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MSU Business Process Review Business Case: Purchasing Team

Compliance-Updating Forms/Policy Manual and Access Database

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 provide tools to support legal compliance with the state requirements and the MSU/State Purchasing Delegation of Authority Agreement.

The current Forms and Policy Manual are out of date and do not adequately reflect the current purchasing procedures. The impact of using dated materials creates increased questions by purchasing customers as well as potential compliance issues with the Delegation Agreement and the state purchasing requirements. There is no specific process or financial projection for completing this task. Other BPR processes address the use of the forms and the vehicle for making them available. The Purchasing Team recommends the updating of the Forms and Policy Manual and its ongoing maintenance to support a healthy purchasing environment that supports the Purchasing Department's Mission. The non-financial impact is improved customer satisfaction and continued compliance.

The current purchasing tools for logging and maintaining purchasing transactions to provide the processing of buying goods and services as well as maintaining the compliance records is the use of five (5) Excel workbooks used as logs. The impact is the amount of time needed to utilize multiple sources to track data and the lack of coordinated reporting that is attainable from multiple sources. The Purchasing Team recommends the business process improvement to acquire development and creation of an Access database for use by the MSU Purchasing Office and make the template available to all purchasing departments, including campuses in Billings, Great Falls, and Havre. Specifically, we anticipate a financial cost savings to the MSU Purchasing department in the amount of \$31,500 over the next 5 years of resource time allocation through improved efficiencies. Additionally there is anticipated savings by using reports from data in the database that identify potential volume purchase agreements and cross-campus vendor agreements.

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

- improve efficiency of the purchasing process by converting all current Excel logs to an Access database;
- increase customer satisfaction by redesigning the web page with interactive instructions and electronic purchasing forms.

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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 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 the volume on each of the campuses. Therefore, we recommended a redesign at the end of Phase I. Through further research and refinement in Phase II, we now recommend a modification for this case. This case involves three processes. They are 1) update purchasing Forms, 2) update purchasing Policy Manual and 3) migrate from the use of Excel workbooks to an Access database. The Oversight Committee endorsed this recommendation.

2. BPR Business Case Purpose

This business case describes the Compliance process, the data the Purchasing Team collected to review it, and the recommendation we have developed. The Oversight Committee and President Gamble, may use this document to inform their decisions to approve our recommendation.

3. Background

The process of Compliance is mandated by the State of Montana through a Delegation Agreement between themselves and MSU-Bozeman. Each campus is responsible for this same Compliance through sub-delegation by MSU-Bozeman to other campus' and departments.

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 store data currently in multiple Excel workbooks;
- enhanced technical support by utilizing one central location for the storage of data;
- future potential to interface with and populate required forms for processing and compliance;
- improved efficiency in the extraction of data input and stored in one central location;
- improved customer satisfaction for a reduced error rate

b. Connections to other Projects/Products or Programs

- Banner
- MSU Web/Portal

- Microsoft Office Products

c. Other, Alternative Actions

If the Oversight Committee or President Gamble do 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/posting restrictions

B. Methods and Assumptions

In Phase I, the Purchasing Team developed flowcharts for the Purchasing process on all four campuses. 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. After comparing the data collected for each campus, we discovered that there is significant agreement among the campuses regarding process improvement.

Specifically we identified the need to update the tools and associated instructions, a current policy manual to provide guidelines for use by our customers and a storage and tracking database for the Compliance information. 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. The updating of purchasing forms and purchasing policy manual are not traceable to particular process analysis but are a support to the purchasing process used to acquire goods and services. These updates will be an ongoing activity.

We predict time involved over one projected year based on estimates of actual time spent on logging purchase transactions into one Access database to last year in entering and maintaining multiple Excel logs.

b. Geography or Location

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

The Forms and Policy Manual will be posted on the purchasing website and purchasing portal and applicable to all MSU purchasers (including all 4 campuses).

The Access database will be developed for use by Bozeman purchasing and will reside on purchasing secured server. The Access database template will be available

for use to all purchasers, including campuses in Billings, Great Falls, and Havre to use to track their delegated authority purchases.

c. Organizations

The organizations covered by this business case include the purchasing processes across all four campuses as applied through the Delegated Authority

The Forms and Policy Manual will be posted on the purchasing website and purchasing portal and applicable to all MSU purchasers (including all four (4) campuses).

The Access database will be developed for use by Bozeman purchasing and will reside on a purchasing secured server. The Access database template will be available for use to all purchasers, including campuses in Billings, Great Falls, and Havre to use to track their delegated authority purchases.

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 updating Forms, Policy Manual or Access Database. However, there will be labor resource costs to develop the Access database.

2. Scenario Design

There were no scenarios to compare for updating Forms and the Policy Manual as they are a requirement for compliance purposes and not a process for improvement evaluation.

This business case compares continuing the *status quo* on all four campuses to the development and creation of the Access database. 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 employee costs associated with creation, data entry and maintenance of logs of purchasing transactions.

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 technical support;

- enhanced data extraction and reporting;
- standardization of forms and data used by all 4 campuses;

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 was to apply current actual processing assumptions and applying the financial calculation model.

7. Assumptions

We assumed that there will be some training necessary for purchasing staff in web page maintenance and in Portal content management. However, this training is also necessary for other purchasing business cases and that cost is not considered here. There will be a transfer of costs from other departments when purchasing takes on the task of updating its own forms and the purchasing manual. An estimate of the time needed will vary due to the number and complexity of any updates needed but should still be less time consuming for others and less expensive for the university as a whole.

The assumptions used for time saved by using an Access database for logging purchasing documents was based on past experience with updating five Excel spreadsheets and an estimate of the time it took to do a search on those logs when trying to find information. An Access database in conjunction with an electronic form should only need to have the information entered once and then updated with the appropriate Banner information. Reporting of open POs, renewals, by department, etc. will be built into the database so they can be compiled at the push of a button saving considerable time. We based our cost analysis on a decrease in the average amount of time for doing the data entry as well as a decrease in time spent searching for information and putting together reports.

C. Business Impacts

1. Analysis

Appendix C shows the Difference between the doing business as usual versus the improved process.

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, maintenance, tracking and reporting of purchasing transactions.

b. Expenses (or “Operating Expenses”)

The operating expenses incurred will be the initial cost of developing the Access database. The operating expenses expected from this recommendation for updating Forms or the Policy Manual are web page maintenance training and is considered in a different business case and not taken into consideration here.. No operating expense increase is expected for ongoing maintenance.

c. Analysis Summary

- Time saved on an annual basis is positive but not substantial however the reporting benefits could be.
- Development and implementation costs are marginal.

2. Analysis of Results

The recommended process will save the Bozeman campus about 250 hours per year. While there are some marginal development and implementation costs, the team believes that the benefits outweigh the costs.

Additionally, the Access Database template will be available for department and other campus use for tracking purchases within their purchasing authority.

3. Non-financial and Non-quantified results

- 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 forms and data used by all four (4) campuses.

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 Forms and Policy Manual are out of date and do not adequately reflect the current purchasing procedures. The impact of using dated materials creates increased questions by purchasing customers as well as potential compliance issues with the Delegation Agreement and the state purchasing requirements. There is not specific process or financial projection for completing this task. Other BPR processes address the use of the forms and the vehicle for making them available. The Purchasing Team recommends the updating of the Forms and Policy Manual and its ongoing maintenance to support a healthy purchasing environment that supports the Purchasing Departments Mission. The non-financial impact is improved customer satisfaction and continued compliance.

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- improve efficiency of purchasing staff and provide better customer service provide updated policy manual and electronic forms for additional customer satisfaction and efficiencies.

F. Appendixes and References

Please see attachments.