MO002/3/2016

Practical Accounting Data Processing

AIN2601

Semesters 1 and 2

Department of Management Accounting

IMPORTANT INFORMATION:
This tutorial letter contains important information about your module.
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1 INTRODUCTION

Dear Student

Welcome to the second half of this module, AIN2601.

You already received MO001 containing important information about this module and the first part of your study guide.

MO002 (Addendum J) contains the second part of the study guide.

To refresh your memory on how the various documents fit together, we included the complete content/index for AIN2601 below.

Kind regards

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Topic 7 – Management reporting systems

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Content: AIN2601 (diagram 1)

Diagram 1 below is a schematic representation of the content of the AIN2601 module.
The aim of topic 3 in part 3 is to explain accounting transaction processing cycles in an information system environment. Topic 4 introduces the chart of accounts and staffing level requirements needed for financial reporting. Topic 5 focuses on the evaluation and selection of an appropriate accounting software program and on accounting software security risks and controls. In topic 6, Pastel Partner accounting information system is practically applied to process transactions and retrieve financial information.
LEARNING OUTCOMES

After studying this topic, you should be able to

– differentiate between the different accounting cycles
– describe the flow of transactions through the various accounting cycles
– identify the source documents, typical reports and database files accessed, updated or modified for each of the different transaction processing cycles
– record transactions’ accounting entries in the different transaction processing cycles
– identify the movement in inventory quantities in the different transaction processing cycles

Topics

3 Accounting cycles
SU 7: Overview of transaction processing
SU 8: Revenue and receipts cycle
SU 9: Acquisition and payments cycle
SU 10: Inventory and production cycle
SU 11: Payroll and personnel cycle
SU 12: Finance and investment cycle

4 Financial reporting infrastructure
SU 13: Financial reporting structure

5 Accounting information system applications
SU 14: Selecting an appropriate accounting information system

6 Pastel Partner accounting information system
SU 15: Getting started on Pastel Partner
SU 16: Customers, suppliers, inventory and general ledger accounts
SU 17: Process transactions
SU 18: Retrieving information and sundry processing
NOTE:  
Study units 7 to 12 only highlight some of the applicable basic accounting entries and mention some of the applicable audit controls and processes. Detailed audit controls, processes and accounting entries are not explained in this study guide. You will learn more in your auditing modules about each cycle’s audit environment and controls. Your financial accounting studies will equip you with the necessary International Financial Reporting Standards (IFRSs) and accounting transactions knowledge relating to these cycles. Please apply your auditing and accounting knowledge to these study units as you work through them.
Overview of transaction processing

1 Introduction
An organisation’s daily business transactions are processed into information by means of transaction processing systems. In this study unit, we will learn about transaction and accounting transaction processing systems and how data is processed into information, both manually and by means of computers.

2 Transaction processing system (TPS)
A transaction processing system is a specialised type of computerised information system.

A TPS collects an organisation’s daily business transactions, processes them into valuable information and stores and retrieves the data and information when required.

A TPS is wider than only an account transaction processing system (ATPS) and includes other operational transaction processing systems – for example, a warehouse system that processes the movement of inventory items between different storage locations.
3 Accounting transaction processing system (ATPS)

An ATPS is also most commonly known as an accounting information system (AIS).

An AIS collects an organisation's day-to-day financial and nonfinancial transactions, processes them into valuable financial information and stores and retrieves the data and financial information.

A financial transaction is a business activity that generates or modifies financial data and can usually be expressed in monetary terms (e.g., a sales transaction will generate a sales tax invoice).

A nonfinancial transaction is a business activity that generates or modifies nonfinancial data but which is of such a nature that it will directly influence the processing of financial transactions. Although the nonfinancial data will not be directly used in a transaction, it provides vital information that will be used during the transaction processing, such as updating a supplier's details or adding a new supplier.

The accounting transaction processing system can be divided into five accounting/auditing cycles, each of which will be discussed in detail in the rest of topic 3. In categorising the accounting cycles, we will use the same categories that are used in auditing. These categories are as follows:

(a) revenue and receipts cycle (see study unit 8)
(b) acquisition and payments cycle (see study unit 9)
(c) inventory and production cycle (see study unit 10)
(d) payroll and personnel cycle (see study unit 11)
(e) finance and investment cycle (see study unit 12)
4 **Accounting transactions: from data to information**

All accounting transaction processing (daily, monthly and ad hoc) follows a standard path from data to usable information, as depicted in study unit 1, figure 1.1.

4.1 **Accounting transactions: from data to information (manual process)**

Refer to figure 7.1 throughout the following discussion:

![Diagram of accounting transactions]

**FIGURE 7.1: Transactions: from data to information (manual process)**

From our basic financial accounting knowledge we already know that in a manual transaction processing system, the following apply:

(a) Data is written on source documents, such as a sales invoice, to record the details of a transaction.

(b) The summary data from each source document is written into the relevant journal, such as a sales journal.

(c) At the end of the month, the summary information from each column in the journal is transferred to the relevant general ledger accounts, such as sales, VAT and accounts receivable (also sometimes referred to as a debtors/customers control account).

(d) In addition, summary information on each individual transaction is also booked to each relevant subledger, which “shadows” the control account. If the individual balances of all the subledger accounts (say, one for every customer) are added up, they will equal the total balance in the control account (in this instance, the customer control account).

(e) The debits and credits of each general ledger account are totalled and the total/balance for each general ledger account taken to the trial balance.

(f) The various income and expense trial balance accounts are grouped together and used to prepare the income statement (statement of profit and loss and other comprehensive income), while the various asset, liability and equity accounts are grouped together and used to prepare the balance sheet (statement of financial position). These can be done monthly for management decisions or annually for reporting to various stakeholders.

(g) The cash flow statement (statement of cash flows or cash movement) is prepared based on the trial balance to indicate an organisation’s cash flow position.
4.2 Accounting transactions: from data to information (computerised process)

As we can see from the manual process, this entail a lot of work that people have to perform manually. Fortunately, the computer has made our lives a whole lot easier!

Refer to figure 7.2 throughout the following discussion:

![Diagram of accounting transactions]

FIGURE 7.2: Transactions: from data to information (computerised process)

In a computerised transaction processing system, the process is slightly different from a manual system, but the same data processed by a computer will produce the same information:

(a) **Selected** data from the handwritten source documents, such as sales orders or sales invoices, can be typed into the AIS on the computer to record the details of a transaction. However, the data could just as well be scanned in with a barcode scanner or typed directly in the AIS, as the transaction happens (thus without any physical source documents).

(b) The computer does not require **ALL the data** to be typed/scanned every time a transaction is entered (captured), because a lot of data is already stored on the computer in the **master files**, such as the customer name and address in the customer master file and the inventory item description in the inventory master file.

(c) The sales transaction file will only record a reference/link to the particular **data records** in the master file and the other details pertinent to the particular transaction, such as the transaction number, date, quantity sold of each item and the price of each item. **The transaction file is the equivalent of the manual journals.** Refer back to study unit 2 in which transaction files are explained.

(d) What is **different** from a manual system, is that any time during the month a report with summary information can be printed, emailed, viewed on the computer screen or saved to a secondary storage device. The computer can reprint source documents and print transaction lists, general ledgers and subledgers, trial balances, income statements, balance sheets and much more – all in a fraction of the time used in a manual system. One only has to specify the type of report, the date ranges
and other parameters and then the AIS quickly classifies, summarises, sorts and calculates the data contained in the transaction files and the linked master file records. Viewing different reports with different information from the same database is as easy as putting on multiple glasses each with different coloured lenses and then seeing different images, even though we are looking at the same picture.

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**NOTE:**

Many AISs still use the terms “Income statement” for the “Statement of profit and loss and other comprehensive income” and “Balance sheet” for the “Statement of financial position” and “Cash flow statement” or “Cash movement” for the “Statement of Cash flows”. Although in IFRSs the respective terms do not technically have exactly the same meaning, you can assume for the purposes of this module that these terms do have the same meaning.

IFRSs terms change regularly and it would be unfair to expect software companies to change their software so often.

In this study guide, when referring to actions taking place in AIS, the terms “balance sheet”, “income statement” and “cash flow statement” will be used.

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5 **An AIS in an organisation**

Accounting software (such as Pastel) is an AIS. Although AIS differs from one software program to the next, the basic underlying principles of an accounting transaction processing system will be the same for all AISs. Different types of AIS, including Pastel, will be discussed in detail in topics 5 and 6 in this study guide.

Before we look in detail at each of the accounting cycles in the accounting transaction processing system, we first need to obtain a high-level overview of using AIS in an organisation.
Refer to figure 7.3 throughout the following discussion:

FIGURE 7.3: Accounting transaction processing in an organisation
(a) When we decide to use AIS to process an organisation’s financial data into information, we first have to create (set up) the organisation on the AIS by providing core organisational information. This information will be used on the documentation and reports as well as in transaction processing. This core setup information includes the following:

- **Organisational parameters.** These involve the following:
  - organisation details: name, address (postal and physical address), VAT number, telephone number and the different document number formats
  - formats: date entry format, default email format, amount format (currency symbol, decimal digits, 1 000 separator) – that is, how this information must be entered and displayed
  - multicurrency: if the organisation has international suppliers and/or customers
- **Periods.** The financial year (start and/or end date), number of accounting periods as well as the end date of each accounting period (last day of the month or same day each month) must be set up. Periods will be discussed in detail in study unit 15.
- **General ledger chart of accounts.** As we will see in study unit 13 each organisation must have a well-structured chart of accounts that suits the organisation’s specific business model, IFRSs and regulatory requirements. A chart of accounts is similar to the format of the trial balance with the various account numbers and account names being specified.
- **Financial categories.** These categories are used in financial reporting and allow the software to place a general ledger account in the correct place on a balance sheet or income statement. All general ledger accounts must therefore be linked to a financial category. For example, the office equipment, computer and motor vehicle general ledger accounts will be linked to the “fixed asset category”. The name given to financial categories may differ between the different AISs, but where it is placed on the balance sheet and income statement will be the same – for example, a financial category can be called “bank” or “cash and cash equivalents”. Usually software allows the renaming of the description, but not for the changing of the underlying nature of the category.
- **Entry types.** Entry types are similar to the subsidiary journals in manual bookkeeping. The entry types created will be based on the organisation’s needs.
- **Tax.** Bear in mind that because different countries have different tax regimes, most AISs already have built-in customisations for the different tax regimes applicable to that country. For example, when selecting South Africa as the country the organisation is trading in, VAT is already set up with the applicable VAT percentages.
- **Users and passwords.** Each individual user must be set up on the basis of his or her access. Authorisation rights and passwords must be assigned to each user. This is vital because it enforces segregation of duties.

(b) We will then need to set up common default data such as the following:

- types of document to be used by the organisation
- customised names, messages and numbers to be used for the various documents (such as payment on delivery)
- user defined fields (extra fields)
- control accounts for customers, suppliers and inventory
- default terms for customers and suppliers (such as trade discounts)
- descriptions of price lists to be used
- integration of inventory to the general ledger
This data will be available in the next step and will therefore limit the data that we will need to enter for each individual customer, supplier, inventory item and general ledger account, although we can still customise it for each one individually. If we specify the information that remains the same upfront, we will not be required to retype that same information each time.

(c) Initially, we will create the individual customers, suppliers, inventory items and general ledger accounts needed, if not already available, or else edit and customise the existing general ledger accounts. We will enter information such as the following:

- code and name of the customer/supplier/inventory item/general ledger account
- contact details
- credit limits
- data required by the user defined field (as specified in step b – common details)
- inventory item prices per price list

We will also be able to modify the default terms for each customer and supplier (brought forward from step b), but this will only be necessary if there are special circumstances for that particular customer or supplier. For example, the default setting is that customers pay within 30 days, but the organisation's largest customer pays within 45 days.

Note the dashed lines on the diagram – we can always come back later and edit the details if circumstances should change.

(d) We will then only need to do a take on of balances if the organisation has done business in the past and therefore already has assets, liabilities and customers that owe it money and suppliers who need to be paid.

We will use the organisation's existing trial balance, age analysis reports and bank reconciliation to bring the existing financial information into the new AIS. If, however, we have a newly established organisation, we will start with zero balances and the take on of balances process will not be necessary.

Now the initial setup of the organisation on the AIS is complete. The setup information and the details of the customers, suppliers, inventory items and general ledger accounts are stored in the database of the accounting transaction processing system in several master files.

(e) The organisation will perform transactions between itself and its customers, suppliers and employees on a daily basis. These transactions will then be captured (preferably daily) either online as they occur, or as a batch and then processed either in real time or as a batch. Refer back to study unit 1.

Capturing of transactions takes place as follows:

- inventory purchases from suppliers through the purchases journal
- sales to customers through the sales journal
- payments to suppliers for inventory and general expenses and receipts from customers through the cash book
The details of each transaction are stored in a separate data record in the transaction file and each transaction is linked to the relevant data record(s) in the related master file(s). For example, the details of a sales transaction are entered into the sales transaction file and linked to the specific customer in the customer master file, as well as the specific inventory item(s) sold in the inventory master file.

Should the daily transaction capturing or processing require changes to the details of a customer, supplier, inventory item or general ledger account, this can be done.

For example, the delivery address of the customer to whom an inventory item is sold has changed and will be updated in the customer master file before the sales transaction is finalised; or a payment is made for entertainment, but an appropriate general ledger account for this expense does not currently exist and will be created before the payment transaction can be finalised.

(f) Financial information is critical for organisations and the importance of daily backups cannot be emphasised enough, especially when transactions are captured daily.

(g) Some transactions do not occur on a daily basis – for example, employee salaries are paid at the end of every month or processing errors need to be corrected. At the end of the month (or as and when the need arises on an ad hoc basis), the company will have to capture and process these transactions.

For example, salaries and monthly expenses (such as water and electricity and telephone) are captured and processed in the cash book at the end of the month. Another example would be transactions such as depreciation, provisions and corrections captured and processed through various journals at the end of the month or when required.

Any of these transactions may need changes to the details of a general ledger account, which will then first be edited before the transaction is finalised.

(h) To ensure that daily and monthly processing was accurate and complete and that all the transactions processed are valid and did occur (you will learn more about this in auditing) certain controls will be performed at month-end.

These will include the following:

- a bank reconciliation (comparison of your cash book information against the bank statement received from the bank)
- several supplier reconciliations (against the customer statements sent by the suppliers to the organisation – remember that the organisation is its supplier’s customer)
- a comparison of the physical cash counted in the petty cash against the calculated petty cash balance in the general ledger (petty cash reconciliation)
- reconciliations of all other material balance sheet accounts and, if required, certain income statement accounts
- an analytical review of all material income statement accounts

Should errors be identified through this process, this will again result in ad hoc processing through journals or the cash book.
MATERIALITY OF ACCOUNT

Bear in mind that materiality of a general ledger, customer, supplier or inventory account is not only based on the rand value balance of the account, but also on the nature of the account. For example, a general ledger suspense account may have a small nonmaterial balance at month-end, but may be material owing to the nature of a suspense account. Suspense accounts pose a high risk because they contain individual entries that are material on their own, but because these individual entries are netted off in one account, the balance may not be material. The concept of materiality will be explained in detail in auditing.

(i) At month-end, certain additional procedures, over and above the controls mentioned in h, will be performed. These procedures include the following:

- All open batches must be updated to ensure that the financial information is complete.
- The current accounting period must be “locked” (after management accounts have been printed and distributed) and only transaction processing must be allowed for the new accounting period. “Locking” a period does not mean we can never process transactions to previous periods, but that we will only be able to do so after adhering to the proper controls. These controls will include management authorisation, an authorised person processing the transaction or an authorised person “unlocking” the previous period. Why is it important for management to know about changes to previous accounting periods’ financial information? Management use financial information in decision making and must be aware of changes so that they can assess the impact of these changes on the organisation’s business and past and current decisions. “Locking” a period also helps prevent staff members from mistakenly capturing transactions in the incorrect financial period.
- An extra month-end backup must be made (after all open batches have been updated).

(j) At the end of the month as well as at year-end, we will also print various reports. The information in these reports will be used to make business decisions, but may also help to identify processing errors.

Processing errors will again result in ad hoc processing of correcting entries through journals or the cash book, or even the processing of transactions not yet captured through daily transaction processing.

Examples of reports usually printed at month- and/or year-end include the following:

- the trial balance used in, say, reconciliations
- customer age analysis used to identify overdue customers, processing errors, etc
- customer statements, which are sent to all customers either via post or email
- supplier age analysis used to identify processing errors, also used in supplier reconciliations, etc
- a bank reconciliation
- the individual departmental, divisional and organisational financial management accounts used by the different management levels for decision making and reporting
MANAGEMENT ACCOUNTS

Management accounts usually include a statement of financial position (balance sheet), a statement of profit and loss and other comprehensive income (income statement) and cash flow statement (statement of cash flows or cash movement) for the reporting cluster the manager is responsible for. In other words, a divisional CFO or manager will only receive reports containing his or her division’s results. Depending on management requirements, these statements are usually not full IFRSs compliant statements, but will only contain adjustments needed for management to run the organisation’s business. Accountants must make sure they know what management’s requirements are and what the management accounts will be used for to ensure that correct and usable management reports are created.

NOTE:

When printing reports, one should always consider the environment. Instead of using a physical printer to print reports on paper, one should use a virtual printer such as Microsoft Office Document Image Writer (creates .tif and .mdf files), Microsoft XPS Document Writer (creates .xps files) or Cutepdf (creates .pdf files) to create a nonmodifiable virtual (electronic) files. It is essential to only print to a virtual printer file format that creates electronic files that cannot be changed or edited. Printing to a modifiable file format such as Microsoft Word or Microsoft Excel creates a risk and/or opportunity for fraud and misrepresentation of information. Section 2 in study unit 15 will explain how to install and print to a virtual printer.

(k) At year-end, in addition to performing the normal month-end controls (h), procedures (i) and printing month-end reports (j) for the last accounting period in the financial year, we will also perform special procedures. These procedures include the following:

- updating all open batches
- printing detailed ledger reports (transaction reports) for the full financial year
- printing all other reports which are deemed necessary (the organisation’s management, auditors, and/or regulatory bodies might have specific reports they require to be printed at year-end)
- revaluing foreign currencies (if used by the organisation)
- processing the required IFRSs adjustments
- making an extra year-end backup
- running the AIS’s official year-end procedure. This official year-end procedure includes the following:

  - General ledger income statement account totals. Current financial year balances, per individual general ledger account, are moved to the “previous” year balances. Pastel Partner AIS calls the “previous” year, “last” year, so these can be used as comparative amounts for the new financial year. Current income statement totals are set to zero during the calculation of the profit or loss for the year and posted to the retained earnings general ledger account. As we know, all debit and credit entries must balance – hence in order to post
the profit or loss to retained earnings (balance sheet account), all income statement balances will be zeroed (see your financial accounting prescribed book). Current year budgets are moved to the previous year’s budgets.

- General ledger balance sheet account balances. For each individual balance sheet account, the previous year’s balances consolidate as one total. The current financial year balances move to the previous year and become the opening balance for the new financial year. Current year budgets are moved to the previous year’s budgets.

- Customer and supplier balances. For each individual customer and supplier account, the previous year’s balances consolidate as one total and the current financial year balances move to the previous year. The current financial year’s sales and purchase balances are moved to the previous year. The current financial year’s balances (Pastel Partner calls the current financial year, “this” year) and sales and purchases values are zeroed.

- General ledger, customer and supplier transactions. The previous year’s transactions are moved to a separate history file (for reference purposes) and the current year’s transactions become the previous year’s transactions. The software creates a new, empty transaction file for the new financial (current) year.

- Inventory. Costs, sales and quantity values for the current financial year are accumulated into the previous year’s totals and the current year’s values are zeroed.

- Periods. In the period table, the financial year is increased by one year and, if applicable, the period-end dates are adjusted for a leap year.

- The transactions in the inventory history file and matched open item history file are not deleted or consolidated.

- After running the organisation’s AIS official year-end procedure, the software will now be ready to capture the transactions for the new financial year.

Bear in mind that we can still post adjustments and accruals to the previous financial year after the official year-end procedure has been run. We do not need to wait to complete all the financial entries before moving on to the new financial year. As with month-end, it is vital to have proper controls in place for processing entries in the previous financial year.

6 Summary

In this study unit we learnt about an accounting transaction processing system in an organisation and how data is processed into information, both manually and by means of computers. In the next study unit, we will learn in detail how transaction processing works in the revenue and receipt cycle.
After working through this study unit, you should be able to answer the following questions:

(a) Define a transaction processing system and an accounting transaction processing system.
(b) Explain the difference between a financial and nonfinancial transaction.
(c) List the different accounting cycles.
(d) Describe how data is processed into information in a manual process.
(e) Describe how data is processed into information in a computerised process.
(f) If presented with figure 7.3, would you be able to fill in the missing information in the figure?
(g) Explain accounting transaction processing in an organisation.
(h) Describe the controls, procedures and reports printed at month-end.
(i) Describe the extra measures taken at year-end and the official year-end procedures.
Revenue and receipts cycle

In this study unit

Revenue and receipts cycle

Revenue → Quotation process → Sales order process → Delivery process → Billing process

Customer returns

Receipts

1 Introduction

In the previous study unit, we learnt about general accounting transaction processing. In this study unit, we will focus on how the organisation's revenue and receipts are recorded in an AIS. All organisations receive revenue of some sort. This revenue may be the result of the sale of capital assets, such as a building, or from normal business activities such as the sale of inventory or the rendering of services. The organisation must also receive money for items sold or services rendered, because without cash an organisation cannot function optimally.

In this study unit, we will learn which documents are used, which database files are accessed, updated or modified, which reports can be printed and some of the basic underlying accounting entries. We will not discuss the audit environment and controls relating to this cycle as you will learn about these in auditing modules. For details of the IFRSs requirements, see the financial accounting modules. This study unit will be based on the retail, wholesale and manufacturing organisations and will not address the revenue and receipt cycle of specialised industries such as financial services, health care, government and so forth.
NOTE:
Because most organisations are registered for VAT on the invoice basis, all VAT implications discussed in this study unit will be based on the invoice basis. Refer back to your tax modules for an explanation of the invoice basis.

For all accounting transactions shown in this study unit, it is assumed that the organisation is a registered VAT vendor and goods/services sold are subject to standard VAT.

Use your financial accounting and tax knowledge to make the necessary adjustments to the accounting entries where the organisation is not a registered VAT vendor and/or goods/services sold are not subject to standard VAT.

2 Revenue
Organisation's business processes differ from each other and the accounting information system (AIS) they use also differs. The AIS used in each organisation is tailored to the specific organisation's

<table>
<thead>
<tr>
<th>Process</th>
<th>Customer activities</th>
<th>Organisational activities</th>
<th>Source document</th>
<th>Accounting transaction</th>
<th>Effect on inventory quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quotation</td>
<td>Request prices</td>
<td>Prepare &amp; send quotation to customer</td>
<td>Quotation</td>
<td>No entries</td>
<td>No effect</td>
</tr>
<tr>
<td>Sales order</td>
<td>Place order</td>
<td>Credit checks &amp; accepted order</td>
<td>Sales order</td>
<td>No entries</td>
<td>Inventory:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Qty reserved (+)</td>
</tr>
<tr>
<td>Delivery</td>
<td>Accept goods or service</td>
<td>Deliver inventory or service</td>
<td>Delivery note</td>
<td>No entries</td>
<td>* Qty available (-)</td>
</tr>
<tr>
<td>Billing (Invoicing)</td>
<td>Receive sales invoice</td>
<td>Create sales invoice &amp; send to customer</td>
<td>Sales invoice</td>
<td></td>
<td>Inventory:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Qty reserved (+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Qty on hand (-)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No effect</td>
</tr>
</tbody>
</table>

FIGURE 8.1: Generic revenue process
NOTE:

The fact that there are no accounting entries for some of the processes, does not mean there are no data entries (either on a manual document or on the computer). Accounting entries are determined by IFRSs rules – for example, a sale takes place when risk is transferred. However when a quotation is processed it will generate a data entry but not an accounting entry.

Refer to figure 8.1 throughout the discussion below.

2.1 Quotation process

- Customer activities

Customers can request quotations from the organisation to determine how much their order may cost them, when inventory can be delivered and/or if inventory is available. It is not a requirement that a customer must always first request a quotation because customers can directly place an order with the organisation.

- Organisational activities

On request from a customer, the organisation will create a quotation and send (fax, email, post, online, etc) it to the customer. Sending a quotation to a customer does not place the customer under any legal obligation to order the items.

- Source documents

Request for quotation received from the customer. This request can be received electronically (email, online request, etc), manually (completed form, letter, fax, etc) or verbally.

The organisation will create a quotation (source document) for the customer. When creating a quotation, the organisation should preferably include an expiry date (ie until what date will the quotation be valid).

- Accounting transactions

Because no accounting transaction has taken place, no general ledger accounting entries have been processed.

- Inventory quantities

Because no accounting transaction has taken place, there is no impact on inventory quantities.

- AIS database files

Some of the database files accessed, updated or modified to compile the quotation will include the following:
- the customer master file: customer details (ie code, address, etc)
- the inventory master file: inventory item codes, inventory description, unit size, etc
- the VAT reference file: applicable VAT rate
- the selling price list reference file: selling price structures for the inventory items
– the quotation transaction file: the quotation details are captured for reference purposes even though no official transaction has taken place. All the above-mentioned information is either captured or referenced in this quotation file, together with the date and quotation number.

- **AIS reports**

An outstanding quotation report can be printed to show all quotations not yet converted into a sales order (see section 2.2) and which have not yet reached their expiry dates. This report can be used to check that all quotations that should have been converted to sales orders were in fact converted. The sales team can also use this report to follow up with customers in an attempt to persuade them to accept the quotation and place an order.

### 2.2 Sales order process

- **Customer activities**

The customer accepts the quotation (or part thereof) and places an order for the inventory items to be delivered and/or services to be rendered.

- **Organisation action**

On receipt of the customer's order (electronically, manually or verbally), the organisation will perform a credit check to establish the client's credit worthiness and to ensure the sale to the client will not result in the client exceeding his or her credit limit. The credit limit check is normally an automatic control (if it was set up correctly) built into the AIS – that is, the AIS will automatically warn if a customer is about to exceed his or her credit limit. A credit limit can be exceeded temporarily as a result of, say, a receipt or credit note not yet processed. The AIS supervisor will normally have the authority to process (overwrite) and accept transactions that temporarily exceed a credit limit. The organisation's procedures for establishing credit limits should be followed if the customer's credit limit needs to be increased.

On receipt of the customer's order, the organisation also checks that it will be able to deliver the required inventory items or/and service required. If all the inventory items are not available, the organisation can, with the customer’s approval, process an adjusted sales order for only the inventory items available or create a sales order for the full order placed by the client and a back order will be created for the items that cannot be delivered. A back order shows all the items ordered by the customer, but which the organisation cannot currently provide to the client.

The organisation will now create a sales order or, if the customer accepted a quotation, convert the quotation into a sales order and close the quotation.

- **Source documents**

An accepted quotation or a new order is received from the customer. The accepted quotation or a new order will be received in a format agreed with the customer or required by the organisation. For example, the organisation will only accept orders submitted on the customer's official order form. A sales order (AIS document) will be created for the order placed and/or quotation accepted by the customer.
OPEN AND CLOSED SOURCE DOCUMENTS

An open source document is not linked or matched to another source document or transaction. A closed source document has been linked or matched to another source document or transaction. For example, a quotation that was linked to a sales order will be a closed quotation, while a quotation not yet linked will be open.

- **Accounting transactions**
  No transaction has taken place and therefore no accounting entries have been processed. In some instances, the organisation may require a deposit before the order will be executed. This transaction will give rise to the following accounting entries: debit assets (bank account) and credit liabilities (deposit). Refer to section 2.4 for the accounting entries when the transaction is finalised.

- **Inventory quantities**
  No physical movement of inventory items has taken place, but inventory items have been committed (ie reserved for a specific client). In the organisation's warehouse information system as well as in the AIS, the inventory quantity reserved will increase and the inventory quantity available for sale will decrease. This artificial movement in quantity is necessary because the organisation cannot sell inventory items already promised to a client.

- **AIS database files**
  The following are some of the database files accessed, updated or modified to compile the sales order:

  - the *customer master file*: customer details (ie code, address, etc)
  - the *inventory master file*: inventory item codes, inventory description, unit size, quantity reserved, quantity available, etc
  - the *VAT reference file*: applicable VAT rate
  - the *selling price list reference file*: selling price structures for the inventory items
  - the *sales order transaction file*: document number, date, client code, inventory code, inventory description, quantity, etc
  - the *quotation transaction file*: where a quotation existed, the quotation transaction file will be accessed for all the above-mentioned information. Changes will be made where necessary (if only a part of the quotation is accepted) and the date added. The quotation file will be updated to reflect the new status.

- **AIS reports**
  An outstanding/open sales order report can be printed to show all sales orders not yet converted into delivery notes and/or sales invoices (see sections 2.3 and 2.4). This report can be used to ensure that all orders are completed.
2.3 Delivery process

- **Organisational activities**

The organisation must now complete all sales orders (ie the goods must be delivered). 
Sales orders received, but not yet filled, are known as *open sales orders*.

As far as the inventory items ordered are concerned, they will be retrieved (picked) from 
the warehouse using a *picking slip*, which was created using the *sales order*. The inventory 
items are packed and a *delivery note* (also called a *packing slip*) attached to the package. 
The package is then delivered or shipped to the customer with the delivery note, which the 
customer must sign as proof that the inventory items were received. You will learn more 
about this internal control in auditing.

For shipments, a carrier will transport the package to the customer for which a *bill of lading* is used.

In most organisations, the warehouse information system will manage the picking, 
packing, delivery and/or shipment process of inventory items. You will learn more about 
these processes in auditing. In the AIS, a delivery note will be created and linked to the 
sales order and the sales order will be closed.

With regard to the services requested, the organisation will now render the services.

- **Customer activities**

The customer receives the inventory items delivered and sign the *delivery note*. For 
services rendered, the customer will sign a *service acceptance document*, in most 
instances, the sales order form. This will indicate that the customer did receive the service 
and that he or she is satisfied with the service rendered.

- **Source documents**

The source documents printed and used in the delivery process are based on the 
information in the sales order (and sales order transaction file). Each document, however, is 
used for a different internal purpose.

The *picking slip* (warehouse information system document) lists the inventory codes, 
descriptions, quantities and, in certain instances, also the location in the warehouse(s) of 
the inventory items. The picking slip will also include the sales order number and, in 
some instances, the customer name. This will enable staff to “pick” the items to be 
delivered.

The *delivery note/packing slip* (warehouse information system and AIS document) 
indicates the customer name, the delivery address, a description and the quantity of 
inventory items included in the package. The delivery note also includes the sales order 
number and any customer reference number reflected on the customer’s order. Two 
documents are usually printed, one for the customer to retain and the other to be signed 
and returned to the organisation.
A bill of lading (third-party document) is a legal agreement between the organisation and the carrier and includes the customer name, delivery address, organisation's details, special shipping instructions (ie fragile), a description and weight of the package, etc.

Picking slips and delivery notes usually do not indicate the value of the inventory items delivered.

A service acceptance document indicates when, by whom and the type of service rendered, and if the quality is accepted. The sales order is generally used for this purpose and functions in the same way as the delivery note.

- **Accounting transactions**

  In most instances, ownership is only transferred when the inventory items are physically under the customer’s control, that is, when risk associated with the related inventory has been transferred from the organisation to the customer. There are no accounting entries at this stage.

  As you will learn in financial accounting, there are exceptions to this because of the method of shipment. If the transfer of ownership/risk occurs, when the inventory items leave the warehouse, the transactions recorded under (invoice/billing) should occur now because risk has transferred even though the customer has not yet received the inventory items. Some AIS systems are not set up to process the accounting transactions at delivery and therefore organisations will record the corresponding sales invoice at the same time as the delivery note to ensure that the timing of the accounting entries is correct. This is more of a timing issue relating to the recording of the transactions.

- **Inventory quantities**

  The inventory quantity on hand will decrease as the inventory items are now physically removed from the warehouse. The sales order is now fulfilled and the inventory quantity reserved will also decrease. Remember: quantity on hand = quantity available + quantity reserved.

- **AIS database files**

  Some of the database accessed, updated or modified will include the following:

  - the customer master file: customer details (ie code, name, delivery address, etc)
  - the inventory master file: inventory item codes, inventory description, unit size, quantity reserved, quantity on hand, etc
  - the delivery note transaction file: delivery note number, client code, inventory code, inventory description, quantity, etc
  - the inventory transaction file: delivery date, inventory code, quantity, etc
  - the inventory history file: summarised inventory movements from previous inventory transaction files
  - the sales order transaction file: where a sales order existed, the sales order transaction file will be accessed for all the above-mentioned information. Changes will be effected where necessary and the date added. The sales order file will be updated to reflect the new status.
• **AIS reports**

A variety of reports, including the following, can be printed:

- An open delivery note report can be printed to show all delivery notes created that have not yet been linked to sales invoices (see section 2.4). This report can be used to ensure that all inventory items delivered are invoiced.
- Delivery tracking reports can be used to track the delivery of inventory items to customers (ie when was orders received and items picked, packaged and shipped).
- Inventory quantity reports will show inventory quantities reserved, available and on hand.

2.4 Billing process

• **Organisational activities**

The team responsible for customer billing will receive the signed delivery note. They will capture any updated delivery note information, and a sales invoice will be created by converting the delivery note into a sales invoice. The complete delivery note will then be closed. (For services, the sales order form will be converted into a sales invoice). The sales invoice is sent to the customer for payment. The sales invoice will only be closed in the AIS when payment has been received according to the invoice from the customer.

• **Customer activities**

The customer receives the sales invoice and is obliged to pay the invoice based on the agreed terms. The payment received is captured in the receipts part of this cycle.

• **Source documents**

A sales invoice includes the following: the organisation’s details; the customer’s name, address and contact details, the payment date; per inventory item/service an item/service description, unit size, quantity, amount per unit, item discount (if applicable), total amount per item; invoice discount (if applicable); VAT, (if applicable); total invoice amount; any messages to the client, etc. A sales invoice is also known as a tax invoice where the organisation is registered for VAT. There are specific SARS requirements for tax invoices to be valid such as the words “Tax invoice” and the organisation’s VAT number; the customer’s VAT number must also be included if the value of the invoice is more than R5 000, etc. You will learn in your taxation studies about all the requirements for a valid tax invoice.

• **Accounting transactions**

The sales journal will be used to capture the sales transactions. The organisation can grant a trade discount to its customers. Any trade discount granted to a customer is not recorded separately, the discount amount must be netted off (ie deducted from) the revenue (sale) and the trade receivables or bank amount recorded.
TRADE DISCOUNT AND SETTLEMENT DISCOUNT GRANTED

Trade discount granted is where the organisation gives a discount on a specific item or the complete invoice to its customer as a result of the quantity ordered, a “sale”, etc. For example, the customer received 5% discount for quantities more than 500 or the customer received 2% on all invoices. Trade discount is not the same as a settlement discount.

Settlement discount granted, also referred to as early payment discount granted, is applicable on credit sales only and is a discount granted to a customer if he or she pays the invoice before an agreed date. For example, the customer can receive 2.5% discount if the invoice is paid five days after the period ends in which it is recorded or a customer can receive 4% discount if the invoice is paid six days after the invoice was issued. You will learn about determining a discount percentage during your later management accounting studies.
The sales invoice will result in the following accounting entries where a perpetual inventory system is used:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade receivables</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Sale amount <em>including</em> VAT (net of any trade discount granted)</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Ct</td>
<td>VAT amount (based on the sale amount net of any trade discount granted)</td>
</tr>
<tr>
<td>Sales revenue</td>
<td>IS – revenue</td>
<td>Ct</td>
<td>Sale amount <em>excluding</em> VAT (net of any trade discount granted)</td>
</tr>
<tr>
<td>Inventory</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Amount based on inventory valuation method <em>excluding</em> VAT</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>IS – expense</td>
<td>Dt</td>
<td>Amount based on inventory valuation method <em>excluding</em> VAT</td>
</tr>
</tbody>
</table>

*Inventory sale on credit where a deposit was paid ("Trade Receivables may also be debited with the sales amount net of the deposit")*

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Deposit amount initially paid</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>BS - asset</td>
<td>Ct</td>
<td>Deposit amount initially paid*</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Sale amount <em>including</em> VAT (net of any trade discount granted)*</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Ct</td>
<td>VAT amount (based on the sale amount net of any trade discount granted)</td>
</tr>
<tr>
<td>Sales revenue</td>
<td>IS – revenue</td>
<td>Ct</td>
<td>Sale amount <em>excluding</em> VAT (net of any trade discount granted)</td>
</tr>
<tr>
<td>Inventory</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Amount based on inventory valuation method <em>excluding</em> VAT</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>IS – expense</td>
<td>Dt</td>
<td>Amount based on inventory valuation method <em>excluding</em> VAT</td>
</tr>
<tr>
<td>Inventory sale for cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bank</strong></td>
<td>BS – asset</td>
<td>Dt</td>
<td>Sale amount <em>including</em> VAT (net of any trade discount granted)</td>
</tr>
<tr>
<td><strong>VAT</strong></td>
<td>BS – liability</td>
<td>Ct</td>
<td>VAT amount (based on the sale amount net of any trade discount granted)</td>
</tr>
<tr>
<td><strong>Sales revenue</strong></td>
<td>IS – revenue</td>
<td>Ct</td>
<td>Sale amount <em>excluding</em> VAT (net of any trade discount granted)</td>
</tr>
<tr>
<td><strong>Inventory</strong></td>
<td>BS – asset</td>
<td>Ct</td>
<td>Amount based on inventory valuation method <em>excluding</em> VAT</td>
</tr>
<tr>
<td><strong>Cost of sales</strong></td>
<td>IS – expense</td>
<td>Dt</td>
<td>Amount based on inventory valuation method <em>excluding</em> VAT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service rendered (sale) on credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trade receivables</strong></td>
</tr>
<tr>
<td><strong>VAT</strong></td>
</tr>
<tr>
<td><strong>Sales revenue</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service rendered (sale) for cash</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bank</strong></td>
</tr>
<tr>
<td><strong>VAT</strong></td>
</tr>
<tr>
<td><strong>Sales revenue</strong></td>
</tr>
</tbody>
</table>

- **Inventory quantities**

  The billing process will have no influence on inventory quantities.

- **AIS database files**

  Some of the database files accessed, updated or modified will include the following:

  - the *customer master file*: customer details (ie code, name, delivery address, year to date sales, outstanding balance, etc)
  - the *inventory master file*: inventory item codes, inventory description, unit size, price per unit, year to date sales, etc
  - the *sales transaction file*: sales invoice number, invoice date, client code, inventory code, inventory description, quantity, price per unit, VAT amount, discount %, discount amount, line item amount, total amount, etc
  - the *VAT reference file*: VAT % per tax type
  - the *VAT transaction file*: VAT transactions
• several general ledger master files: storing new general ledger account balances
• general ledger transaction files: details of each transaction recorded in the general ledger
• the delivery note transaction file: where a delivery note existed, the delivery note transaction file will be accessed for all the above-mentioned information. Changes will be effected where necessary and the date added. The delivery note transaction file will be updated to reflect the new status
• the selling price list reference file: selling price structures for the inventory items

• AIS reports

A variety of reports can be printed, such as the following:

• sales analysis reports which can be extracted on the basis of sales per customer, item, journal, sales agent, etc
• customer statements and customer age analysis based on the customer’s processing method (ie balance forward or open item) (we will learn about balance forward or open item processing methods in topic 6)
• VAT reports showing the output VAT for all sales transactions
• general ledger account details showing the accounting entries for the selected general ledger accounts
• the customer detail ledger showing the detail of transactions processed in each customer’s trade receivables subledger account

Activity 8.1

Yummy Sweets (Pty) Ltd issued the following sales invoices during April 201X. The money relating to cash sales is received immediately. Any applicable trade discount has not yet been taken into account in the “Total sales including VAT” amounts. Yummy uses a perpetual inventory system.

Yummy uses the following general ledger accounts for sales, cost of sales and inventory.

• Sales revenue – Hard candy
• Sales revenue – Soft candy
• Cost of sales – Hard candy
• Cost of sales – Soft candy
• Inventory – Hard candy
• Inventory – Soft candy
<table>
<thead>
<tr>
<th>Customer</th>
<th>Invoice number</th>
<th>Item</th>
<th>Total sales including VAT</th>
<th>Total cost of sales excluding VAT</th>
<th>Cash or credit sale</th>
<th>Trade discount %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash sale</td>
<td>INV8745</td>
<td>Hard candy</td>
<td>R 256.50</td>
<td>R 90.00</td>
<td>Cash</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>INV8745</td>
<td>Soft candy</td>
<td>R 91.20</td>
<td>R 40.00</td>
<td>Cash</td>
<td>No</td>
</tr>
<tr>
<td>Mr S Ucker</td>
<td>INV8846</td>
<td>Hard candy</td>
<td>R 1,995.00</td>
<td>R 700.00</td>
<td>Credit</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>INV8846</td>
<td>Soft candy</td>
<td>R 1,254.00</td>
<td>R 550.00</td>
<td>Credit</td>
<td>10%</td>
</tr>
</tbody>
</table>

Draw the table below and use it to record the accounting entries in the general ledger master file for the transactions indicated above. You should show all the applicable accounting entries. (The accounting entries can be recorded in a summary or in detail.)

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/Credit</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hint:** Draw the T-accounts, as rough work, to ensure that the debits and credits are correct.
Feedback on activity 8.1

The suggested solution below also shows the T-accounts (rough work) in detail and summarised information in the journal. Both methods are acceptable (ie detailed or summarised information). Use the method you find the easiest.

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/ Credit</th>
<th>Amount</th>
<th>Calculation</th>
</tr>
</thead>
</table>
| Sales revenue – Hard candy | Credit        | R1,975.00 | Cash sale excluding VAT: R256.50/1.14 = R225.00  
Mr S Ucker (credit sale) excluding VAT: R1,995.00/1.14 = R1,750.00  
Total sale: R225.00 + R1,750.00 = R1,975.00 |
| Sales revenue – Soft candy | Credit        | R1,070.00 | Cash sale excluding VAT: R91.20/1.14 = R80.00  
Mr S Ucker (credit sale) excluding VAT before discount: R1,254.00/1.14 = R1,100.00  
10% trade discount deducted: R1,100.00 – (R1,100.00* 10%) = R990.00  
Total sale: R80.00 + R990.00 = R1,070.00 |
| VAT                        | Credit        | R426.30  | Sales * VAT %:  
Hard candy: R1,975.00 * 14% = R276.50  
Soft candy: R1,070.00 * 14% = R149.80  
Total VAT: R276.50 + R149.80 = R426.30 |
| Trade receivables          | Debit         | R3,123.60 | Credit sale – Mr S Ucker (incl VAT):  
Total amount including VAT before discount = R1,995 (hard candy) + R1,254 (soft candy) = R3,249.00  
10% trade discount on soft candy deducted: R3,249 – (R1,254 *10%) = R3,123.60 |
| Bank                       | Debit         | R347.70  | Cash sale (including VAT): R256.50 (hard candy) + R91.20 (soft candy) = R347.70 |
| Inventory – Hard candy     | Credit        | R790.00  | Inventory value excluding VAT: R90.00 (cash sale) + R700.00 (credit sale) = R790.00 |
| Cost of sales – Hard candy | Debit         | R790.00  | | |
| Inventory – Soft candy     | Credit        | R590.00  | Inventory value excluding VAT: R40.00 (cash sale) + R550.00 (credit sale) = R590.00 |
| Cost of sales – Soft candy | Debit         | R590.00  | | |
3 Customer returns

There are many reasons why a customer would want to return inventory items. The items may have a defect, the incorrect items may have been delivered, too many items may have been delivered and so on. The rules of what items may be returned will be determined by the organisation's policies, and must be communicated to the customer as early as the quotation and/or order stage. This process can also be used if a customer was incorrectly invoiced for items that were not delivered, although this is highly unlikely if the proper controls were in place.
FIGURE 8.2: Generic customer returns process

Refer to figure 8.2. throughout the following discussion

- **Customer activities**

  The customer returns the defective or unwanted inventory items.

- **Organisational activities**

  The returned inventory items are received and taken back into inventory. The warehouse will issue a “customer goods returned” note. This note will be used to create the credit note in the AIS. The credit note must be linked to the original sales invoice – that is, the sales invoice where the items were originally billed to the customer. The credit note is sent to the customer. The sales invoice and linked credit note will be open until payment has been received from the customer.
• **Source document**

Over and above the information usually reflected on a sale invoice, the *credit note* will also indicate the applicable sale invoice number. Although there is normally no “customer goods returned” note in the AIS, the warehouse information system should issue such a document that will be similar to a “goods received note” (see study unit 9 section 2.2) which is used when items are received from suppliers, in order to control inventory items received into the warehouse. Bear in mind that if a line item or invoice discount (ie trade discount) was granted on the original sales invoice, the same discount, if applicable to the returned items, should also be captured on the credit note.

• **Accounting transactions**

Bear in mind that if any trade discount was applicable on the original sales invoice, this discount will have been recorded by netting it off against the sales and accounts receivable amounts. The credit note accounting entries must therefore follow the same principle as the original transaction – that is, any trade discount must be netted off (deducted) from the sales revenue and accounts receivable amounts.

The accounting entries are recorded when the risk of the inventory items was transferred back to the organisation that is, the organisation receives the returned items.

The credit note will result in the following accounting entries where a perpetual inventory system is used and the original sale was on credit:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade receivables</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Sale return amount <em>including</em> VAT (net of any trade discount granted on the inventory returned)</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Dt</td>
<td>VAT amount (based on the sale amount net of any trade discount granted on the inventory)</td>
</tr>
<tr>
<td>Sales revenue</td>
<td>IS – revenue</td>
<td>Dt</td>
<td>Sale return amount <em>excluding</em> VAT (net of any trade discount granted on the inventory)</td>
</tr>
<tr>
<td>Inventory</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Amount based on inventory valuation method excluding VAT</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>IS – expense</td>
<td>Ct</td>
<td>Amount based on inventory valuation method excluding VAT</td>
</tr>
</tbody>
</table>

**Note:** The transactions above are the exact reversal of the sales transaction.
Although the likelihood is slim, there is a possibility that payment was received from the customer for credit sales, before the items were returned. If the settlement discount was granted on the payment of the items that have now been returned, this the settlement discount must now also be reversed. The reversal of this transaction should be recorded in a separate journal because the VAT effect must be recorded separately. The journal entry will be as follows:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade receivables</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Settlement discount amount including VAT</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Ct</td>
<td>VAT amount</td>
</tr>
<tr>
<td>Settlement discount granted</td>
<td>IS – expense</td>
<td>Ct</td>
<td>Settlement discount amount excluding VAT</td>
</tr>
</tbody>
</table>

- **Inventory quantities**

Because the items have been returned to the warehouse, the *quantity on hand* and the *quantity available* will increase.

The organisation must decide what to do with inventory items returned because of damage, unsatisfactory quality, defects, etc, and which are *unsellable* to another customer. The organisation can, if it is still within their supplier’s terms, return the damaged items to the supplier (see study unit 9 section 3) or if the items cannot be returned, these items must be moved from *inventory available* to *inventory damaged* from where it can be sold at a lower value, or if it is totally unusable, be written off.

If the items are only damaged and can still be sold at a lower value, these items must be moved from the *inventory available* to *inventory damaged*. Because many entry-level AISs do not have a damaged goods function, it may be necessary to create a new inventory item code (eg “Product X damaged goods”) and move the items from the original inventory item code (eg “Product X”) to the new inventory item code, “Product X damaged goods”, which is valued at net realisable value. This can be done through the inventory journal. The *quantity on hand* and the *quantity available* will decrease for the original product (eg “Product X”), and *increase* for the new damaged inventory item (eg “Product X damaged goods”).

When unsellable items are written off, the inventory *quantity on hand* and the *quantity available* will decrease.

- **AIS database files**

Some of the database files accessed, updated or modified will include the following:

- the *customer master file*: customer details (ie code, name, delivery address, year-to-date sales, outstanding balance, etc)
– the inventory master file: inventory item codes, inventory description, unit size, price per unit, year-to-date sales, year-to-date returns, etc
– the credit note transaction file: credit note number, credit note date, client code, inventory code, inventory description, quantity, price per unit, VAT amount, discount %, discount amount, line item amount, total amount, etc
– VAT reference file: VAT % per tax type
– VAT transaction file: VAT transactions
– several general ledger master files: storing general ledger account balances
– general ledger transaction files: details of each transaction recorded in the general ledger, etc
– the sales transaction file: where a sales invoice existed, the sales transaction file will be accessed for all the above-mentioned information; changes will be made where necessary and the date added

• AIS reports

A variety of reports can be printed, including the following:

– credit note analysis reports which can be extracted based on credit note per customer, item, journal, sales agent, etc
– customer statements; customer age analysis; and the customer detail ledger, which will include the credit note
– general ledger accounts details showing the accounting entries for the applicable general ledger accounts
Activity 8.2

Yummy Sweets (Pty) Ltd issued the following sales invoice to one of its customers, Ms CH Olate, who always buys on credit. Yummy uses a perpetual inventory system.

Yummy Sweets (Pty.) Ltd.  
PO Box 9874  
Rosslyn  
5289

TAX INVOICE

VAT number:  
987654333

Date:  
18 May 201X

Invoice number:  
INV 89576

Customer code: OLAT011

Ms CH Olate
PO Box 15647
Sunnyside
4567

VAT number:  
977664441

<table>
<thead>
<tr>
<th>Item description</th>
<th>Code</th>
<th>Qty</th>
<th>Price per unit</th>
<th>Tax %</th>
<th>Net amount including VAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chocolates 200g</td>
<td>CHL200</td>
<td>600</td>
<td>R 10.00</td>
<td>14%</td>
<td>R 6,000.00</td>
</tr>
<tr>
<td>Chocolates 100g</td>
<td>CHL100</td>
<td>500</td>
<td>R 4.74</td>
<td>14%</td>
<td>R 2,370.00</td>
</tr>
<tr>
<td>Hard candy</td>
<td>HCA123</td>
<td>1000</td>
<td>R 5.70</td>
<td>14%</td>
<td>R 5,700.00</td>
</tr>
<tr>
<td>Soft candy</td>
<td>SCA456</td>
<td>1650</td>
<td>R 2.30</td>
<td>14%</td>
<td>R 3,795.00</td>
</tr>
</tbody>
</table>

Sub total         | R 17,865.00
Discount @ 5%     | R 893.25
Total Amount excluding VAT | R 14,971.75
VAT               | R 2,084.25
Total Amount including VAT | R 16,971.75

Refer to the above sales invoice. You can assume that this sales invoice was updated to the applicable master files. Ms CH Olate has returned 500 units of hard candy, which was invoiced (invoice no. 89576), because she is not satisfied with the quality of the hard candy. Yummy Sweets is of the opinion that they will be able to sell these 500 units of hard candy to another customer. The cost price of the hard candy per unit is R2.28 excluding VAT.
(a) Draw the table below and use it to record the accounting entries into the general ledger master file for the return of the hard candy.

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/Credit</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hint:** Draw the T-accounts, as rough work, to ensure that the debits and credits are correct.

(a) Refer to the sales invoice. Identify the AIS document used to record the return of the inventory items.
(b) Refer to the sales invoice above. Identify three (3) database files that can either be accessed, updated or modified by the sales invoice transaction.
(c) Refer to the sales invoice above. Identify three (3) database files that can either be accessed, updated or modified by the return of the inventory items.
(d) Record the effect the return of the items will have on the inventory quantities.

---

**Feedback on activity 8.2**

(a)

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/Credit</th>
<th>Amount</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue</td>
<td>Debit</td>
<td>R 2,375.00</td>
<td>Price per unit excluding VAT = R5.70/1.14 = R5.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total amount excluding VAT before discount = R5.00 * 500 items = R2,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5% trade discount deducted = R2,500 − (R2,500 * 5%) = R2,375</td>
</tr>
<tr>
<td>VAT</td>
<td>Debit</td>
<td>R 332.50</td>
<td>Sales * VAT % = R2,375 * 14% = R332.50</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>Credit</td>
<td>R 2,707.50</td>
<td>Total amount including VAT before discount = R5.70 * 500 items = R2,850</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5% trade discount deducted = R2,850 * (100% − 5%) = R2,707.50</td>
</tr>
<tr>
<td>Inventory</td>
<td>Debit</td>
<td>R 1,140.00</td>
<td>Inventory value excluding VAT = R2.28 * 500 = R1,140</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>Credit</td>
<td>R 1,140.00</td>
<td></td>
</tr>
</tbody>
</table>
(b) Credit note

(c) Any three (3):

- customer master file
- inventory master file
- sales transaction file
- VAT transaction file
- general ledger master files
- delivery note transaction file

(d) Any three (3):

- customer master file
- inventory master file
- credit note transaction file
- VAT transaction file
- general ledger master files
- sales transaction file

(e) Inventory quantity on hand and quantity available will increase by 500 items.

4 Receipts

Collecting amounts due to the organisation is crucial because no organisation can survive without cash. Proper controls to ensure timely collection of cash are therefore of vital importance.

Customers can pay the organisation in various ways. Some of the methods include a direct deposit in the organisation's bank account, cheque, cash, EFT or credit card.

---

NOTE:

Inventory and service sales for cash have activities that fall within both the revenue and the receipt processes. In other words, the recording of the sale and movement in the inventory forms part of “revenue” and the physical cash received and banked forms part of “receipts”.

The influence of cash sales accounting transactions on inventory was included in the “revenue” process so as not to duplicate the information.

---
<table>
<thead>
<tr>
<th>Process</th>
<th>Customer activities</th>
<th>Organisational activities</th>
<th>Source document</th>
<th>Accounting transaction</th>
<th>Effect on inventory quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statements</td>
<td>Receive statement and prepare payment.</td>
<td>Print and send Debtors statement and remittance advice.</td>
<td>Statement and remittance advice.</td>
<td>Credit sales: <em>Trade receivables (CT)</em> <em>Bank (DT)</em> Early payment discount (if applicable): <em>Settlement discount granted (DT)</em> <em>VAT (DT)</em> <em>Trade receivables (CT)</em></td>
<td>Credit sales: No effect</td>
</tr>
<tr>
<td>Receipt</td>
<td>Make payment EFT Deposit Cheque Cash Credit card Debit card</td>
<td>Receive payment and do matching</td>
<td>Receipt Cash register roll Deposit slip and bank statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposit</td>
<td></td>
<td>Deposit any cash/cheques received</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reconciliations</td>
<td></td>
<td>Reconcile the bank statement with the cashbook entries</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 8.3: Generic receipt process**
Refer to figure 8.3 throughout the following discussion

- **Customer activities**

  The customer will receive the debtors’ statement and will compare it to his or her records. The customer will make a payment to the organisation. Cash and cheque payments sent or directly received by the organisation are usually accompanied by a remittance advice. The customer will send a proof of payment to the organisation if he or she made an electronic fund transfer (EFT) or a direct deposit into the organisation’s bank account.

- **Organisational activities**

  The organisation will send, at least monthly, a debtor statement and remittance advice (which is the tear-off portion of the debtor statement) to their customers. The organisation can receive payments from customers in electronic (EFT) format or in cash.

  Amounts deposited and/or received directly in the bank account should be matched to either a remittance advice or a proof of payment received from the customer. A receipt will be issued to the customer for all payments received and verified. The receipts are captured in the receipt cashbook and matched against the customer from whom the
amount was received. If the customer’s transactions are processed using open item processing (see topic 6), then the amount will not only be matched to the customer but also to the specific sales invoices and credit notes that are being paid. When matched, the sales invoices and credit notes are closed. The receipt will be open and reflect as unreconciled on the bank reconciliation until the receipt is matched to the bank statement and reconciled.

All cheques and cash received at the organisation are indicated on a bank deposit slip. The cash and cheques will then be banked and the bank will stamp the deposit slip as proof that money was received.

The organisation will, at least monthly, compare the bank statements received from the bank with the transactions processed in the cashbook and perform a bank reconciliation. Proper internal controls necessitate that any receipt transaction should not be captured using the bank statement as the source document, except for bank-generated transactions (IE interest received), but that the receipt issued or the cash register roll should rather be used as source document.

- **Source document**

  A *bank deposit slip* will be completed for cash and cheques received at the organisation. The bank must stamp this deposit slip. In all instances, a receipt must be issued to customers for amounts received. A receipt also includes a “cash register slip”.

- **Accounting transactions**

  No VAT transaction is recorded with the receipt, as the VAT entries were recorded during the recording of the related sales invoice. (Remember, however, there will be VAT entries for cash sales. See section 2.4)

  As agreed with the customer, and if a receipt qualifies for it, a *settlement discount* (also called *early payment discount*), should be granted and the accounting entries recorded. If the organisation is a VAT vendor, the *settlement discount* transaction must account for VAT against the VAT rate applicable on the linked sales invoices and credit notes.

  Most organisations use a “*settlement discount granted*” general ledger account to record settlement discounts because this enables the organisation to easily see how much discount was granted in a certain period. However, IFRSs disclosure requirements stipulate that the settlement discount should be netted off against sales revenue. We should therefore remember to include the *settlement discount granted* general ledger account in the same AIS report writer category as sales revenue. As an alternative, we could also journalise the settlement discount granted balance to the sales revenue account at period-end.
The receipt cashbook journal will be used to capture the following accounting entries:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash receipts for credit sales</td>
<td></td>
<td></td>
<td>Amount including VAT</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>BS – asset</td>
<td>Ct</td>
<td></td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Amount including VAT</td>
</tr>
<tr>
<td>Settlement discount granted (if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade receivables</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Discount amount including VAT</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Dt</td>
<td>VAT amount</td>
</tr>
<tr>
<td>Settlement discount granted</td>
<td>IS – expense</td>
<td>Dt</td>
<td>Discount amount excluding VAT</td>
</tr>
</tbody>
</table>

- **Inventory quantities**

Since payment is only received, there is no influence on inventory quantities. (Remember however, there will be an influence on inventory quantities for cash sales. See section 2.4)

- **AIS database files**

Some of the database files accessed, updated or modified will include the following:

- the customer master file: customer details (ie code, name, delivery address, year-to-date payments received, outstanding balance, etc)
- the receipt cashbook transaction file: reference number, date, bank amount, customer code, general ledger account number, etc
- the open sales transaction file: summarised sales from previous sale transaction files that have not yet been matched to a payment
- general ledger transaction files: details of each transaction recorded in the general ledger
- the open credit note transaction file: summarised credit notes from previous customer returns transaction files that have not yet been matched to a payment

- **AIS reports**

A variety of reports, including the following, can be printed:

- receipt cashbook detail report (similar to a journal printout) showing the cashbook receipt transactions for a selected period
- customer statements, customer age analysis, customer detail ledger, which will include payments received
- general ledger accounts details showing the accounting entries for the applicable general ledger accounts
- unmatched/unpaid invoices and credit notes showing details of invoices and credit notes not yet paid or matched to a payment received, etc
NOTE:
It is important to know the difference between the *amount due* and the *amount outstanding*.

We will use an example to explain the two concepts to you.

*The same principle applies for both customers and suppliers.*

You opened an account at a clothing retail store and negotiated normal payment terms of 30 days. This means you have to settle your account within 30 days from period end.

On 30 September 2015 you owe a total of R2,500 to the store. The amount is made up of two invoices: Invoice S134 dated 28 August 2015 for an amount of R1,200 and invoice S140 dated 15 September 2015 for an amount of R1,300.

Can you identify the *amount outstanding* and the *amount due* on 30 September 2015?

- R1,200 is *due* on 30 September 2015 as the transaction date of 28 August 2015 for invoice S134 falls within the normal payment terms of 30 days from period end (31 August).
- R2,500 is *outstanding* on 30 September 2015 as this refers to the total amount owed to the clothing retail store.
- R1,300 is only *due* on 31 October 2015 as the transaction date of 15 September 2015 for invoice S140 falls within 30 days from period end (30 September).
5 Summary

In this study unit, we investigated how revenue and receipts are recorded in an accounting information system. We learnt which documents are used, which database files are accessed, updated or modified, the reports that can be printed and some of the basic underlying accounting entries for quotations, sales orders, deliveries, billing, inventory returned and receipts.

In the next study unit, we will gain a deeper understanding of the acquisition and payment cycle and its interaction with the AIS.

<table>
<thead>
<tr>
<th>Self-assessment activity</th>
</tr>
</thead>
</table>

After working through this study unit, you should be able to answer the following questions:

(a) List the processes that form part of the revenue process.

(b) For each process in the revenue process, describe the activities performed by both the organisation and customer.

(c) For each process in the revenue process, name and describe the source documents used.

(d) Identify and record the accounting entries applicable to each of the revenue processes.

(e) Identify the movement in inventory quantities for each of the revenue processes.

(f) For each process in the revenue process, list the database files accessed, updated or modified and name some of the information contained in these database files.

(g) For each process in the revenue process, list the AIS reports that can be generated.

(h) Describe the activities performed by both the organisation and customer in the receipts cycle.

(i) Name and describe the source documents used in the receipts cycle.

(j) Identify and record the accounting entries applicable to each of the receipts process.

(k) Identify the movement in inventory quantities in the receipts process.

(l) For the receipts process, list the database files accessed, updated or modified and name some of the information contained in the database file.

(m) For the receipts process, list the AIS reports that can be used and mention what information it will contain.

(n) Describe the activities performed by both the organisation and customer in the customer returns process.
(o) Name and describe the source documents used in the customer returns process.

(p) Identify and record the accounting entries applicable to the customer returns process.

(q) Identify the movement in inventory quantities for each of the customer returns processes.

(r) For each process in the customer returns process, list the database files accessed, updated or modified and name some of the information contained in these database files.

(s) For each process in the customer returns process, list the AIS reports that can be generated.
1 Introduction

In the previous study unit, we learnt how the organisation's revenue and receipts are recorded in an AIS. In this study unit, we will focus on how the organisation's acquisitions and payments are recorded in an AIS.

To enable the organisation to sell inventory items or render a service to its clients, the organisation first needs to acquire and pay for inventory and services from its suppliers. In this study unit, we will learn which documents are used, which database files are accessed, updated or modified, the reports that can be printed and some of the basic underlying accounting entries. We will not discuss the audit environment and controls relating to this cycle because you will learn about these in auditing. For details of the IFRSs requirements, see the financial accounting modules. This study unit is based on the retail, wholesale and manufacturing organisations and will not address the acquisitions and payments cycle of specialised industries such as financial services, health care, government and so forth.
**NOTE:**

Since most organisations are registered for VAT on the invoice basis, all VAT implications discussed in this study unit will be based on the invoice basis.

For all accounting transactions shown in this study unit, it was assumed that both the organisation and the supplier are registered VAT vendors and goods/services bought are subject to standard VAT.

Use your financial accounting and tax knowledge to make the necessary adjustments to the accounting entries where a supplier and/or organisation is not a registered VAT vendor and/or also goods/services bought are not subject to standard VAT.
2 Acquisition

The inventory items bought will also refer to raw material inventory used in the manufacturing process. The process of converting raw material inventory into finished goods inventory is discussed in study unit 10.

Organisations often use a manual and sometimes an electronic requisition to request the purchasing department to place an order. The process followed will differ materially between organisations. The requisition process is not discussed in this study unit because it generally has no impact on the AIS.

<table>
<thead>
<tr>
<th>Process</th>
<th>Supplier activities</th>
<th>Organisational activities</th>
<th>Source document</th>
<th>Accounting transaction</th>
<th>Effect on inventory quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify needs</td>
<td></td>
<td>Identify needs</td>
<td>Requisition</td>
<td>No entries</td>
<td>No effect</td>
</tr>
<tr>
<td>Purchase Order</td>
<td>Select supplier</td>
<td>Complete order and deliver</td>
<td>Purchase Order</td>
<td>No entries</td>
<td>Inventory: * Qty ordered (+)</td>
</tr>
<tr>
<td></td>
<td>and place order</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory</td>
<td></td>
<td>Receive inventory / non-inventory items / service. Create GRN</td>
<td>Goods received note (GRN)</td>
<td>Inventory: * GRN accrual (CT)</td>
<td>Inventory: * Qty on hand (+)</td>
</tr>
<tr>
<td>received</td>
<td></td>
<td></td>
<td></td>
<td>* Inventory (DT)</td>
<td>* Qty available (+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Qty ordered (-)</td>
</tr>
<tr>
<td>Invoice</td>
<td></td>
<td>Receive invoice. Compare supplier invoice with GRN. Record supplier invoice</td>
<td>Supplier invoice</td>
<td>Inventory: * Trade payables (CT)</td>
<td>No effect</td>
</tr>
<tr>
<td>received</td>
<td></td>
<td></td>
<td></td>
<td>* VAT (DT)</td>
<td></td>
</tr>
</tbody>
</table>

FIGURE 9.1: Generic acquisition process

Refer to figure 9.1 throughout the following discussion.
2.1 Purchase order process

- **Organisational activities**

  Noninventory items and services. A department will request items to be purchased or services to be rendered by following the organisation's procedures and controls. (You will learn about these procedures and controls in auditing.) Examples of controls for nonrecurring items may include obtaining three quotations upon which a staff member with the correct mandate must approve the request. Examples of controls for recurring items may include the use of only preferred suppliers and the placement of orders by authorised staff members. The suppliers that are used will either be predetermined preferred suppliers or other suppliers selected according to the organisation's internal control procedures.

  Inventory items. The organisation will determine from the AIS or warehouse inventory information system which inventory items must be ordered and the quantity required. The quantity required will be determined on the basis of the inventory quantity on hand and the inventory quantities that should be available. In topic 6 we will see how an AIS, Pastel Partner, calculates reorder quantities based on minimum, maximum reorder levels and quantities on hand. Inventory items are regularly purchased from suppliers, and the organisation will therefore have negotiated payment terms, prices, item quality and so forth, with some of these suppliers. The organisation will then normally only buy inventory items from these suppliers (called preferred suppliers) with whom arrangements exist.

  For inventory, noninventory items and services. The selected supplier will be a preferred supplier or any other supplier selected according to internal control procedures. The price that is used can be obtained from the previous paid prices, a quotation, supplier price list and so on. Once we know which supplier and price to use and which items/service to order, a purchase order will be created in the AIS and sent to the applicable supplier.

- **Supplier activities**

  The supplier will receive the purchase order and process the purchase order according to his or her own internal processes. (Similar to those described in the revenue and receipt cycle.)

- **Source documents**

  A purchase order will be created in the AIS and sent to the supplier. Purchase orders sent to suppliers for inventory items not yet received (ie it is not linked to a goods received note [GRN]), are referred to as open purchase orders. The price per unit used on the purchase order will depend on the organisation's prescribed procedures. It can be the current cost price per unit as reflected in the AIS, the prices indicated on the supplier’s quotation, the price per supplier price list and so forth.

- **Accounting transactions**

  Because no transaction has taken place and risk has not yet been transferred, there are no general ledger accounting entries.
• **Inventory quantities**

No physical movement of inventory items has taken place, but inventory items have been ordered. In the organisation's AIS (as well as the warehouse information system if used), the inventory *quantity on order* will increase. This artificial movement in quantity is necessary to ensure that the organisation does not double order (ie. order items already on order from a supplier).

• **AIS database files**

Some of the database files accessed, updated or modified will include the following:

- the *supplier master file*: supplier details (ie code, address, etc)
- the *inventory master file*: inventory item codes, inventory description, unit size, quantity ordered, last prices, etc
- the *VAT reference file*: VAT % per tax type
- the *purchase order transaction file*: document number, date, supplier code, inventory code, inventory description, quantity, etc

• **AIS reports**

An *outstanding/open purchase order report* can be printed to show all purchase orders not yet converted into GRNs (see section 2.2). This report can be used to follow up on outstanding orders to ensure that all purchase orders are completed.

2.2 **Inventory received**

• **Supplier activities**

The supplier will fulfil the order received from the organisation. Items will be delivered with a delivery note that the organisation must sign to confirm receipt of the items.

• **Organisational activities**

The organisation will receive the physical items. On receipt, the organisation will compare the items received with the items listed on the supplier’s delivery note and the organisation’s own purchase order. Any differences in quantity, type of items, quality and so forth, will be clearly indicated on the delivery note before it is signed by the organisation as acknowledgement of receipt. For example, the purchase order included 200 red ink cartridges, but blue cartridges were delivered instead, and the delivery note likewise updated. In this instance, the organisation would probably not accept the blue cartridges and indicate on the delivery note that they did not take delivery. Take another example: the delivery note indicated 200 black ink cartridges, but only 180 were actually delivered. The organisation can decide not to accept the complete black ink cartridges delivery or more likely adjust the delivery note to reflect the actual quantity received (ie 180) and indicate on the delivery note that there is a short delivery. It is however crucial for the delivery note, as adjusted, to agree with the actual items received from the supplier, before the note is signed. The organisation will keep a copy of the delivery note. If a proficient supplier is used, the possibility of the delivery note and the delivery being different is highly unlikely.
As always, the organisation’s unique way of conducting business will determine how incorrect items should be dealt with. It may not always be possible to send items back immediately because the delivery may have been made by a third-party carrier. These “incorrect” items may need to be taken into stock (to keep control of the items) and returned to the supplier later (see section 3).

The supplier’s delivery note will be used to create the organisation’s own goods received note (GRN) in the AIS. The term “goods” is used because a GRN is not only used for the receipt of inventory items, but also for noninventory items, and goods therefore refer to both types of items. The GRN will be linked to the purchase order and the purchase order closed if the complete order was received. If the complete purchase order was not received, the organisation will have the option to close the complete purchase order and inform the supplier that they no longer want the items or to only close the purchase order line items actually received. In the latter instance, the undelivered purchase order will then still be open, but will only show the items still on order.

**Source documents**

The supplier delivery note is an external document that serves as proof of which items were delivered. The delivery note (as adjusted) will be used to create the goods received note (GRN). The GRN created in the AIS will indicate the supplier name, date, a description and the quantity of inventory items delivered and the purchase order number to which the GRN relates. The price per unit will be based on the price per unit used in the purchase order because most delivery notes do not include prices, and the organisation has yet to receive the supplier invoice. The GRN and the original purchase order are linked and the purchase order is completely or partially closed. Most of the information on the GRN can be obtained/copied from the associated purchase order.

**Accounting transactions**

Once the inventory items have been received, risk and ownership are transferred to the organisation, which now has a liability to pay the supplier and can sell the received inventory items. The organisation has not yet received and captured the supplier invoice in the AIS, and as a result, no liability or inventory accounting entries were recorded, but do nevertheless exist. To reflect the actual substance of the transaction, an accrual account is used to record the liability until such time that the actual invoice is received and recorded. This accrual is based on estimates only, because the supplier invoice with the actual prices and so forth, has not yet been received at this stage. In this module, the accrual account will be named “GRN accrual account”. The inventory account will be used to record the inventory accounting entries. Bear in mind that no VAT transactions are raised at this point, because SARS only allows VAT to be claimed on the receipt of a valid supplier tax invoice. The GRN accrual amount will therefore exclude VAT and the inventory amount will also exclude VAT.
Trade discount received entails the organisation receiving discount from a supplier for a specific item or on the complete invoice (also called line item discount and invoice discount respectively). This discount may be the result of the quantity ordered, a “sale” and so forth. Trade discount, however, excludes a settlement discount. For example, the organisation receives 5% discount for quantities over 500 ordered or it receives 2% on all items ordered from the specific supplier (invoice discount).

Settlement discount received, also referred to as early payment discount received, is only applicable on credit purchases and is a discount that is received if the organisation pays the supplier before a specific date. For example, the organisation receives a 2.5% discount if the purchase invoice is paid five days after the period end in which it was recorded or the organisation can receive 4% discount if the invoice is paid six days after the invoice was issued.

NOTE:

GRN accrual account: Pastel Partner labels the accrual account used as the GRN accrual account. We use the same name in this transaction processing explanation because Pastel Partner is the AIS used in this module. Other AISs may use a different name for the accrual account, but the underlying principle of using an accrual account will be the same for those AISs that use it.
Any known trade discount (e.g., a standard agreement whereby the organisation receives 2% invoice discount) should be recorded at this stage. IFRSs requires that inventory should be valued at the lowest of cost and net realisable value. Trade discount will therefore be recorded by netting it off (deducting it from) against the inventory amount, that is, reducing the inventory amount by the trade discount amount.

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Purchase order price per unit excluding VAT (net of any known trade discounts) multiplied by the GRN quantity received.</td>
</tr>
<tr>
<td>GRN accrual</td>
<td>BS – liability</td>
<td>Ct</td>
<td></td>
</tr>
</tbody>
</table>

- **Inventory quantities**

Because inventory was physically received and is now available for selling, the inventory quantity on hand and the quantity available will increase and the quantity on order will decrease. Refer to section 2.3 for the process when the supplier invoice has been received.

- **AIS database files**

Some of the database files accessed, updated or modified will include the following:

- the supplier master file: supplier details (i.e., code, address, etc)
- the inventory master file: inventory item codes, inventory description, unit size, quantity on hand, quantity available, quantity on order, year-to-date purchases, last cost prices, etc
- the GRN transaction file: document number, date, supplier code, inventory code, inventory description, quantity, purchase order number, etc
- the inventory transaction file: delivery date, inventory code, quantity, etc
- the general ledger transaction files: details of each transaction recorded in the general ledger
- for all open and partially open purchase orders, the open purchase order transaction file. Where a purchase order existed, the open purchase order transaction file will be accessed for all the above-mentioned information. Changes will be made where necessary and the date added. The open purchase order transaction file will be updated to reflect the new status.
• **AIS reports**

A variety of reports, including the following, can be printed:

- An open purchase report can be printed to show all purchase orders that have been created but have not yet been completely linked to a GRN.
- An open GRN report will reflect all GRNs that have not yet been completely linked to a supplier invoice (see section 2.3). These reports can be used to ensure all inventory items ordered are delivered and for all delivered items that invoices are received and processed.
- An inventory activity report will show all movements of an inventory item including the purchases received.
- Inventory quantity reports will show inventory quantities on order, available and on hand.

### 2.3 Invoice received

**• Supplier activities**

The supplier issues the invoice and sends it to the organisation. At month-end, the supplier will also send a statement showing all invoices not yet paid (ie outstanding). The organisation is obliged to pay the invoice according to the agreed terms, unless there are disputed item quantities, prices and so forth, on the invoice.

**• Organisational activities**

The trade payables team will receive the supplier invoice and match it to the original purchase order and GRN. The invoice received from the supplier will be captured in the AIS, creating a supplier invoice. The supplier invoice is linked to the GRN and the GRN closed. The supplier invoice will remain open until the invoice has been paid.

**• Source documents**

The purchase order and GRN are matched to the supplier invoice to ensure that the organisation is billed for items actually ordered and received. The supplier invoice will include the supplier details; the organisation's details and address; the payment date; for each inventory/service item, a description, unit size, quantity, amount per unit, item discount (if applicable), total amount per item; invoice discount (if applicable); VAT (if applicable); total invoice amount; any messages from the supplier; and so forth. If the organisation is a registered VAT vendor, it can claim VAT on all valid tax invoices received from its suppliers who are registered VAT vendors. The tax invoice must include information such as the words “Tax invoice” and the supplier’s VAT number, the organisation's VAT number, if the value of the invoice is more than R3 000, and so on. You will learn in your taxation studies about all the requirements for a valid tax invoice.

**• Accounting transactions**

The supplier invoice has now been received and the accounting transactions can be recorded. The liability will now “move” from the GRN accrual account to the supplier’s trade payables subledger account.

*Price differences* between the purchase order and/or GRN and the actual supplier invoice, as well as any *trade discount* not previously acknowledged, must now also be recorded. IFRSs requires that inventory should be valued at the lowest of cost and net realisable value. Price differences and trade discounts will therefore be recorded by adjusting the *inventory value* – that is, increasing or decreasing the inventory amount by the price difference and/or trade discount amount.
The purchase journal will be used to capture the purchase transactions. The purchase journal will result in the following accounting entries:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inventory purchased on credit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(No price and/or trade discount differences between GRN and purchase invoice)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td>BS – liability</td>
<td>Ct</td>
<td>Supplier invoice amount including VAT</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Supplier invoice VAT amount</td>
</tr>
<tr>
<td>GRN accrual</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Original GRN accrual amount excluding VAT</td>
</tr>
<tr>
<td><strong>Inventory purchased on credit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(Price difference and/or trade discount not previously recorded on GRN)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td>BS – liability</td>
<td>Ct</td>
<td>Supplier invoice amount including VAT (net of trade discount and price differences)</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Supplier invoice VAT amount</td>
</tr>
<tr>
<td>GRN accrual</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Original GRN accrual amount excluding VAT</td>
</tr>
<tr>
<td>Inventory</td>
<td>BS – asset</td>
<td>Dt/Ct</td>
<td>Trade discount and price difference amount (excluding VAT)</td>
</tr>
<tr>
<td><strong>Inventory purchased on cash</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(No price and/or trade discount differences between GRN and purchase invoice)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Supplier invoice amount including VAT</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Supplier invoice VAT amount</td>
</tr>
<tr>
<td>GRN accrual</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Original GRN accrual amount excluding VAT</td>
</tr>
<tr>
<td><strong>Inventory purchased on cash</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(Price difference and/or trade discount not previously recorded on GRN)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Supplier invoice amount including VAT (net of trade discount and price differences)</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Supplier invoice VAT amount</td>
</tr>
<tr>
<td>GRN accrual</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Original GRN accrual amount excluding VAT</td>
</tr>
<tr>
<td>Inventory</td>
<td>BS – asset</td>
<td>Dt/Ct</td>
<td>Trade discount and price difference amount (excluding VAT)</td>
</tr>
</tbody>
</table>
### Noninventory items and services purchased on credit

| Trade payables | BS – liability | Ct | Supplier invoice amount including VAT (net of any trade discount or price difference) |
| VAT Expense    | BS – liability | Dt | Supplier invoice VAT amount |
|               | IS – expense   | Dt | Supplier invoice amount excluding VAT (net of any trade discount or price difference) |

### Non – inventory and service purchased on cash

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/ Income statement (IS)</th>
<th>Debit (Dt)/ Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Supplier invoice amount including VAT (net of any trade discount)</td>
</tr>
<tr>
<td>VAT Expense</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Supplier invoice VAT amount</td>
</tr>
<tr>
<td></td>
<td>IS – expense</td>
<td>Dt</td>
<td>Supplier invoice amount excluding VAT (net of any trade discount)</td>
</tr>
</tbody>
</table>

- **Inventory quantities**

There is no influence on the inventory quantities because these items were taken into stock on delivery.

- **AIS database files**

Some of the database files accessed, updated or modified will include the following:

- the supplier master file: supplier details (ie code, name, address, year to date purchases, outstanding balance, etc)
- the inventory master file: inventory item codes, inventory description, unit size, price per unit, year to date purchases, etc
- the purchase transaction file: supplier invoice number, invoice date, payment due date, supplier code, inventory code, inventory description, quantity, price per unit, VAT amount, discount amount, line item amount, total amount, etc
- the VAT reference file: VAT % per tax type
- the VAT transaction file: VAT transactions
- several general ledger master files: storing new general ledger account balances
- the general ledger transaction files: details of each transaction recorded in the general ledger
- the GRN transaction file: where a GRN existed, the GRN transaction file will be accessed for all the above-mentioned information. Changes will be made where necessary, and the date added. The GRN transaction file will be updated to reflect the new status and so on.

- **AIS reports**

A variety of reports, including the following, can be printed:
- *purchase analysis reports* which can be extracted, based on purchases per supplier, document type, journal, etc
- *invoices due reports* indicating unpaid invoices that are due, based on the supplier payment terms
- *supplier statements, supplier age analysis and supplier detailed ledger* showing all supplier invoices recorded
- *VAT reports* showing the input VAT for all purchase transactions
- *general ledger accounts details* showing the accounting entries for the selected general ledger accounts
Activity 9.1

Yummy Sweets (Pty) Ltd received the following supplier invoice from Chocolate Deluxe Ltd, from whom the company always buys on credit. Yummy uses a perpetual inventory system.

<table>
<thead>
<tr>
<th>Item description</th>
<th>Unit</th>
<th>Code</th>
<th>Qty</th>
<th>Price per unit</th>
<th>Tax %</th>
<th>Net amount excl. VAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swiss milk</td>
<td>100g</td>
<td>SWM100</td>
<td>200</td>
<td>R 8.00</td>
<td>14%</td>
<td>R 1,600.00</td>
</tr>
<tr>
<td>Swiss white</td>
<td>150g</td>
<td>SWW150</td>
<td>150</td>
<td>R 12.00</td>
<td>14%</td>
<td>R 1,800.00</td>
</tr>
<tr>
<td>Belgium dark</td>
<td>200g</td>
<td>BED200</td>
<td>300</td>
<td>R 20.00</td>
<td>14%</td>
<td>R 6,000.00</td>
</tr>
<tr>
<td>Belgium milk</td>
<td>100g</td>
<td>BEM100</td>
<td>80</td>
<td>R 15.00</td>
<td>14%</td>
<td>R 1,200.00</td>
</tr>
<tr>
<td><strong>Sub total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>R 10,600.00</strong></td>
</tr>
<tr>
<td><strong>Discount @ 2.5%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>R 265.00</strong></td>
</tr>
<tr>
<td><strong>Total Amount excluding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>R 10,335.00</strong></td>
</tr>
<tr>
<td><strong>VAT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>R 1,446.90</strong></td>
</tr>
<tr>
<td><strong>Total Amount including</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>R 11,781.90</strong></td>
</tr>
</tbody>
</table>

Refer to the supplier invoice. All the information on the supplier invoice and GRN agrees except for inventory item BED200, where the unit price has increased from R18 to R20 and the 2.5% discount that was granted on the whole supplier invoice, but did not reflect on the purchase order or GRN.

Yummy Sweets has separate inventory general ledger accounts for Swiss and Belgium chocolates referred to as “Inventory – Swiss” and “Inventory – Belgium” respectively.

(a) Draw the table below. Use this table to record the accounting entries into the general ledger file for the supplier invoice. You should show all the applicable accounting entries. (The accounting entries can be recorded in summary form or in detail.)

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/Credit</th>
<th>Amount</th>
</tr>
</thead>
</table>
**Hint:** Draw the T-accounts, as rough work, to ensure that the debits and credits are correct.

(b) Identify the two (2) source documents to which the supplier invoice must be matched, to ensure that the organisation is only billed for items ordered and received?

(c) Refer to the supplier invoice above. Name three (3) AIS reports that can be used to verify that this transaction was recorded correctly in the AIS.

(d) Identify the movement in inventory quantities in the processing of the supplier invoice.

---

**Feedback on activity 9.1**

(a) Since the VAT numbers of both Yummy and the supplier, Chocolate Deluxe, are reflected on the tax invoice, we can assume they are both VAT vendors.

The suggested solution below shows the T-accounts (rough work) in detail and the summarised information in the journal. Both methods are acceptable (ie. detailed or summarised information). Use the method you find the easiest.

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/ Credit</th>
<th>Amount</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade payables</td>
<td>Ct</td>
<td>R11,781.90</td>
<td>Total invoice amount including VAT.</td>
</tr>
<tr>
<td>VAT</td>
<td>Dt</td>
<td>R1,446.90</td>
<td>VAT amount as per supplier invoice.</td>
</tr>
<tr>
<td>GRN accrual</td>
<td>Dt</td>
<td>R10,000.00</td>
<td>The original GRN accrual amount. Remember that the 2.5% invoice discount and price difference were not on the GRN and were therefore not accrued. Also, the GRN accrual amount always excludes VAT. Start at the subtotal of R10,600 and adjust for the R2 price increase (i.e. 300 * R2 = R600 R10,600 – R600 = R 10,000.00) We did not adjust the discount because it was not included in the subtotal and was also not on the GRN.</td>
</tr>
<tr>
<td>Inventory – Swiss</td>
<td>Ct</td>
<td>R85.00</td>
<td>The Swiss inventory amount must be adjusted for the trade discount (2.5%) which was not reflected on the original GRN and purchase order. R1,600 + R1,800 = R3,400 R3,400 * 2.5% = R85.00 The inventory account is credited because the cost price decreases. <strong>For VAT vendors, these amounts must always be exclusive of VAT as inventory is valued exclusive of VAT.</strong></td>
</tr>
</tbody>
</table>
### General ledger description

<table>
<thead>
<tr>
<th>Debit/ Credit</th>
<th>Amount</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory – Belgium</td>
<td>DT</td>
<td>R420.00</td>
</tr>
</tbody>
</table>

### T-accounts (rough work)

<table>
<thead>
<tr>
<th>DT</th>
<th>CT</th>
<th>DT</th>
<th>CT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trade payables (TP)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWM100</td>
<td>R40.00</td>
<td>SWM100</td>
<td>R1,600.00</td>
</tr>
<tr>
<td>SWW150</td>
<td>R45.00</td>
<td>SWW150</td>
<td>R1,800.00</td>
</tr>
<tr>
<td>BED200</td>
<td>R250.00</td>
<td>BED200</td>
<td>R5,400.00</td>
</tr>
<tr>
<td>BEM100</td>
<td>R30.00</td>
<td>BEM100</td>
<td>R1,200.00</td>
</tr>
<tr>
<td>SWM100</td>
<td>R5.60</td>
<td>SWM100</td>
<td>VAT</td>
</tr>
<tr>
<td>SWW150</td>
<td>R6.10</td>
<td>SWW150</td>
<td>VAT</td>
</tr>
<tr>
<td>BED200</td>
<td>R21.00</td>
<td>BED200</td>
<td>VAT</td>
</tr>
<tr>
<td>BEM100</td>
<td>R4.20</td>
<td>BEM100</td>
<td>VAT</td>
</tr>
<tr>
<td><strong>Inventory - Belgium (Inv - Belg)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BED200</td>
<td>TP (price diff)</td>
<td>R600.00</td>
<td>BED200</td>
</tr>
<tr>
<td>BEM100</td>
<td>TP (discount)</td>
<td>R30.00</td>
<td></td>
</tr>
<tr>
<td>Balance c/d</td>
<td>R13,781.90</td>
<td></td>
<td>Balance c/d</td>
</tr>
<tr>
<td><strong>Inventory - Swiss (Inv - Swiss)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWM100</td>
<td>TP (discount)</td>
<td>R40.00</td>
<td>SWM100</td>
</tr>
<tr>
<td>SWW150</td>
<td>TP (discount)</td>
<td>R45.00</td>
<td>SWW150</td>
</tr>
<tr>
<td>BED200</td>
<td>TP (discount)</td>
<td>R21.00</td>
<td>BED200</td>
</tr>
<tr>
<td>BEM100</td>
<td>TP (discount)</td>
<td>R30.00</td>
<td>BEM100</td>
</tr>
<tr>
<td>Balance c/d</td>
<td>R1,446.90</td>
<td></td>
<td>Balance c/d</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VAT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SWM100</td>
<td>TP (discount)</td>
</tr>
<tr>
<td>SWW150</td>
<td>TP (discount)</td>
</tr>
<tr>
<td>BED200</td>
<td>TP (discount)</td>
</tr>
<tr>
<td>BEM100</td>
<td>TP (discount)</td>
</tr>
<tr>
<td>Balance c/d</td>
<td>R1,446.90</td>
</tr>
</tbody>
</table>
(b) Purchase order and GRN
(c) Any three (3):
  – *purchase analysis reports*
  – supplier age analysis
  – supplier detail ledger
  – VAT reports
  – general ledger accounts details
(d) There is no influence on inventory quantities.

3 Inventory returned

There are numerous reasons why the organisation would want to return inventory items that have already been invoiced by the supplier and the supplier invoice has already been captured in the AIS. The items may have been defective or may have been damaged during shipment, and these defects and damage were only discovered after the items had been unpacked. The incorrect items may have been delivered or possibly too many/few items were delivered. The latter two reasons should have been picked up during the delivery process, and the items returned and the delivery note adjusted. We are only going to discuss the process in which the supplier invoice had already been processed in the AIS before the inventory items were returned.

<table>
<thead>
<tr>
<th>Process</th>
<th>Supplier activities</th>
<th>Organisational activities</th>
<th>Source document</th>
<th>Accounting transaction</th>
<th>Effect on inventory quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory returned</td>
<td></td>
<td>Return defect/</td>
<td>Debit note</td>
<td>* Trade payables (DT)</td>
<td>* Qty on hand (( - ))</td>
</tr>
<tr>
<td></td>
<td>Receive returned</td>
<td>unwanted items</td>
<td></td>
<td>* VAT (CT)</td>
<td>* Qty available (( - ))</td>
</tr>
<tr>
<td></td>
<td>items and give</td>
<td></td>
<td></td>
<td>* Inventory (CT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>credit to the</td>
<td></td>
<td></td>
<td>Non-inventory:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>organisation</td>
<td></td>
<td></td>
<td>* Trade payables (DT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* VAT (CT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Expenses (CT)</td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 9.2: Generic return process**

Refer to figure 9.2 throughout the following discussion.

- **Organisational activities**

  The defect/unwanted inventory items are returned to the supplier and a credit note received from the supplier. The supplier’s *credit note* received is used to create a return *debit note* in the AIS and the return debit note is linked to the corresponding AIS supplier invoice. The supplier invoice and linked return debit note will remain open until payment has been made.

- **Supplier activities**

  The supplier receives the items and gives the organisation credit for the items received by issuing a credit note.
- **Source document**

The *debit note* must be matched to the credit note received from the supplier. The *debit note* will, over and above the information usually reflected on a supplier invoice, also indicate the supplier invoice number it relates to. Bear in mind that if trade discount was granted on the original supplier invoice, the same discount, if applicable on the returned items, should also be captured on the return debit note.

A debit note is generally used where items are returned to a supplier. However, a debit note can also be used to correct incorrectly captured supplier invoices or supplier invoices captured according to the source document received but which did not, say, include the agreed invoice or line item discount. When performing supplier reconciliation, the debit note must be matched to the credit note received from the supplier.

- **Accounting transactions**

Remember that if any trade discount was applicable on the returned items, this discount would have been recorded by netting it off against the inventory and trade payables amounts. The debit note accounting entries must therefore follow the same principle as the original transaction that is, any trade discount must be netted off (deducted from) inventory and trade payables amounts.

The accounting entries are recorded when the risk of the inventory items is transferred back to the supplier (ie the supplier receives the returned items).

The debit note will result in the following accounting entries where a perpetual inventory system is used:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/ Income statement (IS)</th>
<th>Debit (Dt)/ Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade payables</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Amount including VAT (net of any trade discount received on the inventory returned)</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Ct</td>
<td>VAT amount (based on the inventory amount net of any trade discount received on the inventory returned)</td>
</tr>
<tr>
<td>Inventory</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Amount excluding VAT (net of any trade discount received on the inventory returned)</td>
</tr>
</tbody>
</table>

**Noninventory purchases on credit**

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/ Income statement (IS)</th>
<th>Debit (Dt)/ Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade payables</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Amount including VAT (net of any trade discount received)</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Ct</td>
<td>VAT amount (based on the excluding VAT amount)</td>
</tr>
<tr>
<td>Expense</td>
<td>IS – expense</td>
<td>Ct</td>
<td>Amount excluding VAT (net of any trade discount received)</td>
</tr>
</tbody>
</table>
NOTE:
The above transactions are the exact reversal of the purchase transaction. All the debits become credits. Although not indicated above, you can apply the same principle to the return of cash purchased items.

Although the likelihood is slim, there is a possibility that payment was made to the supplier for credit sales, before the items were returned. If settlement discount was received on the payment of the items which have now been returned, the settlement discount must now also be reversed. The reversal of the discount will have to be done through the general journal because the VAT effect must be recorded separately. The journal will be as follows:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement discount reversed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td>BS – liability</td>
<td>Ct</td>
<td>Settlement discount amount including VAT</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Dt</td>
<td>VAT amount</td>
</tr>
<tr>
<td>Settlement discount received</td>
<td>IS – revenue</td>
<td>Dt</td>
<td>Settlement discount amount excluding VAT</td>
</tr>
</tbody>
</table>

- **Inventory quantities**

Because the items were returned to the supplier, the *quantity on hand* and the *quantity available* will decrease.

- **AIS database files**

Some of the database files accessed, updated or modified will include the following:

- the *supplier master file*: supplier details (ie code, name, address, year-to-date purchases, year-to-date debit notes, outstanding balance, etc)
- the *inventory master file*: inventory item codes, inventory description, unit size, price per unit, year-to-date purchases, year-to-date returns etc
- the *debit note transaction file*: debit note number, supplier invoice number, debit note date, supplier code, inventory code, inventory description, quantity, price per unit, VAT amount, discount amount, line item amount, total amount, etc
- the *VAT reference file*: VAT % per tax type
- the *VAT transaction file*: VAT transactions
- the *several general ledger master files*: storing general ledger account balances
- the *general ledger transaction files*: details of each transaction recorded in the general ledger
- the *purchase transaction file*: where a supplier invoice existed, the purchase transaction file will be accessed for all the above-mentioned information. Changes will be made where necessary and the date added. The purchase transaction file will be updated to reflect the new status and so forth.
- **AIS reports**

A variety of reports, including the following, can be printed:

- *debit note analysis reports* that can be extracted, based on debit notes per supplier, item and so on
- *supplier statements, supplier age analysis and supplier detailed ledger*, which will include the debit note
- *VAT reports* showing the output VAT for all debit note transactions
- *general ledger accounts details* showing the accounting entries for the selected general ledger accounts

## Activity 9.2

Yummy Sweets (Pty) Ltd received the following supplier invoice from Chocolate Deluxe Ltd from whom they always buy on credit. Yummy uses a perpetual inventory system.

<table>
<thead>
<tr>
<th>Item description</th>
<th>Unit</th>
<th>Code</th>
<th>Qty</th>
<th>Price per unit</th>
<th>Tax %</th>
<th>Net amount excl. VAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swiss milk</td>
<td>100g</td>
<td>SWM100</td>
<td>200</td>
<td>R 8.00</td>
<td>14%</td>
<td>R 1,600.00</td>
</tr>
<tr>
<td>Swiss white</td>
<td>150g</td>
<td>SWW150</td>
<td>150</td>
<td>R 12.00</td>
<td>14%</td>
<td>R 1,800.00</td>
</tr>
<tr>
<td>Belgium dark</td>
<td>200g</td>
<td>BED200</td>
<td>300</td>
<td>R 20.00</td>
<td>14%</td>
<td>R 6,000.00</td>
</tr>
<tr>
<td>Belgium milk</td>
<td>100g</td>
<td>BEM100</td>
<td>80</td>
<td>R 15.00</td>
<td>14%</td>
<td>R 1,200.00</td>
</tr>
</tbody>
</table>

| Sub total           |      |        |     |                |       | R 10,600.00          |
| Discount @ 2.5%     |      |        |     |                |       | R 265.00             |
| Total Amount excluding |    |        |     |                |       | R 10,335.00          |
| VAT                 |      |        |     |                |       | R 1,446.90           |
| Total Amount including |    |        |     |                |       | R 11,781.90          |
Refer to the above supplier invoice. Yummy Sweets has returned 50 units of Swiss white (150 g), which were invoiced but not yet paid by Yummy Sweets. Yummy Sweets has separate inventory accounts for the Swiss and Belgium chocolates.

Draw the table below. Use this table to record the accounting entries into the general ledger master file for the return of the Swiss white (150 g).

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/Credit</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hint:** Draw the T-accounts, as rough work, to ensure that the debits and credits are correct.

**Feedback on activity 9.2**

<table>
<thead>
<tr>
<th>General ledger description</th>
<th>Debit/Credit</th>
<th>Amount</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory – Swiss</td>
<td>Ct</td>
<td>R585.00</td>
<td>Total price excluding VAT: 50 units * R12 = R600 (excl VAT) Deduct 2.5% trade discount: R600 – (R600 * 2.5%) = R585</td>
</tr>
<tr>
<td>VAT</td>
<td>Ct</td>
<td>R81.90</td>
<td>Return * VAT %: R585 * 14% = R81.90</td>
</tr>
<tr>
<td>Trade payables</td>
<td>Dt</td>
<td>R666.90</td>
<td>Total returned amount including VAT R585 + (R585 * 14%) = R666.90</td>
</tr>
</tbody>
</table>

**T- accounts (rough work)**

| Dt | Accounts payable - Creditors (AP) | Ct | | | | Dt | Inventory - Swiss (Inv - Swiss) | Ct |
|----|----------------------------------|----| | | | | | | |
|    | Accounts payable - Creditors (AP) |     | | | | | | |
| SWW150 | Inv - Swiss                      |     | R 585.00 |     | | | SWW150 | AP | R 585.00 |     | |
| SWW150 | VAT                             |     | R 81.90  |     | | | |     | VAT | |
|       |                                  |     | R 666.90 |     | | | |     | SWW150 | AP | R 81.90 |     |
4 Payments

The organisation will normally pay the supplier via cheque or EFT. Nowadays, EFTs are the preferred method of payment because the costs involved are lower and there is less fraud risk.

![Figure 9.3: Generic payment process]

Refer to figure 9.3 throughout the following discussion.

- **Supplier activities**

  The supplier will send a statement with a payment remittance advice monthly or more frequently to the organisation. The statements will indicate the ageing of the outstanding balances and other information based on the supplier processing method (open item or balance forward which will be explained in topic 6). After the payment and the remittance advice have been received, the supplier will update his or her records.

- **Organisational activities**

  Proper controls to ensure timely payments are vital to ensure that interest is not charged on overdue accounts and that the organisation's credit record remains untainted.

  The AIS will automatically identify invoices due based on each supplier's payment terms and/or the payment due date captured on the supplier invoice. Payment can be made in cash (very high risk), cheque or EFT. Only persons with the applicable mandates may authorise these payments and most organisations' internal controls require payments to be authorised by two persons. The payments are captured from the petty cash voucher (cash payments), cheque stub or EFT payment list source documents in the AIS payment cashbook, and the amount allocated against the supplier being paid. If the supplier transactions are processed using open item processing (see topic 6), then the amount will not only be matched to the supplier, but also to the specific supplier invoices and return debit notes that are being paid. When matched, the supplier invoices and return debit notes are closed. The payments will be open and will reflect as unreconciled on the bank reconciliation until the payment has been matched to the bank statement and reconciled.
• **Source document**

Proper internal controls necessitate that any payment transaction should not be captured using the bank statement as the source document, except for bank-generated transactions such as interest paid, bank charges and so forth. The *petty cash voucher* (cash payments), *cheque stub* or *EFT payment list* should be used as the source document.

• **Accounting transactions**

No VAT transaction is recorded with the payment because the VAT entries were recorded during the recording of the supplier invoice. As agreed with the supplier and if the payment qualifies for it, *settlement discount* (also called *early payment discount*), should be received and the accounting entries recorded. If the organisation and the supplier are VAT vendors, the discount transaction recorded must account for VAT against the VAT rate applicable on the linked supplier invoices and return debit notes.

Most organisations use a *settlement discount received* general ledger account to record settlement discount because it enables the organisation to easily see how much discount was received in a certain period. VAT rules also require that the settlement discount cannot be netted off against input tax and must be disclosed gross – hence a separate settlement discount account would be more appropriate. However, IFRSs disclosure requirements stipulate that the settlement discount received should be netted off against the cost of sales. We should therefore remember to include the settlement discount received general ledger account in the same AIS report writer category as cost of sales. As an alternative, we could also journalise the settlement discount received balance to the cost of sales account at period end.

The *payments cashbook journal* is used to capture the following accounting entries:

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/Income statement (IS)</th>
<th>Debit (Dt)/Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Payment for credit purchases</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Amount including VAT</td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
<td>Ct</td>
<td>Amount including VAT</td>
</tr>
<tr>
<td><strong>Settlement discount received (if applicable)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td>BS – liability</td>
<td>Dt</td>
<td>Discount amount including VAT</td>
</tr>
<tr>
<td>VAT</td>
<td>BS – liability</td>
<td>Ct</td>
<td>VAT amount</td>
</tr>
<tr>
<td>Settlement discount received</td>
<td>IS – income</td>
<td>Ct</td>
<td>Discount amount excluding VAT</td>
</tr>
</tbody>
</table>

• **Inventory quantities**

There is no influence on inventory quantities because payment is made.
- **AIS database files**

Some of the database files accessed, updated or modified will include the following:

- the **supplier master file**: supplier details (ie code, name, address, year to date payments, outstanding balance, etc)
- the **payments cashbook transaction file**: reference number, date, bank amount, supplier code, general ledger account number, etc
- the **open invoice transaction file**: purchases from invoice transaction files that have not yet been matched to a payment
- the **open debit note transaction file**: debit notes from debit note transaction files that have not yet been matched to a payment
- **several general ledger master files**: storing general ledger account balances
- the **general ledger transaction files**: details of each transaction recorded in the general ledger

- **AIS reports**

A variety of reports, including the following, can be printed:

- a **payment cashbook detail report** showing the cashbook payment transactions for a selected period
- **supplier statements, supplier age analysis and supplier detail ledger**, which will include payments made
- **general ledger accounts details** showing the accounting entries for the applicable general ledger accounts
- **unmatched/unpaid invoices and debit notes** showing details of invoices and debit notes not yet paid or matched to a payment made

5 **Summary**

In this study unit, we investigated the processing of acquisition and payment transactions in an AIS. We learnt which documents are used, which database files are accessed, updated or modified, which reports that can be printed and some of the basic underlying accounting entries for purchase orders, inventory received, invoices received, inventory returned and payments.

In the next study unit, we will investigate the inventory and production cycle.
**Self-assessment activity**

After working through this study unit, you should be able to answer the following questions:

(a) List the processes that form part of the acquisition cycle.

(b) For each process in the acquisition cycle, describe the activities performed by both the organisation and supplier.

(c) For each process in the acquisition cycle, name and describe the source documents used.

(d) Identify and record the accounting entries applicable to each of the acquisition processes.

(e) Identify the movement in inventory quantities for each of the acquisition processes.

(f) For each process in the acquisition cycle, list the database files accessed, updated or modified and name some of the information contained in the database file.

(g) For each process in the acquisition cycle, list the AIS reports that can be generated.

(h) Describe the activities performed by both the organisation and supplier in the payment process.

(i) Name and describe the source documents used in the payment cycle.

(j) Identify and record the accounting entries applicable to the payment process.

(k) Identify the movement in inventory quantities for the payment process.

(l) For the payments process, list the database files accessed, updated or modified and name some of the information contained in the database file.

(m) For the payments process, list the AIS reports that can be generated.

(n) Describe the activities performed by both the organisation and supplier in the inventory returned process.

(o) Name and describe the source documents used in the inventory returned process.

(p) Identify and record the accounting entries applicable to the inventory returned process.

(q) Identify the movement in inventory quantities in the inventory returned processes.

(r) For the inventory returned process, list the database files accessed, updated or modified and name some of the information contained in these database files.

(s) For the inventory returned process, list the AIS reports that can be generated.
Inventory and production cycle

In this study unit

**Inventory and production cycle**

- **Inventory**
- **Production**
  - Product design
  - Production planning and control
    - Manufacturing
    - Costing
1 Introduction

In the previous study unit, we learnt how the organisation's acquisitions and payments are recorded in an AIS. In this study unit, we will focus on some of the information systems used in the production and management of inventory. We will also look at the influence of the inventory and production cycle on the AIS. We will not discuss the audit environment and controls relating to this cycle because you will learn about these in auditing. We will also not deal with the IFRSs requirements in detail because they will be covered in financial accounting.

The inventory bought and sold by retail organisations is mostly managed and controlled with the aid of information systems. Manufacturing organisations buy raw materials and convert these materials into finished goods. Raw materials inventory and finished goods inventory are also managed and controlled using information systems. Owing to the advancement in technology, many large organisations’ production processes are operated by information systems.

2 Inventory

Inventory is affected by the revenue and receipt cycle (see study unit 8) where inventory items are sold, the acquisition and payments cycle (see study unit 9) where inventory items are bought, and the production cycle (see section 3) where inventory items are manufactured.

Inventory can be stored in different warehouses and sold from different locations (ie stores/branches). Most AISs allow for the capture of different location data by capturing the store location and linking it to the inventory items and/or capturing the warehouse locations. Organisations with extensive warehouse and store locations (also called branches) will use specialised warehouse information systems that can track each inventory item's movement between different warehouses and/or stores. Other organisations' warehouse information systems may only record inventory movement in the individual branches and they are not integrated with other branches and/or warehouse information systems. Warehouse information systems are usually a module in an Enterprise resource planning (ERP) system, which you learnt about in AIN1501, but can also be a stand-alone software program.

Activity 10.1

Reflect on your own experience of a warehouse information system in action.

- Have you ever asked a shop assistant to enquire whether the item you are looking for is possibly available at another branch of the store?
  - Did the shop assistant call the other branch to find out or did he or she check the inventory quantities on the computer system?
  - If the shop assistant needed to call, could the branch you were at, at least check its own stores inventory quantities online?

- Reflect on how topic 1 (databases) links to warehouse information systems. Consider the following:
  - Would you recommend using a centralised or distributed database?
  - What would the field name be for the primary key?
The procedures and controls surrounding inventory items will be discussed in auditing, the different valuation methods for inventory in management accounting and the recording of these transactions will be dealt with in financial accounting. The movement of inventory items is recorded in the warehouse system and the data can be linked directly to the AIS (integrated system) or reports from the warehouse information systems can printed and then, if necessary, recorded in the AIS.

The influence of the other transaction cycles on AIS inventory was discussed in the applicable cycles (see study units 8 and 9)

3 Production

Production is unique to manufacturing type organisations, in contrast to service organisations, where there is no inventory to sell, and in retail organisations, where the finished inventory item is bought from a supplier during the acquisition and payments cycle (see study unit 9).

In the production cycle, also referred to as the conversion cycle, raw material inventory purchased during the acquisition and payments cycle (see study unit 9), is converted into finished goods inventory. The procedures and internal controls applicable to this cycle will be examined in your auditing studies, while in your management accounting studies you will learn different methods of valuing inventory and costing of finished goods. In this module, we will discuss how the production cycle is interlinked to the AIS and some of the information systems used in the manufacturing process.

3.1 Product design

The first step in the conversion cycle is the design of the products to be manufactured. This process may involve a number of specialists and software to support the design process such as computer-aided design (CAD) and computer-aided engineering (CAE).

3.2 Production planning and control

Each finished product is manufactured using different raw materials.

The bill of materials (BOM) specifies, for each finished goods inventory item, the type and quantities of raw materials needed in the manufacturing process.

More advanced AISs allow for a manufacturing module where the BOM information is captured.

Before the organisation can start the physical product manufacturing, they need to plan for and schedule the manufacturing, including determining which products (referred to as the product mix) to manufacture, the quantity required, the timing of production and raw materials acquisition and so on. Production planning will take a number of factors into account such as customer demand, labour and machine capacity and distribution and storage constraints.

Different methods can be used to determine the product mix and quantities required such as previous sales and forecast customer demand, and AIS can help with this by providing historical information on the quantities sold. You will learn more about calculating required product mix and quantities in your management accounting studies.

Based on the planned production, a master production schedule (ie a detailed plan of which product must be manufactured, when and the quantity involved) is created.
The BOM, the master production schedule, raw material and work-in-process (WIP) quantities on hand and on order are used to determine the raw material quantities needed and the timing of the purchases. Material resource planning (MRP) software is specialised planning and control software that can help with the process of determining the raw material quantities needed and the timing of the purchases. The AIS acquisition process of raw materials was explained in study unit 9.

**Manufacturing resource planning (MRP II)** software is an extension of MRP software and is used for short- and long-term planning and control of the manufacturing process. It integrates all the aspects (people, materials, machines, money, etc) of the manufacturing process.

MRP II includes determining production needs, the master production schedule, BOM, MRP, capacity planning for machines and labour, managing raw materials and finished goods inventory levels, job/product costing and so forth. MRP II systems are similar to ERP systems, but with the difference that MRP IIs are specifically focused on manufacturing organisations, while ERPs are used by all types of organisations. The MRP II system will provide the necessary information to record the change in inventory quantities and the related costs in the AIS.

### 3.3 Manufacturing

After the planning has been done and the organisation has acquired the necessary raw materials, manufacturing can commence according to the master production schedule. Nowadays, **computer-aided manufacturing (CAM)** and **computer-integrated manufacturing (CIM)** software is used in the manufacturing process.

**CAM** controls and coordinates all the machines used in the manufacturing process such as conveyor systems, cutting or welding machines and so forth.

CIM encompasses more than CAM.

**CIM** is the automation and integration of the complete manufacturing process by using computers to control and/or execute the process from product design right through manufacturing, to quality control, storage of raw materials, WIP and finished goods, and ultimately, the shipment of the finished products.
Some of the steps can be performed by humans, but controlled by the CIM computers. Some of the subsystems found in CIM include CAD, CAE, MRP, MRPII and CAM.

The question that can now be asked is how does the AIS fit into the manufacturing process? Business activities, including the manufacturing process, will be recorded in the AIS. These activities can be recorded in detail or in summary form.

As products are manufactured, the raw materials inventory on hand quantities will decrease and WIP quantities on hand will increase. As the products are completed, the WIP quantities on hand will decrease and the finished goods on hand and inventory quantities available for sale will increase. These changes in inventory quantities will be captured in the AIS at an amount determined during costing.

The effect on inventory quantities is summarised below:

<table>
<thead>
<tr>
<th>Process</th>
<th>Inventory type</th>
<th>Effect on quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase raw material</td>
<td>Raw material</td>
<td>Increase</td>
</tr>
<tr>
<td>Manufacture</td>
<td>Raw material</td>
<td>Decrease</td>
</tr>
<tr>
<td></td>
<td>WIP</td>
<td>Increase</td>
</tr>
<tr>
<td>Finished goods</td>
<td>WIP</td>
<td>Decrease</td>
</tr>
<tr>
<td></td>
<td>Finished goods</td>
<td>Increase</td>
</tr>
<tr>
<td>Sale of finished goods</td>
<td>Finished goods</td>
<td>Decrease</td>
</tr>
</tbody>
</table>

3.4 Costing

There are different methods of calculating the cost of WIP and finished goods. Some of the costing methods that can be used include standard costing and activity-based costing. You will learn more about the different costing techniques in your management accounting studies.

Some organisations use a simplistic method to calculate the finished products’ costs by utilising the information in the BOM – that is, the value of a finished goods item will be the total of the different raw material components’ cost as indicated in the BOM. The raw materials cost is based on basic costing methods such as average cost or last-in-first-out.

However, the costing method used must not be determined by the AIS capabilities – it should be the most appropriate method for the organisation’s business and adhere to IFRSs requirements. Whatever the method of determining costs, the costs must be recorded in the AIS. We will need to use our accounting knowledge to adjust, if necessary, the accounting entries for our organisation’s specific costing methods and the amount of detail required by the organisation. Simplistically, the accounting entries can reflect as follows:
<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/ Income statement (IS)</th>
<th>Debit (Dt)/ Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory – WIP</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Amount based on selected costing method (excl VAT)</td>
</tr>
<tr>
<td>Inventory – raw materials</td>
<td>BS – asset</td>
<td>Ct</td>
<td></td>
</tr>
<tr>
<td>Finished goods</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Amount based on selected costing method (excl VAT)</td>
</tr>
<tr>
<td>Inventory – WIP</td>
<td>BS – asset</td>
<td>Ct</td>
<td></td>
</tr>
</tbody>
</table>

- **AIS database files**

Some of the AIS database files accessed, updated or modified by the production process are as follows:

- the *bill of material master file*: per finished good item, the component code, description quantity needed, cost, etc
- the *inventory master file*: inventory item codes, inventory description, unit size, quantity on hand, quantity available, year-to-date purchases, year-to-date production, cost prices, etc
- the *inventory movement transaction file*: inventory code, date, quantity issued within the production process, etc
- several *general ledger master files*: storing new general ledger account balances
- the *general ledger transaction files*: details of each transaction recorded in the general ledger

- **AIS reports**

A variety of reports, including the following, can be printed:

- *Inventory activity reports* will show all activities on an inventory item, including the movement of items from raw materials to WIP to ultimately finished goods.
- *Inventory quantity reports* will show inventory quantities on order, available and on hand.
- *General ledger accounts details* reports will show the accounting entries for the applicable general ledger accounts.

4 **Summary**

In this study unit, we learnt about some of the information systems used in the production and management of inventory. We also looked at the influence of the inventory and production cycle on the AIS. We focused primarily on the interaction with the AIS. In the next study unit, we deal with the human side of the organisation and investigate the activities relating to payroll and personnel.
Self-assessment activity

After working through this study unit, you should be able to answer the following questions:

(a) List the processes in the production cycle.
(b) Name two types of software that can be used in the production design process.
(c) Explain the following concepts: bill of materials, master production schedule, material resource planning (MRP) software and manufacturing resource planning (MRP II) software.
(d) Explain the difference between computer-aided manufacturing (CAM) and computer-integrated manufacturing (CIM).
(e) Explain how the AIS fits into the manufacturing process.
(f) Describe how some AISs determine the cost of finished products.
(g) Indicate the simplistic accounting entries applicable in costing of the inventory.
(h) For the costing process, list the database files accessed, updated or modified and name some of the information contained in the database file.
(i) For the costing process, list the AIS reports that can be used and indicate what information they will contain.

Further reading

If you are interested in further reading, the following authors discuss information systems used in the production and management of inventory, extensively:

- Boczko, T. 2007
- Dull, RB, Gelines, UJ & Wheeler, PR. 2010
- Hall, JA. 2011
- Romney, MB & Steinbart, PJ. 2009
- Stair, R, Reynolds, G & Chesney, T. 2008
1 Introduction

In the previous study unit, we focused on some of the information systems used in the production and management of inventory. In this study unit, we will learn about information systems used in the payroll and personnel cycle. In the payroll cycle, we will investigate the source documents used, database files accessed, updated or modified the reports printed as well as some of the basic accounting entries.

The payroll and personnel cycle entails all activities revolving around an organisation's employees and their management. These activities will include the recruitment and hiring of personnel, personnel training, the movement of personnel in the organisation, attendance management, performance management, voluntary (resignations) and involuntary (eg redundancy) discharge of personnel, salary management and the payment of personnel.
2 Personnel

The management of personnel and the recording of their activities are not part of an AIS.

Personnel information systems, referred to as **human resource management (HRM) systems**, is a specialised information system used for the management of personnel and the recording of their activities.

These HRM systems are used by the HR department in organisations to help ease the burden of managing the numerous regulations applicable to personnel management such as the Employment Equity Act, Income Tax Act, Basic Conditions of Employment Act and Labour Relations Act.

HRM systems can be stand-alone application software or a module within an ERP system. Both HRM stand-alone software and ERP modules are usually capable of easily integrating with most payroll systems.

The following are some of the functions included in many HRM programs/modules:

- *maintaining personal information:* each employee's full name, surname, identity number, address, next of kin, race, gender, income tax number, etc
- *recruitment:* job descriptions, vacancies, offers made, etc
- *employee compensation:* salary scales, structures, market salaries, etc
- *performance management:* key performance indicators, performance contract and reviews, promotions, disciplinary actions, etc
- *talent management:* employee education, training received and required, awards, work experience, etc
- *absence management:* vacation leave, sick leave, unpaid leave, etc
- *reports and analytics:* budget reports, timing before vacancies are filled, staff turnover, top performers, bottom performers, employment equity reports, etc

Examples of HRM systems/modules include Pastel Partner Human Resources, Sage Accpac HRMS, SAP ERP HCM, Oracle HRMS and Microsoft Axapta Human Resource Management.

In the absence of an HRM system, many organisations use spreadsheets and word processors to perform the above functions, but keeping track of everything is clearly far more demanding compared with the use of an HRM system.

Because you will learn more about personnel procedures and controls in auditing, these procedures and controls will not be discussed in this module.

**Activity 11.1**

Ask a family member or a friend employed at a medium to large organisation about the following:

- How he or she apply for leave and capture performance evaluations.
  - Does he or she complete manual forms, or is the request/information captured on a computer system?
  - If it is captured electronically, does he or she know which computer program is used?
3 Payroll

Payroll is one of the most important processes from an employee's perspective, because it ensures that he or she is paid every month. The timely and accurate processing of payroll is therefore crucial. Payroll is a specialised activity and should be managed by personnel with knowledge of the applicable regulations. Payroll should also make use of software that caters for the applicable regulations such as income tax, unemployment insurance fund (UIF), skills development levies (SDL) and so forth.

Most payroll software include functionalities such as:

- the creation and distribution (print or electronic format) of payslips
- the calculation of annual leave pay
- the calculation of income tax, based on different tax methods (ie monthly, tax directives, directors' tax, etc)
- the creation of statutory returns for tax, SDL, UIF and so on
- the creation and distribution (print or electronic format) of IRP5 certificates
- managing different types of contributions such as medical aid and provident and pension funds
- the management of different deduction types such as loan repayments and garnishee orders.

Examples of payroll software include Pastel Partner Payroll, PraxiPay, Superpay, QuickBook's Quick payroll, Simplepay and Softline VIP payroll. Access to the payroll system is extremely well controlled because it contains huge amounts of sensitive personal information that must be protected. You will learn all about the procedures and controls relating to payroll in auditing. In this module, however, we will explain how the payroll system is linked to the AIS.

AIS and the payroll and personnel cycle intersect at payroll because the payroll-related payments must be recorded in the AIS. There are different methods for this interaction between the payroll and AIS system. Some payroll systems are fully integrated with the AIS and will automatically process the payroll transactions in the AIS. Other payroll systems create electronic files in a format required by the AIS. These electronic files are then imported into the AIS and processed. Other payroll and AIS systems are not at all integrated, and the transactions from the payroll system are manually captured in the AIS from reports generated by the payroll system. Whatever the method of interaction, the principles are the same, as explained below.

- **Payroll system**

All employees' payroll-related information is captured and processed on the payroll software. The payroll will calculate the net pay due to each employee and the liabilities due to various parties such as pension funds, UIF, SDL and tax. Payroll costing reports will include the payroll cost that needs to be allocated to each department and/or cost centre, liabilities that must be recorded (ie amounts payable to UIF, SDL, SARS etc), amounts due to employees and so on. In a nonintegrated system, these costing reports are used to record the payroll transactions in the AIS, while in an integrated system, these transactions will be automatically pushed from the payroll system to the AIS.

The payment of liabilities, especially the payment of employees, will be done by EFT, cheque or (rarely) cash, but nowadays EFT is generally used. Many organisations use a separate payroll bank account, as a control, to pay salaries and payroll liabilities. This
bank account is only funded with the amount as indicated by each month's payroll reports. Any bank charges on this payroll account are deducted from the main bank account and not from the payroll account. This ensures that all money due is paid, and that no more can be paid than what is due as per the payroll run.

- **Source documents**

Where the HRM and payroll system are linked, the source documents will flow from the HRM system. Some of the source documents used include employment contracts stipulating salary, garnishee orders, tax directives received and so on. Source documents relating to the physical payment of the payroll will include EFT reports or cheque stubs.

- **Accounting transactions**

We can divide the accounting transactions into two parts, namely the recording of the costs and related liabilities due and the physical payment of the salaries and related liabilities.

As mentioned previously, an individual employee's salary information is personal and sensitive and we will therefore normally only see totals reflected in the AIS and not individual amounts per employee. The breakdown of individual amounts, however, will be available in the payroll system.

In many organisations, both the employee and the organisation contribute towards certain benefits. For example, they both contribute to the employee's pension fund. Payroll reports will differentiate between employee contributions and organisation contributions, because the taxation and accounting for these differ. The organisation's contribution is a cost to the organisation and should reflect as an expense in the organisation's financial statements, while the employee contribution is a payment on behalf of the employee, and must have a R0 net effect on the organisation's financial statements. The organisation will pay their contribution for the noncash benefit (ie the benefit is not paid in cash to the employee) to the provider of the benefit, say, a pension fund, medical aid and UIF.

Organisations may also use less or more detail — for example, an organisation may decide to only have a salary general ledger expense account or to split the salary general ledger account into separate benefits. A salary control account is sometimes also used to record all liabilities due to third parties (including employees), while other organisations may prefer to use separate liability accounts for this purpose.

We will need to use our accounting knowledge to adjust the accounting entries for our organisation's specific salary and benefit structures and the amount of detail required by the organisation.
Below is a simplistic example, which reflects some of the generic accounting entries for an organisation. In this example, we will use the salary control account to record all liabilities due.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>R100,000</td>
</tr>
<tr>
<td>Employees tax (PAYE &amp; SITE)</td>
<td>- R40,000</td>
</tr>
<tr>
<td>Expense paid on behalf of employees (employee contributions)</td>
<td>- R3,000</td>
</tr>
<tr>
<td>Net payment to employees</td>
<td>R57,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>R 100,000</td>
</tr>
<tr>
<td>Noncash benefits for organisation’s cost (employer contribution)</td>
<td>R 2,500</td>
</tr>
<tr>
<td>Total organisational cost (ie salary expense)</td>
<td>R 102,500</td>
</tr>
<tr>
<td>Account</td>
<td>Balance sheet (BS)/Income statement (IS)</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td><strong>Payroll costing</strong></td>
<td></td>
</tr>
<tr>
<td>Salary control account</td>
<td>BS – liability</td>
</tr>
<tr>
<td>Salaries</td>
<td>IS – expense</td>
</tr>
<tr>
<td>Noncash benefit for the organisation's cost</td>
<td>IS – expense</td>
</tr>
<tr>
<td><strong>Payment to employees</strong></td>
<td></td>
</tr>
<tr>
<td>Salary control account</td>
<td>BS – liability</td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
</tr>
<tr>
<td><strong>Payment to SARS for employees’ tax due</strong></td>
<td></td>
</tr>
<tr>
<td>Salary control account</td>
<td>BS – liability</td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
</tr>
<tr>
<td><strong>Payment to third parties for expenses paid on behalf of the employees</strong></td>
<td></td>
</tr>
<tr>
<td>Salary control account</td>
<td>BS – liability</td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
</tr>
<tr>
<td><strong>Payment to third parties for noncash benefit for organisation's cost</strong></td>
<td></td>
</tr>
<tr>
<td>Salary control account</td>
<td>BS – liability</td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
</tr>
</tbody>
</table>

After all the payments have been accounted, the salary control account will now have a zero balance (ie R102,500 – R57,000 – R40,000 – R3,000 – R2,500 = R0).

Bear in mind the payment for training or recruitment fees to a recruitment agency is not paid through payroll but through the acquisition and payments cycle.

- **AIS database files**

  The database files accessed, updated or modified will be as follows:
  
  - several general ledger master files: storing new general ledger account balances
  - the general ledger transaction files: details of each transaction recorded in the general ledger
  - the payments cashbook transaction file: reference number, date, bank amount, general ledger account number, etc
- **AIS reports**

Some of the reports that can be used are as follows:

- the *payment cashbook detail report* showing the cashbook payment transactions for a selected period
- the *general ledger account details* showing the accounting entries for the selected general ledger account

### Activity 11.2

- Ask a family member or friend employed at a medium to large organisation if he or she knows which payroll software is used in his or her organisation (the name of the software program used is often printed on the employee’s payslip).
- Ask the above family member or friend to explain how his or her salary is broken down. Note: Tell the person to use fictitious amounts (salary information is sensitive).
- If you are the accountant for the organisation, would you be able to record the accounting entries based on the salary information provided?

### 4 Summary

In this study unit, we investigated information systems used in the payroll and personnel cycle and identified examples of the software used. We also learnt about the source documents used, database files accessed, updated or modified, reports printed and some of the basic accounting entries in the payroll cycle. In the next study unit, we will examine the final transaction processing cycle, namely finance and investment.

### Self-assessment activity

After working through this study unit, you should be able to answer the following questions:

(a) Explain the purpose of a Human resource management (HRM) system.
(b) List and briefly explain the different functions of in a HRM system.
(c) List three examples of HRM software.
(d) List five functionalities of payroll software.
(e) Name three examples of payroll software.
(f) List three source documents used in the payroll system.
(g) Identify the differences in the accounting transactions for an employee contribution and an organisation contribution.
(h) Explain why only salary totals are reflected in the AIS.
(i) Using a simplistic example, indicate the applicable accounting entries.
(j) Name the AIS database files that will be accessed, updated or modified by payroll transactions.
(k) Name two (2) AIS reports used in the payroll cycle.
Finance and investment cycle

In this study unit

1 Introduction
In the previous study unit, we learnt about information systems used in the payroll and personnel cycle. In this study unit, we will focus on AIS transaction processing for investments made and finance received by the organisation.

At some stage or other, all organisations will require money to finance normal business operations or expansion of operations. Successful organisations will generate enough money to enable them to invest and thereby generate further profits.

2 Investments
The organisation can invest in a multitude of investment vehicles including new projects, working capital, plant, equipment, money markets, derivates and equity markets, to name but a few. The investment decision will be based on the organisation's financial strategy. Financial strategy, investment appraisal techniques and the financing of these investments will be explained in your later management accounting studies, while the controls and procedures involved in the investment cycle will be dealt with in your auditing studies. However, whatever types of investments are made, all investment transactions must be
recorded in the AIS. Investment transactions will include the initial investment, regular revaluations as per IFRSs requirements and the recording of returns on investments. Revaluation can, for example, include depreciation charges on fixed assets, change in market value of equity investments and so on. Investment-related transactions are recorded in the AIS using different journals. For example, an initial investment using an EFT payment will be recorded in the payments cashbook journal and the revaluation of an investment will be recorded using a general journal.

- **Source documents**

The source documents that are used will be based on the type of investment vehicle. One should always remember to use the applicable source document to record the transaction in the AIS and not only the bank statement. The actual source document contains information required for the accurate accounting of the transaction and the purpose of the bank statement is only to reconcile the bank account.

- **Accounting transactions**

The accounting transaction will depend on the investment vehicle used. These accounting entries are extremely specific to the different investment vehicles, and you will learn about these in your further financial accounting studies.

However, we will now look at a simplistic example, in which the investment is a fixed deposit, and interest is paid at the end of the period. The payments cashbook journal will be used to capture the initial investment and a general journal for the accruing of interest.

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/ Income statement (IS)</th>
<th>Debit (Dt)/ Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed deposit</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Investment amount</td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
<td>Ct</td>
<td></td>
</tr>
</tbody>
</table>

**Accrue monthly return on investment**

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/ Income statement (IS)</th>
<th>Debit (Dt)/ Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed deposit</td>
<td>BS – asset</td>
<td>Dt</td>
<td>Return amount</td>
</tr>
<tr>
<td>Interest received</td>
<td>IS – income</td>
<td>Ct</td>
<td></td>
</tr>
</tbody>
</table>

**Activity 12.1**

- Record the accounting transactions for the purchase of a computer to the value of R10,000 excluding VAT.
- The computer is depreciated at 33% per annum according to the straight-line method. Record the accounting transactions for one month's depreciation charge.
- **AIS database files**
  
  Database files accessed, updated or modified to record investments in the AIS include the following:
  
  - the payments cashbook transaction file: reference number, date, bank amount, general ledger account number, etc
  - several general ledger master files: storing new general ledger account balances
  - the general ledger transaction files: details of each transaction recorded in the general ledger

- **AIS reports**

  The general ledger accounts details report shows the accounting entries for the applicable general ledger accounts. This GL listing will be used to reconcile the general ledger with the investment and fixed asset registers.

3 **Finance**

There are different sources of long- and short-term finance for an organisation. Examples of long-term finance include the issuing of shares, bonds, term loans and leases. A bank overdraft is an example of short-term finance. In your later management accounting studies you will learn more about these finance options, the valuation of thereof and the costs relating to the use of these financial methods.

A finance option must be selected carefully because it can lock an organisation into a long-term agreement that can be to the detriment of the organisation – hence the need to ensure that proper controls and procedures for the finance cycle are implemented. These controls and procedures will be explained in your auditing studies.

However, whatever the type of finance used, all finance transactions must be recorded in the AIS. Finance transactions do not only include the initial finance obtained but also the regular valuation of the finance per IFRSs requirements and the recording of ongoing finance costs such as interest.

- **Source document**

  The source documents used will be based on the type of finance obtained. As with investments, it is also necessary for finance transactions to use the applicable source document to record the transaction in the AIS and not only the bank statement, because the source document may contain information required for the accurate accounting of the transaction. Examples of source documents are loan agreements, minutes of meetings and so on.

- **Accounting transactions**

  The accounting transaction will depend on the finance obtained. These accounting entries are specific to the different finance options and you will learn about these in your financial accounting studies.

  However, we will now look at a simplistic example, in which finance is obtained through a long-term loan and interest is paid at the end of the period. The receipts cashbook journal will be used to capture the initial finance obtained and a general journal for the accruing of interest.
<table>
<thead>
<tr>
<th>Account</th>
<th>Balance sheet (BS)/ Income statement (IS)</th>
<th>Debit (Dt)/ Credit (Ct)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial finance obtained</td>
<td></td>
<td></td>
<td>Finance amount from loan agreement</td>
</tr>
<tr>
<td>Bank</td>
<td>BS – asset</td>
<td>Dt</td>
<td></td>
</tr>
<tr>
<td>Long-term loan</td>
<td>BS – liability</td>
<td>Ct</td>
<td></td>
</tr>
<tr>
<td>Accrue monthly finance cost</td>
<td>IS – expense</td>
<td>Dt</td>
<td>Finance cost – recalculated per loan agreement</td>
</tr>
<tr>
<td>Interest paid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term loan</td>
<td>BS – liability</td>
<td>Ct</td>
<td></td>
</tr>
</tbody>
</table>

- **AIS database files**

  Database files accessed, updated or modified in the AIS include the following:

  - several general ledger master files: storing new general ledger account balances
  - the general ledger transaction files: details of each transaction recorded in the general ledger

- **AIS reports**

  The general ledger accounts details report shows the accounting entries for the applicable general ledger accounts. These listings should be used to perform reconciliations with third-party statements (e.g., a loan statement).

4 **Summary**

In this study unit, we examined the source documents, accounting transactions, database files and AIS reports involved in processing investments and finance transactions in the AIS. In the next topic you will be introduced to the chart of accounts and staffing level requirements for financial reporting.
After working through this study unit, you should be able to answer the following questions:

(a) List three types of investment transaction that must be recorded in the AIS.
(b) Explain the importance of not using only a bank statement as a source document for both investment and finance transactions.
(c) Using a simplistic example of a fixed deposit, record the applicable accounting entries.
(d) Name the AIS database files that will be accessed, updated or modified by the investment transactions.
(e) Name the journal used to record the initial investment transaction.
(f) List three types of finance transactions that must be recorded in the AIS.
(g) Using an example of a simplistic long-term loan, record the applicable accounting entries.
(h) Name the AIS database files that will be accessed, updated or modified by the finance transactions.
(i) Name the journal used to record the initial finance transaction.
(j) Name an AIS report that is used when reconciling finance transactions.
Financial reporting infrastructure

LEARNING OUTCOMES

After studying this topic, you should be able to

- identify the factors influencing the basic staffing level requirements for a specific organisation
- discuss the finance team structure in relation to the AIS
- identify the basic chart of account components to meet the requirements of a specific organisation
- evaluate a given chart of accounts in terms of the organisation's business environment
1 Introduction

The ultimate purpose of the organisation's finance team is to accurately and timeously report on the organisation's financial position and cash flow and provide useful information to facilitate decision making. To accomplish this goal, the finance team cannot only rely on computers, but need some human interaction and technical knowledge as well.

In the previous topic, we focused on accounting transaction processing cycles in an information system environment. In this study unit, we will first examine the staffing level requirements of a finance team. Secondly, we will take a closer look at the chart of accounts (CoA) and the guidelines to create an effective CoA, because without a proper CoA, financial reporting may be a cumbersome and, in some instances, an impossible task.

2 Staffing level requirements

The structure and the number of staff members in a finance team will differ from organisation to organisation. It can vary from one person in an owner-run business (possibly the owner himself or herself), to large teams in large organisations. Even in organisations of the same
size, the structure of the finance teams may differ – some may be centralised, while others may be situated in various business units. The treasury function that deals with investments and financing may be separate or form part of the finance team. Bear in mind that there is no “one size fits all” solution for staffing levels and structures in a finance team because the variables influencing these will differ from one organisation to the next.

Some of the factors influencing the **staffing level requirements** of the organisation’s finance team will include the following:

- the size and structure of the organisation
- the complexity and volume of transactions processed
- the complexity and volume of reporting required
- the integration of the AIS with the operational information systems
- the number of manual interventions needed
- the AIS software used.

We will need to analyse the organisation’s specific environment and requirements before suggesting changes to staffing levels and structures in the finance team.

However, the following **key controls** are always important to remember when relating the finance team structure to the AIS.

- **Segregation of duties (SoD).** The responsibility to perform related tasks is allocated to different people or departments, and is a vital internal control to help reduce the risk of fraud and mistakes. You will learn more about SoD in auditing. SoD must also apply to the AIS by assigning certain roles and responsibilities to the different users in the AIS. The AIS will be set up so that each specific user will only have access to the tasks in the AIS directly linked to his or her role and responsibilities. For example, the cashbook clerk will only have access to the cashbook and will not be able to process customer transactions. We will practically learn how to allocate specific functions to AIS users in topic 6, Pastel Partner.

- **Supervisor.** Each AIS will have a role that has access to all functions in the AIS. This person is usually referred to as the supervisor or administrator. A senior member of the finance team, usually the financial manager, will fulfil the role of supervisor. A trustworthy, honest and ethical person must fulfil this role because he or she will have the authorisation to overwrite most computerised controls and will be able to perform all the functions in the AIS, thereby SoD controls will be overridden.

- **Reconciliations.** Reconciliations should be performed at least monthly, no matter what the size of the team, and these must be reviewed and signed off by a person other than the person performing the reconciliation. Examples of typical reconciliations are bank and creditors’ reconciliations.

- **Audit trail.** Each user’s access (including that of the supervisor) to the AIS and actions performed on the AIS must be logged on the AIS audit trail. An **AIS audit trail** tracks user activity on the AIS by recording the user name and access date and time as well as the actions performed by that user. The level of detail recorded on the AIS audit trail will depend on the AIS used.
3 Chart of accounts (CoA)

As you know from your accounting studies, a CoA is a list of accounts used in the organisation's general ledger.

The CoA in an AIS includes for each general ledger (GL) account a description of the account and a unique account number (primary key) by which it can be identified.

The CoA reflects the complexity of the organisation's structure and requirements. Large organisations' CoAs can contain thousands of GL accounts and smaller organisations' CoAs hundreds of GL accounts.

AIS programs already include a generic and a number of industry-specific CoAs. For example, Pastel Partner contains one generic and 21 industry-specific CoAs. These predefined industry specific CoAs contains GL accounts normally used by an organisation operating in that specific industry. For example, a club's industry-specific CoA will include GL accounts for entry fees and bar sales, while a church's CoA will include GL accounts for offerings and tithes. Although these predefined CoAs will already include a number of industry-specific GL accounts, the CoA is still flexible and can be tailored to the organisation's specific needs by adding, deleting and modifying the GL accounts in the CoA.

3.1 Structure

The CoA is grouped into the five major financial statement categories namely: assets, liabilities, equity, income and expenses, with subcategories for each major category. The subcategories used will be based on the industry- and business-specific requirements of the organisation. Figure 13.1 shows the categories of a generic CoAs.

![Generic CoA categories & subcategories](image)

**FIGURE 13.1: Generic CoA categories**

A block of account numbers is assigned to each of the five major categories, leaving gaps between the subcategories in each major category. These gaps are used to expand the subcategories in future, so that they can be stored numerically. For example, all the account numbers from 8000 to 8999 can be allocated to assets. In the asset category,
the block of account numbers 8000 to 8399 is allocated to non-current assets and the block of account numbers 8600 to 8899 is allocated to current assets.

The AIS software program used will prescribe the CoA account number convention, that is, the number of numbers used, only numbers, or only alpha numeric, and so on.

In the same way as each major category can have subcategories, each GL account, called the main account, can also have subaccounts. For example, a computer shop’s “Sales” main account may have subaccounts named “Sales – hardware” and “Sales – software”. In Pastel Partner the first numbers in a subaccount’s account number will be the same as the main account, and the last numbers in the subaccount’s account number will indicate the specific subaccount. Looking at our example of the computer shop again, the sales main account number may be “1000/000” and the subaccount number for “Sales – hardware” will then be “1000/100” and “Sales – software” account number will be “1000/200”. The “100” will indicate the “hardware” subaccount and the “200” the “software” subaccount. We will learn more about main and subaccounts in practice when we tackle Pastel Partner in topic 6.

3.2 Development guidelines

An effective designed and setup CoA produces better financial reporting and saves time and costs. The CoA structure should assist in the accurate and consistent posting of transactions. Remember the old saying: “If you fail to plan, you plan to fail”. It is therefore essential to spend enough time properly planning a new or adjusted CoA.

When planning for a new/adjusted CoA, the following should be taken into account:

- **The organisation’s business operations and industry.** The CoA should reflect the organisation’s specific business operations and the industry in which it is operating. It is therefore necessary to understand the business before creating the CoA. For example, if the organisation provides services only, then one would not expect to see “inventory work in progress (WIP)” GL accounts in the CoA. By contrast, if the organisation operates in a manufacturing environment, one would expect to see multiple inventory accounts including “inventory WIP” GL accounts.

- **The organisation’s structure.** The GL accounts that are used must fit the organisation’s structure. For example, the GL accounts must give details per department, business unit and so on, and how these relate to one another (department A and B are part of business unit AA). Use an organogram to visualise and plan for this structure.

- **Reporting detail required.** The GL accounts must be able to populate the organisation’s required IFRS financial statements, financial management accounts and the organisation’s various tax returns, without the need to analyse the transactions in an individual GL account. For example, if management reporting for a computer organisation requires sales to be split between hardware and software sales, the “sales” GL account must then also be split along these lines. Meet with the users and creators of the IFRS financial statements, financial management accounts and tax returns to understand and plan for the detail required in these statements and returns. However, remember there should always be a balance between detail requirement “wish lists” and what is practical, feasible and logical.

- **Plan for the future.** The CoA is not only used for the current financial year, but also for future years – hence the need to plan for the future. Take into account possible growth in the organisational structure, change in business processes and detail requirements. For example, leave enough gaps between the GL account numbers and subcategories’ account blocks so that it is possible to add new GL accounts and categories when needed in future.
- **Logical.** The CoA must have a logical flow in the major categories, subcategories and the related account number blocks and individual account numbers. For example, the balance sheet accounts will be first, followed by the income statement accounts. The categories, subcategories and the related GL accounts will not be mixed, but follow each other logically.

- **Consistent.** The account number structure and format must be consistent between the accounts used.

- **Account description.** The account description should clearly but briefly explain the nature of the GL account.

- **Draft.** Create a draft structure on paper first before implementing it in the AIS. It is easier to change the draft than the implemented CoA.

- **Feedback.** Obtain feedback from the different role players on the draft CoA. They may have insights you have not yet considered and which could influence the CoA materially.

- **Sign-off.** Obtain sign-off from applicable management on the final CoA before implementing it.

### Activity 13.1

Fruity Fruit (Pty) Ltd is a retail organisation that buys fresh fruit and vegetables wholesale and then sells it to individuals and small shops. Information in monthly management reports is divided between shop and individual sales. The first four numbers in the account number indicate the main account, and the follow-ing three numbers the subaccount. Below is an extract from the organisation's current CoA.

<table>
<thead>
<tr>
<th>Account number</th>
<th>Account description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000/000</td>
<td>Sales – Shops and individual</td>
</tr>
<tr>
<td>1000/345</td>
<td>Service – Consultation</td>
</tr>
<tr>
<td>1000/346</td>
<td>Service – Medicine</td>
</tr>
<tr>
<td>1001/000</td>
<td>Interest paid</td>
</tr>
<tr>
<td>1002/000</td>
<td>Interest received</td>
</tr>
<tr>
<td>2000/234</td>
<td>Fixed asset – Trucks</td>
</tr>
<tr>
<td>2000/235</td>
<td>Fixed asset – Property</td>
</tr>
<tr>
<td>2001/500</td>
<td>Cost of sales – Individuals</td>
</tr>
<tr>
<td>2001/600</td>
<td>Cost of sales – Shops</td>
</tr>
<tr>
<td>2002/111</td>
<td>Delivery fees paid – Individuals</td>
</tr>
<tr>
<td>2002/211</td>
<td>Delivery fees paid – Shops</td>
</tr>
<tr>
<td>5000/100</td>
<td>L – loan</td>
</tr>
<tr>
<td>5000/200</td>
<td>L – ST FNB</td>
</tr>
</tbody>
</table>

**REQUIRED**

Using examples, evaluate whether Fruity Fruit’s CoA adheres to the CoA development guidelines. For the purpose of this activity, you do not need to consider the draft, feedback and sign-off guidelines.
Feedback on activity 13.1

Fruity Fruit’s CoA does not adhere to the development guidelines. This is evident in the following:

(a) Organisation’s business operation

Fruity Fruit sells fruit and vegetables, but the CoA includes GL accounts for “1000/345 Service – Consultation” and “1000/346 Service – Medicine”. These accounts do not relate to Fruity Fruit’s business operations and should therefore not be included in the CoA.

(b) Reporting detail required

Management requires management accounts split between shop and individual transactions. The sales transactions is all recorded in one GL account namely “1000/000 Sales – Shops” and individual and not in two separate accounts as required for reporting purposes. This also does not match the cost of sales accounts which have separate accounts for “Cost of sales – Individuals” and “Cost of sales – Shops”.

(c) Plan for the future

There should be gaps between account numbers so that it is possible to insert new GL accounts and categories in future. In Fruity Fruit’s CoA there are no such gaps as can be seen where the delivery fees main account number (“2002”) immediately follows the cost of sales main account number (“2001”). Also, the interest paid main account number (“1001”) immediately follows the sales main account number (“1000”).

(d) Logical

There is no logical flow between the categories. Assets accounts numbers, that is, “2000/234 Fixed asset – trucks” and “2000/234 Fixed asset – property” are between income and expense accounts. A logical flow should not have balance sheet and income statement major categories mixed together. “Property” general ledger accounts usually also appear before any other fixed asset accounts such as “Trucks”.

In addition, the expense account “1001/000 Interest paid” is between the income accounts. A logical flow should not have an income statement’s income and expense accounts jumbled together.
4 Summary

In this study unit, we learnt about the factors influencing the staffing level requirements of the finance team, the structure of a CoA and the guidelines for creating an effective CoA. In the next topic, we will examine the available AIS applications, discuss how to select AIS and consider AIS risks and controls.

<table>
<thead>
<tr>
<th>Self-assessment activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>After working through this study unit, you should be able to answer the following questions:</td>
</tr>
<tr>
<td>(a) Name the factors that will influence a finance team’s staffing levels.</td>
</tr>
<tr>
<td>(b) List and briefly describe important items relating to a finance team structure and the AIS.</td>
</tr>
<tr>
<td>(c) List the five major financial statement categories in which the CoA is grouped.</td>
</tr>
<tr>
<td>(d) Explain why gaps should be left between the blocks of account numbers assigned to subcategories.</td>
</tr>
<tr>
<td>(e) Indicate the factor that will prescribe the CoA account number convention used?</td>
</tr>
<tr>
<td>(f) List and briefly explain each of the CoA development guidelines.</td>
</tr>
</tbody>
</table>
Accounting information system applications

LEARNING OUTCOMES

After studying this topic, you should be able to

- list various accounting information systems available
- discuss factors to consider when selecting an AIS
- explain AIS security risks and controls

Study guide 1

Part 1
Data management and utilisation

Part 2
Spreadsheets

Part 3
Transaction processing

Part 4
Management reporting systems

Study guide 2

Topics

3 Accounting cycles
SU 7: Overview of transaction processing
SU 8: Revenue and receipts cycle
SU 9: Acquisition and payments cycle
SU 10: Inventory and production cycle
SU 11: Payroll and personnel cycle
SU 12: Finance and investment cycle
4 Financial reporting infrastructure
SU 13: Financial reporting structure

5 Accounting information system applications
SU 14: Selecting an appropriate accounting information system

6 Pastel Partner accounting information system
SU 15: Getting started on Pastel Partner
SU 16: Customers, suppliers, inventory and general ledger accounts
SU 17: Process transactions
SU 18: Retrieving information and sundry processing
1 Introduction

In most organisations, accounting records are no longer kept in manual paper books. Almost all organisations currently use an AIS to record financial transactions. There are several different AISs available to choose from, making the selection process more difficult for an organisation.

In the previous topic, we learnt about the factors influencing the staffing level requirements of the finance team, the structure of a CoA and the guidelines for creating an effective CoA. In this study unit, we will examine some of the available AIS applications. We will also discuss how to select an AIS, including the items that should be considered in the process. Lastly, we will discuss the risks and controls surrounding AISs.

2 Available AISs

AISs, also known as accounting software, vary greatly in cost and functionality. An AIS can be developed in-house, bought from software vendors and can then be used as is or bought from software vendors and customised to suit the organisation’s specific needs. The use of an in-house-developed AIS, however, is rare nowadays.
AIS vendors have segmented their accounting software to focus on entry-level, small to medium, medium to large and enterprise-level organisations. The software price increases as the complexity and the features provided by the software increase.

An **entry-level** AIS includes basic features, usually has one-user access and generally does not provide for segregation of duties. These software are purchased off the shelf and only allow for basic set-up information. Entry-level software will have the least number of reports available and will not include advanced security controls. Examples include the following:

- Sage Pastel Xpress Start-Up (www.pastel.co.za)
- QuickBooks Online Simple Start (www.quickbooks.co.za)
- Palladium Individual (www.palladium.co.za)

One step up from entry-level software is the **small to medium** organisation's AIS. This software allows for more users (usually between 3 and 5), and will also include more features such as more standard reports, setting of user permissions and passwords. Examples include the following:

- Sage Pastel Xpress Advantage (www.pastel.co.za)
- QuickBooks Pro (www.quickbooks.co.za)
- Palladium Business (www.palladium.co.za)

A wide range of AISs are available for **medium to large** organisations. These programs usually allow between 20 and 50 users, and again have more features than the AIS for small to medium organisations, but fewer features than the enterprise-level software. Examples include the following:

- Sage Pastel Partner Advantage (www.pastel.co.za)
- QuickBooks Accountant (www.quickbooks.co.za)
- Palladium Enterprise (www.palladium.co.za)

An AIS focusing on **enterprise level organisations** is usually a module in an ERP system. This software seamlessly integrates with the organisation’s other information systems and reduces the interactions needed from users to transfer data and information between the different information systems. It provides a large number of features such as multiple currencies and multiple users. These accounting systems are highly customisable and can be tailored to suit the organisation’s specific needs. The implementation period can be extensive because this AIS must be customised and integrated before it can be used. The purchase and especially implementation costs can be extremely expensive for these products. Examples of the AISs focusing on enterprise-level organisations include the following:

- Sage 300 (http://www.sageerp.co.za/sage-300/)
- Pastel Evolution (www.pastel.co.za)
- SAP ERP (http://go.sap.com/africa/product/enterprise-management.html)

The AIS used by the organisation will not only be based on the organisation's size, but also on the complexity of the organisation’s business and the features the organisation
requires. This means that a complex small to medium organisation that only requires access for two users will use software for medium to large organisations owing to the features provided in the more advance software.

**Computer activity 14.1**

A huge number of AISs are available on the market.

Visit https://en.wikipedia.org/wiki/Comparison_of_accounting_software for a comparison of some of these AISs.

The basic principles underlying all AISs are the same – that is, the accounting principles, tax calculations, trial balance, ageing principles, and so on, are all the same. However, the semantics (document names, menu items, etc), look and feel of the accounting programs and the features offered will differ from program to program. Because the basic principles are all the same, it is easier to learn a new accounting program if you already know how one such program works. In topic 6 we will only learn how Pastel Partner works, but with this knowledge at your fingertips, you will be able to apply these principles to all other AISs you may encounter in the future.

### 3 Selecting an appropriate AIS

The acquisition and implementation of an AIS can require a substantial investment in time and money. It is therefore essential that the AIS one purchases matches the organisation’s requirements as closely as possible.

#### 3.1 Determine general accounting information system requirements

When selecting a new accounting program, we need to first determine the general AIS requirements before looking at individual AIS providers and the software they offer. We need to determine the following:

- **Requirement analysis.** The organisation must first determine its requirements for the AIS. These should also include planned future growth in the organisation. It is vital to obtain input from all the role players who will interact with the system, at all levels (ie users, support providers, reporting, etc) in this analysis process. Role players will probably include the finance team, relevant IT staff, management and others, and in smaller organisations, possibly even the auditors. Many large organisations use third-party consultants to facilitate this process.

Once the requirements have been analysed, they must be prioritised. It is necessary to determine the requirements that are non-negotiable and must be included in the new system. Features that are simply “nice to haves”, can be placed on a “wish list”. Requirements will include items such as the following: the number of users; the number of suppliers and customers; input, processing and output methods (real-time, batch, etc.); processing speed; features; standard and customisable reports; and security. The requirements will increase as the complexity and size of the organisation increase.

- **Budget.** Money will always be a constraint for any organisation because organisations can only afford to spend so much on a system before it becomes uneconomical. We
therefore need to understand how much money (budget) is available for the initial investment in software, training and implementation as well as for the succeeding years' maintenance, support and licence fee costs. Implementation costs, which are easily forgotten, can sometimes amount to more than the initial investment costs. Understanding how much money is available will help save time when investigating all the possible new AISs, because we can immediately eliminate the AISs we cannot afford. Bear in mind that the budget should also take into account the cost of possible investment in new hardware, if the AIS requires it, as well as any process re-engineering costs.

- **Implementation period.** In the same way as the organisation needs to budget for the costs, it also has to budget and plan for the time it will take to implement the AIS. If the organisation can only afford a three-month implementation period, it would obviously not be a good idea to look at software requiring a six-month implementation period.

### 3.2 Investigate individual accounting information systems

Now that we know what the organisation's requirements and constraints are, we can investigate individual AISs. When investigating new AISs, we should consider the following:

- **Requirement matching.** Obtain a list of product features and compare it with the organisation's requirements. See how it matches and exceeds the requirements and where the software's shortcomings are. Additional software features cost money, and buying software features the organisation will never use is a total waste of money.
- **Ease of use.** Because this software is used daily, it should be easy to understand and use. The AIS must help, not hinder the organisation.
- **Integration.** How easily can this software be integrated with the organisation's other information systems and applicable third-party systems? For example, does the AIS support the organisation's electronic bank statement format or would it be possible to integrate the organisation's AIS with eXtensible Business Reporting Language (XBRL)? (XBRL will be discussed in study unit 20)
- **Flexibility.** Can this software be tailored to the organisation's specific needs?
- **Country suitability.** Is the AIS suitable or adaptable to the organisation's specific country processing and reporting requirements? For example, can the AIS be configured according to the country's unique tax, levies, currency and regulations.
- **Scalability.** Can this product grow with the organisation?
- **Support and training.** What support and training does the software vendor offer and what are the costs involved? Are there any local support offices?
- **Costs.** How much will the software cost? There are different ways of pricing software (eg per user, features available, fixed fees, etc). We need to understand the pricing structure and therefore the total costs applicable to the organisation for the initial investment, training and implementation as well as successive years' costs. These costs must be compared to the predetermined budget.
- **Hardware requirements.** Can this software run on the organisation's current hardware configuration or should new hardware be acquired, and what will the costs be?
- **Implementation.** Is the software easy to implement and what is the estimated implementation period?
- **Documentation quality.** What is the quality of the software manuals and is it electronic or paper? These manuals will be used by the organisation for support and training.
- **Upgrades.** How often are upgrades made available and what are the applicable upgrade costs? Are upgrades easy to implement or will this require a huge investment in time and money. Because hardware, operating systems, database and other technology improve, the software should be able to keep up with these advances or else it will become
obsolete.

- Software vendor. What is the vendor’s track record? Is it an unreliable organisation that will be unable to provide support when needed, or is it a stable organisation with a good track record of quality software, training and support?

When investigating software we should request product demonstrations from the vendors to see exactly how the program works. We should also obtain references from other organisations where this software has been up and-running for at least a year (to ensure that these organisations have been through a year-end). The reference organisation should be one whose business is at least in the same industry or a related industry than your organisation is in, and should preferably be a similar size. Most software vendors are only too happy to provide the contact details of reference organisations in which their software has been implemented.

4 Risks and controls

In AIN1501, you learnt about the risks, threats and vulnerabilities faced by organisation's information systems. As part of the organisation's information systems, its AIS also faces these risks, threats and vulnerabilities. In AIN1501, you also studied the controls that can be implemented to mitigate these risks, which again will be applicable to the AIS the organisation uses. Since you are familiar with these risks, threats, vulnerabilities and the controls to mitigate them, we will not discuss them here. You must not forget what you learnt in AIN1501, so that you can apply it to the AIS. In auditing, you will learn more about the internal control environment, which again is also applicable to the AIS environment.

In study unit 13, we discussed the finance team and the fact that the segregation of duties in the finance team must be transferred to the AIS by setting up appropriate users and passwords. The setting up of a user means the supervisor selects which functions can be performed by each of the individual users and also allocates a specific password to each user. Most entry-level AISs do not have this feature because only one person works with the software, but as soon as the number of AIS users increases, the availability and use of this security feature become crucial. Bear in mind that the user and password features in some AISs are only a basic feature because they do not allow users to change their own passwords and do not prescribe regular updating of passwords.

In study unit 6, we discussed the controls relating to spreadsheets, including the importance and good practices for passwords. What you learnt about spreadsheet passwords also applies to AIS passwords.

In topic 6, Pastel Partner, you will learn how to allocate roles and set up passwords in AIS. Another threat faced by AISs is the possible loss or partial loss of data. This loss is not always caused by a computer being physically destroyed or stolen – data corruption is also a huge threat. A power surge can often cause data corruption. To protect a financial system against data loss, it is crucial to make back-ups regularly. These backups will allow the organisation to restore the data to the point the last backup was made. The importance of making regular backups cannot be emphasised enough. We referred to backups in study unit 7 and will mention them again in topic 6.

5 Summary

In this study unit, we identified some of the AIS applications available in the market. We also discussed how to go about selecting an AIS for an organisation and the items that
should be considered when comparing individual programs. In conclusion, we discussed the risks and controls surrounding AIS. In the next topic, we will use Pastel Partner to gain hands-on experience of an AIS.

**Self-assessment activity**

After working through this study unit, you should be able to answer the following questions:

(a) Name and briefly describe the market segments an AIS caters for.
(b) For each segment named in a, give two examples of AIS programs.
(c) Name and briefly describe the three general items which must be determined before looking at specific AISs and vendors.
(d) List and briefly describe factors to consider when comparing AISs.
(e) Name two requirements for a suitable reference organisation.
(f) Briefly explain how segregation of duties is transferred to the AIS?
(g) Briefly explain how an organisation can protect its AIS against data loss?