



CONVERSATIONS ON BIG DATA

A podcast series on putting analytics to work at federal agencies



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

The following excerpts are from a discussion with Dean Silverman about the challenges, opportunities and lessons he learned from his experiences managing analytics activities at the IRS, where he is senior advisor to the commissioner in the Office of Compliance Analytics.



Q: You were brought to the IRS by the commissioner to do advanced analytics work. Why was that needed?

A: The IRS has always had and used data analytics quite well. The prior commissioner thought we needed to take it to the next level and to tie analytics to strategy, not just to operations or research. And he wanted us to innovate.

All agencies are being asked to focus on more effective and more valuable use of data analytics because there is a ton of data out there and an awareness that data analytics can materially help improve decision-making if we make better use of it.



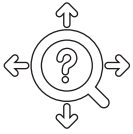
Q: Why is it so important to use data analytics?

A: Leaders are always better off having data and an increased understanding of how things work, and how they might work more effectively, both to make decisions and to define the problem. The latter is frequently not thought of as a major focus of data analytics, but defining the problem is where it all starts. Einstein once said, if he was given 60 minutes to solve a problem, he'd spend 50 minutes thinking about it and framing the problem and the 10 minutes solving it. None of us are Einsteins, but the principle still applies.



Q: You report directly to the commissioner. Do you think that has helped you achieve your goals and helped drive change?

A: Absolutely critically important, for a number of reasons. It comes down to what's your objective. If it's to create good analysis, you don't need to report to anybody. You can just go off and do it and then hand it to somebody. If it's to create an outcome, you could do that, but if the objective is to create an outcome that requires change or innovation, you need somebody who is going to be sponsoring that change at the top of an organization. It is that simple.



Q: You have described the IRS as being awash in data and that the agency model is to take the most difficult or emerging problems and start initiatives to problem-solve. How do you do that?

A: We do have lots of data and raw material. We have hundreds of millions of tax returns annually, with assorted schedules and billions of information reports, and we have challenges that would vex any tax agency.

It's important that we invest in long-term research regarding the impact of programs and approaches to tax administration and to devote resources to operational analyses on how well we do our processes. It's imperative that we train our sights on dissecting the incredibly difficult problems that we face and learn how to structure rigorous and meaningful tests to solve them and to adapt our interventions based on what we learn. Analytics must be the center piece for deciding policy and developing meaningful solutions.



Q: What lessons would you offer other agencies on using data analytics?

A: I'd make it a priority to infuse every core process with data-driven decision-making, and senior leaders need to demand it. They need to demand facts in their regular business operating process reviews, which you can do monthly, quarterly, whatever they are, well beyond a table of numbers or a series of averages.

Agency leaders and analytics leaders need to learn how to experiment, or use what I would call test-and-learn techniques. Third, I would aim at the hard problems. It sounds counter-intuitive, but don't be afraid to point combined operating IT and data analytic teams at big issues and keep them on a short development cycle. Fourth, I'd make everyone focus on and measure outcomes, not outputs. And fifth, I'd own analytics at the highest level of the organization, especially if you want to create change.

Excerpts have been lightly edited.



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