

XYZ WHOLESale Limited

SPECIFICATION OF FOR A COMPUTER SYSTEM



SPECIFICATION OF REQUIREMENTS FOR COMPUTER SYSTEMS

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2. INTRODUCTION

This specification of requirements has been prepared by Brayshay & Paterson Ltd, acting on behalf of **XYZ WHOLESALERS Limited** ("XYZ "). The specification is intended to assist computer suppliers to submit proposals for the supply of appropriate hardware, application software, system software and necessary support services, including maintenance and the training of the Company's staff. You are invited to submit a proposal that will meet the requirements set out in this specification.



The purpose of the specification is to define the broad application system requirements of the Company and to suggest procedures for satisfying these requirements. This information should be used as the basis for any proposal that is submitted. The proposal should show the manner in which a supplier can provide products and services that will meet the Company's needs.

The information included in this specification is not intended to restrict any proposal that a supplier may wish to submit. It is not the intention of 4 Consulting Ltd or XYZ to prescribe the methods whereby processing may be undertaken in meeting the requirements of the Company. Suppliers should, therefore, consider themselves free to put forward alternative procedures and approaches to meeting the requirements described, provided that the Company's systems, as specified, may be satisfactorily implemented and that the advantages of the alternative methods and approaches over those described in this specification are clearly demonstrated.

Additional information regarding the application systems described in this specification will be provided on request. Such information will be made available to all suppliers who have been asked to submit proposals. Opportunities will be given to suppliers' representatives to discuss the proposed applications with representatives of the Company and 4 Consulting Ltd should this be considered necessary.

3. PROPOSAL REQUIREMENTS

Suppliers are invited to submit detailed proposals for the supply of hardware, system software, application software and support services. Proposals will be evaluated by 4 Consulting Ltd to establish the suitability of the hardware, software and services proposed to satisfy the requirements specified.



Additional copies of this specification can be provided on request to Braysay & Paterson Ltd.

Suppliers are particularly asked to set out the information requested in the section entitled "INFORMATION REQUIRED FROM SUPPLIERS" in the sequence in which this section has been prepared. All costs, application software costs in particular, should be fully itemised to clearly show each element of cost. Where it is proposed to provide custom-built software or customised standard packages, costs should be presented in such a way that the individual facilities can be selected according to the value that the Company places on them.

Our client reserves the right to impose penalties upon suppliers who fail to deliver goods or services by agreed deadlines in satisfactory working order acceptable to our client.

Please show detailed calculations, including assumptions, used in "sizing" the proposed equipment.

2.1 Tendering Conditions

In order that suppliers' proposals may receive proper consideration, the following conditions will apply:

- three copies should be submitted to 4 Consulting Ltd in Edinburgh by 9:00am on Monday, **2 December 2002**. A supplier wishing to submit a proposal but unable to do so by the above date, should inform 4 Consulting Ltd in writing as soon as possible after receiving the specification, stating the date by which the proposals could be submitted,
- suppliers wishing to submit proposals are asked to acknowledge receipt of this document and to confirm the date when their proposals will be available. Once such an undertaking has been given, 4 Consulting Ltd reserve the right to discount any proposals not received by the agreed date,

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- any queries concerning the information contained in this specification should be addressed, in the first instance, to:

Mr Sandy Pratt
4 Consulting Limited
2 - 8 Millar Crescent
EDINBURGH
EH10 5HW

0131 447 4546 (office)
07774 889 859 (mobile)



- at this stage, the Company should not be contacted directly. Following submission of the proposal, an opportunity will be given for short-listed suppliers to make a presentation to the Company; these presentations are planned to take place during **February 2001**,
- information provided in each proposal and in subsequent discussions concerning features of hardware and software, including prices, date of availability, systems and programming support, other services offered, contractual options, etc., will be considered to form the basis of a contract in the event of a proposal being accepted,
- the Company will not necessarily place an order solely on the basis of any proposals which may be submitted as a result of the issue of this specification,
- this specification is issued on the understanding that no charge will be made by suppliers for their proposals or other information that may be supplied. If a supplier wishes to make a charge, 4 Consulting Ltd should be contacted before proposals are submitted in order to obtain written consent from the Company to such a charge being made,
- the information supplied in this specification is confidential and should not be disclosed to any persons, other than members of the suppliers' staff directly involved
- the contents of the proposal, especially as regards prices, are to remain in force for a period of six months from the proposal date,
- suppliers not wishing to submit formal proposals are requested to advise 4 Consulting Ltd as soon as possible, and

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- if you do not intend to provide all of the proposed equipment and software you should provide details, including contact names, of all other suppliers involved in your proposal.

2.2 Evaluation

The factors that will be taken into consideration in the evaluation of proposals will include availability of the hardware and software, costs, functionality, ease of use, support and suitability of any special facilities offered.

It should be noted that particular emphasis will be given to the extent and quality of general support functions, including training facilities and systems implementation support services provided.



3. THE CLIENT

XYZ WHOLESALERS Limited operates from a single warehouse in Newmains Industrial Estate in Manchester. The company acts as wholesalers of personal hygiene and cosmetics sundries to chemist shops and multiple-retail outlets throughout the United Kingdom. The company employs around 80 people of whom 15 are sales representatives located throughout the country.

The company has a wide range of customers most of which are independent retail chemist shops. However, the company supplies its products to most leading chains of chemist shops and is currently developing its markets in the major supermarket chains.

The supply industry traditionally experiences 2 seasons each year. XYZ operates around 11,000 stock lines, of which around 50% are dormant at any time. Taking into account colour and size combinations for the baby-wear products, there are around 33,000 stock lines. Each year, the company introduces around 1,000 new stock lines. These are numbered using new stock numbers. The stock numbers of lines that have been sold out remain dormant for at least one complete financial year.

XYZ aims to provide its customers with a 3day order cycle. In other words, goods ordered on a Monday will be delivered on a Wednesday. The company wishes to try to reduce this cycle time by a day using electronic means to capture orders and transfer them to the warehouse for picking and despatch.

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The company has developed its own brand lines for skin-care, nail-care and baby wear products. These products purchased in bulk and repackaged by XYZ on its own backing cards using blister and skin packaging. This "manufacturing" activity is largely a manual activity that involves a number of out-workers. Own brand products represent around 40% of the company's turnover.

The company does not operate any recognised quality assurance systems. However, there are a number of systems in operation designed to ensure that customers always receive the correct products with the correct quality.

The company's present computer system is an Intel multi-user computer operating the Novell operating system in native mode. The central processor, which has recently been upgraded to an Intel Pentium processor, supports 5 VDUs, 2 personal computers running terminal emulation and 2 printers. The printers are used to print all reports and pre-printed stationery.

There are two other, stand-alone, personal computers used for spreadsheets, word processing and other office administration activities. Using a T-switch arrangement, a laser printer is connected both to one of the PCs and to the central processor. This configuration provides a back-up in the event of a failure of the company's main, dedicated, bar-code printer.

The application software used by XYZ is a multi-user system called Distributor from Specialsoft Limited integrated into a standard version of the widely used BOS 2000 financial ledgers package. The payroll software is provided by Specialsoft.

Over the years, the company has had trouble in maintaining the accuracy of its stock system. This has resulted in a significant level of stock-outs and reliance by the stock-pickers on physical inspection for goods in stock and goods substitution. Much of the difficulty arises because of the inaccuracy of data input by staff and because of the large volume of stock transfers arising from the "manufacturing" activities of the business.

The company is keen to find ways of improving the speed and accuracy of data capture using techniques such as bar coding, scanning, hand-held data capture devices, mobile computing and so on. In particular, the company wishes to explore ways of using IT to improve the effectiveness of sales order taking and reducing the amount of manual data entry to the merchandising systems.

The data capacity of the existing machine is sufficient for holding full transactions' details for one year. However, the nominal ledger



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can only have two prior periods open at any time. This is considered unacceptable at the beginning of each financial year, as the audited opening balances are not usually available until after the end of the sixth month in each financial year.

At each month-end, the computer systems are used to produce basic sales and purchases ledger reports and analyses. The nominal ledger is posted daily and the sales and purchase ledgers are posted in batches periodically during the week to the nominal ledger.

The development of sales to the large chemist shop chains and supermarket operators has created a demand for sales statistics reports specifically created to each customer's requirements. At present, many of these reports are created using Excel spreadsheets. However, there is no data link between the operational systems and the spreadsheet software. The company wishes to find improvements in *ad-hoc* reporting facilities coupled with on-line linkages to spreadsheet software.

Wherever possible, the company wishes to continue to use its existing 386 and 286 personal computers, serial dot-matrix printers and parallel laser printers.



4. GENERAL REQUIREMENTS

4.1 General Outline

A replacement IT facility is required to run all the proposed multi-user applications. This facility is expected to be based on either a UNIX server or a personal computer local area network. However, other network technologies will be considered by the company.

In addition to the operations and accounting functions, the company also wishes to use 4 Windows-based personal computers in the Manchester offices for word-processing, spreadsheets and graphics production. The new operational-support systems must be capable of supporting data capture devices used by the XYZ sales representatives, EDI and out-going fax facilities.

There are certain elements that should be highlighted as particularly significant to the company:

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- The company wishes to have on-line multi-user systems which operate without processing delays and which will permit the greatest possible flexibility of operation,
- The provision of monthly management accounts and information as close as possible to the month end with the minimum of human intervention,
- Communications between the company and its sales field staff are considered to be of special importance. In particular, the company wishes to use IT for:
 - capturing sales orders electronically at the time the sales staff are visiting a customer,
 - transferring electronic sales orders from the sales representative to the Manchester sales office,
 - transferring customer's special instructions regarding product substitutions to the sales office,
 - sending sales field staff written details of stock availability, special promotions, stock lines discontinued, price changes and new products,
 - the new systems must support the company's quality assurance system in such areas as sales order confirmations, quarantine locations, recording goods receiving stock inspection failures, storing special handling instructions for individual products,
 - sending sales field staff instructions for updating their samples cases in line with the product changes described above.
- Over the last year, the company has developed a market for sales of goods that are not normally carried in stock. In these cases, stock must be specially bought. These combined sales and purchases transactions, which are known as "back-to-back" sales, must be processed by the new systems. It is characteristic of these sales that they are usually "one-off". Accordingly, the company requires a system that provides rapid ad-hoc set up and removal of product details.
- Back-to-back transactions have the potential for creating several different difficulties, such as:



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- purchase orders with suppliers not being recorded in the purchase ledger,
- not recording goods received in the stock ledger as they are to be sent directly to a customer,
- not recording goods received in the stock ledger as the goods are despatched immediately to be sent to a customer without being admitted into the warehouse,
- ensuring that the purchase is matched with the complementary sales order and sales invoice
- The company would like the new systems to be capable of:
 - receiving EDI sales orders, and
 - generating purchase orders and printing them directly to fax and EDI gateways,
- The sales staff operating the remote data entry facilities must have access to each of the sales ledger accounts that they are responsible for. This will allow them to check a customer's credit limit and outstanding credit balance before any new order is accepted,
- The purchasing activity is carried out during the day by the warehouse manager for repeat items and by the directors for baby wear and new products. Most repeat purchasing is done following a review of the previous week's stock issues and physical inspections of warehouse stock bay quantities. Purchasing staff know, from personal experience, the regular suppliers for each range of products carried by the company as well as alternative suppliers. The company recognises that this is important knowledge that should not be locked up in the minds of staff. There is a need, therefore for the new systems to retain full details of suppliers, alternative suppliers, past orders and prices placed with each supplier,
- The company wishes to be able to look back over the sales orders history for each customer,
- The market demands that XYZ should provide its customers with goods already labelled with a European Article Number ("EAN") and supporting bar code, a product description and a retail price. The new system must support a linkage to a stand-alone, personal computer that



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holds details of product description and retail prices for each customer for each product item. This personal computer is linked to the company's bar-code printer.

- The system must support many different retail prices for printing on bar codes and sales invoices.
- XYZ has introduced a system of negotiated selling prices for many of its larger customers. This has created an increasing trend towards complex structures of retail and trade prices and discount arrangements for each customer. The new systems must not restrict the company ability to set prices and discounts that are competitive and attractive to all its customers,
- the company wishes to have accurate stock balances within the new stock system. The new system should provide a means for prompting the warehouse staff to carry out continuous stock checks, and
- The company operates tight control over its debtors and the granting of credit to customers. The company is anxious to ensure that the directors, sales staff and accounts staff have instant access to sales ledger balances to monitor the true debtor balance position and credit granted to customers at any time.
- The company recognises that some aspects of remote electronic data capture for sales order taking might not be supported in-house by some prospective IT suppliers. Accordingly, the company wishes to purchase its new systems from a systems supplier that is willing and able to take on the role of lead supplier and technology integrator. Such an approach is intended to ensure that the company has a single point of contact for problem solving irrespective of the nature of the equipment, systems or communications facilities involved.



4.2 Software

The following software functions are required:

- Purchase ordering system
- Sales ordering system
- Purchase ledger

- Sales ledger
- Nominal ledger
- Management reporting
- Stock control
- Payroll
- Cash book
- BACS and on-line banking
- EDI for purchase ordering



4.3 Hardware

Appendix B is a plan of how the company envisages the new computer systems being laid out in its premises.

It is envisaged that the directors and certain office staff will use Windows-based personal computers for both the main operations and for personal productivity tools such as word processing and spreadsheets. Other staff will use dumb VDUs where required.

The company is willing to be guided by its chosen supplier as to whether the warehouse and staff will use personal computers or dumb VDUs for accessing the main stock and ledger systems.

4.4 System Security and backup

The directors require a high degree of access controls in the new system. In particular, the following features are required:

- Each option in the menu structure must be capable of being password restricted at the "child" level as well as at the "parent" level,
- The system should retain a log of when each user invoked a menu option, the name of the menu option, and the duration of the log-in to the option,
- Any feature allowing user authorisation of batches or individual transactions must be under a separate password restriction from the users that originated the batches or transactions,

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- All transactions and batches of transactions must retain details of who originated them, who approved them, and the date and time when created or approved,
- A full operating system audit trail must be capable of being printed out,
- Any reports produced by the proposed applications that do not include the entire data from a file or dataset, must include totals of both the data printed and the entire file from which the reports are produced,
- Whilst the company recognises the difficulty of maintaining data integrity, it should be possible for the users to create partial backups as well as the entire system,
- The process and procedures for creating back up copies of data must clear and simple,
- The central backup system must accommodate the backing up of data used by various networked personal computers. Such backups must be capable of being made either as part of an overall file server backup or a separate backup data set independent of the central applications' data,
- When creating backup copies of the system's data, it must be possible for these to be scheduled for these to run unattended outside office hours, and
- The directors consider the control over the completeness and accuracy of the company's data to be important. To this end, the company's auditors may be asked to satisfy themselves that the system provides sufficient audit trails and controls.



4.5 Phasing of Implementation

It is anticipated that the whole implementation will take approximately 8 to 10 weeks to complete. With exception of personal computers for the sales staff, the entire hardware and software acquisition will be purchased complete at the outset of the project.

The company is willing to consider a "big-bang" approach to the implementation of the systems. However, a substantial amount of data transfer and cleaning together with the appropriate training will have to be completed before going live.

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The company envisages spending a significant amount of time setting up stock and ledger systems with standing data and believes that the loading of open transactions and stock balances might be achieved over a week-end. Suppliers will be expected to advise the company as to their preferred approach to implementation.



5. APPLICATION REQUIREMENTS

5.1 Sales

5.1.1 Sales Orders

The company wishes to be able to record sales orders whenever a sales representative calls on a customer. Most sales orders are taken from customers in this way. There is a small, but significant, proportion of sales orders that are telephoned by customers directly into the sales office. This usually happens when customers run out of stock between visits from the XYZ's sales representative.

Sales orders are prepared manually by the sales representative on a pre-printed, multi-line, A4-sized sales order form. Each day, the sales representatives batch up their orders and post them to the sales office in Manchester. (Appendix D contains a sample of the sales order.)

Sales representatives are not permitted by company rules to accept any sales orders from a customer that has exceed its credit limit or credit terms unless expressly cleared to do so by a company director.

Although sales representatives are sent ad hoc memos by post informing them of stock changes in lines and availability, this information is naturally out of date. As a result, most sales orders include a significant level of lines that cannot be satisfied. This problem results to a loss of profitability and of creditability by XYZ with its customers.

Although some customers are willing to accept substitutes for unavailable stock, the company wishes to reduce, or possibly, eliminate this shortcoming in its order taking activity.

In order for the sales office in Manchester to decide whether to accept a customer's sales order, the company requires on-line real time access to:

- credit control information held in the sales ledger, and
- stock ledger balances.



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Once the sales office has completed its credit checks, the sales orders are entered into the computer system. Any "stock-out" messages reported to the operators are ignored as the stock system is usually several hours out of date. At peak times, this lag can extend to more than one day. The main purposes of entering the sales order data are to generate stock picking lists and for producing invoices.

No sales order acknowledgements are required from the system.

For many customers, "out-of-stock" items are neither substituted nor put on back order. These represent lost sales that the company is anxious to eliminate through more accurate stock records and more immediate communications with their sales force.

The company has a policy that only orders for any item worth in excess of (say) £50 will be placed on back orders. All unsatisfied orders less than this threshold will be dropped. The sales invoice should include a message to show that the goods were out of stock or put on back order. The system must be capable of creating separate picking lists and delivery notes for items that can be supplied immediately and those items that are put on back order waiting for the receipt of new stock or back-to-back purchases.

A large and significant number of customers is willing to accept substitutes for "out-of-stock" items. At present, the original sales orders are attached to the computer generated picking list and passed to the stock picker. This enables the stock picker to see each customer's instructions as to whether or not substitutes might be acceptable.

At present, the sales representatives are not given a copy of the sales invoices sent to their customers and, therefore, are unaware of the level of lost sales lines or the volume of substitutes that the customer has experienced. The company would like the new system to be able to retain sales invoice details for remote access queries by sales field staff. The on-line query display must be capable of re-creating the original sales invoice.

Whenever a sales order line is substituted or placed on back order, this event must be shown on the sales invoice so that the customer can see exactly what has happened to each item in the original order.



5.1.2 Advanced Sales Orders

A number of the products sold by XYZ are seasonal in nature and are pre-sold up to six months in advance. For example, orders for hot water bottles are often taken in February and March for delivery in August or September.

The new system must be capable of recording, and separately identifying, advance sales orders. Any such advance sales orders must be separately reported.



5.1.3 Mobile Computing

XYZ currently has 15 sales staff involved in visiting customers. The process of demonstrating samples and taking is usually carried out within the front-of-counter area of a shop. The sales representative has to display a large, A4-sized, lever-arch "presenter" containing photographs and descriptions of stock lines. The representatives will also have up to 5 cases of samples to take into the customer's shop.

Orders are written in manually onto a sales order pad. Sales order can run to 40 or 50 lines spread over 2 or 3 sales order forms. The existing sales order pad has 27 lines per page.

When taking an order, the sales representative has to rely on memos from the sales office indicating whether stock items are available or not. Each week, sales representatives are expected to change the contents of their samples cases and to mark up their presenters with details of new or discontinued lines. The company is aware that this is a potential source of misunderstanding about stock availability. This, and the number of manual operations currently required to record and process an order, are potential sources of error in capturing sales orders. The company wishes the sales field staff to use new IT equipment that will:

- Speed up the collection of sales orders,
- Reduce the level of manual processing of data,
- Have on-line access to stock available and prices,
- Check credit limits and debtor balances, and
- Provide sales representatives with up-to-date remote access to the computer stock records.

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With the new system, the company wishes the sales representatives to have access to customers' debtors ledger balances and transactions histories. The company considers that this information need only be as up to date as "last night".

In providing this debtor's ledger information, the company wishes that sales representatives should have access only to the information relating to their own customers.

The company has no pre-conceived ideas as to how this might be achieved and is willing to consider any reasonable suggestions such as:

- Personal computers linked to mobile telephones,
- Personal computers up-dated each evening from head office prior to order-taking the following morning,
- Personal computers plugged in to customers' telephone sockets,
- Equipping each sales representative with a data capture device that can be up-dated each day with stock availability and downloaded with new orders to head office, or
- Bar-code readers that can be used to scan bar codes on pages of the sales "presenters".

Although not essential, the company is keen to find a way of giving its customers a hard-copy of the sales order before the sales representatives leaves a customer's shop. We believe that a portable PC fitted with an integral printer, such as developed by Canon, provides one solution. Other possible solutions will be also be welcomed by the company.

5.1.4 Price Lists and Discounts

Traditionally, the company has sold its products to its customers using a common set of prices. However, there has been a trend over the past two years for separate price lists and discounts to be offered to certain types of customers such as:

- Supermarkets,
- Chemist shops chains
- Collective purchasing groups,



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- Preferred individual customers.

At present, the sales office staff have details of each customer's list of branches and discount structure stored manually at the sales office. It is essential that the system supports multiple price lists and discount structures that can be assigned to one or more customers.

When setting up these price lists, it would be helpful if price lists and discount structures can be copied and modified rather than each having to be created from scratch.

Price lists are usually created using a combination of trade prices, retail prices and structured discounts.



5.1.5 Parcel Sales

It is a feature of the industry that customers will not specify every item that they wish to buy. Instead, they will tell the sales representative that they wish to buy a "parcel" of goods in a range up to a value of (say) £250 - for example, a "parcel" of baby wear clothes up to a value of £150.

"Parcels" are currently marked on the sales order with a total value and a general description of the customer's requirements such as "girl sizes 4 to 6, boy sizes 4 to 8". The warehouse supervisors usually pick "parcels". The warehouse supervisors note on the picking list the individual items they have picked for a "parcel".

The sales invoices produced by the new system will show each of the items making up a parcel, together with the retail price for each item, including sizes, colours and types of items.

Back order items will not be shown as such on sales invoices.

5.1.6 Back-to-back Sales

Much of the company's success in the future is likely to come from its ability to purchase items for customers that are not normally carried as stock items. The process involves an intimate knowledge of the supplier base and speed of reaction to obtain a purchase price and quote a selling price to the customer.

At present, the current volume of such transactions is low. Documentation of back-to-back transactions is done manually and is susceptible to error. The company wishes to avoid a number of anticipated areas of difficulty that might arise as future volumes of this business increase. These difficulties are envisaged as including:

- Purchase orders are raised but not properly traced through to purchase invoices and matching sales invoicing,
- Details of agreed selling prices are not properly recorded,
- No history is kept of previous back-to-back sales for customers making it difficult to be consistent in dealings with customers and finding out past suppliers and prices,
- When customers place orders resulting in back-to-back sales, the goods are sometimes delivered directly from the supplier to the customer without passing through the XYZ



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warehouse. There is a danger that the company will lose control of the paper documentation resulting in a failure to raise a sales invoice to the customer and a loss of control in the quality assurance system, and

- Non-stock purchases are not recorded properly in the stock or purchases ledgers. To do so could create many records of stock and suppliers that have only 1 or two movements in a year. The effort of setting up the computer details has been considered in the past to be unjustified.



In the case of back-to-back sales transactions, the sales order system must record a cross reference to the matching purchase order.

The company is keen to discover ways in which the new systems can help the company to process these sales quickly and accurately. In particular, there is a need to ensure that the purchase of goods and the consequent sale can be matched and tracked through to completion.

5.1.7 Sales Invoicing

Sales invoices must be generated automatically for items delivered from sales orders. The system is expected to build up a file of sales orders during each day. Sales orders are printed out immediately the goods have been picked from the warehouse. A copy of the sales invoice is physically added in to the stock picker's basket and the goods, picking note and copy sales invoice are passed to the packing department for checking, packing and despatch. In order to maintain speed of operations in this department, the company wishes to continue to use this procedure after the new systems have been introduced.

It must be possible for sales invoices to be generated for part-delivered sales orders. It is essential that sales invoices indicate the details of outstanding sales order items.

When the system is generating sales invoices, the sales values for each line and for the invoice as a whole must be calculated automatically bearing in mind the various prices and discounts assigned to each customer and stock item.

The system must be capable of printing on the sales invoice the recommended selling price that the customer wishes to use. In most cases, this will be the normal retail price set by XYZ. However, certain multiple and chain customers require the recommended prices to be fixed at other values.

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In the case of back-to-back sales, the company needs to be able to generate sales invoices without having raised a goods delivery or picking note.

Appendix D contains a sample of the sales invoice.

The customer's copy of the sales invoice is either packed in with the despatch cartons containing the customers' goods or sent separately by mail to their headquarters.

The new system must be able to print up to 4 address labels on each picking note. These labels are used for the internal control of goods as they move between departments. Labels are attached to each trolley of picked goods as they progress towards the packing department. The company would prefer the address labels to form a series of tear-off parts located at the foot of the picking note. If more than 3 labels are required, the system must be able to print a "dummy", addressed picking note.

At the end of the picking and packing process, the name, address and account number from each label is manually keyed into a dedicated computer terminal belonging to Securicor plc. This terminal and printer are used to create the special carrier's address labels for attaching to the various sales cartons constituting a customer's sales order. The terminal also captures the delivery details in order that a courier vehicle can be scheduled to up-lift the goods. There will be no integration linkages into this system by the new XYZ applications.

The new sales invoicing system must be capable of processing *pro forma* invoices.

5.1.8 Sales Analysis

Every customer must be capable of being allocated a number of analysis categories including sales representative, geographic region, customer type and two user-definable categories.

The company wishes to categorise its customers into types such as independent, purchasing combines, large trade, chains and supermarkets.

The company requires a wide flexibility in the groupings that it can create. In the case of some of the chains, each shop in the chain must be capable of having its own designated sales representative.



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An extensive range of sales analyses is required by XYZ. The reported information will include quantity, sales value and actual margins achieved. Within these reports, the user must be able to call for multi-level analyses such as product group within customer within customer type and within user-specified time spans of up to two years detailed history.

Sales reports must support statistics for the current month, the current financial year and a rolling 30 months (i.e. 2.5 years) of history. As a result of re-using product numbers, the users must be capable of clearing down sales histories for any product number, or range of product numbers, prior to any given date.

Specifically, the sales system must be capable of producing reports, with either detailed or summary analyses, either for all customers or a selected range of customers, for one or more nested categories in the following list:

- Customer,
- Customer type,
- Sales representative,
- Geographic sector,
- User definable categories,
- Product group, and
- Back-to-back sales.

There are many product groups and sub-groups in the present system. The principle categories are by product, e.g. Hair Care, Baby Care, Bath Care, XYZ Branded goods. Within each category, the sub-groups cover product types such as shampoo, conditioner, slides and clips, and scrunchies. However, the company is interested in analysing its sales across categories so that a picture can be obtained of the total sales and margins for all suppliers.

Every month, the company produces special sales analysis reports for use by the larger XYZ customers. Specifically, the new system will be expected to produce the following reports:

- Total and detailed sales lists for current month and year to date, for both the current year and the previous year, total sales for each shop within a customer group or chain. The



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report should have an option to sort, with break totals, by delivery addresses within supplier accounts,

- Summary totals of quantities and values of product groups (eg nail care, bath care) for each shop or location in any customer group, and
- Summary totals of quantities and values of individual stock lines for each shop or location in any customer group.



The following outputs should be produced from a sales ordering system:

- Audit control listings,
- New sales orders,
- Advance sales orders,
- Completed sales orders,
- Various sales analyses reports as described above,
- Unmatched back-to-back sales,
- Sales orders with "substituted" items showing product description and value, together with totals of quantity and trade price value for each substituted stock line,
- Lost sales order items caused by "out-of-stock" events showing description and value,
- Back orders for report, i.e. partially satisfied orders, including the age of each back order,
- Audit trail for automatic update to the sales invoicing system, and
- Cancelled sales orders.

Appendix E contains samples of some of the present sales analysis use by the company.

5.2 Sales Ledger

A system is required which follows standard DP practice with full audit trails. The system should have an automatic interface with both the sales invoicing and nominal ledger systems. This

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interface should allow the user to choose between transactional detailed update or batch summary totals update. At present, the finance department updates the nominal ledger from the sales ledger daily in batch summary form. The sales ledger is updated in real time from the sales invoicing system.

The system should be capable of processing the following types of input:

- Customer details,
- Credit notes,
- Invoice details from the invoicing systems with full automatic update,
- Cash payments,
- Pro forma sales,
- Staff sales,
- Journals, and
- "Return to Drawer" cheques.

Most standard features of a sales ledger package will be used, but the following features are particularly highlighted:

- A structured customer code will be required with a minimum of six characters. The company wishes to retain the existing structure of "AANNNN",
- Each sales ledger customer must have up to 9999 delivery addresses,
- A search facility must be provided to enable all staff to find customers records quickly and accurately,
- A choice is required by individual customer to identify the account as open item or balance forward,
- A single sales ledger statement must be produced for each customer covering all open transactions together with a history of matched transactions in the previous months,
- Invoice addresses can be different from delivery addresses and from statement addresses,



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- Statement addresses can be different from delivery addresses and from invoice addresses,
- A breakdown of VAT should be held in order to produce quarterly VAT returns,
- The company requires an age debtor analysis in the conventional manner. A column is required explaining the credit terms for each customer,
- Aged debtor balances must be calculated using parameters to be set by the user. A choice of calculations must be available including numbers of days, number of months or weeks from invoice date. The company's normal credit terms are 2½% discount if settled within 30 days or 60 days net. In certain circumstances relating to back to back trades, the sales settlement terms will be 30 days net.
- Aged debtor balances analysed by sales representatives.



The following outputs should be produced:

- Audit control listings,
- Customer enquiries and reports,
- Statements shown ageing of debt. Unallocated cash should not be aged,
- Aged debtor report for the company and for individual divisions,
- Monthly statements,
- Credit control letters. These will be helpful but not essential,
- Direct postings to the nominal ledger, and
- Details of receipt into the computerised cash book for bank reconciliation.

The data volumes for the sales operations are shown in schedule A.

5.3 Stock Control

A stock control system is required by location within the company. This system will be essential for the company's future development and must provide flexibility, ease of use features and the ability to accept data captured from remote data capture devices.

Remote access security and the ability for remote users to enquiry and enter data are regarded as the highest priority.

Although the company does not operate any of the internationally accredited quality assurance system, there are strict procedures for inward inspection and despatch and supplier approvals. Therefore, the stock system must provide the normal features associated with a quality assurance system such as multi-locations, batch traceability back to supplier, inwards inspection failure history.

Under the company's quality assurance system, all goods received must be located first in a receiving area awaiting inspection. The inspection is simple and involves a count of packages, an examination of the physical integrity of the outer packaging and labels, and a matching of the packages count and descriptions to the delivery note. Thereafter, the goods are moved either to an area awaiting placement in stock bins or bulk stocks for packaging as XYZ branded products.

The location of stock in the computer system must be easily changed as the goods are received, inspected and passed to the warehouse or despatch areas.

5.3.1 Longer Term Developments

The company is keen, once the initial systems have been installed and fully implemented, to extend the use of IT in the warehouse operations. In particular, the company is interested in developing hand-held, bar-code scanners to scan bar-coded stock bins whenever stock is moved to a new bin, issued or received. Such developments are intended to simplify and speed up the processing of stock movements with the minimum of keyboard data entry.

IT suppliers are encouraged to outline areas and technologies that might be of interest to the company together with indications of costs. The quality of responses in this area will influence the company's decision as to the successful supplier.



5.3.2 Stock Prices

At present, the stock system holds several prices for each stock line, namely:

- Retail or recommended selling price,
- Trade price,
- Historic cost price.



There is a large group of customers that are given discounts from the normal trade prices.

The new system will be required to hold the following price information:

- Multiple retail prices that can be used to prepare product bar code labels or swing tags unique to each customer's needs and pricing policies,
- Normal trade price,
- Special trade price,
- Historic cost price, and
- An unlimited number of discount indicators that can be cross referred to a table of discounts. There are currently around 100 different discount indicators and this number continues to expand.

5.3.3 *Manufacture/Packing*

A very significant part of the goods purchased by the company are bulk purchases of items that are repacked as XYZ-branded items. For example, a XYZ nail care pack might comprise a bubble pack containing a nail file, emery board, nail buffer and nail scissors. Each of the individual items will have been purchased separately in bulk.

The new system must support a bill of materials ("BOM") that can hold details of each of the items that make up a sellable branded product. This BOM must include the bubble pack printed backing board and other packing items. Any equivalent "make up of parts" or "kitting" feature will also be acceptable.

At present, the stock system requires Manufacture/Packing department users to raise a stock movement transaction form to record the issue of stock from its bulk location to the Manufacture/Packing location as Work in Progress ("WIP"). Once the bulk goods have been repackaged, the "new" products are returned to the stock system as finished goods using a stock movement transaction form.

In addition to its own manufacture/packaging activities, the company use waged out-workers to undertake some pre-packaging assembly work. At present, the issue of bulk stock to out-workers is not recorded in the computer system although the Packaging Manager maintains a manual record. This manual record is used to check the movement of stock and the production yields achieved by out-workers. Only when goods have been packaged are they recorded in the stock system as a movement from bulk stock to Finished Goods stock. The appropriate stock movement document is created by the Packaging Manager for processing by the finance department. The new system must be capable of supporting this activity including the recording of production yields and the direct input of stock issues and returns by the Packaging Manager.

The new system must make this transfer from raw material stock and return to finished goods process as simple as possible. Ideally, the system should be designed for users in the different operations departments to enter the stock movements directly rather than the current approach using paper-based stock transfer forms to be processed by the administration office.



5.3.4 Display Stands

In addition to selling XYZ branded goods as normal stock items, the company also sells complete display stands fully stocked with XYZ goods. There are many different types of display stands for different XYZ branded ranges of goods.

The display stands are usually supplied on loan and sales representatives use an "imprest" system to restock the stands each time the sales representative calls on a customer.

The new system must hold details of the stands in stock and the location of each stand supplied to a customer.

5.3.5 Sales Orders

The system must allow the taking of sales orders even when stock is on back-order. The sales department staff must be able to alter a customer's order at any time from "committed stock" to "back order" if they decide that another customer should have priority for existing stock. This may be the most satisfactory method of processing advance sales orders for seasonal goods such as hot water bottles.

It would be helpful, but not essential, for the system to be able to offer the warehouse pickers alternative products in the event that a customer's enquiry cannot be met from available free stock.

5.3.6 Stock Picking

The system must generate stock picking lists for each customer's order. Picking lists will be printed out in the sales office for checking and then passed, complete with the original sales order forms, to the warehouse for picking.

At present, if the pickers find that a stock bin is empty and that a sales order cannot be fulfilled, the picking list is marked as being out of stock. Any "subs" picked are manually written on the picking list.

Any picking lists that are modified for "out-of-stock" or "subs" are passed back to the sales office so that the sales orders can be amended prior to sales invoices being generated.

The new systems will permit the warehouse department to enter stock pickers' changes to picking lists directly into the stock system.



The new system is expected to keep a record of all substitutes made by each picker. This information will be used to report the types of goods being substituted and the volume, quantity and value involved each month.

5.3.7 Stock Locations

The stock system will support multiple locations including goods receiving, bulk stocks, sundries stock, baby wear stock and despatch warehouse.

Within the main sundries and baby wear stock locations, there will be up to 9,999 bins. Each bin must be capable of holding a physical address indicating the aisle, bay and row where the stock bin can be found. This is necessary because of the constant re-use of stock numbers and the need to keep similar kinds of goods physically close to each other.

The new system must allow the warehouse manager to change the physical addresses of any stock bin to reflect the physical re-organisation of the warehouse.

The following are the main features required in the stock control system:

- Details held on stock, distinguishing different types of goods such as hair care, baby wear, nail care, XYZ products, "Bobbie" baby wear range and bath care,
- Each stock record must hold details of several prices i.e. full, detailed historic purchase costs; multiple retail; and multiple trade,
- Each stock record must support a variety of structured discount codes including bulk, volume levels, customer specific, manufacturer promotion,
- Minimum reorder levels and economic order levels for suggested purchase orders,
- For each stock record, the system should hold details of a preferred supplier and at least 2 alternative suppliers,
- Users must be capable of recreating previous purchase orders and to see prices and discounts offered by suppliers for any stock item,
- Print details of stock lines for counting on a cyclic basis,



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- An evaluated stock report that can be produced at any time,
- Count variances between physical stock checks and notional stock figures, and
- Stock must be allocated to specific physical locations.

The following are the main inputs to the system:

- Stock line details,
- Purchase orders via an automatic interface,
- Details of goods received,
- Sales orders via an automatic interface,
- Adjustment to stock levels following stock-takes, and
- Transfers of stock between locations.

The following are the main outputs from the system:

- Variances between actual and notional stock figures,
- Suggested purchase orders,
- Analysis of stock lines by manufacturer, product type, volume turnover, value turnover, margin achieved,
- Details of slow moving lines,
- Details of stock transfers showing totals by volume, quantity and value for each user login ID. The report should have an option to report –
 - the details for any, or all, user log-in Ids, or
 - the details for any or all stock product numbers.
- Cyclic stock check list,
- Stock valuation report, and
- Details of stock issues from raw materials to work-in-progress by product showing quantities and values.

The data volumes for the system are shown in Appendix A.



5.4 Purchase Ordering

A multi-divisional purchase ordering system is required through which purchase orders are raised and which allows the matching of goods received and purchase invoices to the original order. Interfaces with the stock control, purchase and nominal ledger systems are required.

The process of buying goods for resale is carried out by the directors and the warehouse manager using a combination of physical inspection of stock bins, awareness of sales activity over one or two days, requests from customers for back-to-back supplies and presentations from suppliers' representatives.

The office manager is responsible for the buying of office supplies.



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The company is keen that the new IT systems will improve and simplify the buying process. In particular, the company wishes the system to suggest what to buy, to provide a history of prices and discounts for individual items and generally from suppliers.

The purchasing staff usually prepare purchase orders for individual suppliers rather than assemble a list of purchase orders for specific products. Although the company is inclined to continue to operate in this way, it is keen to explore ways of making the buying more time efficient for staff and more profitable for the company. IT suppliers are encouraged to offer technical solutions that might improve operating efficiency in this area.

The company is interested in having the new computer system issue purchase orders to suppliers automatically using electronic fax or EDI. This idea is not essential but is a longer-term aspiration for the system. However, the system will have to be able to produce hard-copy purchase orders for office and supplier confirmation purposes.

In the case of back-to-back sales transactions, the purchase order system must record a cross reference to the matching sales order.

The main features required from a purchase ordering system are:

- Purchase orders will be raised using multi-part stationery. The auto-fax copy will be sent to suppliers and a paper copy will be retained in the accounts department,
- The system must retain the originator's user ID on each purchase order,
- It is particularly important that access to the facility to raise purchase ordering system is password restricted,
- When goods are received, details will be entered into the computer system by warehouse staff against the on-line detail lines of each purchase order,
- The system should require users to enter the purchase prices at the time of creating purchase orders,
- When preparing purchase orders, the system should be capable of sorting and displaying recommended re-order details for any, or all, supplier at the user's request,



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- When goods are received from suppliers, the system will create back orders, if necessary, for part fulfilled orders,
- When purchase invoices are received from suppliers, the user must be able to match the invoice against the original purchase order and to record on-line details of damage, price changes, or other mismatched information,
- The system will compare invoices with purchase orders and report on any price variances,
- The purchase invoice details will be posted automatically to the purchase ledger system,
- There will be an automatic link to the stock control system,
- The system will hold details of previous orders and alternative suppliers. It is particularly important that the company should be able to check past prices paid for supplies before placing an order with a potential supplier,
- The system must be able to record more than one GRN against any purchase order, and
- The system must provide an enquiry facility to display purchase orders by supplier or by date order or by stock product number. The enquiry must display information in summary form distinguishing between open and completed purchase orders. A "drill-down" facility is required to allow users to display the full details of any single purchase order.



The following are the main inputs to purchase ordering:

- Recommended purchase orders generated by the stock system,
- Purchase order details,
- Details of expected prices,
- Goods received details, and
- Invoice details.

The following are the main outputs from the system:

- Purchase orders,

- Part-complete purchase orders,
- Outstanding purchase orders,
- Quantity and price variances between purchase orders and goods received notes,
- Quantity and price variances between purchase orders and invoices received, and
- Interfaces to purchase ledger, nominal ledger and stock ledger systems.



Data volumes for the purchase ordering system are shown in Appendix A.

5.5 Purchase Ledger

A standard multi-divisional, open item purchase ledger system is required which follows accepted DP practices and provides a full audit trail. The system should have an automatic interface with both nominal ledger and purchase order processing.

The purchase ledger is required to interface into a BACS software module for on-line payment of suppliers and payroll.

Most of the standard features offered by a purchase ledger system will suffice, but the following specific requirements exist:

- The supplier code will be a minimum of seven characters in length and access must be available to suppliers by short search name. The company wishes to retain the existing structure of "AAANNNN",
- All input to the purchase ledger will be batched with controls required on batch totals. As staff keying input may be unable to make a decision regarding non-balancing batches, the facility should be available to hold unbalanced batches on the system and to return to them to make corrections at a later date,
- In order to claim discount, the company pays its suppliers by one of the following methods that must be supported by the new systems:
 - immediately,
 - weekly or fortnightly,

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- by due date to be entered to the system with invoice details, and
- by a period pre-set for the supplier, e.g. 30 days from invoice date,
- Remittance advices are to be printed by the system,
- The system should list, at any date, a payments due list. The company wishes to make a payment run each day. The system should have the ability to override selections or add to the suggested list,
- Invoices which have been paid should be retained on history following payment to allow interrogation for possible duplicate invoices,
- Every invoice should be allocated to the appropriate expense heading in the nominal ledger, with the ability to spread costs over multiple expense headings,
- The interface to the nominal ledger should be automatic but the choice should be available as to whether posting should be in real time or await a batch update, and
- VAT analysis should be able to control goods with standard, zero and exempt categories.



The system should be able to process the following input transactions:

- Supplier details,
- Purchase invoices, either directly or from the purchase ordering system,
- Debit notes,
- Credit notes,
- Manual payments,
- Journals,
- Standing orders/direct debits,
- Cheques received, and
- Stopped or cancelled payments.

The system should be capable of providing the following output:

- Audit control listings,
- Supplier accounts enquiry and reports,
- Payments due report,
- Remittance advice notes,
- Cheques,
- Aged creditors analysis,
- Printed or electronic BACS payments lists for direct payment of creditors,
- Nominal ledger postings with audit trails, and
- Details of payments into the computerised cash book for bank reconciliation.



The data volumes for the purchase ledger system are shown in Appendix A.

5.6 Payroll

A standard package is required which is capable of handling both weekly and monthly employees. Payroll costs for each employee must be attributable to the appropriate departments of the company. Employees are paid by Bank giro credit using direct BACS electronic input.

Provision must be available for payment by cheque or cash for joiners and leavers.

The system must interface directly with the nominal ledger and correctly allocate costs to each department within the nominal ledger.

A high level of security is required.

Payroll details and calculations are not complicated. The following points are considered important:

- Password control is of great importance on both payrolls,

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- It should be possible to direct payroll reports to specific printers and to deny non-authorized users access to spooled reports,
- There are several pension schemes in the company which operate on different percentage calculations each period,
- The system must be capable of calculating Directors' National contributions on both a weekly and monthly basis,
- The system should be able to record and calculate full details of SSP and SMP the system should handle calculation of Income Tax and National Insurance on multiple weeks, holiday pay,
- No more than 10 payment elements and 10 deductions will be required in any of the payrolls,
- There are three rates of calculating overtime, namely standard rate, time and a half and double time,
- The system must support the processing of additional voluntary contributions to pension schemes (i.e. AVCs), and
- Automatic posting of pay details to the nominal ledger with costs being allocated to each department as required.



The system should handle the following input:

- Employee static data
- Employee variable data
- Bulk changes, e.g. tax codes and pay rates
- Changes to income tax and national insurance rates and bands.

Standard outputs are required from the payroll system as follows:

- Payroll costs by division with overtime broken down by premium rates
- Payslips
- BACS file

- Audit trail
- Nominal ledger postings
- Fiscal year-end documentation.

Data volumes in respect of this system are shown in Appendix A.



5.7 Nominal Ledger and Management Accounts

A multi-divisional nominal ledger system meeting accepted DP practices and the requirements of double entry bookkeeping should be provided. It should interface with sales and purchase ledgers, payroll and sales and purchase invoice systems. In addition, it should be possible to extract any data required in either a report writer or spreadsheet.

The following are the main features required within the system:

- The company operates a 12 period year,
- Periods can be either four weeks or five weeks in length. Provision must be made for years which can include 54 weeks,
- The coding structure within each company is likely to be as follows:
 - department - two digits,
 - expense grouping - three digits, and
 - expense code- three digits,
- Transaction details should be held for 2.5 years, with a maximum of 9 months transactions to cover the financial year end,
- It must be possible to extract data in either a report writer or a spreadsheet. Data should be extracted either vertically or horizontally within the chart-of-accounts, i.e. either within or across cost centres,
- At the end of each month or each year, it must be possible to post transactions into both future or past months and to re-compute brought forward figures,
- Period actual figures must be held for the previous year to allow year-on-year comparisons,

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- Budgets will be held at various levels within the chart-of-accounts, i.e. not always at posting level. Flexibility is required in setting up these budgets, e.g. based on last year actuals, phased, weighted,
- The processing of recurring journals, accruals, prepayments and reversing journals is required,
- It would be helpful, but not essential, for all manually input data to be batched and no batch should be released until it balances to zero. It should be possible to exit a non-balancing batch and to return to correct it at a later time. It should not be possible to carry out the period end processing, while there are still batches awaiting posting,
- Password control is necessary to restrict access to the ledger and to allow some personnel only to key in transactions, not to enquire or produce reports,
- Postings to periods or future periods must be under strict password controls,
- At the financial year end, processing for the last period of the old year must be possible for up to period 9 of the new year. As long as the old year remains open, the trial balance of the current year must be produced as many times as required. It must be possible to close periods one to six of the new year while the last period of the old year is still open. Once the old year is finalised, the profit and loss account should be cleared and the balance sheet rolled forward into the first period of the current year, and
- Production of monthly management accounts should include balance sheet, trading accounts, profit and loss account and *ad hoc* reports by company and department.



The following inputs are required:

- Journals,
- Direct input from sales ledger, purchase ledger, sales invoicing, purchase invoicing, sales ordering, purchase ordering and payroll systems,
- Accruals,
- Prepayments,

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- Reversing journals,
- Standing journals, and
- Budgets

The following main outputs are required:

- Audit listings,
- Trial balance (at varying levels of detail),
- Quarterly VAT returns,
- Budget prints,
- Trading accounts by department, and by Accounting Head (eg People Costs, Establishment Costs, Financial Costs, Marketing Costs and Financial Costs)
- Profit and loss account,
- Balance sheet, and
- Link to a report writer or a spreadsheet.



Data volumes for the system are shown in Appendix A.

5.8 Report Generation

A report generator is required to access any of the modules within the total system. It should be capable of the following:

- Accessing more than one file per report,
- Accessing files from more than one module per report,
- Producing reports greater than 132 columns wide in order to make use of condensed print facilities which are available on many printers,
- Print one set of details on more than one line of the report,
- Have a data dictionary facility for ease of report set up,
- Be suitable for non-technical users to set up their own reports,

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- Be capable of carrying out mathematical calculations including percentages,
- Be capable of executing user logic,
- Be capable of selecting extraction data using multi "and/or" conditions,
- Be capable of reporting both past and future periods in current, past or future accounting years,
- Be capable of maintaining up to 10 levels of totalling and of printing any sub-total at any position within a report, and
- Be capable of producing a report in a form that can be passed to a spreadsheet system such as Lotus 1-2-3.



5.9 BACS Payments

At present, the company uses a personal computer system provided by the Clydesdale Bank to make BACS payments to suppliers and to pay wages and salaries.

XYZ requires an industry standard BACS transmission package that will extract payments or direct debits from the purchase ledger and payroll and relay the information necessary to BACS in an acceptable format, preferably by modem dial-up.

The system will hold details of the bank details of all persons or organisations to be paid or debited.

Amounts for each submission can be entered manually or by direct input from other interfaced applications.

The system must produce a printed list of proposed payments that must be approved by a director of the company. The proposed payments file cannot be released by the accounts department staff but can only be released by a director of the company using a separate login and password.

5.10 Bar Code Label Printing

The company uses a dedicated personal computer linked to a specialised bar code label printer to produce product price tickets and swing tags for supplied goods to certain customers.

The system uses a standard international 13-digit EAN and bar code. For each EAN, the PC's software holds details of product description and recommended retail price to be printed on the label.

The new system must provide a database of information that can be printed for any product for any customer. The bar-code printer must be linked to the stock and sales order systems in order that the correct number of bar code labels or swing tags can be printed for each customer's order.

As a contingency, XYZ can use a bar-code printing module provided by the Merchandising software. The central processor is connected by a T-switch to the laser printer belonging to a stand-alone personal computer. A similar contingency is required of the new systems.



5.11 Other Systems

The company intends to use its existing personal computers in the administration department to assist in the day to day work of the department. The company is interested in having these machines networked as part of the new IT facilities. The computers will operate the following software:

- Spreadsheets,
- Electronic mail - both internal and remote,
- Mail verge,
- Word processing, and
- File transfer and terminal emulation.

These systems should be able to accept data passed to them from systems on the main processor using industry standard data interchange methods. Acceptable interfaces could include ODBC or SQL linkages. However, the company will consider any reasonable alternative.

The company wishes to introduce an ISDN telephone connection. The main purpose of this new facility is to enable one or more members of the finance department staff to work from home on a regular basis. The ISDN line will also to be used for BACS. The existing direct telephone line will continue to be used for incoming and outgoing faxes.



6. INFORMATION REQUIRED FROM SUPPLIERS

Suppliers of computer equipment interested in submitting a quotation are invited to put forward their proposals, which should include the following information.

6.1 Management Summary

The suppliers are requested to provide a one-page summary outlining the reasons for selection. This should include special advantages and features of their company and proposed solution.

6.2 Proposed Hardware

Included in this section should be a detailed description of the hardware configuration proposed to provide the business solution.

6.3 Proposed Software

The suppliers are requested to provide a detailed description of password and access controls, audit trails and recovery procedures.

In addition, this section should also refer to how the proposed applications will be implemented, particularly in terms of packages, modified packages, 'bespoke' written software.

In particular, the proposal should state the basic packaged system solution, emphasising to what extent the potential future requirements of the company are currently available.

Where modifications to standard packages are proposed, these should be clearly described.

The proposal should also detail any software warranty period available.

6.4 Summary of Costs

The cost section should detail the following:

- Hardware Costs
 - This should detail the options available in terms of outright purchase, rent or lease, and specify the supplier's recommended method of acquisition
- Software Costs
 - This should specify, in detail, the breakdown of costs for the basic system, and a breakdown of additional costs necessary to introduce the various enhancements.
 - Suppliers are requested to provide detailed proposals of any software licence or software maintenance costs.
- Maintenance Costs
 - The annual maintenance charge for hardware support should be quoted



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- Additional Costs
 - This should provide estimates wherever possible of any environmental, delivery or training charges. An estimate should also be provided for any additional stationery costs.



6.5 Implementation

The proposal should provide a draft implementation schedule from the time of signing the order. This should show the estimated date of delivery of the computer equipment and the plan of work necessary to introduce the software applications.

6.6 Training

Suppliers should outline their plans for any training that might be required for the company's staff. Examples of training manuals are considered a useful guide to the professionalism of the proposed supplier's support.

6.7 Reference Installations

A great emphasis is placed on the suppliers to demonstrate that the proposed solution has been successfully installed.

The proposal should indicate how many installations there are of this type currently operating. Lists of customers using the proposed hardware and software should be provided, from which at least two may be visited or contacted by 4 Consulting Ltd or their clients.

6.8 Technical Details

Any technical documentation that the supplier may wish to submit concerning the proposed solution should be included.

6.9 Contracts

Copies of the contracts normally agreed by the suppliers should be provided showing methods of payment, conditions and terms, methods of dealing with disputes.

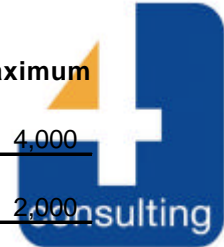


SPECIFICATION OF REQUIREMENTS FOR COMPUTER SYSTEMS

7. APPENDIX A - DATA VOLUMES**Sales Ledger, Sales Invoicing, Sales Orders**

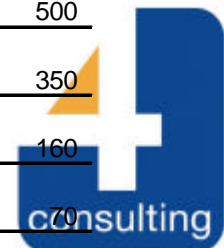
	Average	Maximum
Number of credit customers	3,000	4,000
Number of sales invoices per month	1,700	2,000
Number of cash invoices per month	50	70
Number of sales orders per month	1,800	2,000
Number of Customer remittances received per month	380	500
Number of lines per sales order	50	220
Number of lines per Invoice	34	75
Number of sales orders for goods not normally stocked (i.e. back-to-back sales)	4	6
Number of sales statements per month	1,500	3,100

Every invoice will generate at least 1 posting to an income account within the nominal ledger as well as VAT and control postings.



SPECIFICATION OF REQUIREMENTS FOR COMPUTER SYSTEMS

Purchase Ledger & Purchase Orders	Average	Maximum
Number of live suppliers	400	500
Number of purchase invoices per month	300	350
Number of payment remittances per month	130	160
Number of purchase orders per month	50	70
Number of lines per purchase order	6	120
Number of lines per purchase invoice	6	120
Number of supplier statements per month	50	70



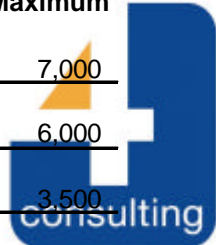
Every invoice will generate at least 1 posting to an expense account within the nominal ledger as well as VAT and control postings.

SPECIFICATION OF REQUIREMENTS FOR COMPUTER SYSTEMS

APPENDIX A - DATA VOLUMES

Stock Control

	Average	Maximum
Number of active stock lines (ignoring size & colour combinations)	5,000	7,000
Number of dormant stock lines (ignoring size & colour combinations)	5,000	6,000
Number of new stock lines per year	3,000	3,500
Number of stock lines falling dormant per year	800	1,500
Number of stock locations (ignoring the despatch warehouse)	3,200	3,500
Number of goods receipts per month (i.e. GRNs)	175	200
Number of goods inwards returned to suppliers per month	3	6
Number of goods picking lists per month	1,200	2,000
Number of picking "substitutes" per list	10	15
Number of stock adjustments per month	50	100
Number of stock movements per month	300	500
Number of despatches per month	1,500	2,000
Number of labels per despatch	2	35
Number of back orders per month	100	200



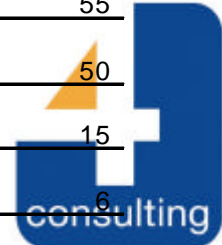
SPECIFICATION OF REQUIREMENTS FOR COMPUTER SYSTEMS

Payroll

	Average	Maximum
Number of weekly paid staff	45	55
Number of monthly paid staff	36	50
Number of weekly paid outworkers	11	15
Number of pay elements making up Gross Pay	6	6
Number of pay deductions making up Net Pay	3	4
Number of Employee standing data changes per month	12	15
Number of Tax code changes per month	2	5

Nominal Ledger

	Average	Maximum
Number of nominal accounts	79	99
Number of cost centres/departments	5	9
Number of cash book receipts per month (excluding sales ledger)	24	30
Number of cash book payments per month (excluding purchase ledger)	22	30
Number of petty cash book receipts per month (excluding sales ledger)	5	10
Number of petty cash book payments per month (excluding purchase ledger)	20	50
Number of bank receipts per month (excluding sales ledger)	5	10
Number of bank payments per month (excluding purchase ledger)	2	5
Number of BACS payments per month (excluding wages & salaries)	218	350
Number of debit/credit journal postings per month	25	30

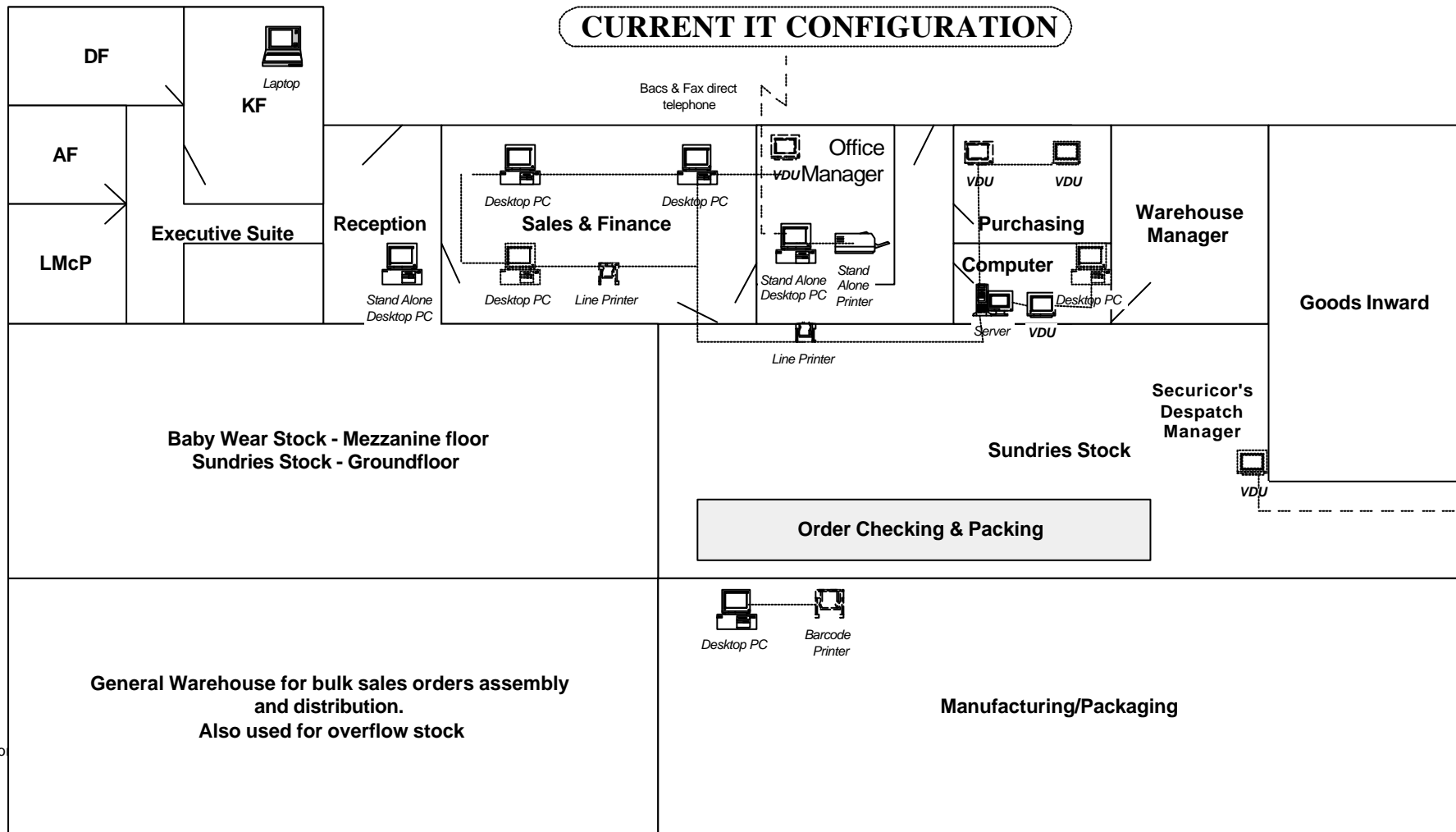




8. APPENDIX B - CURRENT IT CONFIGURATION

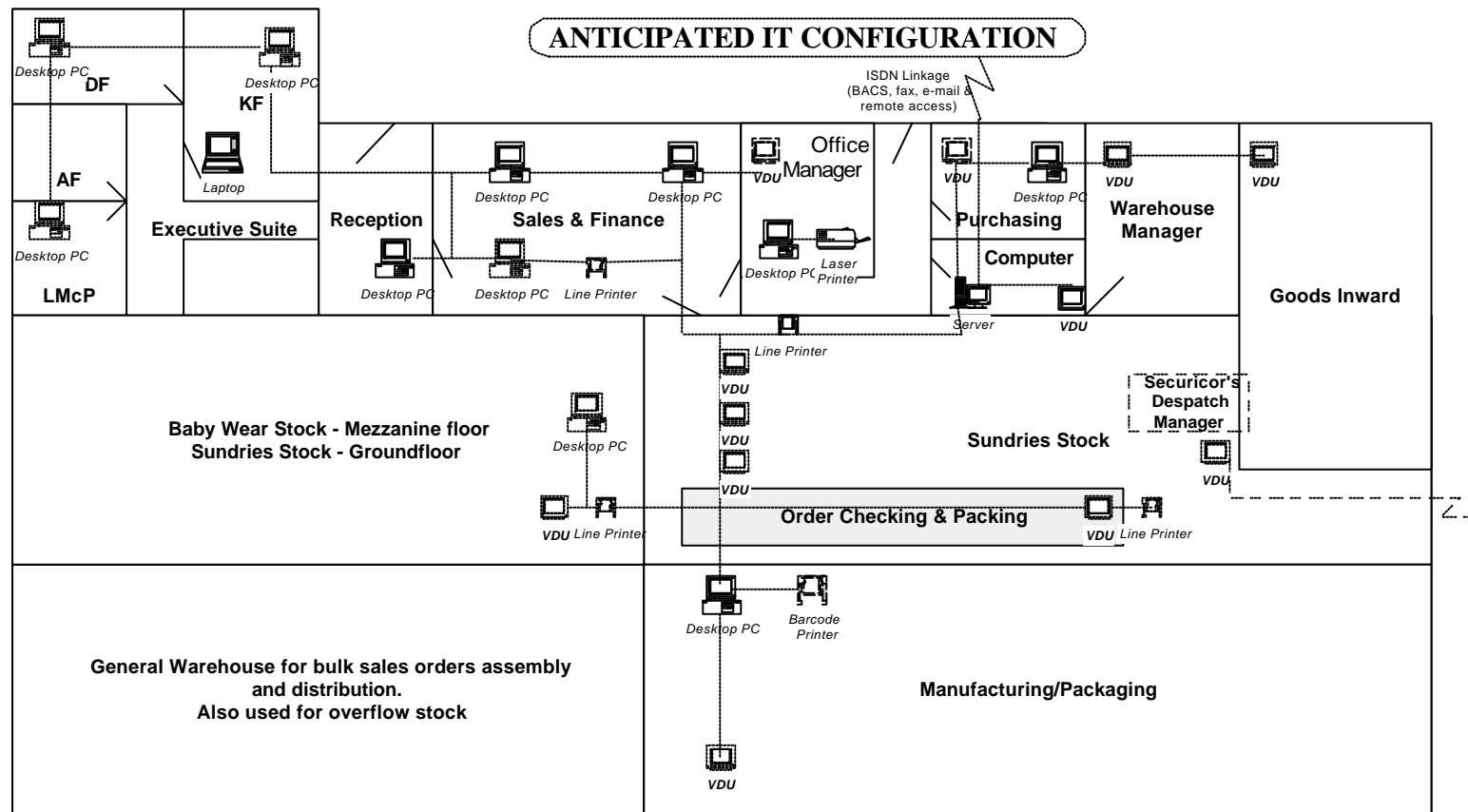


CURRENT IT CONFIGURATION





9. APPENDIX C - ANTICIPATED IT CONFIGURATION





10. APPENDIX D - SAMPLE DOCUMENTS



11. APPENDIX E - SAMPLE REPORTS