gotten immensely more powerful. Instead of talking about megabytes, we are now talking about petabytes and zettabytes—quadrillions and sextillions of units of information. It boggles the mind. Collecting and storing this huge volume of data would have been impossible just a few years ago.

I'm looking forward to the testimony of today's witnesses and learning more about the benefits of "big data" to society.

As I understand it, big data has potential to improve nearly all sectors of society. The National Cancer Institute is funding a prototype in biological "big data" that could lead to new advances in cancer treatment. Companies and agencies are using "big data" to run controlled experiments that improve decision-making. Scientists at Florida International University—in my district—are using "big data" to advance understanding of topics including cybersecurity, social networks, and cloud computing.

But there are challenges. In order to reap all the benefits of complex and broadly available data, we need new technologies and software. We also need a workforce with the skills necessary to analyze data of such great volume and complexity. A recent study estimates that the United States is in need of 190,000 additional data scientists.

In thinking about this hearing on "big data," I couldn't help but think about the tragic events last week in Boston. The marathon bombings may be one of the most photographed attacks in history. The Massachusetts State Police asked the public to share the photos and videos taken on that awful day. Now, all of this digital information has been and is being used by the Boston Police Department and the FBI in their investigation. It appears that this data has been instrumental in helping to identify the individuals who were involved.

Examples like this one demonstrate how important it is that we develop and attain the tools and the skilled people needed to analyze tremendous amounts of complex data. Big data can not only lead to amazing scientific discoveries—It can also save lives.

As we learn more about these opportunities and challenges today, I hope our witnesses will offer recommendations on how the federal government can help create the new tools, software, and workforce needed to realize the full potential of “big data.”