



CONVERSATIONS ON BIG DATA

A podcast series on putting analytics to work at federal agencies



LORI WALSH
SECURITIES AND EXCHANGE COMMISSION

Data analytics offers a powerful way for federal agencies to target resources and improve decision-making.

The following excerpts are from a discussion with Lori Walsh about the challenges, opportunities and lessons she learned from her experiences managing analytics activities at the Securities and Exchange Commission (SEC), where she is chief of the Center for Risk and Quantitative Analytics.



Q: What are the most important elements of a good analytics program?

A: There are three fundamental pieces. First is having the right data available. Analytics can help fix holes in data but fundamentally, analytics requires good data.

The second piece is the right computing infrastructure and tools, and more sophisticated processing of data. If you're a nationwide program you need a good network of computing capabilities so people can work together seamlessly as if they were next door to each other.

The third core of a good analytics program is subject matter expertise. You can do all the analytics in the world on all the data you want, but if you don't have a focus on what you're trying to find, you won't be successful.



Q: How does analytics help the SEC's Enforcement Division prevent violations of securities laws?

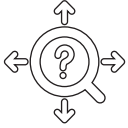
A: Analytics help you organize information. It's like a Rubik's Cube that helps you twist and turn data to view it in different ways. Maybe you graph it or histogram it or icon it or manipulate it in various ways to get a different picture.

The main part of my job entails proactive identification of violations of the securities laws, so I focus on data and analytical tools and techniques to identify violations more quickly.



Q: What role does leadership play in making analytics successful?

A: Leadership is critical. It takes time to get the infrastructure in place so you need leadership who understands and is willing to back you during this time of growth. Additionally, you're always going to have the people who want to do things the way they've always done things and having senior leadership step in and say we've got to do things differently is critical.



Q: When you look across government, what mistakes do you think people are making when setting up an analytics program, and what advice would you have for them?

A: The primary mistake that I see, and I have made myself in my career, is not identifying a mission and a core function for analytics. Analytics in and of itself doesn't mean anything. If people don't know the question they're trying to answer when they start these analytics programs, they don't know how to write an algorithm or create an analytical technique that's going to answer the question.

The second mistake is not setting expectations upfront. It takes time to put in place a really good analytics program. The third mistake is skipping critical steps needed to set up the foundation. You need to have good data, good infrastructure and good subject matter expertise. Skipping any of those steps is going to cause your analytics program to be unsuccessful.



Q: What have you learned about analytics that's been game-changing?

A: One is the power of pulling pieces of information together, and the power of algorithms and the analytics, to really bubble up the key pieces of information. Data is not collected in a manner that allows you to easily look across the data to identify patterns or trends or risks. Analytics allows you to jump across different data sets and find connections with the click of a button, when otherwise I'd have to look at 10 different documents to try to find those connections.

Excerpts have been lightly edited.



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