

Driving State Procurement Decisions Using Business Intelligence

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State of Arizona

Jean A. Clark, State Procurement Administrator



Executive Summary

For years, public procurement officials have touted the benefits of using data to drive decision-making. Management in general has operated under the mantra that “you cannot manage what you cannot measure.” This is no less true in a procurement organization than in any other operational unit.

However, most efforts to use data to drive decision making have resulted in stale measures that, at best, provide a static scorecard of tactical performance measures that are reported once, but not used to make strategic decisions. In other cases, data is used to drive strategic sourcing projects, often based on a one-off, expensive project with consultants who provide you with more data than you can realistically use. Rarely does an organization effectively combine data in a framework that drives analysis, processes, and ongoing business decisions.

Instead of focusing purely on reporting, the technology industry has begun to focus more fully on business intelligence (“BI”) as a management concept. BI goes beyond traditional reporting to focus on the intelligent analysis of data to drive management decisions. According to Gartner, organizations implementing BI initiatives should:

- “Deliver a metrics framework that aligns strategic goals with operational activities and provides insight by highlighting leading indicators.
- Support decisions by evolving BI scope beyond its role as just a measurement system. This task requires identifying and targeting specific decisions made in the business with BI content.
- Make customer-facing BI part of the business model. Increasingly, BI provides insight and information to customers and business partners. Sometimes this information is so valuable that enterprises can charge for it; other times, it becomes an expected part of the relationship.” (*Business Intelligence and Performance Management Key Initiative Overview*, Gartner, Report ID G00228848, February 3, 2012)

The State of Arizona has embarked on an effort to capitalize on its investment in eProcurement technology by developing a business intelligence framework focused on gathering data, presenting it in a dynamic and easy-to-read manner, and incorporating the results in a process focused on contract portfolios. This approach has required a concerted effort to implement a set of Key Performance Indicators (KPIs) using a framework focused on the following:

- *Efficiency* – How efficiently are state resources being put into action to drive procurement processes and decisions? What are our cycle times? What are we processing per procurement FTE? Are we meeting our timeline goals? What is coming up that we need to plan for?
- *Quality* – What is the quality of our pricing and scope of individual contracts, and what is the collective quality of our contract portfolio? What are we buying, and how much of that is being managed through contract vehicles? Where do we have potential contract leakage that needs to be addressed? How effectively are we managing our contracts? Do we have opportunities to improve vendor performance, make pricing more dynamic, and make our contracts more attractive to state agencies and cooperative partners?
- *Consistency* – How consistently are we applying the policy of the State on purchasing as expressed through statutory and programmatic requirements? Are our targeted vendor populations (veterans, disadvantaged businesses, etc.) active in our processes? Are we buying local? Where can we improve how consistently we meet the policy objectives set forth for procurement?

This approach by Arizona is both innovative, in that it focuses on not just reporting but also on how processes should be affected by data, and transferable, in that this is a business framework that can be adopted by all state procurement organizations.

Background

In 2009, the State of Arizona faced an economic crossroad. With a \$1.4 billion dollar budget deficit, influenced by the US economic recession, the State needed a solution that would cut cost and eliminate waste, and it needed something fast. It was important to find a solution that the State could implement quickly to help cut costs where possible. The State of Arizona issued a Request for Proposal (RFP) for a modernized procurement system. The State called for a single off-the-shelf software solution that would increase process efficiencies, provide transparency, and track the results needed to formulate strategic purchasing decisions moving forward. After a thorough review process of the top rated solutions, the State selected Periscope Holdings, Inc.'s BuySpeed eProcurement/sourcing solution: a one-stop-shop specialized in government purchasing.

To ease the budget deficit and cover the costs for a new system, the State instituted a one percent administrative fee on contractors for the purchases made by local government using state contracts. Not only did this administrative fee cover the full cost of the procurement modernization and installation, it is generating additional revenues for the State within the five year period.

In 2009, Arizona launched Phase I implementing the new eProcurement system, calling their implementation of BuySpeed "ProcureAZ." This initial phase included a single web-based portal for vendor registration, sourcing and contract/catalog ordering. Phase I was successfully completed in less than one hundred (100) days. This initial implementation included the loading of 19 WSCA contracts plus over 2,000 Arizona-specific contracts with 80,000 line items, and it leveled the playing field for Arizona based small businesses.

In October 2010, Arizona began the roll out of ProcureAZ Phase II. Phase II offers full procurement/sourcing functionality and allows State agencies to manage inventory, requisitions, purchase orders, receipts, solicitations, vendors, contracts, and business intelligence reports all in on-demand solution. All 88 state agencies successfully implemented Phase II on time and on budget by the end of summer 2011.

To maximize the savings potential, Arizona launched Phase III which includes the implementation of an invoicing and accounts payable module to enable a "3 way match" process. In addition, the State initiated a focused effort to identify KPIs that drive management decisions, develop reports and dashboards to support proactive and real-time monitoring of these indicators and implement processes to use this data to drive procurement strategy and resource allocation. This document describes Arizona's KPI efforts and their results.

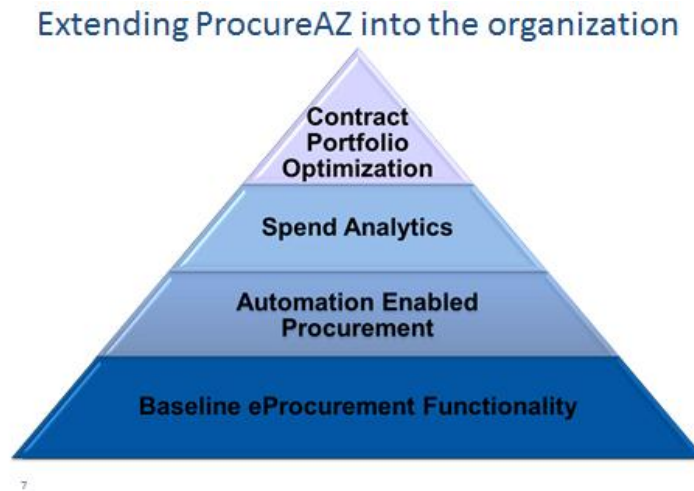
Approach to Solution

Following implementation of eProcurement systems, it is typical for an organization to focus initially on 1) implementing baseline functionality and 2) enabling automation through the new tool, thereby improving business processes. For much of the first year of using ProcureAZ, this was the focus of Arizona agencies and the State Procurement Office.

In the winter of 2011-12, the leading procurement executives for the State began to focus increasingly on trying to use ProcureAZ and its Business Intelligence module to ask increasingly difficult questions:

- How are our contracts being used by state agencies and coops?
- Are we using the system and the contracts within it consistently across the State?
- How can we expand the footprint of procurement to better meet the operational needs of the State and thereby increase our value?

This resulted in a shift to improve spend analytics first, and then to use that analysis to optimize the State’s contract portfolio.



To accomplish this, the State contracted with Periscope, its eProcurement solutions provider, to assist the State in utilizing the ProcureAZ system to more strategically evaluate data to define and track key performance metrics and to identify strategic contract opportunities. Periscope subcontracted to Civic Initiatives, an Austin, Texas-based company specializing in strategic procurement initiatives and contract portfolio management, to assist with this effort. This team of consultants worked with the State to define key indicators and contract opportunities, build dashboards and analytical reports, roll those reports out statewide, and support the implementation of strategic contract portfolios.

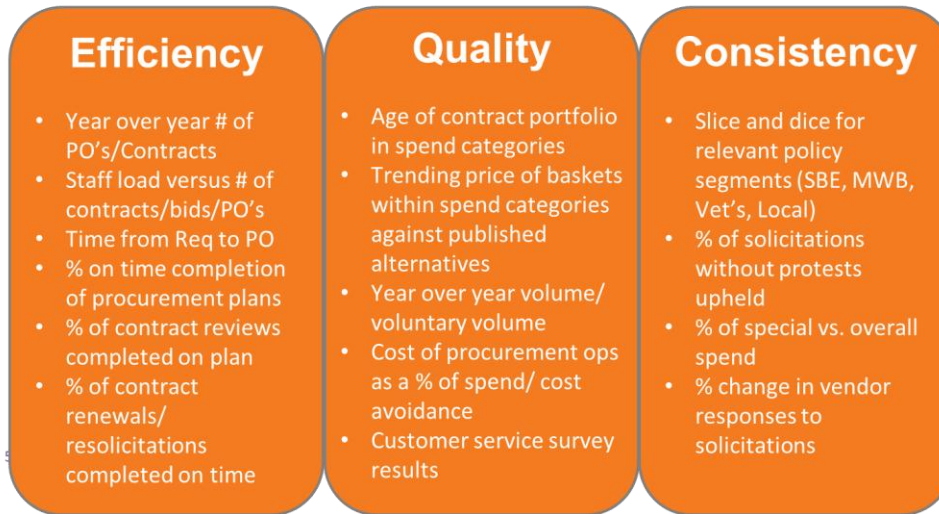
The State’s project objectives were to:

- Assist the State in defining key performance indicators for the procurement function, including efficiencies, customer service, and effective spend management
- Develop a set of key administrative reports, dashboards, and ad hoc report infrastructures to support reporting of these key performance indicators
- Develop a contract portfolio optimization approach focused on the State’s operating model and data gathered from ProcureAZ
- Assess current contract portfolio (including statewide and key agency-specific contracts) to identify opportunities for re-procurement or renegotiation, using ProcureAZ business intelligence tools
- Work with the State to establish a procurement prioritization matrix for the contract portfolio that will allow for ongoing strategic management of spend

Results – Building a Framework Focused on Service Improvement and Value Generation

As a result of this effort, the State decided on a KPI framework focused on three pillars: Efficiency, Quality, and Consistency. These three elements allowed the State to focus on measures most commonly associated with KPIs, but reframing them in a way that moved beyond simple performance reporting to provide actionable data.

Suggested Common Definitions of Success



The State and its contractors developed a series of dashboards using data residing within the ProcureAZ system that allows management to validate on a real-time basis that:

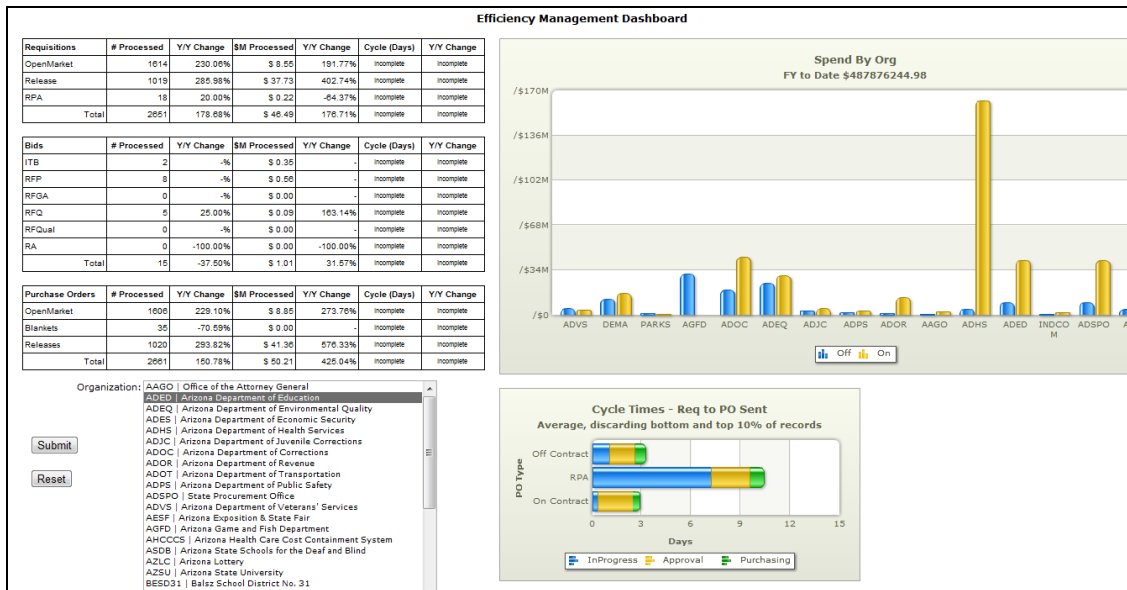
- Expenditures have gone through a defined and consistent sourcing process consistent with state policy, and results of expenditures are available for buyer (and citizen) review
- Solicitation opportunities have gone through a robust and fair competition
- An appropriate mix of contracts is present which reduce unnecessary procurement thrash
- Exceptional value is delivered within defined spend categories, with the minimum level of complexity necessary to deliver that value

In short, Business Intelligence should be more than just interesting data, but instead it should be a process that uses data to make strategic decisions and drive future direction. Processes and operations need to ensure that data/reports are used with a focus on the future (“what should we do about this?”), based on information from the past (“what drove these numbers?”). In short, Business Intelligence is as much a business process as a reporting effort.

Efficiency Management:

One of the first elements that managers think of when considering reports and KPIs is efficiency: are our processes timely, affordable, and responsive? Are we managing our resources to maximum effect? To answer these questions, the State developed dashboards that central and agency procurement leads can run to provide them the following data:

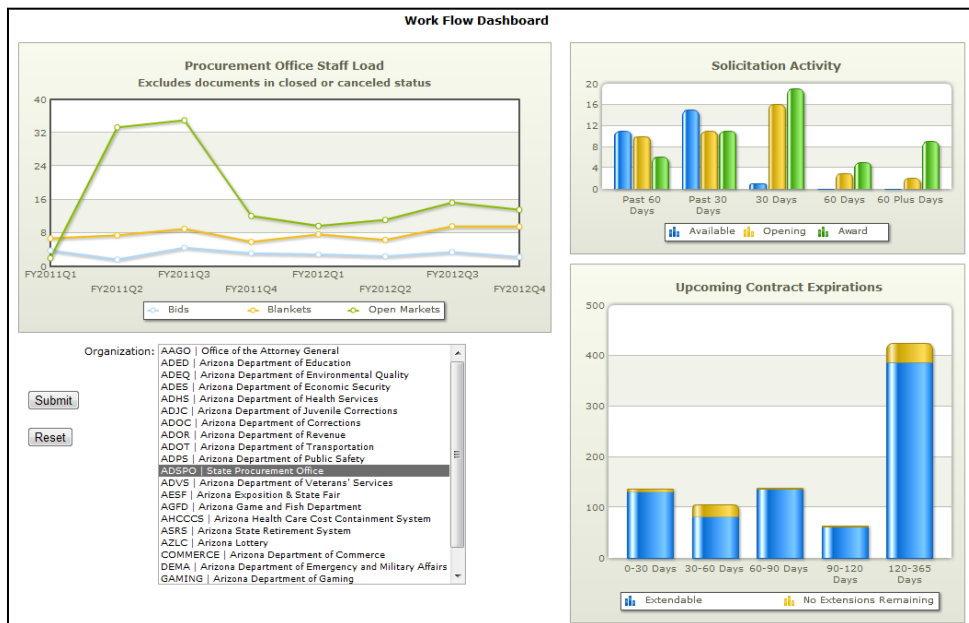
- Detailed data on documents processed, dollar value, and cycle times, with a comparison to prior year data for all elements. This data is broken down by document type (requisition, solicitations, POs) and by purchasing method (contract release, RFP, IFB, etc.)
- Dollars purchased by organizational unit, to allow for an overview of who is buying the most, and how much on/off-contract spend they are processing
- Cycle times for major document types, by phase of the process, to allow managers to see whether delays are in document creation, approvals, or procurement-staff processing



Workflow Management:

Once efficiency is determined (and to help drive improved efficiency), a manager must be able to forecast the procurement pipeline. What actions are coming up that my resources need to manage? Are there seasonal fluctuations I need to anticipate? Are there must-complete activities that I can't let slip? Our Workload Management dashboard provides managers with this information to enable proactive decisions about resource allocation.

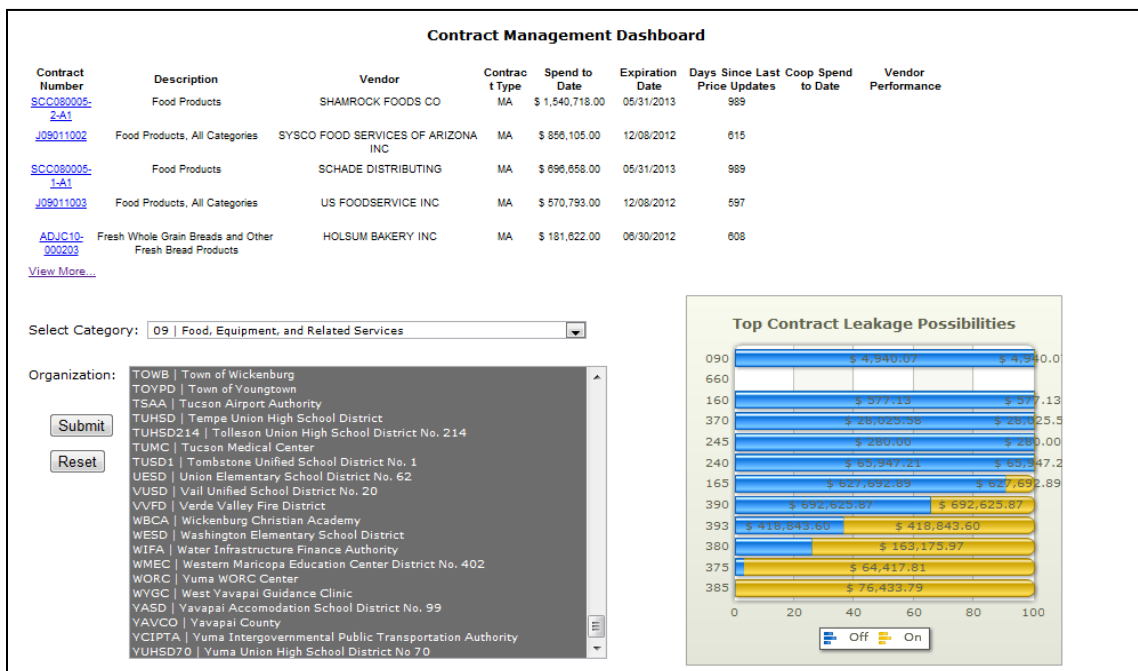
- Trendline data on documents managed per procurement FTE, to allow for analysis of seasonal variations and to gauge the impact on staffing decisions
- Historical and forecast solicitation activity, including solicitations posted/opened/awarded over the past 60 days and projected for the next several months
- Upcoming contract expirations, to allow for planning of reprourement activities; this report tracks contracts that have available extensions, and those that have reached the end of their term and must be resolicited



Contract Management:

Based on the data reported in the Workflow Management dashboard, the State Procurement Office may identify upcoming contracts that need to be evaluated to determine how effectively they are being used, whether they should be modified to make them more effective, and whether they should be resolicited. This allows for a top-down analysis of spend under management by both central and agency procurement managers. The State’s team developed a dashboard to allow for a quick view into contracts within spend categories that presents the following:

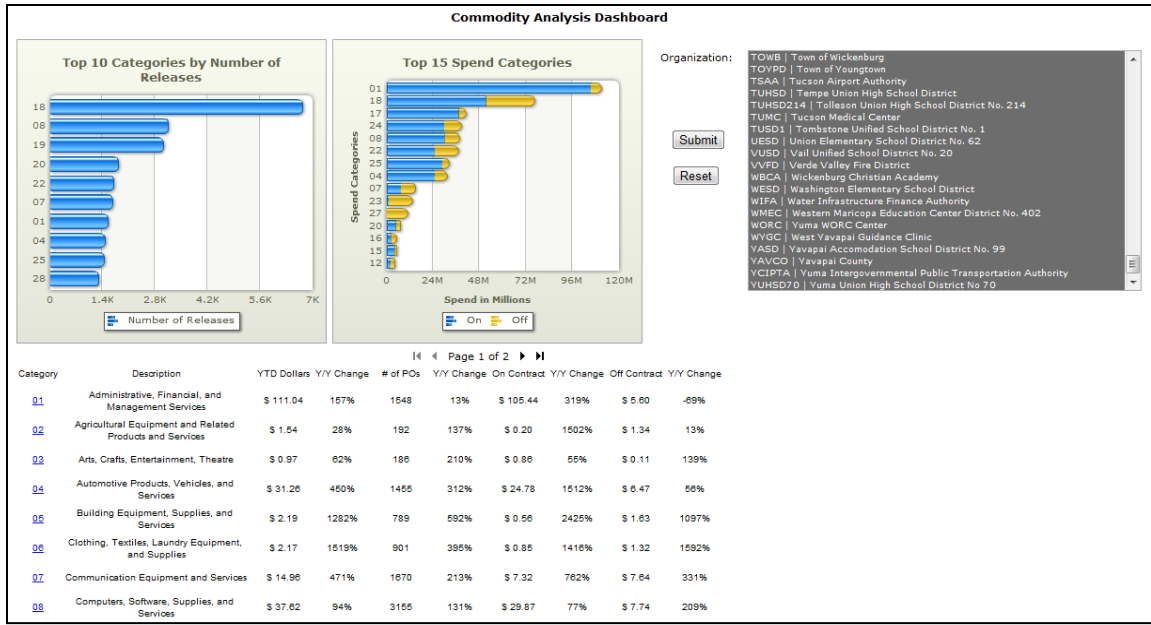
- Ranking of individual contracts within the spend category based on dollar volume, with a glimpse at the spend to date, expiration date, duration since price updates were last made, spend by cooperative partners, and vendor performance rating
- Prioritization of NIGP classes within the spend category, based on total dollar volume and the potential contract leakage (based on a ratio of on-contract versus off-contract spend)



Commodity Management:

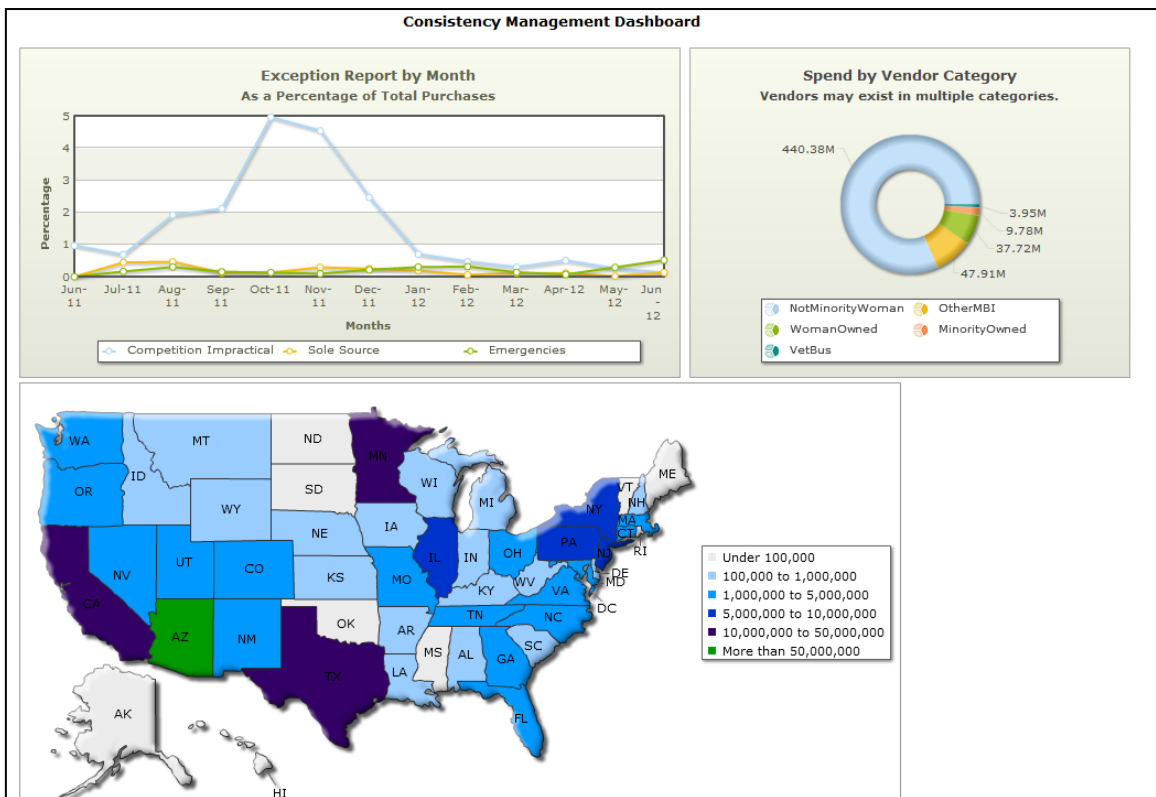
In addition to the top-down analysis of spend within contracts, a dashboard was developed to allow for a bottom-up monitoring of commodity spend patterns. Again, this dashboard is focused on NIGP class data, grouped by major spend category, and provides insight into the following components:

- Ranking of categories by transaction frequency in order to focus on commodities/services most frequently ordered
- Ranking of categories by dollar volume, including delineation of on/off-contract spend, to allow managers to monitor the highest cost commodities/services
- Detailed data by NIGP Category to allow for quick drill-down to the 5-digit NIGP class



Consistency Management:

Finally, a dashboard was developed to allow for monitoring of programmatic and policy accomplishments, including compliance with exceptional purchasing rules, effectiveness of targeted vendor population programs, and local/state vendor spend. This dashboard allows the State’s management team to evaluate how consistently state policies and programs are being implemented across State agencies.



KPIs Driving Service Improvement and Cost Reduction

Dashboards are critical tools to help managers monitor performance trends in major areas. In a typical business intelligence implementation, the KPIs presented in dashboards raise as many questions as they do answers. Questions like: Why are approval times lagging in a particular agency? Why aren't some contracts generating more spend flow than similar contracts? What is causing off-contract spend to be so high in particular categories?

Part of this project has been to develop complementary tools to help the State's procurement professionals make more informed decisions. First, most of the reports provided through the dashboards allow direct drill-down to the next level of data. For example, a buyer reviewing commodity spend for Spend Category 01 - Administrative, Financial, and Management Services can drill down to all the 3-digit NIGP classes within that category to identify which classes have the highest spend, which have spikes in off-contract spend, etc.

Next, each of these reports can be further parsed by detail reports available within the system. For example, if a buyer finds that NIGP class 952 – Human Services has a high degree of off-contract spend, they can run a report that provides a detailed listing of what agencies (and divisions within those agencies) are buying off-contract in that class.

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NIGP Spend Analysis
Detail
For 01/01/2012 - 06/30/2012

Arizona Department of Corrections

NIGP Code	On/Off Contract	Dept	Buyer	PO Number/release	Item Number	Vendor	Total
952/01	Off Contract	State Prison Lewis	Geraldine Fitzpatrick	ADOC12-021438	1	ALLIED BONDED INSURANCE LLC	\$ 301.79
952/01	Off Contract	State Prison Perryville	Joyce Skulemowski	ADOC12-023157	1	ALLIED BONDED INSURANCE LLC	\$ 147.64
952/01	Off Contract	State Prison Perryville	Joyce Skulemowski	ADOC12-022786	1	ALLIED BONDED INSURANCE LLC	\$ 150.90
952/01	Off Contract	State Prison Perryville	Joyce Skulemowski	ADOC12-023157	2	ALLIED BONDED INSURANCE LLC	\$ 147.64
952/01	Off Contract	State Prison Perryville	Joyce Skulemowski	ADOC12-023157	3	ALLIED BONDED INSURANCE LLC	\$ 147.64
Sub Total Off Contract for 952/01:							\$ 895.61
NIGP Code	On/Off Contract	Dept	Buyer	PO Number/release	Item Number	Vendor	Total
952/05	On Contract	Offender Operations	Bob Bryce	ADOC12-022975:1	2	Correctional Healthcare Companies, Inc.	\$ 5,175.00
952/05	On Contract	Offender Operations	Bob Bryce	ADOC12-022975:1	1	Correctional Healthcare Companies, Inc.	\$ 22,765.00

Finally, the State is incorporating use of an Opportunity Assessment tool to provide a standardized approach to analyzing and documenting spend improvement initiatives within spend categories. This tool incorporates analysis from dashboards and detailed reports, as well as additional analysis by procurement teams, to provide a common mechanism for targeting improvement opportunities.

Opportunity Assessment: Food Products

Opportunity

Recommend consolidating current contracts for food and food related items at several different agencies into a single solicitation to establish a statewide contract for food products at SPO.

Overview

Based on the data from ProcureAZ, the state currently spends just over \$2M in food and food related products, with a contract portfolio of 8 contracts across 4 different agencies. Many of the contracts in the category will expire in the next 2 years, and most are coming up for renewal later this year. As such, this presents a great opportunity to seek to consolidate the contract portfolio into a single statewide contract and in the process seek to aggregate state volume toward the goal of driving contract price savings. Additional structural changes that will affect savings levers can also be considered for the new contract.

Environment

The following provides an overview of the spend and associated contracts for food products for the State.

Spend Analysis

The following provides a high level overview of the spend in the various food product NIGP class codes based on a report of spend for the past year from ProcureAZ.

Category	Class	Class Description	YTD Spend (in \$M)	# of POs	On Contract Spend (in \$M)	Off Contract Spend (in \$M)
9	375	FOODS: BAKERY PRODUCTS (FRESH)	\$0.06	61	\$0.06	\$0.00
9	380	FOODS: DAIRY PRODUCTS (FRESH)	\$0.92	101	\$0.10	\$0.82
9	385	FOODS, FROZEN	\$0.07	139	\$0.07	\$0.00

Summary

In conclusion, the State of Arizona has taken significant steps towards instituting a business intelligence framework that capitalizes on the use of a single, statewide eProcurement system. This framework not only uses sophisticated reporting tools to present data in a meaningful, easy-to-understand way, but it also provides the interconnectedness needed to put that data to use in driving management decisions. While this framework requires a robust eProcurement solution and business intelligence engine to bring the data together, it provides an operational and analytical approach that can be used by other states as a guidepost for more effectively analyzing procurement data to bring value to their organizations.