Strategic Sourcing and Data Mining

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Success is in the Cards

11th Annual GSA SmartPay Conference

Phoenix, Arizona
July 28th - July 30th, 2009
To ensure the best possible learning experience for participants, please adhere to the following house rules:

• Turn cell phones and pagers to vibrate
• Hold questions to end of session
• Must be scanned to receive CLP credits
  − For each course
• Unanswered Questions
  − Q-Cards & Ballot Boxes
  − Answer to be emailed after the conference - within 45 days
Strategic Sourcing and Data Mining

Goals & Objectives

This session is designed to assist you in achieving the following goals:

• Understanding the meaning and enhancement capabilities of Strategic Sourcing and Data Mining
• Discover how Strategic Sourcing and Data Mining apply to your SmartPay 2 program
• Understand how Citi can provide you with the tools you need
Agenda

1. Strategic Sourcing and Data Mining - Defined
2. The Importance of Strategic Sourcing and Data Mining
3. Citi Tools Review
4. Incorporating Strategic Sourcing into Your SmartPay Program
5. Mining Your Own Data
1. Strategic Sourcing and Data Mining - Defined
1. Strategic Sourcing and Data Mining - Defined

What is Strategic Sourcing?

- A process of continuous improvement and evaluation of an organization’s buying activities
- Part of an organization’s “supply chain management” that identifies key areas of focus
- An examination of the way government spends its appropriations through contracts, delivery orders and purchase cards
1. Strategic Sourcing and Data Mining - Defined

What is Data Mining?

- A process of systematically searching large volumes of data for patterns and finding out relevant information

- “Knowledge discovery”…
  - Analyzing data from different perspectives
  - Summarizing it into useful information
    - Increase efficiency
    - Cut costs
1. Strategic Sourcing and Data Mining - Defined

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.

- Reporting
  - Standard Reports
  - Custom Reports
  - Ad-hoc Queries
  - CCRS

- Strategic Sourcing
  - Data Summarization
  - Vendor Utilization Reporting
  - Vendor Ranking
  - CCRS

- Data Mining
  - Business Rules
  - Data Analysis
  - Exception Reporting
  - CCRS, Program Audit Tool
2. The Importance of Strategic Sourcing and Data Mining
2. The Importance of Strategic Sourcing and Data Mining

Why is Strategic Sourcing Important? Finding Those Patterns!
2. The Importance of Strategic Sourcing and Data Mining

What is Strategic Sourcing important? The OMB Circular A-123

- Mandated

- December 2006 Memorandum states agencies must...
  - Describe initiatives
  - 2007 goals
  - Performance measures
    - Price of goods
    - Cost to transact
    - Socio-economic goals
    - Information management
2. The Importance of Strategic Sourcing and Data Mining

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
  - Proactively providing updates to management
  - Reactively providing quick responses to management requests
2. The Importance of Strategic Sourcing and Data Mining

Basic Strategic Sourcing Life Cycle

1. Spend Analysis
2. Vendors
3. Develop Strategy
4. Suitable Vendors
5. Negotiate
6. Apply Plan
7. Monitor
2. The Importance of Strategic Sourcing and Data Mining

Basic Strategic Sourcing Life Cycle

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

Step 2 – Vendors
- Network – see what others 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

Step 4 – Identifying Suitable Suppliers
- Getting first hand knowledge of products/services
- Apples to apples comparison
Basic Strategic Sourcing Life Cycle

Step 5 – Negotiate
- RFPs – build your requirements into proposals and requirements
- Size/Scope – Federal Government is key client/leverage your size
- Supplier’s bargaining strengthens/weaknesses

Step 6 – Apply 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
2. The Importance of Strategic Sourcing and Data Mining

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
2. The Importance of Strategic Sourcing and Data Mining

Summary of Strategic Sourcing

- Process improvement of buying activities
  - Being the best
  - Achieving your agency’s objectives
- Seven stage life cycle
- Key government initiative
2. The Importance of Strategic Sourcing and Data Mining

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
2. The Importance of Strategic Sourcing and Data Mining

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
3. Citi Tools Review
3. Citi Tools Review

Available Citi Tools

- Citibank® Custom Reporting System (CCRS)
  - Standard reports
  - Create your own reports
  - Data mining opportunities
- Program Audit Tool
- Program Dashboards
3. Citi Tools Review

Citibank Customer Reporting System - Your Source for Strategic Sourcing and Data Mining!
3. Citi Tools Review

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 different program management categories
3. Citi Tools Review

Citibank® Customer 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**
3. Citi Tools Review

Citibank® Customer Reporting System – Standard Reports and Ad-Hoc Queries

Account Management Reports
Owner: Administrator
Modified: 3/16/07 11:08:41 PM

Declined Authorizations Reports
Owner: Administrator
Modified: 3/4/06 7:47:18 PM

Delinquency Reports
Owner: Administrator
Modified: 2/11/07 1:48:22 AM

Lodged Reports
Owner: Administrator
Modified: 3/4/06 7:45:09 PM

Merchant Reports
Owner: Administrator
Modified: 3/4/06 7:48:43 PM

Reallocation Reports
Owner: Administrator
Modified: 3/16/07 11:43:15 PM

Transaction Reports
Owner: Administrator
Modified: 3/16/07 11:15:21 PM

Travel Reports
Owner: Administrator
Modified: 3/16/07 11:23:38 PM
3. Citi Tools Review

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
Data mining consists of four major elements:

1. Extract and load transaction data onto the data warehouse system
   - Citibank/CCRS

2. Provide data access
   - Citibank/CCRS
   - Internal systems

3. Analyze the data

4. Present the data in a useful format
   - Graphs
   - Spreadsheets
   - Charts
### 3. Citi Tools Review

#### Using the Data – Getting Started: A Summary by MCC

<table>
<thead>
<tr>
<th>MCC</th>
<th>MCC Description</th>
<th>Total Transaction Amount</th>
<th>Transaction Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>3058</td>
<td>DELTA</td>
<td>1,001,738.09</td>
<td>3,504</td>
</tr>
<tr>
<td>4722</td>
<td>TRAVEL AGENCIES</td>
<td>722,894.53</td>
<td>14,568</td>
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<tr>
<td>3000</td>
<td>UNITED AIRLINES</td>
<td>628,539.61</td>
<td>1,919</td>
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<tr>
<td>7011</td>
<td>LODGING NOT SPECIFIED</td>
<td>625,042.58</td>
<td>2,428</td>
</tr>
<tr>
<td>3061</td>
<td>CONTINENTAL</td>
<td>592,791.88</td>
<td>728</td>
</tr>
<tr>
<td>3063</td>
<td>U.S. AIRWAYS</td>
<td>518,755.17</td>
<td>1,708</td>
</tr>
<tr>
<td>4131</td>
<td>BUS LINES, CHARTERS, TOUR BUSES</td>
<td>512,286.44</td>
<td>11,516</td>
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<tr>
<td>3001</td>
<td>AMERICAN AIRLINES</td>
<td>422,631.35</td>
<td>1,659</td>
</tr>
<tr>
<td>3501</td>
<td>HOLIDAY INNS</td>
<td>382,488.25</td>
<td>1,564</td>
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<tr>
<td>6011</td>
<td>MEMBER FINANCIAL INSTITUTIONS--AUTOMATED CASH DISBURSEMENTS</td>
<td>327,943.40</td>
<td>2,505</td>
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<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>311,258.34</td>
<td>1,250</td>
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<tr>
<td>3060</td>
<td>NORTHWEST</td>
<td>298,380.49</td>
<td>933</td>
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<tr>
<td>5943</td>
<td>OFFICE SUPPLY STORES</td>
<td>241,523.14</td>
<td>807</td>
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<tr>
<td>5969</td>
<td>DIRECT MARKETERS - OTHER</td>
<td>235,371.11</td>
<td>417</td>
</tr>
</tbody>
</table>
### 3. Citi Tools Review

**Using the Data – Rank Your Suppliers by Putting Output into Excel**

<table>
<thead>
<tr>
<th>MCC</th>
<th>MCC Description</th>
<th>Merchant Name</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>ASPEN PUBLISHING CO, INC.</td>
<td>47,565.59</td>
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<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>STAPLES DIRECT00209908</td>
<td>39,464.32</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>QUILL CORPORATION</td>
<td>33,682.09</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>STAPLES DIRECT00209411</td>
<td>22,760.36</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>GATOR OFFICE PRODUCTS INC</td>
<td>11,631.51</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>COMPUDATA PRODUCTS INC</td>
<td>10,954.77</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>T &amp; M COMPUTER SUPPLY CO.</td>
<td>9,862.89</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>STAPLES NATION00347138</td>
<td>8,712.06</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>VETERAN'S OFFICE PRODUCTS</td>
<td>7,445.04</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>SUPPLY SAVERS</td>
<td>7,122.40</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>CORNERSTONE OFFICE SYSTEM</td>
<td>6,647.19</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>DESKIMATE OFFICE P01 OF 01</td>
<td>6,307.21</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>METRO OFFICE PRODUCTS</td>
<td>5,812.58</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>FRANK PARSON PAPER CO</td>
<td>5,463.98</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>JWOD.COM</td>
<td>4,554.94</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>INDUSTRIESFORTHETHEBLINDI</td>
<td>3,816.21</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>STAPLES BUSINE00346718</td>
<td>3,552.66</td>
</tr>
<tr>
<td>5111</td>
<td>OFFICE SUPPLIES, PRINTING, STATIONERY</td>
<td>4ANYPRINTER.COM</td>
<td>2,582.11</td>
</tr>
</tbody>
</table>
3. Citi Tools Review

Using the Data – CCRS Helps You Find Unusual Transactions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Amount</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>5719</td>
<td>MISCELLANEOUS HOUSE FURNISHING STORES</td>
<td>$3,245.89</td>
<td>12</td>
</tr>
<tr>
<td>7379</td>
<td>COMPUTER MAINTENANCE, REPAIR AND SERVICES</td>
<td>$3,329.99</td>
<td>7</td>
</tr>
<tr>
<td>5971</td>
<td>ART DEALERS</td>
<td>$3,632.87</td>
<td>7</td>
</tr>
<tr>
<td>4784</td>
<td>BRIDGE AND ROAD FEES, TOLLS</td>
<td>$3,852.75</td>
<td>32</td>
</tr>
<tr>
<td>7333</td>
<td>COMMERCIAL ART, GRAPHICS, PHOTOGRAPHY</td>
<td>$3,696.00</td>
<td>3</td>
</tr>
<tr>
<td>8734</td>
<td>TESTING LABORATORIES, NON-MEDICAL</td>
<td>$3,706.44</td>
<td>4</td>
</tr>
<tr>
<td>7342</td>
<td>EXTERMINATING AND DISINFECTING SERVICES</td>
<td>$3,986.50</td>
<td>2</td>
</tr>
<tr>
<td>5211</td>
<td>BUILDING, MATERIALS, LUMBER STORES</td>
<td>$4,082.26</td>
<td>35</td>
</tr>
<tr>
<td>4215</td>
<td>FREIGHT FORWARDER</td>
<td>$4,427.96</td>
<td>38</td>
</tr>
<tr>
<td>1520</td>
<td>GENERAL CONTRACTORS</td>
<td>$4,648.27</td>
<td>11</td>
</tr>
<tr>
<td>5941</td>
<td>SPORTING GOODS STORES</td>
<td>$4,798.16</td>
<td>11</td>
</tr>
<tr>
<td>7339</td>
<td>STENOGRAPHIC SERVICES</td>
<td>$4,834.20</td>
<td>4</td>
</tr>
<tr>
<td>5996</td>
<td>SWIMMING POOLS - SALES AND SERVICE</td>
<td>$4,999.91</td>
<td>2</td>
</tr>
</tbody>
</table>
### 3. Citi Tools Review

#### Using the Data – Drill Down to View Transaction Detail

<table>
<thead>
<tr>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>5/29/2007</td>
<td>5/31/2007</td>
<td>9</td>
<td>9</td>
<td>XX284</td>
<td>XXXDY</td>
<td>5996</td>
<td>RECREATION SUPPLY COMPANY</td>
<td>BISMARCK</td>
<td>ND</td>
<td>393.74</td>
</tr>
</tbody>
</table>
3. Citi Tools Review

Declined! Why So Many in One Month?

<table>
<thead>
<tr>
<th>Cardholder</th>
<th>Total Number of Declines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane Doe</td>
<td>35</td>
</tr>
<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>
</tr>
<tr>
<td>Jack Barratt</td>
<td>14</td>
</tr>
</tbody>
</table>

- Jane – Not enough credit
- Ken – Not enough credit
- Sam – Expiration Date Mismatch
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Program Dashboard – NEW For SmartPay2!

- The enhanced features are as follows:
  - Provides dynamic, graphical presentation of information based on user-driven parameters
  - Turns traditional reporting to summary level overviews
  - Allows users to highlight exceptions, trends, and data points from summary levels for Program Managers
  - Includes drill-down options to view specific transactions, cardholders, and vendors that account for the exception or trend
  - Enables the user (Program Managers) to dynamically change parameters such as time sequence, hierarchy, vendor base, etc., and see the result displayed graphically
3. Citi Tools Review

Program Dashboard – NEW For SmartPay2!

- The Program Dashboards will provide summary information in three key areas:
  - Transaction Summary – key trends related to card spend and transactions
  - Program Performance – metrics on payments, delinquencies, cards, and span of control
  - Vendor Summary – aggregates spend by top vendors, Merchant Categories and Merchant Names

- The new feature is a CCRS based report module and located under the Shared Reports
3. Citi Tools Review

Program Dashboard – Why?

Figure 2: Top Pressures Driving Dashboard Initiatives

- Need to align business activity with company strategy: 27%
- Need to improve timeliness and accuracy of business decisions: 30%
- Need to remove spreadsheet based process to get to "one version of truth": 33%
- Need to replace "gut-feel" decisions with "fact-based" decisions: 37%
- Need to gain visibility into key business processes: 43%

Source: Aberdeen Group, Executive Dashboards Report - May 2009
3. Citi Tools Review

Program 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
3. Citi Tools Review

Program 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
3. Citi Tools Review

Program 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
3. Citi Tools Review

Program 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
3. Citi Tools Review

Program Dashboard Information Delivery (continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Merchant Name</th>
<th>Transaction Amount</th>
<th>Transaction Count</th>
<th>Average Transaction Amount</th>
<th>Min Transaction Amount</th>
<th>Max Transaction Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>January</td>
<td>AMERICAN AIRLINES</td>
<td>$7,203,798</td>
<td>9,439</td>
<td>$763</td>
<td>($18,550)</td>
<td>$18,859</td>
</tr>
<tr>
<td>2008</td>
<td>January</td>
<td>UNITED AIRLINES</td>
<td>$1,941,142</td>
<td>2,359</td>
<td>$823</td>
<td>($10,497)</td>
<td>$17,388</td>
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<tr>
<td>2008</td>
<td>January</td>
<td>DELTA</td>
<td>$1,226,358</td>
<td>1,878</td>
<td>$653</td>
<td>($9,982)</td>
<td>$9,982</td>
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<td>2008</td>
<td>January</td>
<td>U.S. AIRWAYS</td>
<td>$1,099,862</td>
<td>2,535</td>
<td>$434</td>
<td>($2,385)</td>
<td>$8,542</td>
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<tr>
<td>2008</td>
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<td>SOUTHWEST AIRLINES</td>
<td>$354,352</td>
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<td>$226</td>
<td>($7,361)</td>
<td>$823</td>
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<tr>
<td>2008</td>
<td>January</td>
<td>NORTHWEST</td>
<td>$1,920,252</td>
<td>327</td>
<td>$6,702</td>
<td>($1,174)</td>
<td>$6,668</td>
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<td>2008</td>
<td>January</td>
<td>CONTINENTAL</td>
<td>$195,251</td>
<td>401</td>
<td>$497</td>
<td>($5,002)</td>
<td>$7,781</td>
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<tr>
<td>2008</td>
<td>January</td>
<td>BRITISH AIRWAYS</td>
<td>$137,392</td>
<td>75</td>
<td>$1,831</td>
<td>($3,792)</td>
<td>$8,586</td>
</tr>
<tr>
<td>2008</td>
<td>January</td>
<td>LUFTHANSA</td>
<td>$126,681</td>
<td>81</td>
<td>$1,589</td>
<td>($5,555)</td>
<td>$8,928</td>
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<td>2008</td>
<td>January</td>
<td>JETBLUE AIRWAYS</td>
<td>$102,202</td>
<td>392</td>
<td>$281</td>
<td>($6,69)</td>
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<tr>
<td></td>
<td>Total</td>
<td>January</td>
<td>$12,612,300</td>
<td>19,056</td>
<td>$662 ($18,550)</td>
<td></td>
<td>$18,889</td>
</tr>
</tbody>
</table>

All Airline Merchant by Month for Hierarchy Selection

![Graph showing air travel spend by month](image-url)
Citi Tools Review

CCRGS Program Audit Tool

- Features Include:
  - Role Driven
    - Reviewer, Administrator, and Final Reviewer
  - Rules Management
    - Account and Transaction Level
  - Dashboard Screens
    - Monthly Review and Activity Report Cards
  - Transaction Management
    - Review Questionnaire and ability to add transactions
  - Program Violation Management
    - Violation information, edit resolution, and save changes

The Program Audit Tool resides within CCRGS and provides a web-based application that allows Citi clients to audit and review credit card transactions.
**Citi Tools Review**

**CCRS Program Audit Tool**

Account and Transaction Rules can be set by hierarchy with unique parameters.

---

## Citibank® Custom Reporting System

- **HOME**
- **SHARED REPORTS**
- **MY REPORTS**
- **CREATE REPORT**
- **MY SUBSCRIPTIONS**
- **HISTORY LIST**
- **PREFERENCES**

**File** ▶ **View** ▶ **Data** ▶ **Format** ▶

**Row Axis** ▶ **Values** ▶ **Font** ▶ **Size** ▶

**PAGE-BY:** none

---

<table>
<thead>
<tr>
<th>Rule Type</th>
<th>Rule Definition</th>
<th>Parameter X</th>
<th>Parameter Y</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Account</strong></td>
<td>Account credit limit in excess of &lt;X&gt;</td>
<td></td>
<td>50000</td>
</tr>
<tr>
<td></td>
<td>Single transaction limit in excess of &lt;X&gt;</td>
<td></td>
<td>3000</td>
</tr>
<tr>
<td><strong>Transaction</strong></td>
<td>Posted Transactions(s) causing over cardholder credit limit status</td>
<td></td>
<td>3000</td>
</tr>
<tr>
<td></td>
<td>If MCC is &lt;x&gt; and Merchant city = cardholder account city</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Split Ticket -- multiple trans from same merchant, same tran date</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Split Ticket -- AND total greater than single transaction limit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Citi Tools Review

CCRS Program Audit Tool

Can create multiple rule sets to apply different rule sets to different hierarchies.
Citi Tools Review

CCRS Program Audit Tool

Can view unique transactions that are filtered by the rules that are applied and provide explanations.

<table>
<thead>
<tr>
<th>Hierarchy Level 3</th>
<th>Hierarchy Level 4</th>
<th>Cardholder First Name</th>
<th>Cardholder Last Name</th>
<th>Account Number (Short)</th>
<th>Resolution</th>
<th>Edit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0019</td>
<td>0025</td>
<td>PELZ</td>
<td></td>
<td>9</td>
<td>Closed Account</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0019</td>
<td>0025</td>
<td>TILLEY</td>
<td></td>
<td>75</td>
<td>Closed Account</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0019</td>
<td>0025</td>
<td>YHR</td>
<td></td>
<td>77</td>
<td>Closed Account</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0019</td>
<td>0025</td>
<td>BOY</td>
<td></td>
<td>18</td>
<td>Closed Account</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0019</td>
<td>0025</td>
<td>PES</td>
<td></td>
<td>53</td>
<td>Closed Account</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0019</td>
<td>0025</td>
<td>MARTINE</td>
<td></td>
<td>7</td>
<td>Closed Account</td>
<td></td>
</tr>
</tbody>
</table>
Citi Tools Review

**CCRS Program Audit Tool:** Ability to drill into transaction details.

<table>
<thead>
<tr>
<th>Hierarchy Level 4</th>
<th>Hierarchy Level 4 Name</th>
<th>Transactions To Be Reviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>00024</td>
<td>ABC Company</td>
<td>234</td>
</tr>
<tr>
<td>00025</td>
<td>CDF Agency</td>
<td>816</td>
</tr>
</tbody>
</table>

Select the Transaction Review ID to view transaction details. Click on the review action to review the transaction.

<table>
<thead>
<tr>
<th>Transaction Review ID</th>
<th>Review Status</th>
<th>Account Number (Short)</th>
<th>Last Name</th>
<th>First Name</th>
<th>Date</th>
<th>Merchant Name</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>473</td>
<td>Review</td>
<td>149</td>
<td>Y</td>
<td>WAY</td>
<td>3/24/2008</td>
<td>GATEWAY ACE HARDWARE</td>
<td>240.00</td>
</tr>
<tr>
<td>503</td>
<td>Review</td>
<td>114</td>
<td>DRA</td>
<td>WAY</td>
<td>3/24/2008</td>
<td>AMAZON.COM</td>
<td>253.65</td>
</tr>
<tr>
<td>601</td>
<td>Review</td>
<td>115</td>
<td>RISTNA</td>
<td>WAY</td>
<td>3/24/2008</td>
<td>HARBOR FREIGHT CATALOG</td>
<td>149.29</td>
</tr>
<tr>
<td>521</td>
<td>Review</td>
<td>4157</td>
<td></td>
<td></td>
<td>3/24/2008</td>
<td>METRO OFFICE PRODUCTS</td>
<td>65.37</td>
</tr>
</tbody>
</table>

**Transaction Details**

<table>
<thead>
<tr>
<th>Transaction Information</th>
<th>Cardholder Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Date</td>
<td>3/24/2008</td>
</tr>
<tr>
<td>Merchant Name</td>
<td>WECSYS LLC</td>
</tr>
<tr>
<td>Account Number (Short)</td>
<td>061110</td>
</tr>
<tr>
<td>Cardholder First Name</td>
<td></td>
</tr>
<tr>
<td>Cardholder Last Name</td>
<td></td>
</tr>
<tr>
<td>Single Transaction Limit</td>
<td>3000</td>
</tr>
</tbody>
</table>
Strategic Sourcing and Data Mining

Summary

This session was designed to assist you in achieving the following goals:

• Understanding the meaning and enhancement capabilities of Strategic Sourcing and Data Mining
• Discover how Strategic Sourcing and Data Mining apply to your SmartPay 2 program
• Understand how Citi can provide you with the tools you need
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