

Reengineering the purchasing function: identifying best practices for the City of Chicago. (purchasing department of Chicago, Illinois)

Government Finance Review - October 1, 1998

Kathryn M. Kustermann

Word count: 2949.

[citation details](#)

Chicago's purchasing department has redesigned its processes by incorporating best practices from research conducted around the country.

As local governments across the U.S. replace legacy financial systems, they can seize the opportunity to redesign extant business processes. Recently, the purchasing department of the city of Chicago, at the encouragement of the mayor, began an initiative to improve the service, timeliness, and quality of information in the core purchasing processes. This included finding ways to:

- * reduce processing time from identifying a need through awarding a contract;
- * increase vendor participation on bids;
- * encourage greater participation of minority and women-owned vendors in city business;
- * improve the quality and accessibility of information; and
- * speed up the payment process.

During the past year, much work has been completed to position the purchasing department to meet these objectives. This article presents the methodology and approach taken to redesign the core purchasing processes at the city of Chicago. This article also provides some useful reference guides, presents findings of best practice research, and summarizes the key purchasing redesign improvements. Finally, it outlines steps taken to implement a new enterprise resource planning system that enables the process redesign improvements.

A Three-Phase Process Redesign

Using Proven Transformation Methodology. The purchasing reinvention project was officially initiated in June 1997. Operating as business consultants in partnership with the management team of purchasing, the city's Department of Business and Information Services (BIS) set out to reinvent purchasing, using the transformation and change methodology documented in popular publications such as *Reinventing Government*,⁽¹⁾ *Improvement Driven Government*,⁽²⁾ and *Reengineering the Corporation*.⁽³⁾ A team made up of members with reengineering experience in private-sector management established a facilitative methodology to redesign processes.

The authors of *Improvement Driven Government* recommend a core business process redesign method that follows six key principles, which Chicago incorporated in its project:

- * base the redesign on the strategy;
- * make the business and political case;
- * involve the right people;

- * use information technology wisely;
- * manage the change; and
- * ensure continuous improvement.

The project was guided by the reengineering definition described in Reengineering the Corporation, that is "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed." Essentially, the "clean sheet of paper" approach was used in comprehensively redesigning the way in which the city of Chicago purchased goods and services.

In addition, the entire "business system diamond" was considered in the redesign approach. The focus was not only on redesigning the core business processes, but also on the crucial role of information technology as the enabler of the processes, and the roles of jobs, skills, and structure, culture and values, and management/measurement systems as supporting elements of the new processes.

Facilitative, Not Directive. As recommended in the reengineering literature, the city of Chicago followed a three-phase approach to this transformation (see Exhibit 1). The approach included facilitating teams of purchasing employees representing a cross-section of roles and levels in the organization to define new ways to accomplish work. More than 30 end-users were directly involved. Employing a facilitative approach ensured that purchasing ultimately owned the redesigns and was accountable for the results along the way. The entire effort was approached from a process perspective, allowing purchasing employees to discover ways to bring improvements in the performance of the critical purchasing processes they performed every day.

Additionally, to ensure that progress was made early on and momentum was sustained throughout the duration of the project, several "quick hit" projects were initiated and completed. These included posting bid information on purchasing's Internet Web page for easier vendor access, reducing the number of required bid submissions from three to one to lessen the burden on vendors and increase control with only one copy, and beginning the process of standardizing construction contract terms and conditions for improved consistency and reduced internal contract processing time.

Phase I: Current Process Mapping

In Phase I, the city conducted in-depth "current state" process-mapping, customer and vendor interviews, and best practice analysis, which culminated in visioning sessions to scope-out the desired end-state at a high level. Four teams were formed in Phase I, each focusing on comprehensively understanding the current process in one of the following areas:

- 1) commodities contracts;
- 2) construction contracts;
- 3) professional services contracts; and
- 4) certification of minority-owned and women-owned business enterprise (MBE/WBE) vendors.

Once these current processes were mapped in detail, the teams analyzed them and found a variety of improvement opportunities.

Exhibit 2

SITE VISIT SELECTIONS

Organization Visited	Reasons Selected
----------------------	------------------

State of Oregon	Electronic bidding system Cooperative purchasing agreements with other states Electronic Vendor Information Program (VIP)
State of New York	Procurement legislation reform Well-managed vendor database Employee development training program
State of Massachusetts	Successful use of the internet and EDI for bidding, ordering, and payment "Best value" procurement legislation Team purchasing structure
County of San Diego	Paperless purchasing system "Procurement 2000; Use of procurement cards Use of electronic commerce
State of California	"Request for Best Price" pre-qualification program Procurement card usage Standardization of contracts Streamlined approvals
State of Michigan	Streamlined RFP process "Quick Purchase Program" for low-dollar, high-volume purchases "Best value" procurement philosophy
City of Milwaukee	Training in Total Quality Information (TQI) Empowerment of user departments by eliminating low-dollar requests
University of Michigan	Innovative organizational structure using self-directed work teams Delegated signature authority for buyers

A cross-section of internal customer user-departments and external vendors were interviewed. These customers and vendors provided purchasing with their requirements and needs and also their suggestions for improvement. These customers told the city many things, such as wanting easier access to information, bid information through the Internet, more information on the city's purchasing processes, faster contract processing, and one up-to-date source for contract tracking.

Best Practice Research Yielded the Most Value. The greatest learning occurred in the in-depth best practice research that was conducted. The goal was to identify, evaluate, and learn from organizations that had demonstrated high performance in the purchasing process. Specifically, the team wanted to understand how they achieved this high performance so that this knowledge might be transferred to the city of Chicago's purchasing process.

Based on redesign methodology often used in the private sector, purchasing was able to build the case for best practice research and analysis. Best practice research was found to:

- * shorten transformation timeline by transferring key operating principles from organizations that exhibit high performance;
- * help the city understand potential land mines and how to overcome them;
- * identify highest-impact ideas and implementation strategies; and
- * move thinking of managers from "problems" to "opportunities."

Best Practice Method. Across the four Phase I teams, the objectives of best practice site visits were

determined. The 10 main areas of interest were:

1) performance measurement; 2) organization; 3) technology; 4) personnel; 5) purchasing process; 6) regulatory change; 7) vendor management; 8) change management; 9) information management; and 10) compliance monitoring of MBE/WBE participation in contracts.

Using these objectives as a guide, the teams performed extensive secondary research to gather preliminary information. The secondary research included literature and Internet searches on purchasing from several sources, including:

- * National Institute of Government Purchasing (NIGP)
- * National Purchasing Institute (NPI) "Achievement in Procurement" award winners
- * National Association of Purchasing Management (NAPM)
- * National Association of State Procurement Officers (NASPO)
- * Kennedy School of Government at Harvard University
- * Center for Advance Purchasing Studies (CAPS)
- * National League of Cities
- * US Conference of Mayors
- * Small and Minority Business Task Force Report
- * Alliance for Reinventing Government.

Team members researched and evaluated the secondary information and, in most cases, performed initial phone interviews with high-potential public- and private-sector purchasing organizations to evaluate them against the 10 key objectives. Finally, a recommendation was made to the budget director of the city to provide funds for small teams to conduct eight visits in order to conduct field research that could best collect information by face-to-face meeting and interviewing. After finalizing the interview guide, best practice visits were conducted. See Exhibit 2.

Learning from Best Practices. Once all the visits were conducted and the findings summarized, the team compiled a compelling list of best practices in purchasing. Equal in importance to the actual purchasing best practices was the conversion process that many managers experienced, as they saw for themselves that improvement and change was possible and exciting. The high-level common themes gained in the best practice research and site visits are shown in Exhibit 3.

Visioning - Bringing It All Together. At the completion of Phase I, visioning sessions with the teams and executives were conducted. In the visioning sessions, rule-breaking, creative thinking, and customer service exercises were used to develop redesign philosophies. Then, by incorporating improvement ideas from the current state analysis, customer and vendor input, and best practice research, the teams decided that the vision was to look at purchasing's operations under a new perspective:

- * high-volume purchase order processing, from requisition through payment;
- * high-dollar contract processing, from specification development through award and payment; and
- * the business development process of certifying minority-owned and women-owned business enterprises.

Within each of these three main groups, most of the transactional work of purchasing was performed.

The teams also identified work that needed the department's particular focus, including vendor management, business development, and the high-dollar high-impact business transactions where purchasing could provide the most value.

Phase II: Redesign

Thus, in Phase II, "Redesign," the teams were reconfigured to focus on redesigning the three key processes performed in purchasing: high-volume orders, contracts, and business development.

The teams worked diligently to eliminate non-value added work, to speed up the overall process, and to better serve external vendors and internal customers in their new redesigned processes. In conjunction with the redesign of the business processes, the detailed technical requirements necessary to enable the newly redesigned processes were carefully documented.

High-Volume Orders - Significant Redesign Improvements. The following improvements were designed into the high-volume orders process:

- * using the technology system to automatically determine term agreement (or blanket order) contract opportunities;
- * using current and planned purchase requirements entered by the requisitioner, thereby indicating which commodities and agreements needed attention;
- * using the system to quickly and easily send and receive information through fax server and e-mail technology, eliminating a majority of manual effort and lost documents;
- * streamlining receiving and payment processing, using forms-based invoice processing, electronic receiving, and three-way matching to create vouchers automatically, thus speeding payment processing; and
- * processing sub-orders from existing term agreements automatically, reducing processing time.

Contracts - Significant Redesign Improvements. In reinventing the high-dollar contracts process, the following improvements were designed:

- * planning with purchasing's customers (user departments) early in the purchasing cycle, enabling better value in procurement by eliminating the need for "rush" purchases;
- * incorporating life-cycle costing ("best value") award evaluation criteria, enabling consideration of the total life-cycle cost of the commodity or construction project;
- * advertising on the Internet, making specifications and bid packages available on-line for vendor review and downloading, and providing the MBE/WBE directory on-line for prospective bidders, thereby increasing the information available to vendors and reaching a broader vendor audience;
- * managing the flow of vendor information;
- * using the system to provide workflow routing to track the flow of documents and information, thus speeding the award and signature of contracts and facilitating work assignments; and
- * monitoring the MBE/WBE compliance on contracts using electronic download of contractor payroll data directly into the system, decreasing manual data entry.

Business Development - Significant Redesign Improvements. The following improvements were designed into the business development process:

- * using technology and a scripted, interview-based approach, to provide four ways to get key

information from an applicant, increasing the chances of gathering the right information from the vendor the first time;

- * using external databases to help validate and verify information from applicants;
- * using the Internet to allow vendors to register and maintain their vendor information on-line, enabling the vendor to easily access bidding information and allowing for the standardization of commodity coding;
- * allowing for concurrent committee review of certification applications, enabling the committee to focus on exceptions and speed the group review process; and
- * processing site visit inspections real-time using portable laptop computers, reducing time, and effort in the certification review process.

Documenting the Technical Requirements and Issuing the RFP. As the processes were redesigned, the technical requirements to enable the processes were gathered and documented. More than 380 technical requirements were documented, and a Request for Proposal (RFP) was released asking technology vendors to demonstrate how they could meet the requirements.

At the same time, the city of Chicago made a decision to combine the efforts of several departments seeking new financial management functionality with the purchasing effort, in order to seek a fully integrated financial management and purchasing system. Responses were received from five vendors and evaluation and system selection tasks began thereafter.

Vendor Selection. A cross-departmental team was assembled and charged with the responsibility of evaluating the proposals and selecting the software and implementation services necessary to meet the very specific business and technical requirements of the city. The team spent several months in proposal evaluation, analyzing week-long vendor demonstrations with the top three candidates. The team also conducted numerous reference checks, conducted site visits to view the live software in production environments and evaluated a significant amount of external research.

After contract negotiations, the team unanimously decided to award the contract to the chosen vendor based on their ability to best meet the requirements at a reasonable cost, and at the greatest value to the city.

Phase III: Implementation

The purchasing department of the city of Chicago is now ready and positioned for implementation of their new system, thus enabling their process redesigns. Significant time and effort were expended getting the department ready for implementation by designing and building a local-area network (LAN) to connect purchasing to the city's enterprise network. In addition, unnecessary data was purged from the vendor file, the department was converted from an unsupported operating software environment to an integrated desktop package, standards and conventions for word processing were established, and a Web-page strategy was completed.

Over the coming months, the city of Chicago anticipates refining the scope, defining the implementation team roles and structure, finalizing the roll-out strategy, and configuring the new system. This will all be done with the end result of realizing improvement in the critical purchasing processes of the government.

Exhibit 1

THREE-PHASE PROCESS REDESIGN

PHASE I

- * Identity objectives, benefits and measures
- * Detail current state analysis/process mapping
- * Conduct customer and vendor research
- * Conduct best practice research and site visits
- * Incorporate state-of-the-art practices
- * Scope out future-state vision

PHASE II

- * Complete redesigns for:
 - * Process (future state process maps)
 - * Technical business requirements
- * Complete and issue RFP for new system to enable redesigned processes
- * Evaluate vendors' proposals
- * Negotiate contract and select vendor
- * Prepare environment and organization for implementation

PHASE III

- * Refine scope and roll-out strategy
- * Define implementation teams, roles and structure
- * Complete system design and implementation
- * Train employees in new skills
- * Roll out new future-state

Exhibit 3

BEST PRACTICES IN PURCHASING

- * Using the Internet for advertising, bidding, posting information, and vendor registration
- * Using teams to get best results incorporating user department and sometimes vendor representatives as part of the purchasing teams
- * Empowering staff to make decisions by pushing decision-making down in the organization
- * Using best value analysis for awarding contracts
- * Incorporating electronic approvals and signatures to gain speed in the purchasing process
- * Using procurement cards to handle the accounting and processing for smaller, commodity purchases
- * Using technology to enable paperless processing

- * Increasing the levels of approval authority to enable effective electronic commerce
- * Segmenting work by transaction type and dollar impact for efficiency
- * Focusing employees with the right skills on the right transactions

NOTES

1 Osborne, David and Gaebler, Ted, *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*, 1992, Plume - Penguin Books.

2 Carr, David, Littman, Ian and Condon, John, *Improvement Driven Governments: Public Services for the 21st Century*, 1995, Coopers & Lybrand L.L.P.

3 Hammer, Michael and Champy, James, *Reengineering the Corporation: A Manifesto for Business Revolution*, 1993, HarperCollins.

KATHRYN M. KUSTERMANN is the Deputy Chief Information Officer of the city of Chicago. She was formally a management consultant with CSC Index in Chicago and also served as a Strategic Planning Manger for Motorola Corporation.

Citation Details

Title: Reengineering the purchasing function: identifying best practices for the City of Chicago.
(purchasing department of Chicago, Illinois)

Author: Kathryn M. Kustermann

Publication: *Government Finance Review* (Magazine/Journal)

Date: October 1, 1998

Publisher: Government Finance Officers Association

Volume: v14 **Issue:** n5 **Page:** p29(4)