TRANSFORMATION FROM TRANSACTIONAL PROCUREMENT TO STRATEGIC SOURCING AND E-PROCUREMENT AT A PUBLIC UNIVERSITY

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ABSTRACT

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AT A PUBLIC UNIVERSITY

Wright State University, located in Dayton, Ohio, is currently celebrating its 40th anniversary as a four year state-assisted institution of higher education. Until 2006, its procurement operation was a "cookie cutter" reflection of all the other college and university purchasing departments within the state. Unfortunately, procurement strategies within higher education typically linger behind those in the private sector. Thus, it is imperative that state-assisted colleges and universities periodically assess how they conduct their business of ordering goods, services, and construction in order to champion sustainable changes.

Traditional transactional-based purchasing operations founded on "first in, first out" requisition processing, historically have not taken advantage of obtaining the best pricing as a result of aggregated spend. Sealed bidding practices lacking the opportunity to negotiate pricing, terms, and conditions, severely limit the ability of a Purchasing department to pursue the best and final offer from a supplier or contractor. Cost avoidance opportunities abound once we understand total spending patterns. Driving spend to the greatest extent possible against aggregated contracts minimizes "maverick" off contract purchases.

Early in 2006, the Wright State University Board of Trustees challenged the Purchasing department to develop a more aggressive strategy. The vision was to develop a strategic sourcing program positioning the University's procurement operation as "best in class" in Ohio. In response, the Purchasing department took a three step approach to achieving maximization of our aggregated spend. Our first step was to adopt a procurement strategy utilizing principles of strategic sourcing. Secondly, was the implementation of an e-procurement system having the capacity to interface with our Banner ERP system. Simultaneously, the third step was to implement an Invitation to Negotiate (ITN) process in lieu of simply conducting sealed bidding. A project of this magnitude required the assistance of consultants having experience within higher education. A competitive bid process resulted in the engagement of the Huron Consulting Group.

Our ROI was projected to occur within three years of the implementation of a five year commitment to the SciQuest (WrightBuy) e-procurement system. To date, we are within our plan of achieving our break even point including both consulting and the e-procurement system costs. As a result of our business cases completed through 2007, we have projected over two million dollars in savings during the first three years of our program. As we continue to develop business cases in new commodity areas, our savings will continue to increase.

INTRODUCTION OF THE ORGANIZATION

Wright State University, named after the famous Wright brothers, was founded in 1967 and celebrated its 40th anniversary in 2007. WSU is an Ohio state-assisted four year institution of higher education with its main campus located in Dayton, Ohio, with a branch campus located in Celina, Ohio. Combined, the enrollment is nearly 17,000 students. The main campus is located within a 90 minute major metropolitan market area including Cincinnati and Columbus, Ohio. We are also adjacent to Wright Patterson Air Force Base and thereby positioned in a highly technical job market.

Our University employs over 2,200 FTE's, includes 24 academic and support buildings, with an additional 26 student residential buildings, and geographically combined, encompasses over 557 acres. The University also serves the community with its E.J. Nutter Center, a 12,000 seat multi-purpose arena built in 1990. The academic structure includes 100 undergraduate and 50 Ph.D., graduate, and professional degrees, including The Boonshoft School of Medicine.

The Purchasing department presently consists of eight people including: (2) Strategic Sourcing Coordinators, (3) Senior Purchasing Agents, a Systems Support Administrator, a Purchasing Coordinator, and a Director of Purchasing. The Procurement function processes between $130-140 million dollars per year.

STATEMENT (RESTATEMENT) OF THE PROBLEM / INITIATIVE

The Purchasing department at Wright State University for many years attempted to provide measurable savings as a result of its efforts to achieve cost avoidance through cost containment and standardization while operating within state guidelines and local policy. In 2006, the Purchasing department, with the approval from the Board of Trustees, chose to aggressively pursue the implementation of sourcing methodologies and e-procurement technology for all applicable expenditures. The mission of the program was to implement new strategies aimed at transforming its large scale transactional based purchasing operation to a strategic sourcing based operation. The objective was to maximize contracting leverage through aggregation of spend, coupled with the ability to negotiate contracts, and offer contract pricing through an e-procurement buying portal.

Historically, our purchasing practices primarily utilized consortium contracts and local sealed bidding processes. This was a widely accepted approach used by all colleges and universities in Ohio. The desired sustainable program would be based on proactively re-inventing business processes to focus on aggregation of spend, negotiation, and electronic posting of contracts through a buying portal accessible by all departments. The concept, while widely embraced in the private sector, would position Wright State as the first school in the state to conduct a "cradle to grave" restructuring of procurement operations.

DESIGN

College and university Purchasing departments can greatly reduce their institution's operational costs by realigning their primary mission to focus on obtaining the best price available in the market place for all major aggregated purchases in lieu of making spot transactional purchases. The challenge of transitioning practices and procedures through implementation of strategic sourcing principles and implementation of e-procurement software is a major initiative requiring significant investment with a quantifiable ROI. A top-to-bottom procurement reorganization coupled with process improvements of this magnitude requires commitment by the Purchasing staff and other key campus stake holders in order to achieve timely significant reportable savings.

Selecting a Consultant

Early in 2006, we decided to solicit the services of a national level consulting firm having sourcing expertise in both the private sector and higher education. After performing market research and networking with other purchasing professionals, we developed a list of qualified consulting firms. Following the solicitation and submittal of proposals, the two most qualified companies were invited to make on-site presentations to our project executive steering committee. After a thorough analysis including contacting twelve past clients across the county, we determined to invite The Huron Consulting Group to provide a detailed overview of their plan. This allowed us to identify the break even point of our investment

during the third year of a five year program. Thereafter, we engaged Huron to provide on-site and teleconference services including sourcing instruction over a several month term.

During this same time frame, we researched our options for an e-procurement program that would integrate with our Banner ERP system. The SciQuest program was the system identified as being designed for higher education that would maintain our Banner system as the system of record. After receiving a pricing proposal, based on a five year site license agreement, SciQuest was invited to make presentations to the project executive steering committee. The user friendly system with a "shopping cart" experience received favorable acceptance. Shortly thereafter, Wright State became the first university in Ohio to invest in the SciQuest e-procurement program. Several months later, Kent State University became the second Ohio college (as of this writing) to purchase the SciQuest system. Many other Ohio schools are now inquiring about the program.

The consultant's initial assessment began in the late Spring of 2006. They indicated that the Purchasing department was primarily identifying savings by individual Purchasing Agents as a result of local bids and utilization of consortium contracts. The aggregation of spend and assessment of needs forecasting were not being accomplished on a regular basis in the buying process. However, the Purchasing department was praised for performing well under the prior
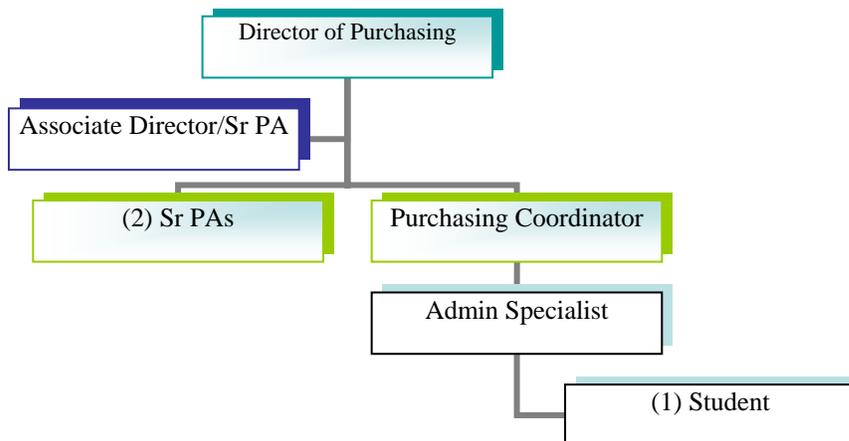
operational guidelines. In essence, our Purchasing operation was not broken, but needed a complete overhaul. Faced with over a year-long road to accomplishing a multitude of process improvements and implementation of an e-procurement system, fortunately our department was enthusiastic about the challenges ahead.
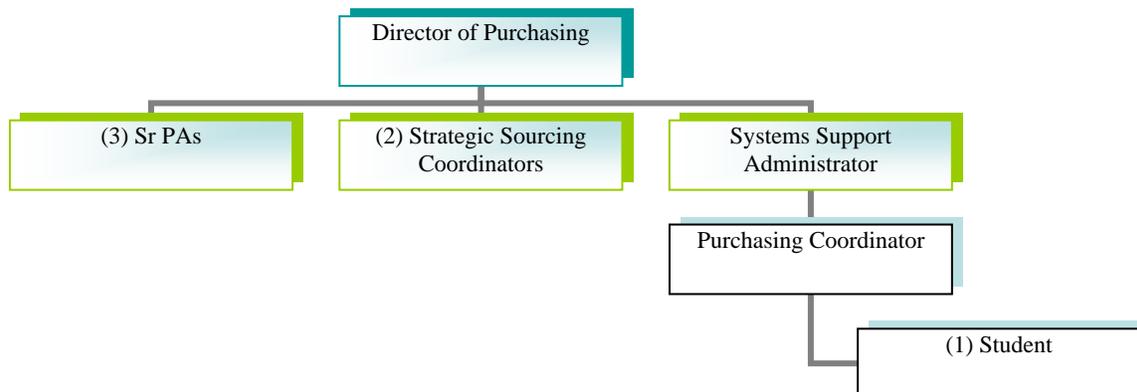
Staffing Ramp Up

To begin the transformation, the consultant recommended hiring two Strategic Sourcing staff. The plan was to have these individuals trained by the consultants to conduct strategic sourcing according to current state-of-the-art methodology. At the same time, the Associate Director and one Senior Purchasing Agent (PA), each having 30 years experience, were retiring providing us with a window of opportunity for staffing changes.

We were able to fund one of the Sourcing positions with the salary of the Associate Director. Therefore, we only had to fund one new Sourcing position. However, we then had one less Senior Purchasing Agent position to handle the daily requisitions. Fortunately, a satellite Senior Purchasing Agent position that was prior assigned to the Physical Plant department for the purpose of supporting their needs, was moved into central Purchasing. This individual was able to absorb a portion of the workload prior handled by the Senior Purchasing Agent position that was deleted. Once the staffing organization was in place, the project began in June, 2006.

PURCHASING ORGANIZATION PRIOR TO FY06

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SOURCING REORGANIZATION FY07

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 │   (3) Sr PAs  │ │  (2) Strategic Sourcing│ │  Systems Support   │
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Net result: Eliminated one Senior PA with the title of Associate Director, hired two Strategic Sourcing positions, and upgraded the two clerical positions. The prior Purchasing Coordinator became the Systems Support Admin person, and the prior Administrative Specialist became the Purchasing Coordinator. The 3rd Senior Purchasing Agent was transferred from the Physical Plant department.

Cultural Change

An inter-departmental culture change involved motivating seasoned traditional

Senior Purchasing Agents to begin working as a team with the newly hired

Strategic Sourcing Coordinators. This required both the Purchasing Agents and

clerical staff to attend many training sessions. A SciQuest implementation team

was organized consisting of four Purchasing staff members, Business Managers from each of four e-procurement pilot departments, and a representative from the IT department. The Business Managers from the four pilot departments served in a dual role. They agreed to assist in the initial set up of the system, and later assist in the user training during the roll out of the program. Weekly meetings were held for several months for the purpose of designing the e-procurement system and testing during the pilot program. In essence, we quickly learned that the SciQuest program is not "plug and play;" it requires much integration and testing with the ERP system.

IMPLEMENTATION

It is important to realize that various combinations of change strategies will have varying amounts of impact to the bottom line. However, we found our combination of strategies in a "cradle to grave" approach yields the most significant hard and soft dollar savings. Consider the opportunities related to following examples of process changes:

1. Sealed Bidding vs Negotiation

<u>Problems with Sealed Bidding</u>

Sealed bidding limits the ability of the Purchasing staff to assure they are achieving the best possible price. They can only be reasonably certain that comparatively speaking, a price is competitive. In essence, the most responsive and responsible proposal is only in relation to the proposals submitted by those companies invited to bid. There typically is not an expectation by the Purchasing Agent or the contractor for opportunity to adjust pricing other than to clarify questions and perhaps dates.

<u>Advantages of Negotiating</u>

By simply adding the ability to negotiate, the Purchasing staff has the opportunity to review proposals and attempt to negotiate for better pricing or terms. The concept of asking for a better price at least opens the door to achieving greater discounts than previously realized by sealed bidding. However, without having strategic sourcing data available to provide understanding of opportunities for

increased leverage during negotiations, benchmark goals are likely not established prior to negotiations. Success is varied depending on dollar volume, contract term, and the pricing level previously paid for the same goods or services.

2. Implement Strategic Sourcing Coupled with a Negotiation Process

Sourcing requires the development of a business case that provides historical detailed categorical spend that the supplier does not typically know. A thorough commodity study maps previous spend and trends over the past 3-5 years based on actual invoices. It also provides the detail necessary to develop sub-categories of the general commodity being sourced. A spend analysis and research of the market place through Internet research, networking, and collaborative efforts, is used to develop a story board including target pricing benchmarks. Targeted savings projections are identified prior to the competitive process and are vital and essential to negotiations. The sourcing information, when coupled with a competitive negotiation process (Invitation to Negotiate), will yield significant savings that could easily range from 10-20% better than previously experienced by sealed bidding or negotiation alone, depending on factors such as the commodity type, aggregated annual spend, and the prior pricing level experienced. In some cases, longer contracts may also result in greater discounts.

The above processes have a shared problem. How can the Purchasing

department best communicate contract pricing to the campus community?
Likewise, lack of a mechanism to minimize maverick spend off contract via p-cards remains a constant challenge. Also, reporting capabilities do not necessarily improve, and Purchasing Agents continue to process in a transactional mode.

3. Restructure with Strategic Sourcing and Negotiation, Coupled with E-procurement and Collaborative Consortium Efforts

Not only are the savings from the above processes achieved, with the added implementation of an e-procurement program, the contracts developed for most commodities are accessible through an e-procurement buying portal displaying electronic catalogs. This enables the campus users to obtain the same price whether for one item or for one hundred items throughout the contract term, with easy access to current pricing. It also offers a "shopping cart experience" by providing a point and click selection process that drops a precise and accurate description in the body of the purchase order which is automatically electronically sent to the vendor. A convenient, time-saving feature allows users the option of setting up favorites and recalls items that are typically re-ordered.

Several soft dollar savings are also achieved such as: 1) avoidance of manual keying of item descriptions and minimization of keying errors for catalog items, 2) a traceable electronic approval process is mapped for all orders, and 3) Purchasing Agents will experience 15-20% time savings related to no longer

having to process electronic catalog orders under the old transactional based system. As in the past, the Purchasing Agents must continue to handle vendor relations and any related problems. E-Procurement also allows the Purchasing Agents greater time to work more closely with the Strategic Sourcing staff. For non-catalog orders, the end user has the ability to key the e-requisition and scan attachments such as correspondence, quotes, or contracts. This eliminates the need to send such correspondence via fax or campus mail.

Purchasing Agents retain the flexibility for aggregation of spend with other institutions through consortiums for the purpose of acquiring greater discounts through volume purchases. This approach is appealing when buying items for which our institution does not have a high volume spend on its own, such as for mattresses or library book detection strips. The Inter-University Purchasing Council is many times the consortium of choice in Ohio. It was chartered in 1964 to promote development of contracts for use by colleges and universities.

In essence, the combination of sourcing, negotiation, and e-procurement offers greater opportunity for savings than any one of the above processing changes discussed above. We must also not forget that collaboration with other colleges and universities in Ohio is strongly encouraged by the state as outlined by a Governor's Executive Order.

The roll out of our "WrightBuy" e-procurement program was wisely staggered for

the entire campus following a five month pilot program involving four departments. Business Managers from the pilot departments assisted in the program setup and training in excess of 200 campus users over a two month period. The program was fully implemented as of December 10, 2007. Thus far, our e-procurement program with identified savings, coupled with streamlined processing, has been widely appreciated by the campus community.

BENEFITS

Our most significant benefits are as follows:

1. Strategic Sourcing:

- Identifies University aggregated spend areas top to bottom where opportunity exists for aggregation of spend.

- Allows for aggregation of total spend in a specific commodity group over a measured term.

- Provides detailed historical information from invoicing or paid files.

- Offers a methodology for breaking down spend into sub-categories.

- Identifies benchmark pricing such as derived from consortium pricing schedules, state contract pricing, or Internet research.

- Demonstrates market trends and promotes forecasting.

- Anticipates potential pricing increases due to factors such as upward price trending for steel, copper, or aluminum costs, as well as fuel and petroleum based materials.

- Develops a business case (PowerPoint presentation) displaying all researched commodity information including eye charts, benchmarking, and projections. This tool also identifies potential savings based on anticipated spend.

- Promotes proactive planning when developing an ITN competitive process. The business case is later updated to demonstrate achieved savings. The completed case is presented to varied audiences to communicate successes.

2. <u>Negotiation</u>

- By re-naming our "Request for Proposal" (RFP) to an "Invitation to Negotiate" (ITN), we now have the ability to negotiate to the best and final offer deemed to be in the best interest of the University. All interested contractors understand in advance that a negotiation process will take place after submittal of initial proposals.

- The strategic sourcing business case provides leverage during negotiations. This provides data that can demonstrate why we are negotiating for better pricing, terms, or deliverables.

- Negotiation assures that "money is not being left on the table" as was the case with the prior sealed bidding process.

- By having identified significant spend potential, we have proven many times that negotiated pricing will likely yield greater discounts than State of Ohio pricing agreements and some consortium agreements.

- Cost savings are measurable.

3. <u>E-Procurement Streamlining</u>:

- Our purchasing system now has a single buying portal for authorized personnel to utilize when logging into the campus network with their user name and password. User identities have been set up either as "requestors" or "approvers" with a tiered approver matrix.

- Requestors can either buy from e-catalogs with contract pricing through our "WrightBuy" (SciQuest) program, or request non-catalog items using a "Non-

Catalog" e-requisition. This e-form routes to the Purchasing Agents based on the selected commodity code.

- Requestors now have the ability to scan attachments to their e-requisitions. This greatly streamlines the ordering process. Purchasing Agents no longer have to wait for hard copies of backup information (such as quotes or correspondence) to process orders.

- Turn around time for non-catalog orders has improved by 1-2 days when a competitive process is not required (under $25,000). This is related to the electronic approval process and ability to scan attachments to the requisition

- All departments receive the same price whether buying one or one hundred of an item.

- By having the majority of orders placed in the e-procurement system, other than non-catalog p-card orders (such as for travel expenses), the Purchasing department can produce reports by commodity code or vendor name that were previously not possible without going through the IT department.

<u>Cost Savings Projections</u>

Please review the attached summary of projected savings as the result of our current strategic sourcing program. These savings are specifically the result of strategic sourcing efforts to date.

Note: Additional savings averaging annually over one million dollars, are achieved through utilization of consortium contracts and local Invitation To Negotiate (ITN) processes for spot buys. These savings are based on discounts

off list price. Strategic sourcing savings are arrived at by comparison to the last

price paid, a more aggressive standard.

Wright State University Cost Savings Projections
as a Result of Strategic Sourcing

Commodity/ Service	Actual FY 2006 Spend		Annual Projected Savings		Effective Date	Portion of Annual Savings First Realized in FY 2007		Projected Savings FY 2008		Projected Savings FY 2009	
Expendable Office Supplies	$	820,000	$	169,000	12/1/2006	$	84,500	$	169,000	$	169,000
Desktops & Laptops	$	1,330,000	$	294,000	1/1/2007	$	147,000	$	294,000	$	294,000
Lab Supplies/Equip.	$	655,000	$	144,100	4/1/2007	$	36,025	$	144,100	$	144,100
Lab Supplies/Equip.	$	140,000	$	30,800	7/1/2007	$	-	$	30,800	$	30,800
Wire & Cable	$	315,000	$	23,000	12/23/2006	$	23,000	$	-	$	-
Ground Delivery	$	138,091	$	41,000	7/19/2007	$	20,000	$	41,000	$	41,000
Office Furniture	$	1,200,000	$	40,000	5/1/2008	$	20,000	$	40,000	$	40,000
Plant Expendable, low cost high volume MRO supplies & equip	$	557,961	$	50,000	4/1/2008	$	25,000	$	50,000	$	50,000
Audio Visual Equipment	$	505,000	$	135,766	9/13/2007	$	-	$	135,766	$	135,766
PC peripherals	$	140,077	$	14,000	5/1/2008	$	-	$	14,000	$	14,000
Remanufactured Laser / toner cartridges (At 50% usage)	$	294,413	$	31,474	2/1/2008			$	31,474	$	31,474
Sub Total Strategic Sourcing	$	6,095,542	$	973,140		$	355,525	$	950,140	$	950,140
Percent Savings (better than last purchase price)				16.%							
Projected Savings (first 2.5 years)										$	2,255,805

Benchmark Pricing

Strategic sourcing identifies the savings opportunity for a particular commodity area in the business case. A benchmark price is reached by considering several factors including: The last price we paid for the item, the best price as researched in the market place, pricing available through consortiums, and by considering market trends for future pricing. The benchmark price is the target we strive to negotiate towards or do better than.

Strategic Cost Savings

The savings reported from strategic sourcing is defined as follows: It is the difference between what we paid for the item the last time it was purchased, or as compared to the current consortium price available (whichever is lower), versus the negotiated price which was based on aggregated spend.

Cost Incurred

The total cost for consulting services, SciQuest site licenses fees over a five year program, and the hiring of one additional staff was just over two million dollars. Thus, the ROI was targeted to occur between the second and third year. This would be the point at which our measured cost avoidance would equal the investment in the transformation program. As the numbers above show, we are within our targeted time frame to recover our initial two million dollar investment. Additional commodities will be strategically sourced during the next two years that will also continually increase projected savings

In summary, our program allows the Purchasing Agent and Strategic Sourcing people to become proactive. By aggregating spend and doing the work on the front end of the buying process, the Purchasing Agents now experience approximately 15-20% more productive time in the areas that have electronic catalogs developed. This is accomplished as a result of no longer having to process repetitive transactional purchases (based on spot market pricing) as was the case in the traditional purchasing system.

Other Ohio colleges and universities are very interested in our transformation. We were invited and presented at the annual regional Ohio National Association of Educational Procurement Officers meeting held at Miami University, in Oxford, Ohio in October, 2007. Our presentation was the showcased program and was attended by all participants. The audience consisted of purchasing practitioners and management staff from most colleges around the state. We have now been asked to present examples of strategic sourcing business cases to the Inter-University Purchasing Council (IUCPG), a consortium of all public colleges and universities in Ohio. We are working closely with the organization to assist in developing a program that will mirror many of the processes at Wright State University.

RETROSPECT

Three Lessons Learned:

1. The hiring of Strategic Sourcing Coordinators was new to Wright State University and no other colleges in Ohio had such positions. We did not anticipate any problems having the Senior Purchasing Agents partnering with the sourcing staff. However, we learned that the Purchasing Agents were initially ingrained in their transactional buying activity and had difficulty understanding their role in strategic sourcing. The challenge was to promote teamwork and sharing of information related to major purchases prior to bidding or placing orders.

2. With a better understanding of the complexity of the SciQuest e-procurement system and its integration with our Banner ERP system, we would recommend the creation of an E-Procurement System Program Manager position or designation of a person knowledgeable of new software implementations. Not having a dedicated person required us to draw upon existing resources and re-assign people from their normal day-to-day duties. In our program, we had to change the leadership role in the middle of the e-procurement implementation. As mentioned previously, the e-procurement system is not a "plug and play" system as we earlier believed.

3. We initially anticipated rolling out the e-procurement program to the entire campus on one pre-determined switchover date. Later, it was determined to have a phased-in switchover from the Banner requisition module to our WrightBuy program. We also determined to handle training of over 200 people in-house using our implementation team. Additionally we wisely allowed people to gain access to the system only after receiving our training. Since it took several weeks to train the key users, the roll out was gradual over a short three month period.