TxSmartBuy System Upgrade to Cloud-based eCommerce Technology

http://www.txsmartbuy.com

Emerging and Innovative Technologies Award Nomination

Project initiation date: 8/30/2013
Project completion date: 10/31/2014

Contact: Michael Telfeyan
Email: michael.telfeyan@cpa.texas.gov
Phone: 512-463-6133
Address: 111 E. 17th Street, Austin, TX 78711

1.   Executive Summary

In Texas, state agency purchasers are required to order many items from pre-existing statewide contracts, using the TxSmartBuy online purchasing system available at http://www.txsmartbuy.com. Texas' local governments also can use the system. The Texas State Comptroller's Texas Procurement and Support Services (TPASS) and Innovation and Technology (IT) divisions maintain TxSmartBuy.

The original TxSmartBuy ordering system employed two extensively customized software tools that were difficult to integrate, were not 100% accessible and required high administrative overhead in purchaser support and contract item maintenance. Users found its poor search performance (averaging 13 seconds) and awkward ordering functions frustrating. Maintaining this system, moreover, cost the state $11.5 million annually.

TPASS and IT partnered to replace the old system with a modern, comprehensive, cloud-based SaaS solution providing user-friendly search, ecommerce and order management functions consistent with the retail industry's best practices, as well as cost-effective, configurable administrative functions.

The resulting TxSmartBuy 2.0 (TSB2) system was created and released within nine months. TSB2 provides searches averaging less than 1 second each and an easy-to-use shopping-cart experience. It has also allowed the Comptroller's office to slash its maintenance costs to less than $3.3 million annually, **a 72 percent annual savings.**

2.   Business Problem and Solution Description

Due to the original TxSmartBuy system's flaws, many local governments ceased using TPASS statewide contracts, and some state agencies requested exemptions to process certain orders outside the system. The efficiency and savings available through our statewide contracts will diminish if key constituents choose not to use TxSmartBuy.

In addition, the original system could not process orders made with manufacturer's dealers (such as furniture dealers). Thus, TPASS was unable to effectively monitor the use of several state contracts.
TPASS and IT planned to increase purchaser productivity and satisfaction through a new system that could offer an intuitive, streamlined user experience for item search and ordering. The replacement system was also intended to speed up search results and requisition creation, thus reducing the time required to make orders.

It was also critical to reduce the TPASS staff workload involved in providing help-desk support and making changes to statewide contracts, contractor information and item catalogs. TPASS also wanted to process and track manufacturer's dealer orders through TxSmartBuy to improve its oversight of such purchases.

Finally, the IT Division wanted to reduce the time and costs involved in custom software development by implementing a cloud-based SaaS solution.

TSB2 achieved improvements in the following key areas:

Technology — replacement of legacy, on-premise systems with a new cloud-based, configurable SaaS system, resulting in shorter enhancement timelines and cost savings over custom code and hardware.

User Experience — significant performance improvement (average search time reduced from 13 seconds to less than one second), more intuitive presentation, fewer required screens and added filtering and item comparison features.

Maintenance and Support — number of employees required to support the system reduced from three full-time and eight to 10 part-time employees to two full-time staff members. Average duration of support calls reduced from 30+ minutes to 5 minutes or less.

Solution Details and Innovation Information

TxSmartBuy 2.0 is built on the NetSuite cloud platform, using NetSuite's SuiteCommerce and core ERP functionality to seamlessly connect e-commerce, order management, administration and customer service in a single system. With SuiteCommerce, we can deliver a B2C-like commerce experience to all Texas government agencies.

The scalability of the cloud hosting, combined with the speed of the new search function, now results in an average TSB2 search time of 0.616 seconds, as opposed to a 13-second average for the original system.

SuiteCommerce uses a version of the popular JavaScript/Bootstrap framework, providing a faster time to market for scripting changes and greater flexibility to achieve accessibility. By using the Bootstrap framework, TSB2 also offers a responsive web design that adapts automatically to smartphones and tablets.

The configurability of the system, combined with built-in administrative search functions and a case management system, has allowed us to reduce administrative overhead and focus on system improvements.

TSB2 provides an audit trail of timestamps and owner assignments for every transaction in the system, adding complete auditability for external and internal changes made by TPASS, IT and external users.

3.   Significance

The new TxSmartBuy system requires TPASS helpdesk support from only two employees, while the original system required three full-time staff members and part-time contributions from eight to 10 other employees to answer calls and assist purchasers.

Significantly less staff time is required for a TSB2 support call. Calls for the old system typically lasted 30 to 45 minutes, since staff members had to provide explicit screen-by-screen instructions across two software tools involving at least eight screens. TSB2 involves only three user-friendly, intuitive screens; current help-desk calls tend to last five minutes or less.

Vehicle sales were particularly difficult for TxSmartBuy users; TPASS received constant calls for help with entire orders. The help-desk team reports that most TSB2 vehicle purchase orders are processed *without* their support.

Time required for order processing has been reduced by more than 50 percent. Orders made through the old system required anywhere from five to 30 minutes, and averaged about 10 minutes. TSB2 orders typically require just three to five minutes from search initiation to purchase-order issuance.

The help desk, moreover, can add or edit TSB2 user information in 10 to 30 seconds, versus several minutes for the previous system.

4.   Costs and Benefits

TSB2 cost $2,972,700 for subscription service licenses and development time as well as $185,900 in personnel costs.

The original system cost $11.5 million annually to maintain. Maintenance for TSB2 costs less than $3.3 million annually, saving the state more than $8.2 million , a 72 percent reduction.
In addition, the Comptroller's office is authorized to charge users a 1.5 percent administrative fee, for system cost recovery of approximately $9 to 12 million per year.

Detailed Benefits

1. *One Comprehensive System* — TSB2 provides a central administration location for contract, supplier and item record information. TPASS no longer has to maintain two sets of item data in separate search and ordering systems.

2. *Built-in Flexibility* — the agency can quickly add new features and fields to TSB2's back-end as Texas' contracting and online purchasing needs evolve. The flexibility of the e-commerce JavaScript/Bootstrap framework is easily edited to support public-facing searches.

3. *Upgraded Search* — TSB2 offers drastically improved search performance, results presentation, filtering features and item comparison. It offers users a streamlined retail experience with the functions they expect.

4. *Enhanced Item Ordering* — the new system provides more than two ordering options per item and accommodates regional pricing, four-decimal pricing, "favorite" orders, dealer orders and more.

5. *Future Security Integration* — the new system's user authentication and permission settings were easy to configure to Comptroller standards, ensuring a secure ordering experience for customer agencies. TSB2 offers a single sign-on Application Programming Interface (API). We plan to allow purchasers and contractors to use their TxSmartBuy login credentials to access other TPASS systems in upcoming years.

Constituent Benefits

State and local government purchasers benefit from shorter processing times for TSB2 orders and an intuitive, streamlined user experience.
Contractors receive accurate orders and can use search and wish-list functions to help purchasers with complex orders and quotes.

Citizens benefit from enhanced reporting and real-time transparency for government purchases.

The TPASS Contract Management Office now can track dealer sales within the same system as all other statewide orders.

The TPASS TxSmartBuy help desk has been able to reduce its workload involved in answering user questions and editing purchaser and shipping address information.

The IT Division was able to outsource hardware and software administration effectively, and reduce its need for custom software development.

The Comptroller's office benefits from streamlined internal operations and satisfied agency customers.