Informed Decisions in a Big Data World

August 2013

How agencies drive efficiency and performance

Mining large volumes of data can accelerate informed decision making to better protect our nation and the security of our global supply chain, assess threats, reduce risk and fraud, and other agency priorities.

In every conversation, "big data" is dangled as the carrot of opportunity. While corporations are driven by commercial success to leverage intelligence embedded in vast amounts of data, the upside potential within and across government agencies is even more profound. Mining large volumes of data can accelerate informed decision making to better protect our nation and the security of our global supply chain, assess threats, reduce risk and fraud, and other agency priorities. Government is able to transform the way it serves America by identifying mission-critical objectives and then transforming big data into intelligence to drive improved performance and efficiency.

> *Big Data is most often defined along three dimensions, "the rapid acceleration in volume, velocity, and variety."*

Harnessing this explosion of information is central to meeting the strategy objectives outlined in the White House's May, 2012 report, *Digital Government: Build a 21st Century Platform to Better Serve the American People*, specifically to "unlock the power of government data to spur innovation across our Nation and improve the quality of services for the American people."

This opportunity comes at a time when government is challenged to accomplish more with fewer resources and operate within a high-stakes global and political environment. Yet, various agencies are successfully extracting insights from big data and using them to implement data-driven improvements. While the path may appear circuitous, McKinsey & Company provides a roadmap for capitalizing on big data. In the October 2012 Harvard Business Review article, *Making Advanced Analytics Work for You*, the process is boiled down to three steps:

1. Identify, combine, and manage multiple sources of data

2. Build advanced analytics models for predicting and optimizing outcomes

3. Possess the muscle to transform the organization so that the data and models actually yield better decisions

Government Agencies Turn Big Data into Big Insight

Different agencies are already using big data to drive efficiencies and improve results in four key areas: Reducing Fraud, Protecting our Nation, Ensuring Global Supply Chain Security, and Knowing Your Business Partners.

Reducing Fraud

Government agencies charged with reducing fraud are looking for ways to shift the paradigm from recovery to prevention, a far more cost-effective approach.

Shifting from "Pay and Chase" to Prevention

Departments of Health and Human Services across America are harnessing big data to reduce the $160 billion cost to taxpayers of Medicaid fraud, waste, and abuse. Predictive modeling, provider screening, and data mining and analysis uncover fraud schemes perpetuated against state Medicaid programs. These processes all require

THE FIVE Cs OF FRAUD PREVENTION

Confirmation: Does the person or entity truly exist?

Condition: Is the business and/or its executives active?

Consistency: Are stated facts consistent with other sources of information?

Character: Are there any past issues that could impose risks on the current or a future transaction?

Continuity: Has the current operational status changed and is it posing new risks?

access to quality information—and insight. Upfront verification and authentication can confirm the existence and condition of a provider, ensure the consistency of information across

all sources, and deliver a better understanding of a provider's character and the continuity of their business. States also must overcome common data-related challenges that undermine initiatives, including duplicate records, outdated or inaccurate address information, limited visibility into connections between providers and beneficiaries, and the inability to accurately assess the risk associated with businesses and individuals. Adopting these approaches enable departments to quickly identify "the needle in the haystack," — and screen out the 1-5% of providers most likely to engage in Medicaid fraud.

"National Medicaid data files are not current, they are not complete and they are not accurate. In fact, the National Medicaid data does not capture all of the elements necessary for the detection of fraud, waste & abuse. Missing data includes elements as basic as name, address and billing information"

Ann Maxwell
Regional Inspector General Office of Evaluation and Inspections
Office of Inspector General, Department of Health and Human Services

Using Risk Scorecards to Reduce Exposure

Agencies responsible for the oversight of large government outlays can mitigate risk using scorecards for prospective recipients based on a combination of data points that are seemingly contradictory and difficult to evaluate. For example, an entity might have a solid payment history but a large number of

pending judgments or liens, or it may have an outstanding performance record but very few customers. Predictive analytics, based on comprehensive data and finely-tuned algorithms, verify legitimate businesses and accurately assess and flag likely risk. Scorecards can also highlight geographic concentrations of potential risk. These initiatives contributed to impressive fraud prevention – in one agency, less than a fraction of a percent of the billions awarded were fraudulent.

D&B has consulted with numerous government agencies to design and implement a disciplined approach to upfront vetting and due diligence for businesses and individuals to detect or prevent contractor fraud and/or Medicare/Medicaid improper payments.

Protecting our Nation

Agencies responsible for protecting America and its borders from known and unknown threats need to quickly convert massive and often times conflicting volumes of data into the insight necessary to manage mission-critical imperatives—from counter proliferation and threat financing to immigration fraud.

Accelerating Analysis to Mitigate National Threats

A thorough understanding of relationships among organizations and people is necessary to safeguard our country. In today's volatile world, counter proliferation is critical. Tracking the activities of every organization related to the nuclear, chemical, and biological industries —including those involved with potentially hazardous or dual use materials—requires the synthesis of huge amounts of disparate data. Analysis and actionable insight from this information can

stop the spread of intelligence and technologies involved in producing weapons of mass destruction and keep them secure from foreign influence and control.

Agencies also need this intelligence to unravel the enormously complex chains of ownership and association used by international businesses and trade organizations that finance terrorism and other harmful activities. Quickly identifying potentially-involved individuals protects United States interests domestically and overseas.

Data-driven intelligence can also prevent illegal cross-border criminal and drug trafficking activity, such as along the southwest border of the U.S. Through systematic analysis, one agency identified that criminal activity and high-risk indictors were prevalent in businesses with high volumes of cash transactions. Local law enforcement agencies now focus resources on these highest-gain opportunities.

Controlling Immigration Fraud

One agency tasked with oversight of more than 350,000 employers and a million work sites adopted data analytics and innovative technologies to handle demand. The agency needed to replace 4,000 monthly, manual employer verifications with a more scalable, risk-based approach. They implemented an automated visa fraud adjudication solution to streamline and standardize the review and approval processes of employment-based visa applications. Now the agency relies on data analysis to validate new business registrations and approve or deny non-citizen employees in real-time. Data-driven intelligence plays a critical role in streamlining and optimizing the reduction of fraud and control of illegal immigration.

Ensuring Global Supply Chain Security

Sharing accurate data is pivotal for safe and efficient commerce across all participants in the global trade ecosystem.

Facilitating Trade with a Unique Entity Identifier

Securing the safety of the global supply chain — from regulatory and border management agencies, importers, global manufacturers, and brokers to international governments—is a priority shared by agencies charged with regulating the flow of goods. It is a careful balancing act with a dual focus: to promote and facilitate legitimate commerce while simultaneously mitigating supply chain risks.

Used by the world's most influential standard-setting organizations, D&B's D-U-N-S® Number is recognized, recommended, or required by over 200 government, trade, and industry organizations around the globe.

These priorities hinge on the ability to identify and validate every entity in the chain. A unique identifier is critical to this process. It enables the fail-safe and efficient exchange of trusted trader data on which the Mutual Recognition Agreements (MRA) depend.

| Business Identification and Validation | → | Information Sharing | → | Registry of Trusted Trader Information |

Ensuring Public Safety with Accurate Information on Importers

Agencies responsible for safeguarding the health of American citizens are faced with complex supply-chain processes with over 20 million import transactions annually. Accurate identification of all related business entities and their activities ensures the selection of suppliers most able to deliver and protect public health. A unique identifier

rectifies often incomplete and incorrect trade information so that duplicate and unlinked records do not cloud admissibility decisions. With a clear view of each entity and the products it manufactures, agencies can confidently adopt a risk-based approach to identifying facilities and importers for onsite inspections. They use finely-tuned predictive scores to evaluate the financial risk of suppliers in order to better focus inspection and regulatory resources. This 360-degree view of all supply-chain participants functions as an "early warning" detection system.

Knowing Your Business Partners

With a mandate to improve accountability and transparency, agencies need efficient access to actionable insight into the financial and operational stability of business partners worldwide—mitigating contractor risk and streamlining oversight.

Best Practices for Mitigating Contractor Risk

- Establish standardized processes
- Validate potential contractors with rigorous due-diligence during the pre-award phase
- Monitor contractor risk during the post-award phase
- Adopt a portfolio view that assesses and manages the collective risk of contractors across the entire organization

Vetting Contractors Efficiently Pre and Post Award

Agencies face a Herculean task of procuring billions of dollars of goods and services and managing thousands of contractors each year. Some agencies optimize this process by providing their acquisition community with instant web access to comprehensive predictive scores on the financial strength of potential contractors. Contracting Officers (COs) also rely on an online application to monitor the stability of selected vendors across their entire contract period. Use of a custom, content-based, responsibility-determination

program—accessible through an enterprise-wide agency portal—facilitates adoption and ease-of-use. Predictive financial-stress scores enable COs to confidently select and manage all contract awards, task orders, renewals, exercise of options, and other acquisitions in excess of predetermined threshold.

Minimizing Exposure with Upfront Loan Authorization Scoring

For government agencies supporting small businesses, managing lending risk upstream in the process is instrumental to ensure continued access to working capital. To drive to zero subsidy, agencies need to collect sufficient fees from lenders and borrowers to back guaranteed loan programs without adding additional government requirements that depress use. Access to scores that reveal risk exposure associated with a business and its business owner is critical to vetting loan requests based on a company's payment track record and forecast of their likelihood to pay. Balancing accessibility and ease-of-use for local banks makes it possible for them to be responsive to their customers while protecting government and commercial entities against exposure.

Moving Forward

The exponential explosion of volume, sources, and types of data presents both a challenge and an opportunity for government agencies. Within this huge amass of ever-changing data hides a goldmine of intelligence imperative to bolstering economic health and protecting national security. Many agencies have successfully taken control of big data to improve the speed and effectiveness of their decisions. Using tools for data capture, cleansing, enrichment, and analytics, they have driven down costs, reduced risk, streamlined operations, and enhanced service.

For more than 85 years, D&B has been advancing responsible government through informed decision-making. D&B understands big data—with a global database of over 225 million companies that is updated more than 1.5 million times a day. Explore how access to D&B's global commercial database, data quality process, unique identifier, corporate linkage capabilities and predictive analytics can power informed decisions and help you advance your agency's mission.

About D&B Government Solutions

D&B partners with all 15 Cabinet-level departments, most federal agencies, and all 50 states to make sense of information to solve complex problems. We harness the world's data to provide independent, historical, and forward-looking perspectives. Perspectives that drive efficiency and enable data-driven decisions to protect our nation and our global supply chain, assess threats, reduce fraud, and better understand business partners and their relationships. As the global leader of business intelligence, agencies rely on D&B as a trusted partner for unparalleled business insight and expertise to empower smart, confident decisions.

For more information, contact us at **1-800-424-2495** or **government@dnb.com**, or visit **www.dnb.com/government**.

Dun & Bradstreet (D&B)
103 JFK Parkway
Short Hills, NJ 07078

www.dnb.com