nehta

Procurement Process Paths

Supply Chain - e-Procurement

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Final

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Executive Summary

When a process is automated, e.g. e-Procurement, many discoveries are made about the way the process is assumed to work, that are detrimental to the automation of the process. In particular with procurement, if the sequence of processes is changed, then some processes may not have access to the pre-requisite data needed to complete the process.

This document identifies 6 common Procurement Process Paths as a starting point for organisations to review their own procurement processing along with the potential problems typically found when IT systems have to adjust to them. These Processing Paths are:

- Normal
- Audited Fast Moving Consumer Goods
- Vendor Managed Inventory
- Consignment
- Pre-Paid
- Utilities

Each of these paths should be examined in detail to identify any incompatibilities with an automated e-Procurement system. These incompatibilities need to be resolved, or that particular Process Path should not be used with e-Procurement.

1 Introduction

1.1 Purpose

When a process is highly automated as it is in e-Procurement, it loses the capacity for easy human intervention when exceptional situations occur. This is because the goal of automation is to eliminate the need for human intervention. In order to minimise the impact of exceptional situations on automated systems, it is wise to fully review the existing processes through the entire process path before automation and determine the way to handle all the situations encountered.

This document provides an overview on six Procurement Process Paths as an aid for a full review of Procurement prior to implementing e-Procurement. Organisations should identify and review all the Procurement Processing Paths in use in their organisation. Those listed in this document cover the major Processing Paths and should be used as a starting point, but also bear in mind that there can be exceptions to the rule and it is often the exceptions that cause the problems.

1.2 Background

The Process Paths listed in this document are the potential Processing Paths used in Procurement. They all commence with the activity that creates the demand or requirement for the items/services being purchased. However the different types of demands are treated as one component in this document, as the variations in the way a demand can be created is irrelevant from an e-Procurement perspective. The movement of items after they have been received is not relevant to the Procurement Process and has been ignored.

Each box in the diagram represents processing which is executed using some combination of manual and IT systems. The arrows between the boxes represent communications between the processes which in many cases are e-Procurement messages. For example, the arrow coming out of the PO process box represents the PO set of messages.

The sequencing of these processes is critical, but from an IT system processing perspective not from the messaging perspective. It does not matter to the e-Procurement messages in which sequence these processes occur as the messages just carry the information between the processes. To the system which is processing the messages that is not necessarily the case as often data that is required to complete the processing comes from another process which may or may not be complete depending on the sequence. For example, if an order is pre-paid, then the invoice is generated before receipt of the items. If the system is expecting to have a receipt as the authority to generate the invoice, then it cannot process a pre-paid order.

In many organisations these inconsistencies are "corrected" using manual procedures. For example, the pre-paid order may be paid using a manual cheque which is later cross matched to the invoice generated after the receipt of goods. In an e-Procurement system there is little opportunity for these manual corrections as it is designed to process messages automatically with little or no clerical work required. A manual cheque situation for example, would bring processing to a halt.

It is critical that organisations identify all the Procurement Processing Paths in use in their organisation. Once identified, each processing step should be reviewed to ensure that (a) the IT system has all the necessary data to complete the step; and (b) manual work-arounds or interventions are not required. If data is missing or manual work-arounds are required to complete the process, then these must be corrected or the Processing Path should not be used with e-Procurement.

2   Process Paths

Six Process Paths are given in this section with brief details on their operations. It is assumed that all systems are able to handle the Normal Process Path without any issues. The Potential Issues listed in the others are based on the difference in operation between that Process Path and the Normal Process Path. In discussing the processes, it is assumed that there are no errors or exceptions, but that everything flows through the process as expected.

The potential issues identified for each Process Path are problems that may arise because data does not arrive in the same sequence as the Normal Process Path. Many business documents expect data from other processes to be available at the time they are created, and if that process has not happened then the document cannot be created.

2.1   Normal
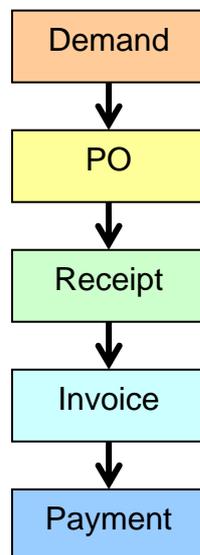
2.1.1   Comments

This is the standard process path, and the one normally thought of when discussing Purchasing from a generic point of view. The other paths are usually seen as variations on this one.

2.1.2   Process Details

When a demand is received (e.g. Purchase Requisition, Stock Replenishment, Forecast) a Purchase Order is created and sent to the supplier. When the supplier delivers the goods they are receipted into the system using the Delivery Docket or equivalent as the authority. At the same time or subsequent to the receipt, the supplier sends the invoice which is received by the Accounts Payable staff. Accounts Payable staff match the invoice to both the Purchase Order and Receipt, and then pay the invoice.

2.1.3   Potential Issues

Usually no potential issues as this is the basic system.

2.2   Audited Fast Moving Consumer Goods

Demand

↓

PO

↓

Invoice

↓

Receipt

↓

Payment

2.2.1   Comments

This is a variation on the classic process path where the formal receipting into the system is not done. It is assumed that the Receipt is identical to the Invoice.

Periodically, statistical audits are done where the PO's are formally receipted. Any variances found in the audit samples are then applied as a correction factor to all subsequent invoices. For example, if the audit sample is undersupplied by 2%, then all invoices are subsequently paid at 2% less than the face value.
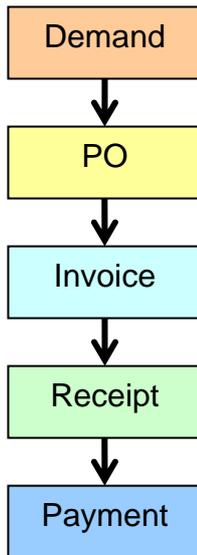
2.2.2   Process Details

When a demand is received (e.g. Purchase Requisition, Stock Replenishment, Forecast) a Purchase Order is created and sent to the supplier. The Supplier sends the items with an Invoice, and they are immediately put away without checking for correct quantity. When the Invoice is received, it is also used to automatically create a receipt using the quantities stated on the Invoice. Accounts Payable match the invoice to the Purchase and pay the invoice.

2.2.3   Potential Issues

Inability to create an Invoice without a Receipt

Inability to automatically create a Receipt based on the Invoice

2.3   Vendor Managed Inventory (VMI)

Supply on Demand

↓

Receipt

↓

Invoice

↓

PO

↓

Payment
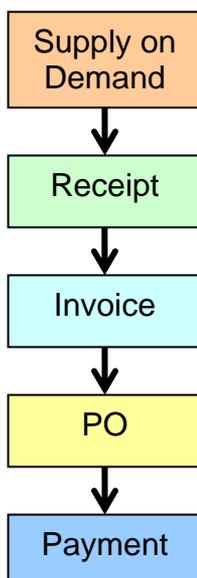
2.3.1   Comments

This may also be valid for Imprest accounts. There is an agreement with the Vendor to maintain stocks at set levels. The vendor manages this process and Purchasing's first contact is when the vendor sends an invoice.

The process with Imprest accounts is similar except that non-Purchasing staff have authority to make purchases up to a limit, at which point they request reimbursement. Again, Purchasing's first contact is when the invoice is presented.

2.3.2   Process Details

The Supplier reviews current stock levels and replenishes them back to the agreed stock levels. It is the suppliers responsibility to do this and is not initiated by the Buyer, although there is likely to be an agreed timetable. In some environments where the cost of monitoring is greater than the savings expected e.g. consumable stationery, the original demand and/or the receipt are not formally recorded. When the stock has been replenished, the Invoice is sent to Accounts Payable where a Purchase Order is raised. The invoice may or may not be matched to the receipt, and then it is paid.

Imprest accounts have a slight variation in that the replenishment is initiated by staff in the Buying organisation outside the Procurement group. They will

also most likely have a limit on the value of purchases they make, and will apply for reimbursement at or near this limit.
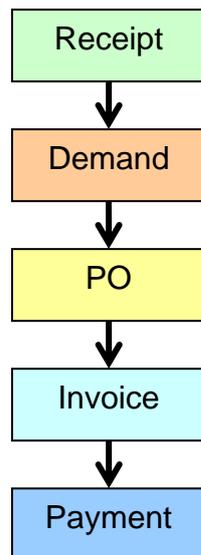
2.3.3 Potential Issues

Inability to create an Invoice before the PO is created.

Inability to create a Receipt before the PO is created.

Inability to create a PO that references an existing receipt.

2.4 Consignment

Receipt → Demand → PO → Invoice → Payment

2.4.1 Comments

Items are supplied by the vendor but they are not invoiced until they are used by the buyer. The PO may or may not be required.
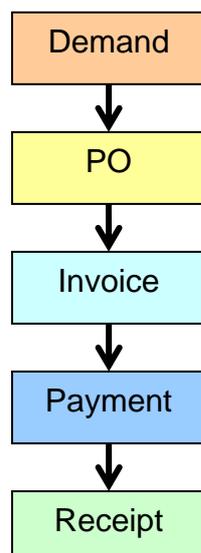
2.4.2 Process Details

By agreement, the Supplier delivers items that may be used to the Buyer. Typically these are high value items with a low turnover. When they are used, a PO is created, and then an Invoice is raised against the PO. Finally the Invoice is paid.

2.4.3 Potential Issues

Inability to create a Receipt before the PO is created.

Inability to create a PO that references an existing receipt.

2.5 Pre-Paid

Demand → PO → Invoice → Payment → Receipt

2.5.1 Comments

In this path, payment is required by the vendor before they ship the items. This is usually because either the buyer does not have an account with the vendor, or the item requested is a special order.
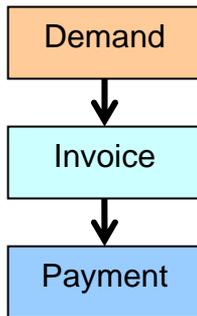
2.5.2 Process Details

These demands usually arise from abnormal requirements, e.g. emergency purchasing or special one-off items. The supplier is often contacted directly by the end user of the item. Once details and terms have been agreed to, the Purchase Order is raised and sent to the supplier along with payment. This requires an invoice to be raised from the PO prior to the receipt. When the supplier receives payment, the goods are shipped and received by the buyer.

2.5.3 Potential Issues

Inability to create the Invoice without a Receipt

Inability to link the Receipt to an existing Invoice

2.6   Utilities

```
┌─────────────┐
│   Demand    │
└──────┬──────┘
       │
       ▼
┌─────────────┐
│   Invoice   │
└──────┬──────┘
       │
       ▼
┌─────────────┐
│   Payment   │
└─────────────┘
```

2.6.1   Comments

Utilities such as electricity and gas are supplied by the vendor under an agreement where a PO is not required. The first contact is when the invoice is presented, and these invoices are usually handled by Accounts Payable directly.

2.6.2   Process Details

The items/services are supplied according to the terms of the agreement. Usually they are from utilities where supply of the item or service is required constantly, but the exact quantity cannot be pre-determined. On an agreed billing cycle, the supplier sends an Invoice. Accounts Payable receives the invoice and processes it according to their internal procedures. Once processed, it is paid.

2.6.3   Potential Issues

Inability to distinguish between "Utility" and "non-Utility" invoices for payment when a PO has not been created.

Inability to confirm payment is valid before processing payment.