Booz Allen Hamilton, a leading strategy and technology consulting firm, is well versed in delivering pragmatic change and a pioneer in developing high impact Data Science programs. In fact, we’ll describe how we went from woe to wow in 4 weeks with a client.

Enhanced insights through data analytics are on the minds of many businesses and IT leaders. Growth in data volume, velocity and variety has outstripped the data science capabilities of most institutions. While many see the potential in their data assets, few are able to realize the desired returns despite significant technology investments. These investments have not translated into results due to siloed initiatives, overreliance on vendor solutions, and tactical rather than strategic programs. The end result is fragmented, ineffective capabilities. Privacy and security concerns exacerbate the tendency for data to fall into silos, further preventing a cohesive enterprise-wide view of corporate data. Answers are being delivered, but results tend to be based on narrow data sets and simple Visualization tools. The data and technology need to evolve alongside the questions asked of a Data Science team. This requirement puts further pressure on balancing and sequencing investments in mathematical/statistical skills, as well as software engineers.

Furthermore, as outlined below, a dizzying array of choices across software, hardware and services vendors complicates the industry’s message and understanding of what is needed to build and sustain a robust Data Science capability. With some vendors offering data analytics “in a box,” it’s tempting to believe that the problem can be solved with a single purchase. In reality, no single product or single provider provides the full range of capabilities and the necessary flexibility for a widely applicable and sustainable competence.

Based on our work across various industries, we believe the portfolio of projects encompassed in most Data Science programs are currently stalling and are less than the sum of their parts due to a lack of a Data Science roadmap.

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Commercial Solutions

4 WEEKS TO ANALYTIC WOW!

Getting the sequence right to generate Analytic impact. Booz Allen IVADS™ Model guides the way.

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Here’s how:
We believe organizations must consider their current Data Science program in the context of 5 key dimensions and a critical post script—Insights, Visualization, Analytics, Data and Systems—and subsequently develop a balanced roadmap yielding a sustainable capability which can support growing demands for insight over time. PS, build the necessary Privacy and Security throughout the journey.

Introducing the IVADS™ Data Science Model
The IVADS™ model helps organization think through critical enablers, relative strengths and areas of next focus driven off the Insights or questions the entity needs to answer. Considering the 5 pillars of data science enablement—Insights, Visualization, Analytics, Data and Systems—helps organizations evaluate both their strengths and their gaps.

Our client workshop application of IVADS™ shows us organizations often fall into similar patterns of either technology outpacing business or vice versa. We call these IVADS paradigms.

Sample Core IVADS™ Paradigms
These paradigms of “imbalance” are not uncommon and show that even where insights may be broad, and analysis sophisticated, the results are obtained at great cost and lack the depth that would be possible with full and nimble access to the data. Furthermore, the best investment in data and systems does not guarantee results without the engagement of experts.

• Business lacks defined analyst roles and spends little time thinking through insights not readily available
• Visualization, Data Tools, and Systems Infrastructure are well defined and blueprinted
• Little output due to lack of collaboration of data scientists

...and limited use and distribution of analysis due to lack of visualization capabilities
4 weeks to wow!

Working with a market-leading financial services client with a desire to create more value from its data, we applied the IVADS™ model to rapidly determine how to accelerate impact, and correct imbalances.

The client had invested significant time and money attempting to extract Insights from the data using traditional data warehousing paradigms and fragmented technology solutions, with limited results. To facilitate change, we launched a rapid proof of concept, following the IVADS™ model as outlined on the right.

Data was captured across the entire loan lifecycle—origination, servicing, default and public records—but stored in a variety of siloes including legacy mainframe systems. Considerable effort had been spent to enable extraction, but efforts were hampered by the variable nature of VSAM structure, lack of real time access, and lengthy ETL (extract, transform and load) to normalize and store the content. Sophisticated techniques were applied to glean insight, but with so little of the potential data accessible, and given the long aggregation process, the resultant data product was narrow in scope and far from the real-time product desired. After spending considerable time and money to solve these issues, the client engaged Booz Allen Hamilton to help unlock the greater potential in the data. This began an iterative journey moving the client through the IVADS™ paradigm.

1. **Systems** The most significant issue was the inability to access all of the data. Booz Allen rapidly built a Hadoop platform to aggregate the data.

2. **Data** The deployment and build out of a non-SQL architecture, combined with rapid “as is” extracts broke through the ETL bottleneck. The addition of historical data from archive further enriched the data scope. In just 4 weeks of effort, the team was able to create an aggregated and enriched data set to drive new insights.

3. **Insights** Insights rapidly traveled from Describe to Discover as new acumen was enabled through access to “all” of the data. Reports in the existing product line were expanded in scope as a result of greater and timelier data access.

4. **Analytics** This break-through led the Analytics team to re-evaluate the overall potential of the product. The team was able to experiment with new analytic algorithms and consider new data use cases.

5. **Visualization** This quickly led to a greater understanding of the limitations of the existing Visualization engine—the next inhibiting factor. The analytic team needed a visualization framework that would foster more rapid development and more intuitive communication of information.

6. **Insights** New product potential, combined with new thinking in visualization of information, culminated in some break through thinking—how could the provider more closely partner and collaborate with its customers? What might be a better distribution mechanism? The next generation of insights should lead to Predict and Advise.

7. **Systems** A new internal cloud is envisioned to offer advanced insights and collaborative enablement with the appropriate Privacy and Security measures necessary in such a venture.
Unlock the value of data and thrive

The IVADS™ model provides the roadmap to rapidly create value from data. It forms the basis for future analytic insight development and builds the confidence to move quickly. Evaluating all aspects of the IVADS™ and iteratively applying them is key to unlocking the value of data and analytics; whether that includes questions on risk, revenue growth or operational efficiency. IVADS™ helps identify the impediments to Insight and how to simultaneously triage and elegantly work around them. IVADS™ helps Data Science Leaders understand strengths, gaps, and logical next steps in driving toward insights and value. Exploring each factor, results in a deeper knowledge of the current state and aids in building a pragmatic roadmap as the organization moves forward.

Our Data Science team can help you with any step in the process:

- Founded in 1914, Booz Allen has over 23,000 staff and $5 billion in annual revenue and has been delivering mission-critical software and systems solutions to federal and commercial clients for over 30 years
- Currently, we have over 300 active development projects in flight, staffed by over 5000 resources (>1750 java developers, >1500 .NET/MS developers, >800 Oracle DB experts)
- We also have 465 people in our Big Data and Data Science teams; 80% hold Master’s degrees or higher in computer science, engineering or statistics
- …and many Computational Jumpstart algorithms pre-built, focusing on Revenue, Cost, Risk and Compliance management categories
- We are contributors to open source technology development (Hadoop, Accumulo, Hbase, Lucene, and Gora) and a strategic delivery Partner with Amazon Web Services, Cloudera, and Pivotal

See our ideas in action at boozallen.com

To learn how Booz Allen Hamilton can help your business thrive, contact:

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Booz Allen Hamilton Commercial Solutions

To thrive in business today, you need to do more than meet the challenges in front of you. You need to anticipate the future, act decisively and invest wisely to achieve long-term success. Booz Allen Hamilton Commercial Solutions is laser-focused on enabling our clients to succeed. Our dedicated teams understand business imperatives, combining in-depth industry knowledge with operational expertise. All grounded in Booz Allen’s decades of experience working on the federal government’s toughest data and security challenges. We bring smart planning, superior implementation and expert tradecraft to solve our client’s toughest problems.