Strategic Sourcing and Data Mining

David Ruda

Citi® Commercial Cards, Government Services
The Tenth Annual GSA SmartPay® Conference
Towards New Horizons!

Denver, Colorado
July 22nd - July 24th, 2008
Goal & Objectives

- To learn what strategic sourcing and data mining are and how it can make your program even better
- To learn how these apply to your SmartPay program
- To learn how Citi can provide you with the tools you need
Agenda

1. What are Strategic Sourcing and Data Mining
2. Why are Strategic Sourcing and Data Mining Important
3. Reviewing the Citi® Tools
4. Incorporating Strategic Sourcing into Your SmartPay Program
5. Mining Your Own Data
What is Strategic Sourcing?

- Strategic sourcing is...
  - A process of continuous improvement and evaluation of an organization’s buying activities.
  - Part of an organization “supply chain management” that identifies key areas of focus.
  - Examining the way government spends its appropriations through contracts, delivery orders and purchase cards!
What is Data Mining?

• Data Mining is…
  – A process of systematically searching large volumes of data for patterns and finding out relevant information
  – Data mining or “knowledge discovery” is:
    ▪ Analyzing data from different perspectives
    ▪ Summarizing it into useful information
    • Increase efficiency
    • Cut costs
Data Mining – Misuse / Abuse Identification to Strategic Sourcing Analysis

Data needs and uses progress from simple account listings, to strategic sourcing, to complex data mining and analysis.
Why is Strategic Sourcing Important? Finding those patterns!

Why is Strategic Sourcing Important?

- OMB Circular A-123
  - Mandated
  - December 2006 Memorandum
    - Agencies must
      - Describe Initiatives
      - 2007 Goals
      - Performance Measures
        - Price of goods
        - Cost to transact
        - Socio-economic goals
        - Information management
Why is Strategic Sourcing Important?

- Getting the Best Value
  - How do you know?

- Supplier Diversity Goals
  - Are they being met?

- Quality Improvement
  - Are goods/services specifications achieved?

- Being Prepared
  - Never know who is going to come knocking
  - Keeping management in the know
The path to strategic sourcing – by Justin Sullivan

- January 16, 2006

“Federal agencies of all sizes are huddled to discuss what kind of impact the ‘May 20th memo’ will have on plans for 2006. The memo from Clay Johnson, the Office of Management and Budget’s deputy director for management, commits the chief acquisition officers, chief financial officers and chief information officers to implement strategic sourcing efforts in all agencies. “

“… According to the memo, the government spends approximately $300 billion on goods and services each fiscal year. A modest 1 percent to 2 percent reduction would produce savings equivalent to the annual revenues of a Fortune 500 company. “
Basic Strategic Sourcing Life Cycle

1. Assessing your current spend
2. Who sells what you want to buy
3. Developing your strategy
4. Identifying suitable suppliers
5. Negotiating with suppliers
6. Implementing your plan
7. Tracking results
Strategic Sourcing Life Cycle – Steps 1 to 3

- **Step 1 – Assessing your current spend**
  - First step is to take step and review your current spending
  - Review what you are spending by commodity

- **Step 2 – Who sells what you want to buy**
  - Network – see what other know and have experienced
  - Research – see what you can find out about suppliers

- **Step 3 – Developing Your Strategy**
  - Team work – you need input from stakeholders
  - Supplier’s importance
  - Supplier’s bargaining strengthens/weaknesses
  - Mission of your organization
Strategic Sourcing Life Cycle – Steps 4 to 7

- **Step 4 – Identifying Suitable Suppliers**
  - Getting first hand knowledge of products/services
  - Apples to apples comparison

- **Step 5 – Negotiating with Suppliers**
  - RPFs – build your requirements into proposals and requirements
  - Size/Scope – Federal Government is key client/leverage your size
  - Supplier’s bargaining strengthens/weaknesses

- **Step 6 – Implementing Your Plan**
  - Project plan – create detailed project plan with all the stakeholders
  - Supporting material – complete policies, procedures, communication plan

- **Step 7 – Monitor**
  - Post plan review – extract results from systems
  - Create a formal score card
Keys to Success in Developing Your Strategic Sourcing Program

- Management buy-in
  - Engage your bosses

- Challenging the status quo
  - Things don’t have to stay the same

- Supplier Relationships
  - Challenge your suppliers
  - Communication
Summary of Strategic Sourcing

- Process improvement of buying activities
  - Being the best
  - Achieving your agency’s objectives
- Seven stage life cycle
- Key government initiative
Data Mining Introduction….

- Sorting through data to identify patterns and establish relationships
  - **Association** - looking for patterns where one event is connected to another event
  - **Sequence analysis** - looking for patterns where one event leads to another later event
  - **Clustering** - finding and visually documenting groups of facts
  - **Forecasting** - discovering patterns in data that can lead to reasonable predictions about the future
Data Mining

- It’s the IN thing to do

- Be careful what you ask for…
  - Be focused on the information you’re seeking
Why is Data Mining Important?

- Managing the exceptions
  - Split transactions?
  - Supply sources?
  - ATM transactions in home zip code?

- Risk Management
  - OMB Circular A-123 Section 4
    - Detection of Fraud, Waste and Abuse

- Using Data Mining as tool to get where you want go
Citibank Tools Available

- Citibank® Custom Reporting System (CCRS)
  - Standard reports
  - Create your own reports
  - Data mining opportunities
- Program Auditing Tool
- Dashboards for SP2
Citibank® Customer Reporting System – Your Source for Strategic Sourcing and Data Mining

Citibank Commercial Cards Reporting System

Help Desk
Help Desk users can change their current security filter to assist in troubleshooting.
Current Security Filter: Citigroup  (change)

Shared Reports
- Citi Internal Folder
- Global Shared Reports
- Organizational Shared Folders
- CINI SE Omni
- GSA SmartPay Conference Reports
- Standard Reports
Mine Data for Business Intelligence

- Web-based, ad hoc reporting tool with 500+ public and private sector clients in over 20 countries use the Citi® EAS
- Mine data and create reports from over 650 data elements
- Robust and user-friendly
  - Aggregates Level 1, 2, and 3 data and pulls in data from Visa/MasterCard, merchants and other sources
- 52 universally shared queries covering 7 program management categories
Citibank® Custom Reporting System – Standard Reports and Ad Hoc Queries

**Statistical Summary Report - CD900**
*Owner:* Administrator  
*Modified:* 11/17/06 2:16:40 PM  
Summary unit totals by transaction category for a unit and its sub-units without extended transaction detail  
Subscriptions  Export  PDF

**Summary Quarterly Merchant Report - CD1000**
*Owner:* Administrator  
*Modified:* 11/17/06 2:19:45 PM  
Totals of merchant activity and average merchant transaction for each fiscal quarter on a 5-quarter basis  
Subscriptions  Export  PDF

**Summary Quarterly Vendor Analysis Report - CD1100**
*Owner:* Administrator  
*Modified:* 11/17/06 2:22:51 PM  
Summary totals activity for the top 100 merchants for fiscal quarter and fiscal year-to-date  
Subscriptions  Export  PDF

**Summary Quarterly Vendor Ranking Report - CD1200**
*Owner:* Administrator  
*Modified:* 11/17/06 2:24:23 PM  
Summary totals of merchant activity by fiscal year for the top 100 merchants utilized with statistical comparison to prior quarter activity  
Subscriptions  Export  PDF
Citibank® Custom Reporting System – Standard Reports and Ad Hoc Queries
Using the Data

- What do you learn from these reports?
- How can you use them?
- How can you incorporate into your program?
  - Adjusting MCC Controls
  - Adjusting limits on accounts
How to Mine Your Own Data

• Data mining consists of four major elements:
  – Extract and load transaction data onto the data warehouse system
    ▪ Citibank/CCRS
  – Provide data access
    ▪ Citibank/CCRS
    ▪ Internal systems
  – Analyze the data
  – Present the data in a useful format
    ▪ Graphs
    ▪ Spreadsheets
    ▪ Charts
## MCC Summary - 06 02 2007

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Using Data – Bring the Output into Excel and You Can Rank your Suppliers

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CCRS – Helps You Find Unusual Transactions…
Let’s Go Swimming!

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<th>Code</th>
<th>Category</th>
<th>Amount</th>
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<td>5971</td>
<td>ART DEALERS</td>
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<td>4784</td>
<td>BRIDGE AND ROAD FEES, TOLLS</td>
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<td>7333</td>
<td>COMMERCIAL ART, GRAPHICS, PHOTOGRAPHY</td>
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<td>8734</td>
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<td>7342</td>
<td>EXTERMINATING AND DISINFECTING SERVICES</td>
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<td>5211</td>
<td>BUILDING, MATERIALS, LUMBER STORES</td>
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<td>4215</td>
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<td>SWIMMING POOLS - SALES AND SERVICE</td>
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Using the Data – You Can Drill Down and See the Transaction Detail

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<th>Transaction Date</th>
<th>Transaction Post Date</th>
<th>Hierarchy Level 2</th>
<th>Hierarchy Level 3</th>
<th>Account Number</th>
<th>Cardholder Last Name</th>
<th>MCC</th>
<th>Merchant Name</th>
<th>Merchant City</th>
<th>Merchant State</th>
<th>Transaction Amount</th>
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<td>5/29/2007</td>
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<td>XX009</td>
<td>XX284</td>
<td>XXXXDY</td>
<td>5996</td>
<td>RECREATION SUPPLY COMPANY</td>
<td>BISMARCK</td>
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Declined! Why so many in one month?

<table>
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<tr>
<th>Cardholder</th>
<th>Total Number of Declines</th>
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<tr>
<td>Jane Doe</td>
<td>35</td>
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<tr>
<td>Ken Williams</td>
<td>22</td>
</tr>
<tr>
<td>Sam Hill</td>
<td>22</td>
</tr>
<tr>
<td>Donna Dorh</td>
<td>18</td>
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<tr>
<td>Jack Barratt</td>
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</tr>
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</table>

- Jane – Not enough credit
- Ken – Not enough credit
- Sam – Expiration Date Mismatch
Dashboards – NEW for SMARTPAY 2!!

- Pictures speak a 1,000 words
- Gives you a snapshot picture of your program
- Integrated within Citibank Custom Reporting System (CCRS)
  - Like “Shared Reports”
- Initially three initial categories of dashboards
  - Transactions
  - Card Performance
  - Vendor Management
Dashboards – Transactions

• Transaction based Dashboard includes:
  – Total Transaction amount over a period
  – Total transaction count over a period
  – Average transaction amount in a given period (week, month, quarter)
  – Cash usage
  – Cash spend as % of total spend
  – Potential split transactions
  – Cash Withdrawals within the zip code of the card holder zip code
  – Weekend transactions
Dashboards – Performance Metrics

• Card performance based metrics (summary level and hierarchy levels)
  – Number of cards and number of active cards
  – Audit purpose data
    ▪ Past due metrics – Account Status (30, 60, 90, 120, +)
    ▪ ATM/Cash Fees
    ▪ Disputes – settled by cardholder, merchant, status, reason
Dashboards – Vendor Management

• Vendor Management based:
  – Transactions by MCC / identified merchants categories (top airlines, hotels, rental cars, office supplies, others)
  – Average spend amounts
  – Max / min transaction amounts
  – Transaction amount/count – total and count for a given hierarchy

• Airline data

• Hotel data by hotel properties and in summary:

• Rental car by rental company
Dashboard Information Delivery

- Graphical presentation of key performance indicators
- Single snapshot point automatically tailored to each user
- All management information reporting can be derived directly from the Citi data warehouse using CCRS
Dashboard Information Delivery
Summary

- Discussed definition of strategic sourcing and data mining
- Understanding the process steps of strategic sourcing
  - Seven steps to remember
- Using the Citi® Tools
  - CCRS
  - Dashboards new for SP2
- Understanding the Results
  - Slicing and dicing
Reminders

• Thank you for attending this session

• Visit the Citi® Welcome Center
  – Exhibit Area Entrance, Sheraton Denver
  – Conference Slide Show – come see yourself shine

• Visit the Citi® One-on-One Mini-Sessions
  – Governor’s Square Rooms 10 and 11

• Please take a moment to complete your GSA survey for this session
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