

## Federal CFO Insights Enhancing Operations of Purchase Card Programs Through Advanced Data Analytics & Continuous Monitoring



In this age of increasing austerity, Federal Chief Financial Officers (CFOs) and their respective agencies are being confronted with increased regulatory requirements for improving the management of purchase cards<sup>1</sup>; specifically, to maintain standardized and consistent monitoring of transactions to detect instances of potential misuse, fraud and abuse. Management is expected to adhere to these regulatory requirements, while addressing their other competing initiatives and achieving performance goals. As management responsibilities increase and resources remain limited, it is increasingly important for CFOs to manage programs with efficient purchase card operations, establish effective oversight, and make sure agency funds are used for their intended purpose.

Federal agencies encounter similar challenges when it comes to consistent and effective purchase card review, such as the lack of resources and reliance on manual processes to perform consistent and standardized monitoring of purchase card transactions and effectively enforce purchase card-related policies and procedures. In addition, month-to-month purchase review results may not be consistently tracked and analyzed for trends in an effective manner. If controls are not operating effectively to mitigate the risk of fraud, misuse and delinquency; there is an increased risk that charge cards may be used improperly. In addition, there is an increased risk for financial misstatement.

What if it were possible for Federal CFOs to enhance the quality and efficiency of purchase card operations, while also adhering to relevant laws, regulations, and policies and procedures? Advanced data analytics can help improve decision making, reduce risk exposure, and help discover valuable operational insights that could otherwise remain undiscovered within raw and unconnected data. Furthermore, data analytics can help increase oversight and monitoring and reporting capabilities that can help inform policy, procedure and/or government updates to improve internal controls. This article describes a data analysis and continuous monitoring method that can help CFOs increase efficiencies and oversight of their purchase card program in tight budgetary times.

### What is Advanced Data Analytics?

Advanced data analytics is the practice of using data to manage information and performance – and make more informed decisions. Advanced analytics uses data mining, pattern matching, data visualization and predictive modeling tools to produce analyses and algorithms that help organizations make better decisions. Advanced analytics helps to answer these questions: Why is this happening? What if trends continue? What will happen next? What is the preferred outcome?

Many CFOs do not exploit – or even realize – the insights hidden within their data. Advanced data analytics helps to reveal information that can drive better decision-making

### How analytics can be applied to purchase card programs:

- Isolate transactions of unusual amounts or relationships such as frequent purchases with the same vendor for the same amount
- Identify which employees have frequent purchases with questionable vendors based on merchant categorization codes
- Detect “split purchases” made to circumvent transaction limits by observing purchases made to the same vendor on the same day using the same card and in total exceed the transaction limit
- Help identify cardholders who do a large portion of business with one vendor to achieve strategic sourcing goals
- Identify buying patterns of purchases near the micro purchase threshold that is set by the specific agency
- Evaluate the effectiveness of approving officials; for example, identifying approving officials who have too many cardholders under their responsibility

(e.g., prediction, forecasting and optimization). An effective and efficient data analytics process can help CFOs solve complex problems and draw conclusions about current conditions and future events to improve productivity and process efficiency, and to manage for performance.

### How can Advanced Data Analytics be used?

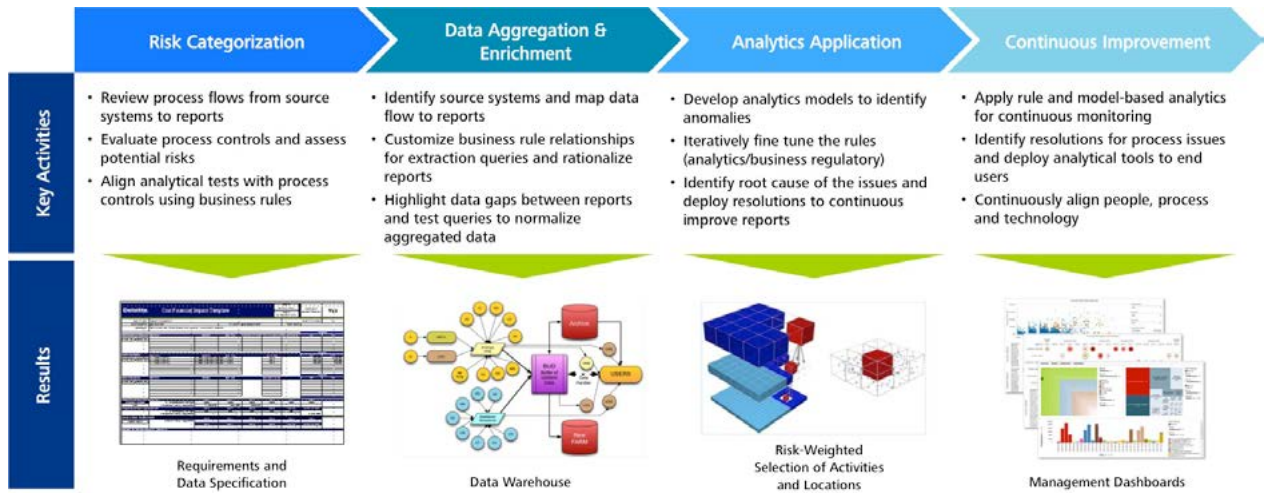
Advanced data analytics can be used to aggregate, organize, and monitor financial data across various business domains over time to focus limited resources on analyzing potentially high-risk transactions, while continuously improving performance and internal controls. For purchase cards, advanced analytics can be leveraged to model outcomes and assist with predictive intelligence. These techniques include connecting enterprise data to facilitate fact-driven intelligent decisions and drawing more reliable conclusions about current conditions and future events. Data analytics can be used to understand vendor patterns with purchase card transactions; for example, identifying the commonly used vendors and performing an analysis to evaluate if strategic sourcing goals are being attained. Additionally, data analytic tools can facilitate the development of user-friendly dashboards that can be tailored to stakeholder needs and allow for continuous monitoring of purchase card operations (e.g., high risk cardholders, spikes in spending patterns by cardholder, repetitive buying patterns of purchases near the micro- purchase threshold, etc.). These dashboards provide increased transparency and insight to help reduce the burden of program coordinators and individual cardholders for manual monitoring of transactions.

The use of data analytics provides a mechanism and opportunity for continuous and standardized monitoring of purchase card transactions. Purchase card data analytics has been effectively implemented at several agencies to address specific business needs with desired results and better efficiency. The Data Analytics framework, as shown below in figure 1, is a defined process for aggregating, evaluating, and analyzing the data required for solving business problems

Figure 1. The process of delivering analytics business results is one of continuous improvement. Starting anywhere in the analytics cycle, an organization can immediately begin to address its specific needs.



Figure 2. Four-step approach



### Strategy for Realizing Advanced Data Analytics & Continuous Monitoring

The following four-step approach serves as a high level view of the processes, key activities, and results that can be realized when employing an advanced data analytics and continuous monitoring solution. Each step described below is highly customizable based the agency's purchase card program maturity and its ability to fit the agency's business needs and meet desired results.

- 1. Risk Categorization:** As CFOs look to achieve performance goals and improve efficiency of their purchase card programs, defining specific, measurable objectives as well risks to be monitored is an essential first step. This planning phase should evaluate current process controls, assess potential risks, and identify which business rules can be leveraged for analytics tests.
- 2. Data Aggregation & Enrichment:** Collect, cleanse, and normalize data to accelerate progress in achieving strategic objectives, as well as determine which approaches are more effective and where there is the greater need for intervention and improvement.
- 3. Analytics Application:** The collected data can be analyzed to illustrate trends, outliers and other information. For example, the data can illustrate trends

in purchase card data and potentially show inefficiencies and issues by different offices. The results of the analysis can further drive remediation and attention to reduce further fraudulent and improper payments, and increase the efficiency of agency funds.

- 4. Continuous Improvement:** The use of interactive dashboards offer a visual and interactive display of the analyzed data and provide viewers easy to use reporting tools to improve visibility into the organization. These tools and dashboards provide granularity in its analysis; specifically by illustrating purchase card performance and potential cost-saving opportunities, by displaying results at the geographic office, cardholder and approving official level. As a result, leadership has the ability to tailor the results and drill down to various levels, maximizing the flexibility and usefulness of the data. These data visualization capabilities, in conjunction with business process enhancement techniques, can help end users to independently and promptly mine their data and analyze it in an intuitive and easy-to-navigate "point-and-click" Web-based format. Presentation of the information can be displayed to show multiple trends (e.g., year over year) and specific information within the data, tailored to stakeholder interest and priorities.

These steps can help CFOs improve efficiencies of their purchase card program and drive improvements in efficient spending and monitoring of transactions. An increased focus on data analytics and automation can help alleviate the burden of manual reviews, and save agency personnel time and allow them to focus on their other high-priority goals.

Oversight of purchase card transactions will continue to be an area of significant regulation and scrutiny, including from outside parties such as Congress and the media. As the use of government purchase cards continues to increase, additional potential risk for errors, fraud, and abuse will most likely be introduced. As this risk increases, it will become even more important for agencies to maintain proper controls to prevent and detect misuse and improve management of their purchase card programs.

#### Advanced data analytics benefits:

- Increased insight into trends through interactive tools, which can enable real-time analysis with drill-down capabilities
- Increased efficiency of the post-transaction review to determine that potential fraudulent or improper payments are identified and resolved in a timely manner
- Increased oversight, monitoring and reporting capabilities that informs policy, procedure and/or governance updates to improve internal controls
- Improved quality of purchase card review to help drive a standardized mechanism for monitoring transactions
- Continuous monitoring and oversight of the purchase card program

#### Endnotes

<sup>1</sup>The following regulatory requirements should be considered by agencies with purchase card programs:

- *Improving the Management of Government Charge Card Programs*, OMB Circular A-123, Appendix B (January 15, 2009)
- *Promoting Efficient Spending to Support Agency Operations*, OMB Memorandum M-12-12 (May 11, 2012)
- *Government Charge Card Abuse Prevention Act of 2012 (Charge Card Act)*, Public Law 112-194
- *Implementation of the Government Charge Card Abuse Prevention Act of 2012*, OMB Memorandum M-13-21 (September 06, 2013)
- *Standards for Internal Control in the Federal Government (aka "the Green Book")* (September 10, 2014); requires Federal Agencies to consider fraud risks as part of their overall risk assessment and A-123 process; purchase cards represent a major source of fraudulent and improper payments.

#### Primary contacts

##### Robert Gramms

Deloitte Advisory Principal  
Deloitte & Touche LLP  
[rgramms@deloitte.com](mailto:rgramms@deloitte.com)

##### Ali St. Clair

Deloitte Advisory Manager  
Deloitte & Touche LLP  
[astclair@deloitte.com](mailto:astclair@deloitte.com)

##### Natalie Samuel

Deloitte Advisory Manager  
Deloitte & Touche LLP  
[nsamuel@deloitte.com](mailto:nsamuel@deloitte.com)

Deloitte *Federal CFO Insights* are developed with the guidance of Roger Hill, Principal, Federal CFO Program Leader, Deloitte & Touche LLP; and Emily Franklin and Matt Prizinsky, Federal CFO Program Managers, Deloitte Consulting LLP

#### About Deloitte's Federal CFO Program

The Federal CFO Program brings together a multidisciplinary team of Deloitte leaders and subject matter specialists to help Federal finance leaders stay ahead in the face of growing challenges and demands. The Program harnesses our organization's broad capabilities to deliver forward thinking and fresh insights for every stage of a leader's career — helping Federal CFOs manage the complexities of their roles, tackle their company's or agency's most compelling challenges, and adapt to strategic shifts in the market.

For more information about Deloitte's Federal CFO Program, visit our website at:

[www.deloitte.com/us/FederalCFO](http://www.deloitte.com/us/FederalCFO)

This publication contains general information only and is based on the experiences and research of Deloitte practitioners. Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.

**About Deloitte**

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee (“DTTL”), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as “Deloitte Global”) does not provide services to clients. Please see [www.deloitte.com/about](http://www.deloitte.com/about) for a detailed description of DTTL and its member firms. Please see [www.deloitte.com/us/about](http://www.deloitte.com/us/about) for a detailed description of the legal structure of Deloitte LLP and its subsidiaries. Certain services may not be available to attest clients under the rules and regulations of public accounting.