

CONTINUOUS IMPROVEMENT REPORT

Date: July 29, 2002	Team Name: Procurement and Accounts Payable Processes
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DATES OF MEETINGS: Ongoing. Two hour meetings every third Wednesday. Initial meeting held on August 17, 2001.

TEAM MEMBERS

Accounts Payable:	Hazel Burgess; Elsa Liauwapau; Genevieve Nugent
Bascom Palmer Eye Institute:	Tracy Mote
Continuous Improvement:	Bob Dale
Controller's Office:	Teresita Díaz
Facilities Administration:	Linda Dellinger; Gabriel Domínguez-Núñez
Information Technology:	Cardelle Hayes; Jorge Molina
Pediatrics Department:	Linda Davidson
Purchasing:	Susan Montes; Carmen Oliva
Rosenstiel School of Marine and Atmospheric Science:	Kimberly Miller
Treasury Operations:	Olga Cano
UMHC/Sylvester Comprehensive Cancer Center:	Chris McHugh; Pat Viteri

TEAM MISSION STATEMENT

Improve the procurement and payment processes at the University of Miami in order to maximize discounts earned, strengthen control, improve efficiency and reduce costs.

By improving the procurement and payment processes we expect to achieve the following:

- Improve return on assets by increasing discounts from vendors and reducing costs.
- Increase efficiency by reducing rework on purchase orders and payments and by automating functions, whenever feasible.

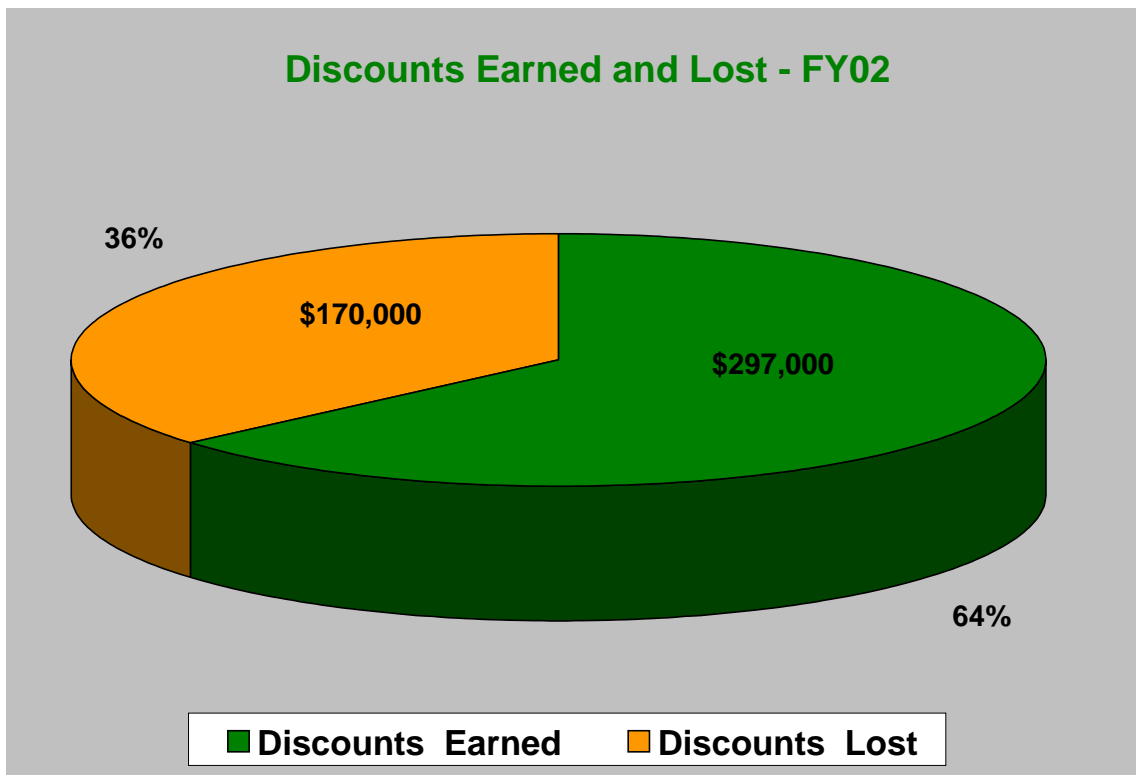
- Ensure continuity of services by reducing/eliminating late payments.
- Improve controls over the purchasing and payment process.

REASON PROJECT WAS SELECTED

Improve/streamline certain procurement and accounts payable processes functions.

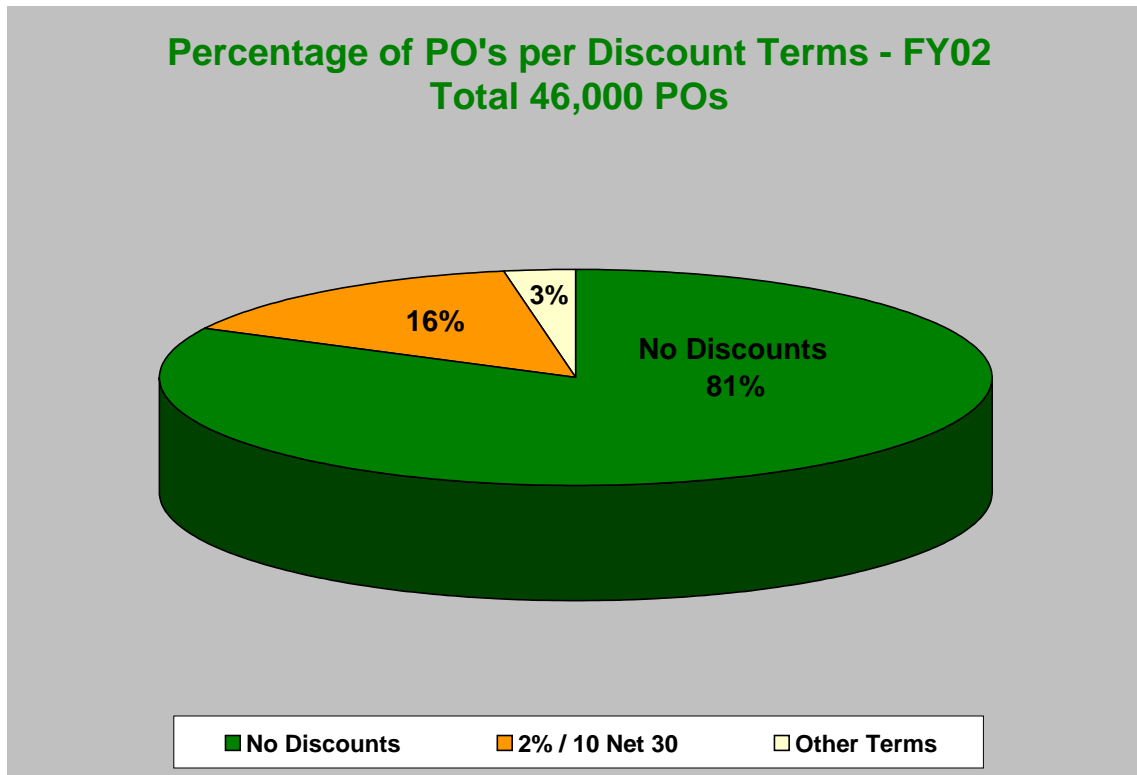
Increase vendor discounts earned: During the five fiscal years from 1998 to 2002 discounts lost amounted to \$ 567,000. Discounts lost as a percentage of discounts available increased from 31% in 2001 to 36% in 2002.

As shown in the graph below, in fiscal year 2002 discounts lost amounted to \$170,000, compared to \$112,000 in fiscal year 2001.

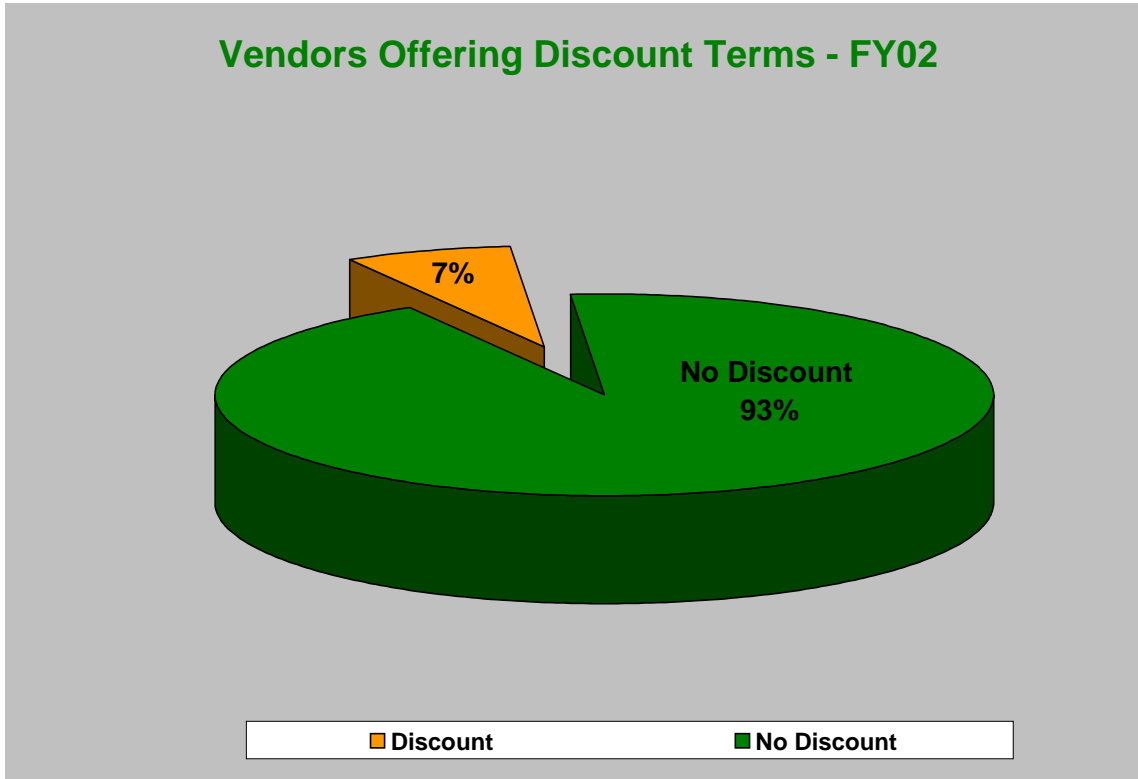


In fiscal year 2002, 9,000 POs offered discount terms, or 19% of a total of 46,000 POs. Terms offered were:

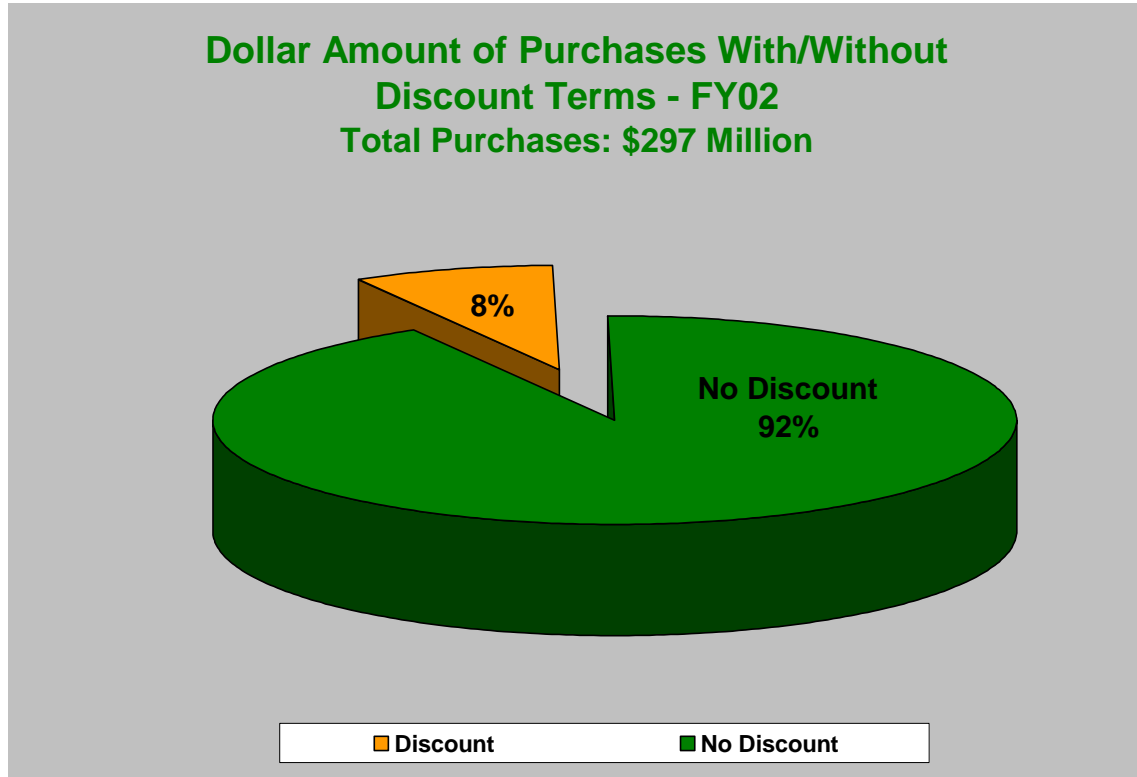
<u>No. of POs</u>	<u>Discount Terms</u>
6,600	2%/10, net 30
660	1%/10, net 30
270	1.5%/10 net 30
1,470	Various



In fiscal year 2002, about 7 %, of the active vendors offered discount terms, mostly ranging from 2 % to 2.5 %. In fiscal year 2001, also 7 % of active vendors offered discounts.



In fiscal years 2001 and 2002, about 7 % and 8%, respectively, of total purchases had discount terms. Note that the data includes purchases from organizations that generally do not provide discounts, such as construction companies, utilities, property leases and universities.



HOW SUCCESS ACHIEVING THE MISSION WILL BE MEASURED

The key indicators are:

- Increase in discounts “earned” as a percentage of discounts offered and purchases.
- Reduction in rejected invoices as a percentage of total invoices processed.
- Reduction in the number of change orders as a percentage of purchase orders.

DATA COLLECTION AND DATA ANALYSIS

Process Mapping

Each of the campuses and the hospitals use slightly different processes for purchasing and payment of invoices. There are also separate processes for departments within those operating areas. Process maps were completed by team members for their respective areas: the Department of Pediatrics and the primary Accounts Payable processing areas, which are: (1) Bascom Palmer Eye Institute, (2) UMHC/Sylvester Comprehensive Cancer Center, and (3) AP Coral Gables, Medical, and Rosenstiel School of Marine and Atmospheric Science.

Number of Days between Invoice and Accounts Payable Department Processing Dates-
Invoices on which Discounts Were Lost in Fiscal Year 2002

As shown in the graph below, there are significant delays in processing invoices. In fact, on invoices for which we lost discounts, over 75 percent were not paid within 30 days of the invoice date and 25 percent were paid over 90 days late. The data for fiscal year 2001 is very similar.

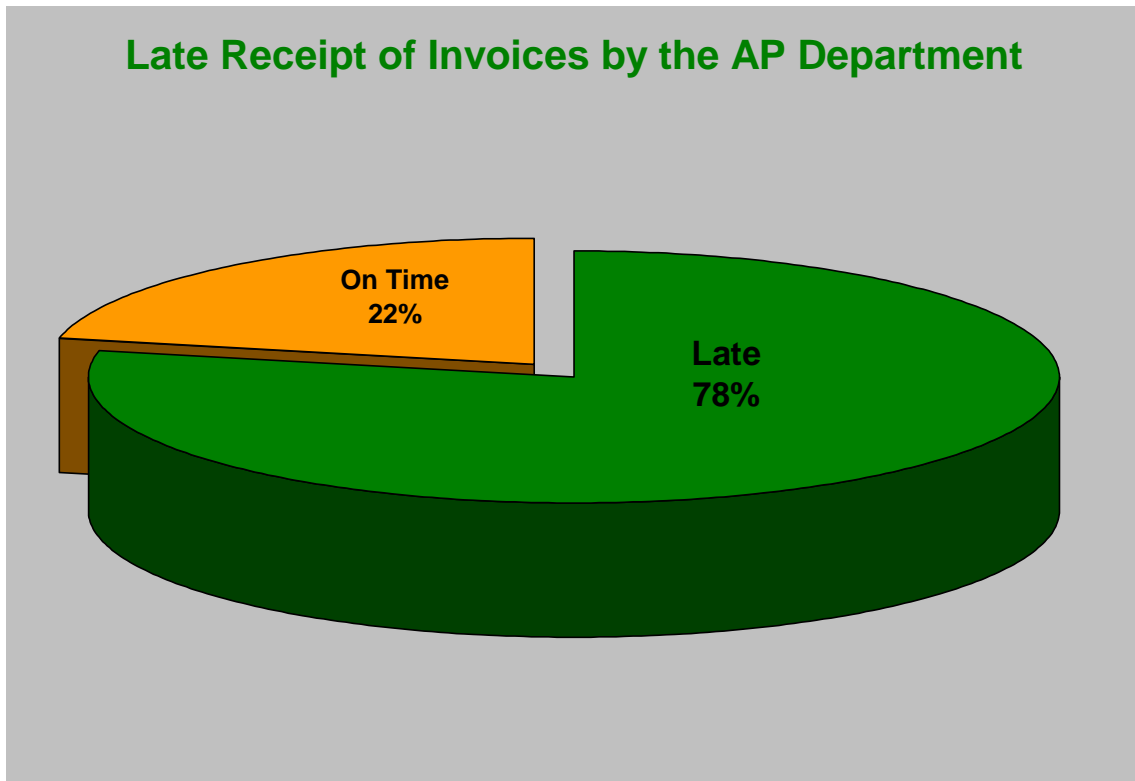
Days	# Invoices	%	Cum %
0 - 10	5	0 %	
11 - 20	202	2 %	
21 - 30	2,286	22 %	24 %
31 - 40	1,601	16 %	
41 - 50	1,052	10 %	
51 - 60	962	9 %	59 %
61 - 70	724	7 %	
71 - 80	540	5 %	
81 - 90	326	3 %	75 %
91 - 120	1,061	10 %	
121 - 180	772	7 %	92 %
181 - 360	598	6 %	
361 - 540	162	2 %	
541 - 720	30	0 %	
Over 720	3	0 %	100 %
Total	10,324	100 %	

The data sampled revealed the following two major root causes for these delays:

- Upfront delays in the receipt of invoices by the Accounts Payable Department, and
- Processing problems, such as the rejection of invoices.

Late receipt of invoices at the Accounts Payable Department

The sampling of 8% of the 9,205 invoices on which discounts were lost in fiscal year 2001 revealed that 78% of the invoices were received late at the Accounts Payable Department. (The number of days between the invoice date and the date that the Accounts Payable Department stamps the invoice upon receipt exceeded the discount terms.)



Rejected invoices-Fiscal years 2001 and 2002

Statistics from the Medical and Coral Gables AP departments indicated for fiscal years 2001 and 2002 that as many as 16 percent of invoices were rejected for a variety of reasons.

Statistics for fiscal years 2001 and 2002:

<u>AP Department</u>	<u>Rejected Invoices</u>		<u>As % of Total</u>	
	<u>2001</u>	<u>2002</u>	<u>2001</u>	<u>2002</u>
Medical	14,234	15,724	15%	16%
Coral Gables	9,428	8,193	13%	10%

The major causes for the rejection at Medical were:

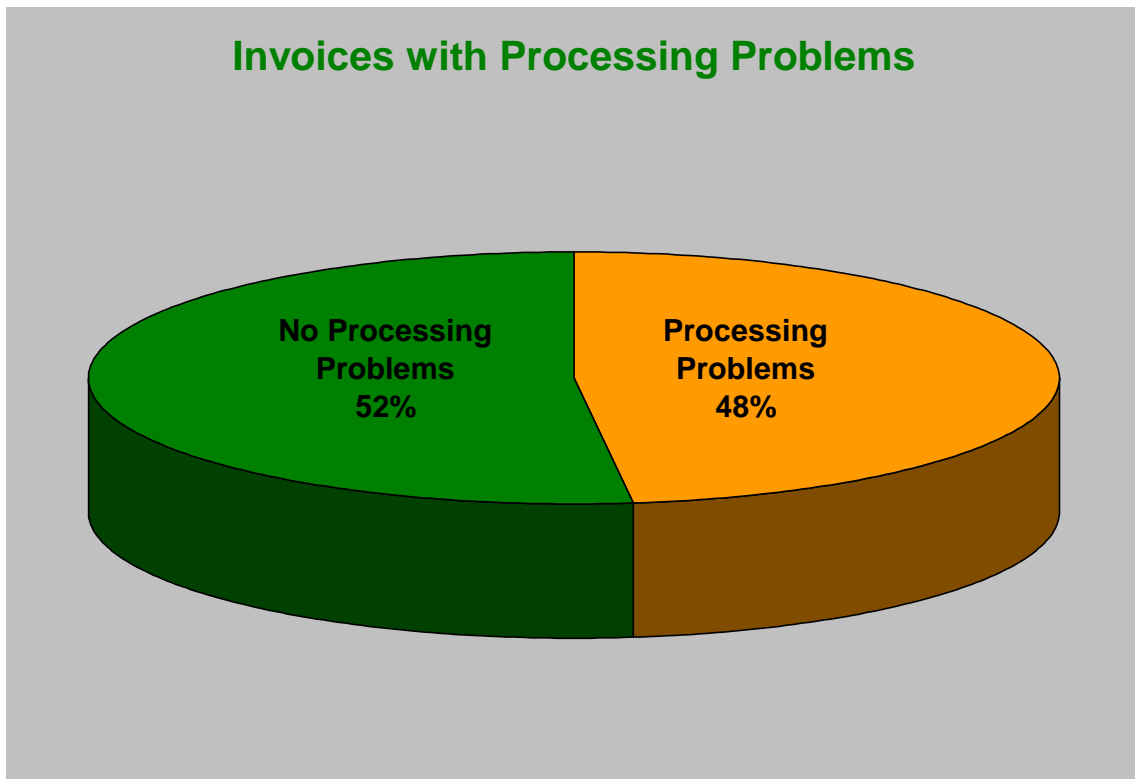
	<u>2001</u>	<u>2002</u>
Invalid purchase orders	36%	35%
Insufficient funds in purchase orders	41%	35%
Line problem	6%	7%
Vendor address	7%	10%
Wrong Vendor	4%	3%
Credits	5%	7%
Other	1%	3%

The majority of invoices are rejected manually because the Accounts Payable system does not screen invoices for most of the major causes for rejection.

Invalid purchase orders mainly result from vendors using the previous year's purchase order number. The system does not cross-reference the new to the old purchase order.

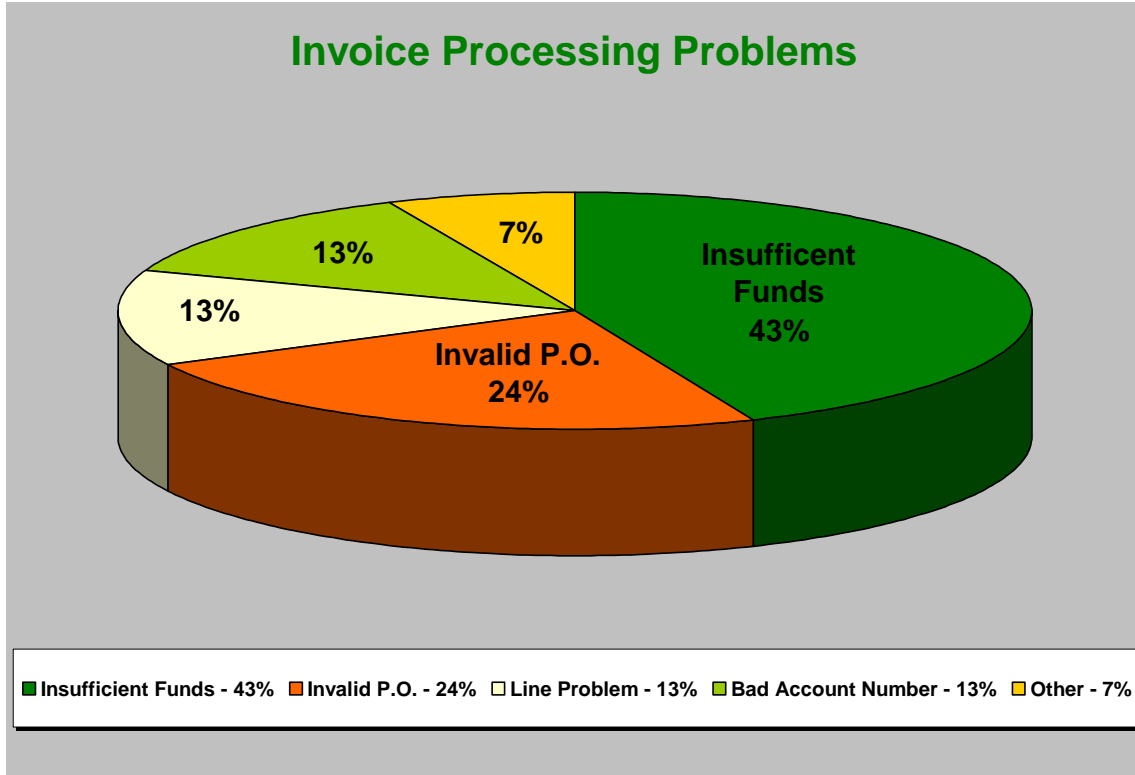
Invoices with processing problems

The sampling of 8 % of the 9,205 invoices on which discounts were lost in fiscal year 2001 revealed that 48% of all invoices had processing problems. Some invoices had more than one problem.



The processing problems were as follows:

Insufficient funds:	43 %
Invalid POs:	24 %
Line problem:	13 %
Bad account No.:	13 %
Others:	7 %



Change orders-FY 2002

<u>PO Type</u>	<u># POs</u>	<u># Change Orders</u>	<u>%</u>
All types	46,000	10,200	22
Standing POs	9,100	3,700	41

Change orders on standing POs were 36% of total change orders processed.

Note that it is difficult to get clean data on change orders because the system does not (1) calculate the total number of change orders processed (this data is based on manual input by the buyer) or (2) determine the cause for the change orders.

Discounts lost-analyzed by vendor and department-Fiscal year 2002

There is a concentration of discounts lost in a relatively small number of vendors and UM departments.

<u># of Vendors</u>	<u>% of Total Discounts Lost</u>
25	65 %
45	78
391	100 %

<u># of UM Departments</u>	<u>Percentage</u>
15	57 %
25	70
44	86
208	100 %

Survey on the procurement and AP processes

In order to expand the analysis of the root causes of the problems mentioned above and to obtain recommendations from departments, thirty three representative departments from the Medical, Coral Gables and RSMAS campuses completed questionnaires prepared by the team. A summary of the responses is in Exhibit 1.

The responses suggest the need for the clarification of policies, standardization of procedures and the training of departments by the Purchasing and Accounts Payable Departments.

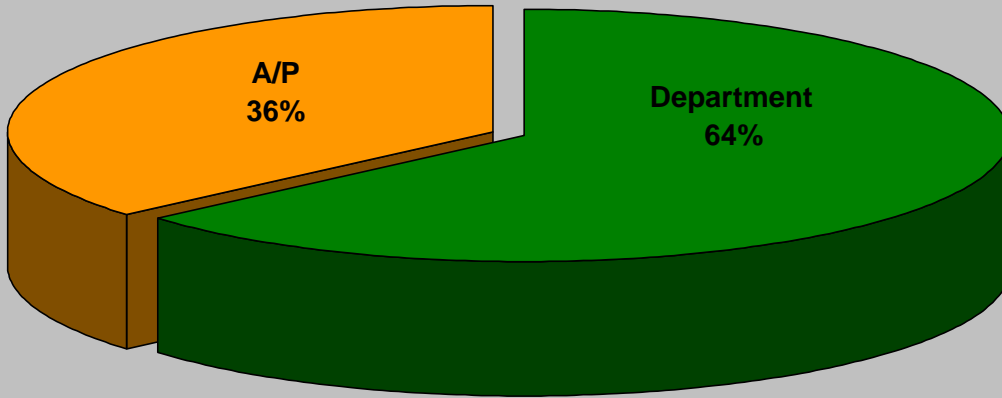
Below are some of the responses:

1. Causes for the late receipt of invoices by the Accounts Payable Department

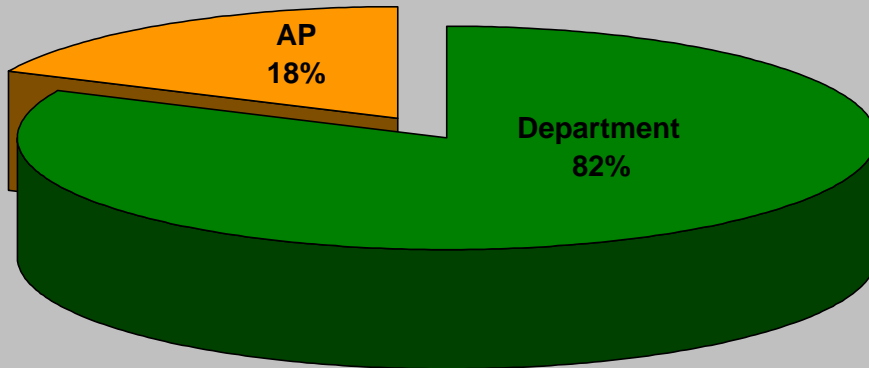
Receipt of invoices directly by the departments-questions 5 and 11a

Sixty four percent of the departments reported requesting that vendors mail invoices directly to them. Eighty two percent reported now receiving them directly.

Invoice Mailing Address Requested By Department



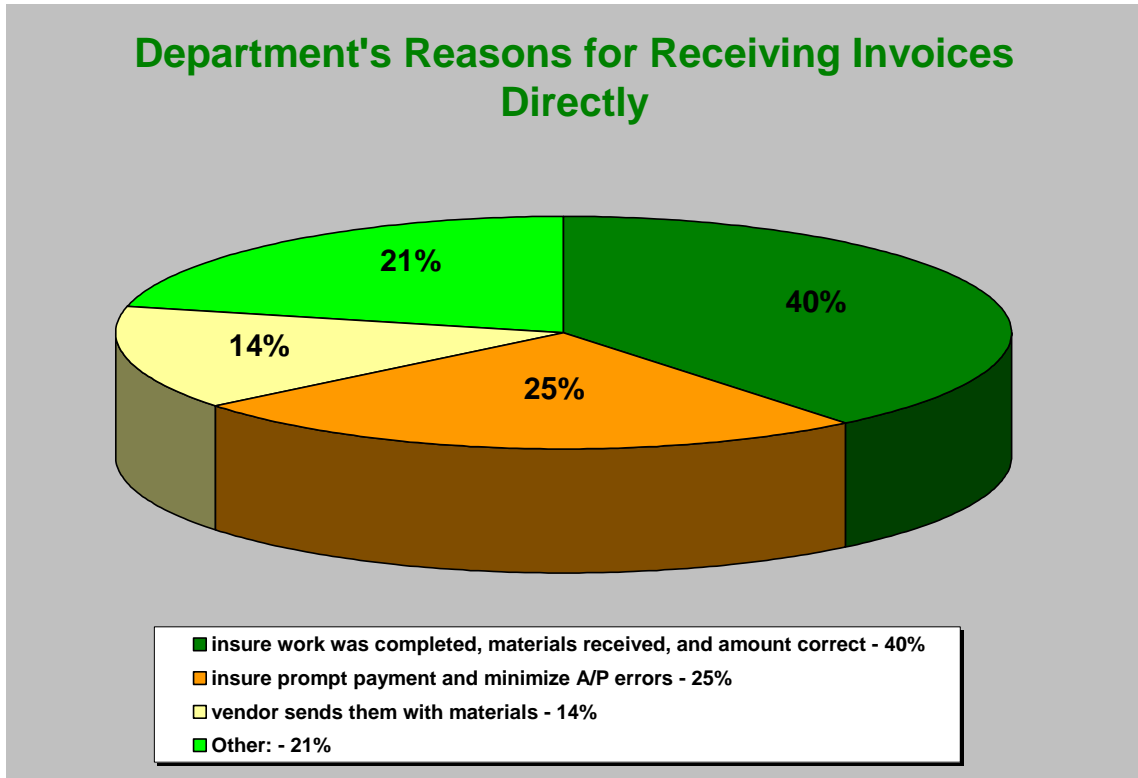
Invoices Received Directly by Departments



Departments' reasons for receiving invoices directly from vendors-question 11b

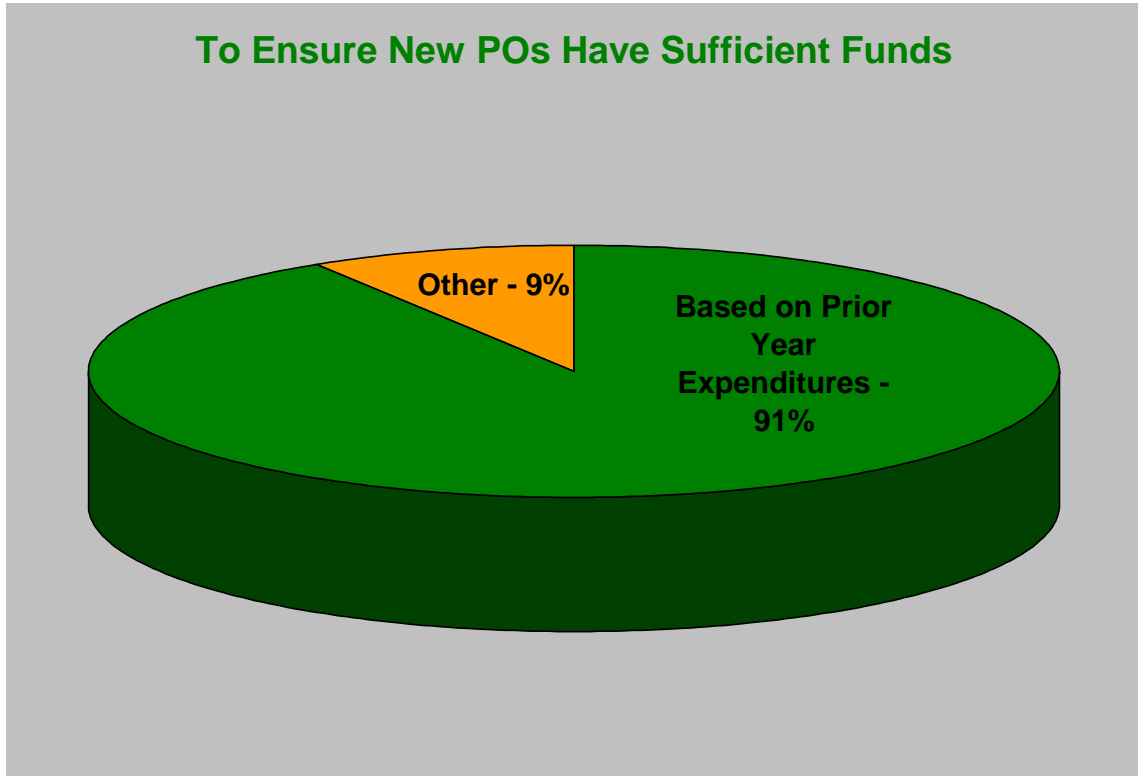
40 % of responses: insure work was completed, materials received, and invoice amount was correct.

25 % of responses: insure prompt payment and minimize AP errors.



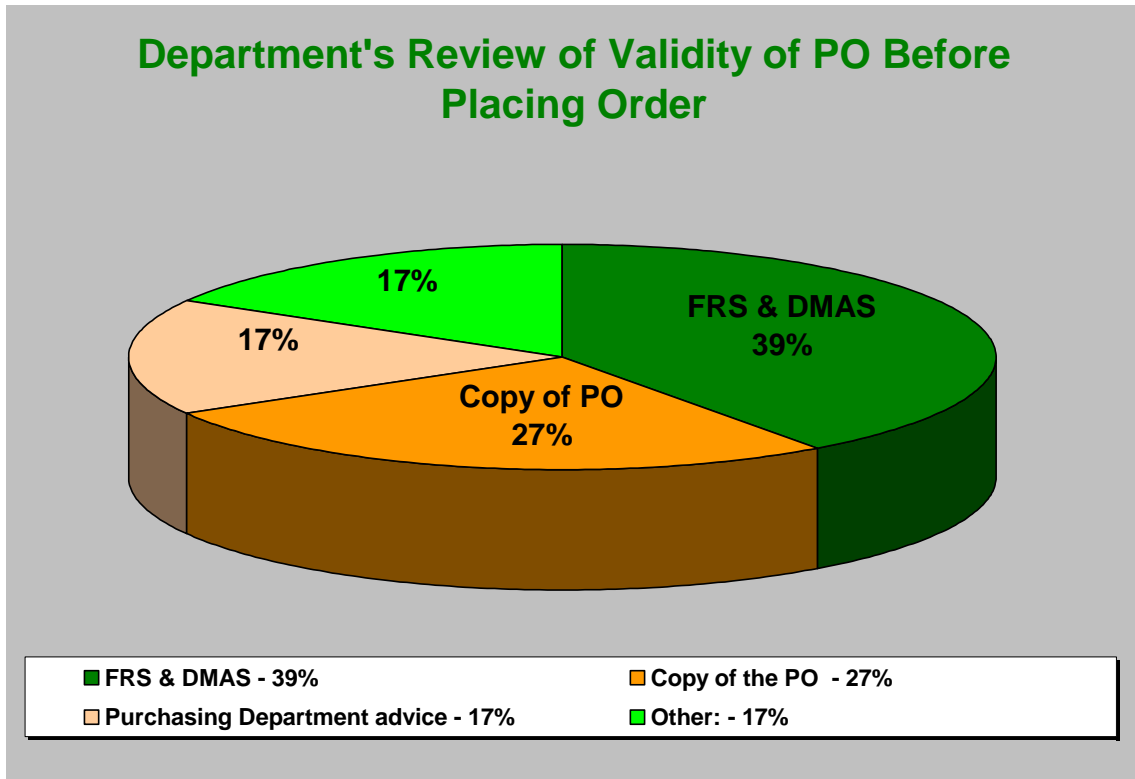
2. How do you ensure new POs have sufficient funds?-Question 8

About 91% of departments responded that they renew standing POs based on the prior year expenditures.



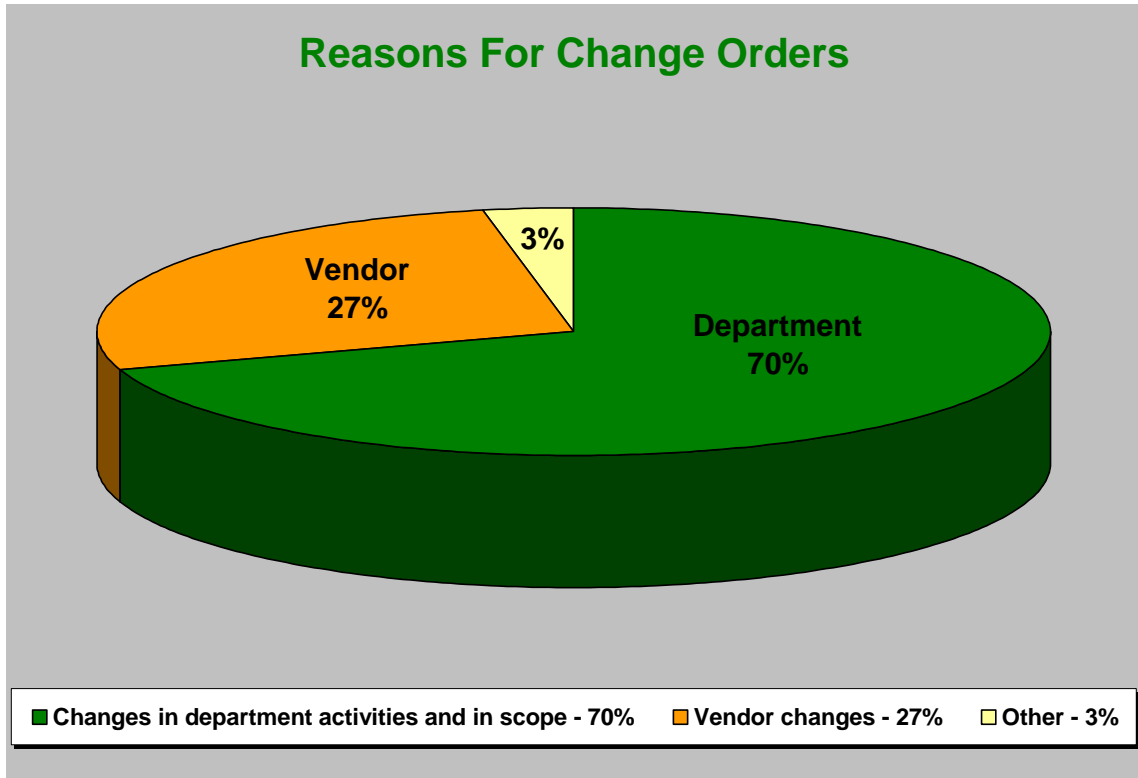
3. How do you ensure there is a PO in place before placing an order?-Question 6

Only 39% indicated using FRS or DMAS. Others use less effective procedures.



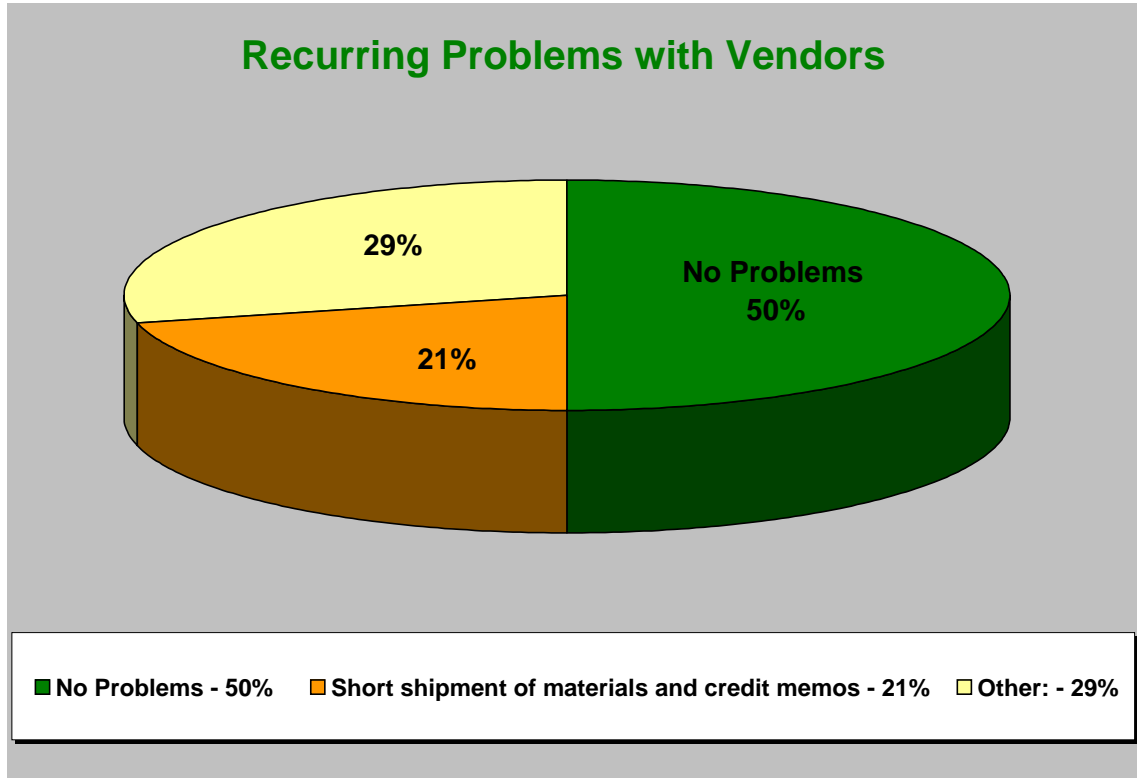
4. Reasons for change orders-question 10

70 % of responses indicated POs with insufficient funds resulting from changes in the department's activities and in scope and 27% due to vendor related causes, such as price changes and unavailability of materials.



5. Recurring problems with vendors-Question 12

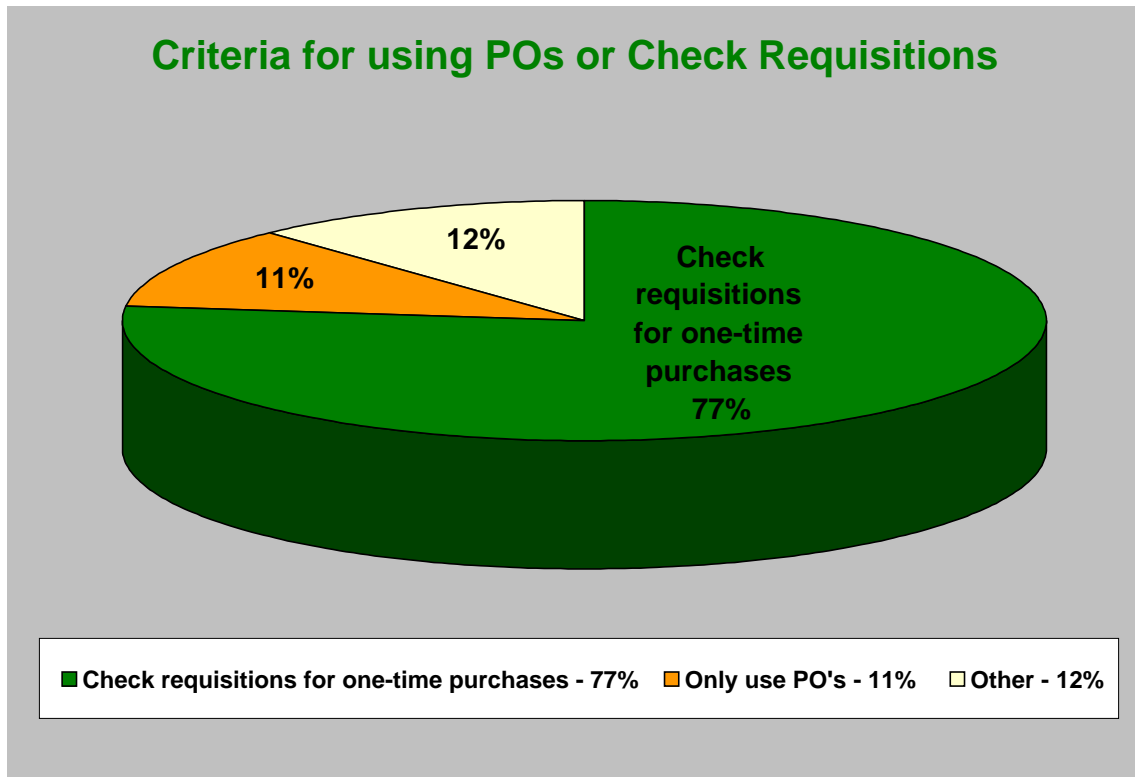
50% responded that they had no problems, and 21% reported short shipments of materials and credit memo problems. The remaining 29% were spread among several reasons, detailed in Exhibit 1.



6. Criteria for using POs or check requisitions-Question 4

The responses point to the need to establish policies.

Check requisitions for one-time purchases- nonrecurring invoices.	77 %
Only use POs	11 %
Other	12 %



RECOMMENDATIONS

1. Automatic rollover of standing POs and cross referencing of old/new year PO numbers

The Purchasing Department has proposed, for implementation in fiscal year 2004, the automatic roll over of standing POs for nonsponsored accounts. At present about 4,800 POs, 96% of all standing POs, meet the automatic rollover criteria.

This proposal also includes the automatic crossreferencing of the new PO number to the prior year PO number.

For details of this proposal please refer to Exhibit 2.

It is expected that these standardized, fully automated procedures will:

- Reduce processing hours and increase process efficiencies, both at the Purchasing and Accounts Payable Departments and at the user department level.
- Improve the timeliness and controls over the renewal of standing POs.
- Reduce the number of rejected invoices and change orders due to POs with insufficient funds and invalid POs. Consequently,
 1. Reduce late payments and increase “earned” vendor discounts.
 2. Reduce rework on POs and payments, and
 3. Improve the encumbrance process

2. Enforce policy to require that the AP Department receive invoices directly from vendors

Clarify and enforce policy to ensure that departments do not request vendors to mail original invoices directly to them, bypassing the Accounts Payable Department. This policy will not only improve the timeliness of the receipt of invoices by the Accounts Payable Department, but will also improve controls over invoice processing.

Departments may request that vendors send them a copy of the invoice.

The policy must specify the types of purchases that require a receiving report. The team has identified that the Facilities Departments may require a receiving report for certain purchases due to their nature and significant amounts involved.

The system will be modified to include the invoice date and the date the invoice is received by the Accounts Payable Department in order to have a proper audit trail and monitor the timeliness of the receipt of invoices.

The AP Department should retain all original invoices. When required, it will send copies to the departments. This occurrence must be limited to extraordinary/emergency instances where the department did not receive the invoice copy directly from the vendor.

3. Revise vendor application and PO

- Require that original invoices be mailed directly to the AP Department,
- Specify that the University will take discounts based on the date the invoice is received at the Accounts Payable Department,
- Require that shipments be in accordance with the terms of valid POs in place, and
- Specify the University Department that the vendors will deal with.

4. Negotiate more advantageous discount terms

Purchasing Department will review list of vendors with POs in excess of \$25,000 to negotiate more advantageous discount terms. This project will commence after the root causes for the loss of discounts have been substantially eliminated.

5. Negotiate discount terms on all purchases

Any exceptions where the negotiation of discount terms is not practical/feasible should be excluded by policy and properly documented.

6. Clarify policies and guidelines for the use of different purchasing tools

These policies/guidelines should prescribe the appropriate use of POs, the P-Card, check requisitions and business expense reimbursement forms (BERFs) in order to strengthen control, improve efficiencies and reduce costs:

- The team has determined that check requisitions are used to circumvent purchasing controls.
- The use of the P-Card, where applicable, should reduce the number of POs and invoices paid manually and result in rebates.

7. Expand policies/procedures and training for user departments

Some policies may be specific to certain departments, such as Facilities.

This project should include, but not be limited to:

- The proposed automatic rollover of standing POs,
- Policy to specify departments that deal/negotiate directly with vendors,
- The use of different purchasing tools (POs, the P-Card, check requisitions, and (BERFs),
- A better understanding by the departments of the purchasing and payment functions, including reasons why original invoices must be mailed directly to the AP Department.

The resolution of issues, such as recurring problems with vendors.

- Accurately determine the PO amount, including minimization of the number of POs with insufficient funds.

The treatment of “artificial” budget deficits” for revenue producing departments. These “deficits” result from the booking at the beginning of the fiscal year of the encumbrance for a standing PO for the entire year and the recognition of revenues during the year, as earned. The avoidance of these “artificial budget deficits” has been identified as a root cause for POs with insufficient funds.

- Returned merchandise process,
- Determination that a valid PO is in place before an order is placed, including the use of DMAS and FRS, and
- Other relevant issues, such as PO line problems and bad account numbers.

8. Expand the distribution of the Discounts Lost/Earned Report to the departments through RDS

9. Include identifier for discount vendors in the PO number

EXHIBIT 1

**PROCUREMENT & ACCOUNTS PAYABLE PROCESSES CI PROJECT
ANALYSIS OF QUESTIONNAIRES**

There were 33 responses to the questionnaires, which included departments from all three campuses. Following are the results of each of the questions:

1) Main vendors-that comprise about 80% of purchases:

There appears to be a wide range of vendors for all the areas. The most frequently noted are Apricot and PC Solutions.

2a) Major types of POs:

Regular POs:		9%
Standing POs	:	21%
Both:		70%

2b) # of regular POs annually:

<500:	78%
501-1000:	9%
>1000:	13%
No answer:	10 departments

3) # Standing Purchase Orders annually:

<100:	88%
>100:	12%

4) Criteria for determining whether to use a PO or a check requisition:

50%	check requisitions for vendors with one-time purchases only
11%	only purchase orders; no check requisitions
6%	POs only for vendors over \$1,000, or when requested by the vendor
3%	whatever method will get the vendor paid the quickest (usually check requisitions)
22%	POs only when there will be recurring invoices
5%	check requisitions only
3%	POs for one-time vendors only
	did not answer: 3 departments

5) Mailing address for invoices requested by departments on purchase requisitions:

64%	mail invoices directly to their department
36%	mail invoices directly to A/P

6) How do you ensure there is a valid PO in place before placing an order:

7%	use approved requisitions with supporting documentation
3%	are self-approved by the PO processor
39%	check by departmental reviews using FRS and DMAS

- 7% check the vendor quotes
- 17% check by using the advice received from purchasing
- 27% check by using the copy of the PO they receive from purchasing
- did not answer: 3 departments

7) Date the new standing POs are processed:

- 19% March
- 26% April
- 45% May
- 10% June
- did not answer: 2 departments

8a) Basis used to determine the amount of new SPOs:

- 91% the prior year's expenditures
- 6% a minimum amount and then increased as needed
- 3% vendor estimates
- either did not answer or the question was not applicable since they do not use SPOs: 2 departments

8b) Is the actual invoiced amount for the prior year used as a basis for the new year SPO?:

- 94% Yes
- 6% No
- N/A, since they do not use SPOs: 1 department

8c) If no for 8b, why not?

There were only 3 responses: 2 said that they open the POs for a minimum amount so that the amounts are not questioned by Purchasing, and 1 said that their new POs never exceed the amount of the existing POs.

9) # of change orders per year; per PO:

This section had such a variety of responses that it requires follow up. Some answered with the number of change orders in a year (one as high as 700!), while others answered only the number of changes on an average PO. Using the actual results, 77% answered less than 10, but it is unknown whether it is less than 10 total for the year, or 10 per each PO.

10) Reasons for change orders:

- 12% changes in scope
- 6% to pay pending and/or projected invoices
- 21% vendor changes (increase/decrease in prices, name changes, etc)
- 6% material not being available from the vendor
- 52% changes in department activities and account number changes
- 3% to correct errors on the purchase requisitions
- did not answer, said the reasons were unknown, or had no change orders: 5 departments

11a) Are invoices received directly from the vendors?

- 82% Yes
- 18% No

11b) Reasons for requesting that invoices be sent directly to department:

- 25% to insure prompt payment and minimize A/P errors
- 11% to insure that proper approvals were received before payment
- 40% to insure work was completed, materials received, invoice amount was correct
- 7% the expenditures need to be entered into the department system
- 14% because the vendors send them with the materials
- 3% vendors are unaware of where to send the invoices
- did not answer or N/A because they do not receive invoices directly: 9 departments

11c) Days it takes departments to process invoices received directly, prior to sending them to the AP Department:

- < 5 days: 86%
- > 5 days: 14%
- No answer or N/A: 5 departments

12a) Recurring problems with vendors:

- 3% some discount vendors use date of order rather than completion date
- 3% invoices cannot be processed until the job is checked to see if completed
- 15% short shipments of materials
- 3% the price billed is different than the amount quoted
- 6% late payments by A/P cause balances on statements
- 6% credit memo problems (receiving them; getting them credited, etc)
- 50% no problems
- 14% just answered "Yes"

12b) Recommendations to resolve vendor problems:

The answers were varied and repeated in only in one case, so they are listed here:

- The PO should state that the invoice date be no later than the date of completion.
- Invoices should be authorized by departments to ensure accuracy of invoices.
- Scan the invoices so that the department can review them on-line.
- UM should get a different vendor for pagers; too many problems with Pagenet.
- Send out a mailing to vendors about where to send invoices.
- Purchasing should check payment address for vendors when opening POs.

13) What do you do when you return merchandise?

- 13% no merchandise returns
- 19% request a credit memo
- 48% request a return authorization
- 10% rarely have any problems
- 10% notify Purchasing and A/P
- did not answer: 4 departments

14) Recurring problems with the payment process:

- 33% payments are delayed; invoices get stuck at A/P
- 23% no problems
- did not answer: 3 departments
- 44% were spread rather evenly among the following problems:

A/P pays the incorrect amount on the invoice
A/P assigns a new invoice #, then pays the invoice twice
A/P pays invoices without departmental approval
Getting discount vendors paid on time almost impossible with time in mail, approval by departments, etc.
Payments sent to incorrect vendors
Invoices charged to incorrect object code
Payments not made before close of PO at year-end (PO# rollover problem)
Check requests are better because they get paid faster; more control for department
Invoices lost by A/P
Multiple-address vendors have check sent to one place.
Vendors have problems identifying the payments on the UM checks.
A/P pays the invoice even though there is a credit due
Lack of communication from A/P re problems; problem invoices were not returned promptly.

15) Recommended changes:

Eleven departments did not answer

The responses were spread evenly over the following recommendations and comments:

A/P processors need to be more attentive to invoice details
Change the net 10 to net 15 or 20
Start the discount date from the day invoice is received at UM
More training needed for Purchasing and A/P staff
Training of departmental staff is needed
Need better system to allocate POs to different account numbers
Increase limits on purchasing cards
PO documentation is often lost by Purchasing
Purchasing turnover is high; requisitions are not processed on timely basis if someone is out or leaves
Need more personnel in A/P
Whole process (Purchasing and A/P) takes too long
Need department to approve invoices prior to payment
Need faster follow-up by A/P on problem invoices
Allow immediate payment of invoices under \$100 without department approval
Approvals of POs by other department (legal, IT, etc) takes too long (1-2 months)
Medical FPC would like a dedicated AP person for their invoices like Purchasing has a buyer for them.

**PROPOSAL FOR THE AUTOMATIC ROLLOVER OF STANDING POs and
CROSS REFERENCING OF OLD YEAR/NEW YEAR PO NUMBERS**

AUTOMATIC ROLLOVER OF STANDING POs

Implementation Date

To go into effect June 1, 2003 (Fiscal Year 2004).

Scope of Project

To fully automate the renewal of Standing Purchase Orders for non-sponsored accounts. (At present, about 4,800 POs meet the automatic rollover criteria, or 96% of all standing POs).

Fully Automated Data Interchange

The transfer of data between the Purchasing Department and the Departments is to be fully automated (paperless), with full tracking capabilities.

Departmental Notification

The system will issue a Standing Order Rollover Notification to inform departments that unless they respond within 30 days of notification, through the established automated procedures, the standing POs will be automatically rolled over at the:

Recommended Rollover Dollar Amount, calculated as follows:

The system will choose the larger of either:

- (a) **The current year PO amount, or**
- (b) **The invoiced amount for the year.**

The departments will also have the option to instruct the Purchasing Department, via the established automated procedures, to:

- (a) **Not roll the PO, or**
- (b) **Roll the PO for an amount different from the recommended rollover dollar amount indicated above.**

Minimize Rejection of Invoices and Manual Change Orders Resulting from POs with Insufficient Funds

- **If a department rolls a standing PO for less than 80% of the Recommended Rollover Dollar Amount, the system will prompt it to explain the reason for the decrease.**
- **If an invoice exceeds the PO available amount, the system will automatically issue a notification to the department informing it that, unless instructed otherwise by the department within five days, the system will increase the PO amount by projecting expenditures through the end of the fiscal year. This projection will be based on the invoiced amount to date, on the assumption that invoices are paid evenly during the year. The system will generate a change order.**

Departments will be asked to provide a justification in cases where they request that the PO be increased for an amount below the recommended amount above. All communications will be via the established electronic procedures.

Timing of the Rollover

Standing POs will be rolled over no later than May 1 of every year to allow time to process/distribute the new POs. This would require using an April 30th cutoff for the actual invoiced amount and estimating one month.

The system will issue the Standing Order Rollover Notification to the Departments in March. The Notification will include:

- **PO number**
- **PO amount for current fiscal year**
- **Invoiced amount as of February 28th of current year**
- **Projected invoiced amount for the current fiscal year (based on data as of February 28th)**
- **Account number**
- **Line description**
- **Vendor name**
- **Ship to address**

Approvals

The system will send the Rollover Notification to an authorized individual at the department level. The departments will be responsible to ensure that their PO rollovers are properly authorized, according to University policies.

AUTOMATIC CROSS REFERENCING OF OLD YEAR/NEW YEAR PO NUMBERS

Minimize Invalid POs

The present problem of vendors using prior year PO numbers that result in invalid POs should be eliminated by the automated cross-referencing of the new PO # to the prior year PO #. This automated cross-referencing will be developed and implemented as part of this project.