

To: President Gamble Business Process Review Oversight Committee	From: BPR Purchasing Team (Shawna Lanphear-BZ, Jeana Henley-BZ, Mary Lou Wilson-BZ, Brian O'Connor-BZ, Traci Miyakawa-BZ, Deby Gunter-GF, and Nancy Voorhees-BL)
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MSU Business Process Review Business Case: Purchasing Team

Buying Goods: Purchase Order Printing & Distribution through Access; Electronic Purchase Request Approvals through Outlook

Executive Summary

The Purchasing Team researched the current purchasing practices within each MSU campus. While we found that the four campuses are consistent with compliance rules required by the State, as they have delegated authority through MSU Bozeman Purchasing, the only differences (though slight) were related to volume on each of the campuses. Based on this knowledge the team focused on processes and tools to improve the efficiency of purchasing as well as the customer satisfaction in performing its purchasing.

The purpose of this process modification was to improve the processing time for issuing and distributing purchase orders; and to provide a process improvement in acquiring approvals on the purchase requisition.

The current process for printing Purchase Orders requires the use of merging Banner information with a Word Document (a 3-page process) and distribution requires photocopying for both the requestor through intercampus mail and the purchasing files. The impact of using Word is very inconsistent printing requiring reprinting and troubleshooting technical difficulties. The distribution process is very manual and there are opportunities for purchasing communication to be lost. There is a significant time and consistency savings by making this modification. The Purchasing Team recommends changing the purchasing printing and distribution process to utilize an access database. The access database allows for the printing, creating and printing a file copy with a "file copy" watermark, creating an email with an attachment of the file copy to the purchase requestor, and filing an electronic copy. Specifically, we anticipate a financial cost savings to the MSU Purchasing department in the amount of \$28,000 of resource time allocation through improved efficiencies over the next five years. The non-financial impact is improved customer satisfaction in improved distribution time.

The current process for submitting a purchase requisition and supporting documents requires a manual routing for original signatures before being delivered to purchasing for processing. The impact is that it may take walking it around for signatures or routing it and waiting for it to route through many departments and matching up the supporting documents with their signatures. The Purchasing Team recommends the use of Outlook voting buttons to provide an electronic approval on the purchase requisition and supporting documents. Departments and the other campuses for processing their department purchase orders where they require multiple internal approvals and other supporting documents may use this process. There is no specific savings to the purchasing department; however, we anticipate a financial savings to the departments due to a resource and timesavings through improved efficiencies. Additionally there is anticipated savings by having the same information and communications being disseminated to all approvers.

We feel that by modifying the process of buying goods, we will accomplish the following objectives:

- improve efficiency of the purchasing process by streamlining the printing and distribution of purchase orders;
- increase customer satisfaction by providing a process to speed up the approval process of purchase requests;
- contribute to the UBS objective of decreasing the distribution and saving of “paper”

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A. Introduction

1. MSU Business Process Review (“BPR”)

The 4 campuses of MSU were invited to participate in a Business Process Review (BPR) of all administrative and financial business processes across the 4 campuses.

There were several strategic objectives:

- develop a single process to be used by the 4 campuses,
- have a consistent set of definitions for all data elements, and
- improve institutional and system efficiencies and effectiveness.

Each of the processes will be:

- Redesigned,
- Modified, or
- Remain unchanged.

Each process will have a business case and cost benefit analysis to support the final recommendations.

The investigation and development phases (Phases I and II) occurred during 2006. Implementation of approved recommendations will occur during 2006 and 2007 in alignment with business cycles and resources availability.

a. Summary of Purchasing Processes to be Redesigned or Modified.

Process Title	Recommendations	Interim Recommendations
General Services	Modify	Modify
Buying Goods	Modify	Modify
Contract Administration	No change	No change
Payment Approval	Modify	Modify
Compliance	Modify	Modify

The Purchasing Team reviewed five processes in Phase I and brought the above recommendations to the Oversight Committee in June. In the meantime, we have reviewed in greater depth the four modifications. This document describes Purchasing in its current state and our recommendations.

b. BPR Objectives

The Purchasing Team’s goals for Purchasing are to:

- increase customer satisfaction by redesigning page with interactive instructions and electronic purchasing forms;
- improve efficiency of purchasing staff and provide better customer service with electronic submission of Purchase Requisition and electronic approvals;
- improve efficiency of payment approval with the incorporation of approval queues;

- improve efficiency of the purchasing process by converting all current Excel logs to one Access database;
- provide improved and additional training, updated policy manual and electronic forms for additional customer satisfaction and efficiencies.

c. Scope of This Case

The Purchasing Team reviewed our purchasing practices in Phase I. During that review, we found that the purchase requisitions are submitted by all campuses and departments for purchases over their delegated authority. Based on this analysis, there was no issue of campus or department differences that needed to be resolved. Additionally, as only the purchasing department inputs purchase requisitions into Banner, they are the only department that required improvements for printing and distributing purchase orders. We recommend a modification for this case. This case involves two processes. They are 1) printing and distributing purchase orders through the use of an access database and 2) electronic approval of purchase requisitions and supporting documents through voting buttons in Outlook. The Oversight Committee endorsed this recommendation.

2. BPR Business Case Purpose

This business case describes the purchase requisition and purchase order issuing process of Buying Goods. The Team collected data, reviewed it and developed this recommendation. The Oversight Committee and President Gamble, may use this document to inform their decisions to approve our recommendation.

3. Background

The process of Buying Goods is mandated in part by the State of Montana through a Delegation Agreement between themselves and MSU-Bozeman. Content and file set up and tracking is required to verify compliance. Additionally MSU has spending policies that require approvals prior to purchasing. Each campus and department is responsible for this same Buying Goods process through sub-delegation by MSU-Bozeman.

a. Problems and/or Opportunities Addressed by BPR

The Purchasing Team had identified several opportunities identified by BPR including:

- improved efficiency by creating an Access database to print and distribute purchase orders;
- improved efficiency in electronic submission of purchase requisitions using Outlook voting buttons;
- improved customer satisfaction for a reduced error rate of incomplete purchase requisitions submitted

b. Connections to other Projects/Products or Programs

- Banner
- Microsoft Office Products

c. Other, Alternative Actions

If the Oversight Committee or President Gamble does not approve our recommendation to create this Access database, we propose reverting to the *status quo*.

d. Current Problems or Limitations

- Technical resources and MSU policies regarding the use of an Access database;

B. Methods and Assumptions

In Phase I, the Purchasing Team developed flowcharts for the Purchasing process. We collected data on the amount of time each step takes (flowchart analysis) as well as how much of each employee's FTE is devoted to the process overall (workload distribution analysis). There were two surveys sent out to various constituents of the process, which included processing of purchase requests. After comparing the data collected, we discovered that there is significant potential for process improvement.

Specifically we identified the need to improve the printing process as it was labor intensive and inconsistent and the approval process was lengthy. These decisions were supported by the use of Customer Surveys, Flowchart Analysis and Workload Distribution Analysis.

1. Business Case Scope and Boundaries

a. The Analysis Period

As we are on a fiscal year for purchase orders and contracts, the underlying reporting is set up to track on a fiscal year basis. This allows for consistent tracking of all processes to help determine the effect of each modification taken in conjunction with all of the changes. This is important and the purchasing process is an integrated process that is dependent on what and when purchase requisitions are received by the purchasing department.

We predict time involved over one projected year based on estimates of actual time spent on printing and distributing purchase orders.

b. Geography or Location

The BPR recommendations will be for all purchasers through their Delegated Authority, which includes all four campuses.

The Purchase Requisition instructions will be posted on the purchasing website and purchasing portal and applicable to all MSU purchasers (including all 4 campuses).

The printing and distribution of purchase order process will be developed for use and implemented by Bozeman purchasing.

c. Organizations

The organizations covered by this business case for purchase requisition approval submissions include any MSU employee on any campus who wants to purchase goods or services for MSU.

d. Functions and Positions

The Director of Purchasing and Purchasing Department are the principal participants in procurement compliance implementation, monitoring and policy management. They coordinate with the State, stakeholders and other campuses.

e. Technology

No product costs are included in this business case for implementing the use of Outlook for providing electronic approvals on purchase requisitions and submissions.

Labor resources for updating the Access database for printing. This has already been developed.

2. Scenario Design

This business case compares continuing the *status quo* in the purchasing department for printing the purchase orders and distribution. The purchase order printing from Banner directly was reviewed but the form, content and consistency is even less than that of using Word. The main difference between the Word printing versus the Access printing is the time saving and accuracy.

The business case for the submission of a purchase requisition compares continuing the status quo by the purchase requestors and the use of Microsoft Outlook. The other scenario evaluated was approval queues in Banner. However, this requires the implementation by Accounting. This is an interim step and easily converted to Banner approval queues. The main difference between these two scenarios will be in the accuracy and efficiency of data integrity for compliance.

3. The Cost Model

The financial considerations we have included are resource costs and savings, utilization of existing technology and licenses and processes that are convertible as business processes evolve.

4. The Benefits Rationale

Aside from the financial considerations, we also considered the following non-monetary benefits:

- improved timeliness in processing transactions;
- improved efficiency in process by reducing human error;
- enhanced use of technology;
- enhanced communication;

5. Data Structure

The cost/benefit analysis for the Access database compared costs for business as usual versus the implementation of this modification.

6. Data Sources and Methods

a. Data Sources

We used the following data sources for our analyses:

- Flowcharts
- Workload Distribution Chart
- Cost-Benefit Analysis
- Customer Surveys
- Peer data

b. Methods for Estimating Costs and Benefits

The WDC for Phase I was determined based on 1) long time personnel with combined 50 years of experience that have since retired (06/06 and 09/06) and 2) organizational structure of specific job responsibilities. A complete turnover in staff and a restructuring to a cross-functional job assignments created different statistical data points that do not translate to the BPR financial analysis tool. The best method to extrapolate accurate financials were to apply current actual processing assumptions and applying the financial calculation model.

7. Assumptions

The time savings is in the time it takes to route the documents, the actual time to fill out the documents originally is essentially the same as the current process. The process improvement gets the information to and from the departments faster. Very slight reduction in paper costs. Additionally, there will be other forms converted to electronic ones that will need to be routed with the purchasing requisition. The PARR form (Property Asset Removal Request) for trade ins and the DPES form for data processing purchases. Again, the savings is in the time to route the documents no time savings in having to complete them. However, with the enhancement of an online form populating a database there will be significant time savings in the Property management department as well as time saved in the Computer Stores documenting the approval of the purchase. This has not been measured and was not part of the purchasing team's scope.

However, printing the PO using Access provides significant savings. If all went well a PO could be printed in half an hour, sometimes it could take 4 hours to get one to print, sometimes all day. That does not include the time it took to make copies and send it to the department and the vendor. Now they are all done with the push of a button and the PO is printed and communications drafted and sent almost simultaneously.

C. Business Impacts

1. Analysis

Appendix C shows the current process of purchase order printing and distribution. There is no process flowchart change showing the processing of the purchase requisition as the change effects the pre-submission that is at the department level. The process change provides the departments with a tool to reduce their resource overhead.

a. Benefits and Gains

As stated earlier, the financial benefits attained from the development and creation of an Access database will be improved accuracy and efficiency in the creation and maintenance of purchasing transactions.

b. Expenses (or “Operating Expenses”)

The operating expenses incurred will be the initial cost of developing the Access database, which has already been developed. No operating expenses or on-going expenses are expected from this recommendation for utilization of Microsoft Outlook. No operating expense increase is expected for ongoing maintenance.

c. Analysis Summary

- Time savings on an annual basis are positive.
- Development and implementation costs are marginal.
- Customer service improvements are significant

2. Analysis of Results

The recommended process will save the Bozeman campus about 228 hours per year. The development and implementation costs are minimal and the expected benefits in time saved, will be significant.

The use of Access to pull PO and contract information out of Banner will prove to be a huge time saver and improve the customer service provided by the department. Non-financial and non-quantified results in:

- improved timeliness in the processing of transactions;
- improved efficiency in process by reducing human error;
- enhanced technical support by storing data in one place;
- enhanced data extraction and reporting;
- standardization of approval process by purchase requestors

D. Sensitivity, Security and Risk Analysis

Issues with security using an Access database have been addressed. The database will be resident on a secured server with access only to the particular department using the database through password identification. No confidential information is stored in the database.

E. Conclusions and Recommendations

The current process for printing Purchase Orders requires the use of merging Banner information with a Word Document (a 3 page process) and distribution requires photocopying for both the requestor through intercampus mail and the purchasing files. The impact of using Word is very inconsistent printing requiring reprinting and troubleshooting technical difficulties. The distribution process is very manual and there are opportunities for purchasing communications to be lost. There is a significant time and consistency savings by making this modification. The Purchasing Team recommends changing the purchasing printing and distribution process to utilize an access database. The access database allows for the printing, creating and printing a file copy with a “file copy” watermark, creating an email with an attachment of the file copy to the purchase requestor, and filing an electronic copy. Specifically, we anticipate a financial cost savings to the MSU Purchasing department in the amount of \$28,000 of resource time allocation through improved efficiencies. The non-financial impact is improved customer satisfaction in improved distribution time.

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- increase customer satisfaction by providing a process to speed up the approval process of purchase requests;
- contribute to the UBS objective of decreasing the distribution and saving of “paper”
- improve efficiency of purchasing staff and provide better customer service with electronic submission of Purchase Requisition and electronic approvals;

F. Appendixes and References

Please see attachments.