Interagency Excellence: Business Analytics

8am—4pm, August 25-27, 2015, Robert H. Smith School of Business
Executive Suite, Concourse Level, Ronald Reagan International Trade
Center, Pennsylvania Ave NW, Washington DC

As organizations are facing more complex data and analysis challenges, they are also finding that equipping executives to lead such teams is challenging. The Robert H. Smith School of Business is offering a three-day workshop for mid to senior level management and executives who are leading teams engaged in Business Analytics and Big Data projects within their agencies. The goals of the program are to:

1. Appreciate why their agency needs to successfully harness and exploit Big Data and Business Analytics to succeed in today’s business/work environment.
2. Learn the “Art of the Possible” for Big Data and Business Analytics:
   - What do we mean by Business Analytics and Big Data?
   - What it can do (measurable benefits)
   - What it cannot do (e.g., examine claims sometimes made that cannot be fulfilled, learn how to determine whether more standard methods meet the needs of a business problem rather than analytics and big data)
   - What is the cost / benefit equation?
3. Ask the right questions when presented with a proposal for a Big Data or Business Analytics Project (from within or outside the organization).
4. Assure that the right staff and internal organizations are involved in the solution, i.e., applying the appropriate skill sets and experience to projects.
5. Monitor the progress of Big Data and Business Analytics projects.
6. Develop strategies for mentoring, training and retaining this very challenging and complex workforce (i.e., those with Business Analytics and Big Data skills).

This program will create a "cohort" of executives from several agencies, allowing participants to benefit not only from expert teaching, but from an enduring network in government.
A tentative schedule for this event is as follows:

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Plan details:

- **Introduction to Data Analysis.** This 3 hour session with one break will include both lecture and programmed activities that will lay the groundwork for the program. Considering that there is dizzying plethora of conflicting terms in this area, the instructor(s) will focus on formulating a clear terminology to be used within the program and that is known to be the most common in general use. Second, the session will describe the analytics landscape that discusses a range of tools distinguished by level of maturity of an organization from Descriptive, Predictive, and Proscriptive analytical methods. We will describe the use of the key analytical methods used in practice. This will include what they are used for, how they work, and what sorts of knowledge and expertise are required by a user to be effective in their use. These tools include: basic statistical methods, visualization and optimization.

- **Data Analytics.** This 3 hour session after lunch will expand the focus from what are the methods to “What is the art of the possible?” The use of these tools in practice suffer from many of the following problems:
  - The “When I have a hammer, every problem looks like a nail” syndrome. It is critically important to make sure that the solution (or ensemble of solutions) fits the problem. Several examples will be explained in which this is an issue and how it is best resolved; and a group exercise will reinforce the concepts.
  - The overpromising syndrome. It is not uncommon for practitioners to be over confident in their favorite methods, even before the quality of the available data and other key factors have been examined. Several case studies (some presented by the instructor and some worked on in small groups) will dive into this issue. The day will conclude with a discussion of a case study that will extend into the next days of the course. The participants will be asked to begin the process of working through this case study in groups.

- **Big Data Strategy.** The issue of data is a major component of Business Analytics. Complex analytic problems always have complex data that requires analysis and use. Sometimes this data is so massive, arriving so quickly, or structured in vastly different formats, the standard database methods are not sufficient. In some, but not all, of these situations, it is important to be able to leverage new approaches that have been developed.
in recent years and are generally referred to as “Big Data.”

This 3 hour session will focus on the basic concepts of Big Data. The key questions that will be answered are: What is really new about Big Data? How do you decide whether you have a Big Data problem, or whether it is more of a standard situation amenable to more standard solutions? What are core tools and techniques that are included in Big Data? How is Big Data linked with the solution of Business Analytics problems?

This session will follow the model of sessions above: lectures to explain the key concepts and hands on cases to allow the participants to solidify what they have heard in the lectures.

- **Leading Practices for Business Analytics Management.** There are a host of issues that arise in managing Analytics and Big Data projects. This session will discuss the following issues:
  - Best practices for staffing, organizing and managing Business Analytics projects
  - How to recruit, train, and retain a staff that have the appropriate skills sets to promote and deliver Business Analytics projects
  - How to assess a proposal made by employees, consultants and others that claim to deliver Business Analytics solutions

  The session will also include more work to be done on the Case Study, primarily focusing on the leading practices that were discussed in the session

- **Group Activity and Presentation.** The primary focus of the last morning’s events will be completion of the Group Case Study. The goal of this session is to pull together all of the information learned in the program, prepare a presentation, and then give the presentation to the entire group of professors and participants.

- **Graduation.** Certificates of Completion will be distributed.

**Who should attend?**

This course is intended for mid to senior level management and executives, who are overseeing the work of analytics professionals or data scientists or managing projects that require these skills. It is not intended to teach the underlying theory or concepts of the core tools. Rather, it is intended to provide executives with the capability to ask the right questions, monitor the performance of business analytics projects, and grow and mentor employees who work in this area.

**Any advanced preparation required?**

No, participants just need to come with interesting experiences or challenges to share, and an open mind to learning a new set of ideas and concepts.