



CONCURRENT SOFTWARE

A Small Book : A Big System

This is a fact and concept book about SEQOS®; the packaged, computer-driven, warehouse and stock management system. The book has no pictures, no graphs, no flow charts, no brilliant colours; just a summary, in plain English, of some of the basic facts about the SEQOS warehouse management package. Facts which help reduce warehouse operational costs, enhance customer service, simplify staff management, improve asset deployment, and strengthen business controls.

Since the first printing of this book several years ago, SEQOS has been continuously developed along exactly the same lines which led to its initial success. Every installed system uses SEQOS as an intelligent subsystem to an enterprise mainframe running through a real-time interface to such software as SAP, FOCUS, BPCS, MFG-PRO. SEQOS can also run "standalone".

There are no practical limits to the warehouse sizes which SEQOS may manage, nor, on a single installation on a single server, any limit to the number of warehouses, companies, users, products, customers, languages, the number and types of peripherals, e.g., RFs from various manufacturers, even in the same warehouse, carousels, pick-to-light, picking cranes, check weighs, automated conveyors, diverters, scanners, carton printers, etc., all in the same warehouse, or in geographically dispersed warehouses on the same system server or on networked servers.

Resizing of the system server is all that is necessary to efficiently manage higher volumes and more complex requirements.

For smaller warehouses, SEQOS can usually be economically justified for installations supporting ten employees, particularly if there are demanding stock storage and handling requirements, e.g. hazardous substances requiring strict controls of quantities in store and separation of products.

Complex Problem ?

Most companies have a unique set of requirements for warehouse management; a combination of differing products, customers, suppliers, staff, warehouse buildings, warehouse equipment, and management principles. Within this melange of almost infinite variety, custom-written software for the warehouse management system may appear the inevitable solution.

Simple Answer !

The SEQOS package is readily tailored for any warehouse by keying the warehouse parameters (details of every business rule and the minutiae of stock management elements) into a series of data entry screens. Many of the entry fields are in free-form tables.

"Free-form" means exactly what it says. You do not simply select from prepared options lists. There are, in fact, no standard lists, even for such well-known functions as units-of-measure tables.

You use your own terms and expressions, which can be completely exclusive to your own company or line of business; even, e.g., standard and non-standard units-of-measure, the company's own internal terminology in menus, other countries' languages, dating conventions and currencies, customised label formats, even innovations in warehouse operating methodology and equipment.

There is one proviso to this "simple answer" just given. You may ask "What if a client requests some completely unique or novel process?"

Since SEQOS would be unnecessarily encumbered by including such one-off solutions, and that the basic system concept dictates that the same software package will be installed for every implementation, special software is created for that unique process.

This specially created software is maintained in a separate file from the SEQOS packaged software and is seamlessly integrated into the SEQOS operation by a dedicated interface. The special file is not overwritten during upgrade to a newer version of SEQOS, and, since each upgrade of the SEQOS package is completely backward compatible with previous versions, the existing special software file automatically integrates with the updated SEQOS package through the dedicated interface.

Mini Case Study

The largest SEQOS installation of special software is in a warehouse with more than 200 staff using English and another language, running 24 hours x 7 days, with substantial system-managed product kitting and assembly, additional to normal stock management. The special software unique to that installation is little more than 1% of the total SEQOS installation; 7,200 lines of source code in a total of about 580,000 lines. Nearly 99% of the installation is the standard SEQOS package.

Substantial and complex warehouses often run 100% on the SEQOS package alone.

Version Control

Can you begin to imagine the complexity and cost of upgrading and maintaining the software for a multifaceted warehouse management system used by a number of disparate businesses? SEQOS has met this problem at the basic design level by using a standard package for which there are only two customisation methods, neither of which requires any changes to the software package.

1. Details of every business rule and the minutiae of stock management elements (the warehouse parameters) are filed as data, not in customised software.
2. Very unusual customisation is isolated, for that client only, in a special software file which is integrated into the SEQOS package through a dedicated interface.

Every SEQOS installation therefore uses an identical software package (in the same SEQOS version). Upgrade and maintenance is simple. A new SEQOS version can even be installed by accessing the system server via the Internet.

Licensing Policy

SEQOS is licensed, not sold. The only license fees, after the initial installation, are one-off charges for any increase in the number of "users" concurrently accessing the system. This licensing policy is very straightforward and fair to all our clients, and has proved particularly attractive to companies with multiple warehouses and to third party warehouse operators, since there are no "per warehouse" licensing charges, and licenses which become "spare" when a warehouse is closed can simply be transferred to another warehouse.

The SEQOS design concept is that "one-package-fits-all". The whole system and all system enhancements are available to our clients from the initial installation, with no parts of the system being switched on or off, or subject to any additional license fee to put into use.

Features & Functions

This issue of the Fact Book lists numerous advanced built-in SEQOS features and functions. Many of these attributes are unique to SEQOS; some are available in other systems, if at all, only as chargeable add ons.

There are a number of specialised and less-used SEQOS functions which are not listed, or are available as combinations of other SEQOS functions. Please mail us, at enquiry@seqos.com, or call us if you have any requirements which are not in the book. You will find a helpful index at the end.

System Design

Scalable, Robust, Effective, Efficient, are significant SEQOS system design attributes.

- SEQOS is a generic system. Almost every likely requirement in the best contemporary warehouse and stock management practice is supported by the one package.
- SEQOS is truly a package. Every warehouse uses the same basic software. (Also see previous information in this book.)
- SEQOS can be customised by system "owners" (in-house warehouse or IT staff) for many parts of the system through free-form tables.
- SEQOS is an almost limitless system. There are no limits to database sizes; numbers of products, storage locations, customers, suppliers, etc..
- SEQOS is menu driven, with an optional "mouse" pointer. Experience in a variety of warehouses has proved the advantages of simple menus rather than Windows GUIs for operator training, speed of operation and ease of use.
 - The current menu path names are constantly cascaded on screen during menu use so that the operator can always view the menu path.
 - Access to menu items by individual users is controlled by warehouse management defining various warehouse functional groups, setting the access which the group may have or be denied to every system function, then allocating each user to one of the warehouse functional groups. Access control can afford a user full access, or view only or hidden from view and completely inaccessible.
 - Every operator can open additional menu sessions without closing out other menus currently in use by that operator. This includes access to other languages currently being used in the system, via a single function key switch.
 - Cross access to associated tables and functions is simple and fast via standard keyboard "function" keys, without retracing the menu path.
- Some SEQOS features are available through a Web browser, so that a remote warehouse can be run from a server via the Internet. More existing SEQOS features are continually being added to the Web browser capability.
- Database Automatic Disaster Control.
 - Automatic database transaction commit and roll-back.
 - Automatic index rebuild if corruption detected (e.g., due to improper shutdown).
- SEQOS New Version Releases
 - Each new release and version of SEQOS is backward compatible with previous versions. New fields are automatically added into the database with the default values when upgrading to the new software. Upgrading is so simple that it is typically undertaken during a meal break or after hours.

Menus

Throughout most business offices, for word-processing, spreadsheets, project planning, accounting, etc., computers running GUIs (Microsoft Windows, Apple) are endemic. But the SEQOS warehouse management system is menu driven! Why? And why do our experienced clients prefer menus over Windows for warehouse use?

- Menu usage is far more readily understood than Windows displays by operators with limited comprehension or education. Why spend time and money to train staff in Windows operations who require only simple menu directions to efficiently perform their tasks?
- Training requirements for menu usage are minimal. Newly introduced staff can be productive almost from Day 1. This is practical, basic work knowledge presented in the simplest form possible. No complicated, specialised staff training; no theoretical knowledge tests.
- Menus are almost universal on RF units and on console RF simulators, so menus for general use in the warehouse maintain a consistent display environment.
- Standard keyboard function keys are used to move around within the SEQOS system. Function key access is faster and more certain than mouse pointing.
- Mouse operation is supported for report generation and other management and office functions by office staff already conversant with Windows usage.

Databases

SEQOS provides its native database, a superset of DBF-compatible dBase, which is incorporated into the SEQOS product without any separate charge, and which combines high speed, robust reliability, very low system overheads, with software tools which enable maintenance by staff who do not possess professional computer qualifications. The integrated design of this database is a major reason for the ability of SEQOS to efficiently manage substantial warehouses on single-processor Pentium servers.

SEQOS will also run efficiently on most proprietary databases, e.g. Oracle, MySQL, Informix, Microsoft SQL, although usually requiring higher processing power to service the increased system overheads. Operating systems available are RedHat LINUX and major implementations of UNIX, e.g. H-P, SUN, DEC, SCO. Please mail or call us if you wish to use another database product or operating system.

Quick Overview

A quick run-down of some more general interest features.

- SEQOS provides full batch control of all stock by, optionally, batch number, manufacture date, use-by date. This extends to the ability to identify individual batches within each individual order fill, so that product recalls can

be limited to the customers who received the recalled batches.

- SEQOS operators can simultaneously run a number of completely different enquiry sessions under the UNIX or LINUX operating systems. This facility can prove invaluable for warehouse supervisors and enquiry clerks dealing concurrently with several different matters.
- SEQOS includes extensive standard reports which can be customised by a system "owner" using a wide range of options. Owner-customised reports can be automatically run at preselected times on preselected days during overnight or off-peak processing.
- SEQOS Report Wizard includes a graphing capability and can automatically start up Microsoft Excel and paste the report data into the spreadsheet.
- SEQOS database search efficiency and convenience of use exceeds standard query language searches within the SEQOS system context. All databases can be explored on any selected criteria, including mixed model and wildcard searches. SQL syntax can also be entered to match database records.
- SEQOS drives multiple companies within single or multiple warehouses. Third-party warehousing services can store any number of clients' stock in mixed stock storage locations in any number of warehouses on a single SEQOS system, while retaining full stock control, separate screen access for each client, reporting, stocktake, etc., as if each client is the sole warehouse occupant.
- SEQOS has easily-applied multilingual capacity, with other languages and terminologies operating contemporaneously in a single system, including multi-byte character set languages, and multi-currency capability with exchange rate tables.
- SEQOS includes a comprehensive online operating manual (English language version) which may be viewed with an Internet browser. The manual is available via a hot-key or Windows menu choice, and is context sensitive to the current input field in the current module. One index references related topics; another index provides module and section references across the whole manual.
- SEQOS provides numerous system specific diagnostic tools which can be applied by the system "owner", and by Concurrent Software's support staff through modem connection. SEQOS SPY program allows management and other authorised staff to view the screen of another user and type keystrokes as if the user is typing them, so assisting remote training and support for warehouse operators.
- SEQOS support is comprehensive and prompt, and is normally provided by Internet access via a SEQOS Client workstation to the associated SEQOS system server.

Basic Stock Management

All warehouse stock movements, including the filling of customer orders through picking, packing, checking, invoicing, manifesting and despatching, are system-driven. Complete management control is maintained by enabling manual intervention by authorised staff in every operation, while fully retaining system integrity and audit trails.

SEQOS is designed to operate as a completely "paperless" system in which stock, stock storage locations and customer orders are identified by barcode labels which are scanned by appropriate equipment, e.g. RF terminals, fixed scanners, hand-held scanners. The system then decides the action required to complete the transaction, e.g.,

- Direct the operator to move stock to storage, pick against customer order, manage crossdock, load for despatch, etc.
- Move stock automatically by system controlled conveyors, diverters, through check weigh, etc.

Barcode Labels

SEQOS paperless systems processes depend on the scanning, by various devices, of barcode labels. Major label uses include:

- **Stock storage locations** are each identified by a unique barcode label. Location labels are scanned for positive transaction confirmation by RF terminals.
- **Stock receipts** are each identified by a system-generated or supplier's barcode label attached to the pallet or other warehouse storage conveyance.
- **Customer orders** are actioned by the system printing barcode order labels, which also include shipping information, e.g. Ship To (Name), (Address), (Carrier). When the labels are scanned by RF devices, the system identifies to the operator the location and quantity of stock to be picked.
- **Shipper labels** used for packing.
- **Contents labels** attached to the shipper for the customer.

System Server

It is recommended that each warehouse be provided with its own file server and backup server, able to operate independently of any other company computer. This ensures uninterrupted warehouse operation should the mainframe server or its communications fail.

Distributed servers can be linked to each other for enquiries on other warehouses' systems, for stock transfers between warehouses and other offices, consolidation of head office reporting, etc.

Server Backup

RAID disk systems and other hardware can be installed for data backup.

SEQOS includes an attractively priced and efficient alternative to RAID systems, through real time "dual tracking" of data to a duplicate server. A duplicate server provides the important advantage of duplicating the processor and associated hardware, as well as backing up data.

SEQOS "dual tracking" software automatically copies each record updated on the main server into the same database on the backup server in real time. If there is any failure of the main server file system or processor, warehouse operation can be promptly resumed on the backup server at the last completed transaction, i.e. last stock movement or last picked line item, without loss of data, audit trail or any system integrity.

Since SEQOS operates in real time with full transaction rollback on system failure, partly completed orders do not need to be backed out of the system and order picking recommenced, if the processor fails during multiple line item order picking.

When the main system server is restored to full service after failure, all updated records are *automatically* copied from the backup server to the main server. Installing a backup server for this "dual tracking" system (an Intel-based PC is suitable for backup in many warehouses), is very low cost "insurance" against warehouse downtime caused by system hardware failure.

Data can additionally be archived to removable media (tape or disk). This is most conveniently scheduled as part of an automatic end-of-day or end-of-week process. The system is fully useable during end-of-day data archiving.

SEQOS "Client"

Peripheral equipment, such as consoles (for system management, data entry, and enquiry), pick lights, carousels, check-weighs, conveyors, diverters and printers, are serviced by dedicated workstations, which are low-cost basic PC processors with a small memory, running the SEQOS Client proprietary software on Microsoft Windows (Windows 97 upwards & Windows NT). Workstation programs to control carousels, pick displays, and remote printing are automatically downloaded to those devices by the main warehouse computer, which acts as their system host.

The SEQOS Client program supports multiple login sessions, remote report and label printing with multi-byte character set languages for any Windows-supported printer.

Uninterruptible Power

A UPS (Uninterruptible Power Supply) is essential to ensure reliable service for each computer. The UPS "smoothes" the power supply and, if mains power fails,

provides sufficient time for the system to be shut down gracefully.

If the system is not correctly shutdown, then when it is restarted, any incomplete transactions are rolled back. Any corrupted indexes are detected and automatically rebuilt during normal operation. An easily-used SEQOS utility program also enables a warehouse supervisor to check the indexes and rebuild the files. No IT expertise is required to use this utility.

Peripheral Hardware

Numerous peripheral devices can be interfaced to SEQOS. Expensive proprietary interfaces are frequently unnecessary. Peripheral hardware currently interfaced includes RF devices, barcode readers, specialised printers, pick lights, carousels, conveyors, check weighs, diverters. SEQOS is also used with Decombi cranes, Destamats, scannable employee badges, etc.

Printers

Reports & Manifests: The system requires one or more report printers for 11x15 continuous stationery (or laser printer). SEQOS Client manages requests to laser printers for oversize reports, e.g., 10 x 15, by automatically reformatting those reports to the printer's paper size, e.g., A4.

Consignment Notes: Usually produced on pre-printed stationery. An impact printer is required for multipart stationery. This printer can act as the emergency backup support for other report printer(s).

Barcode Labels: Printers for pallet labels for attachment to received goods, customer orders' address labels for despatch, and location labels for racking. Since label production is essential for paperless operation, at least two label printers are essential to ensure continuous service in the event of printer breakdown.

Also see further details of Printers under "SEQOS Advanced Features" later in this book.

RF Terminals

SEQOS supports all major brands. Differing models of the same brand and different brands can be mixed in the same system, e.g. 4-line and 9-line displays can be intermixed in a single SEQOS system. Multiple RF base stations can also be installed on a single SEQOS system.

Typical RF terminal usage in forklift operation follows this sequence.

- Stock operator logs in.
- Selects equipment type, i.e. forklift model, being used.
- Selects operation from menu display, e.g. Receiving, Putaway, Replenishment.

Operator is then directed through all subsequent tasks by the system in real time, without management intervention. Where various types of forklift equipment are used, e.g. standard, high reach, the operator will only be directed to tasks which are suitable for the equipment being used.

The operator is prompted to scan stock location barcode label and stock ID barcode label on every stock movement. Unless the effect of these scans will result in a valid action, the operator cannot proceed to the next operation, and reentry of commands is prompted. The system records operator activity and assesses productivity. Productivity reports are accessible only to management possessing an appropriate security level.

Operators with sufficient authority can override the system recommendations for storing or picking the stock providing that the configured business rules are not violated.

Host Systems

SEQOS usually manages the warehouse(s) as an intelligent subsystem within a company's main business management systems. Automatic real-time data transfer between SEQOS and the enterprise system, which may be in-house software, or such products as SAP, FOCUS, BPCS, MFG-PRO, is completely transparent to users of those systems, irrespective of the types of operating systems or databases. Third-party warehouse operators may have each of their external clients using completely different mainframe systems without interface contention or degradation of service levels.

The ability to readily interface SEQOS with other computer software packages through real-time data transfers (at the user's option, polling may be introduced) or ODBC, irrespective of the other packages' operating environments, enables SEQOS to be a major component of a fully integrated Supply Chain Management system.

Advanced Features

The balance of this document lists numerous advanced SEQOS features and functions which indicate the scope of this system.

Many of the SEQOS features listed below are those which most frequently differentiate SEQOS from other warehouse and stock management systems. The lists do not include features that should be considered standard in a RF-driven high-volume warehouse management system. Since the SEQOS system is being constantly enhanced, please enquire (enquiry@seqos.com) about any required features which may not be listed. It is also likely that a combination of existing features can be reconfigured to achieve desired operational enhancements without making any software changes to the system.

Calendar

SEQOS features several unique Calendar functions, including:

- Public Holiday Table: Configurable by delivery zone to accommodate different states and countries recognising different public holidays. Among other system functions, SEQOS can automatically reschedule deliveries to take account of public holidays at the customer delivery point.
- Despatch Cycle Date Calendar: Marks the beginning of a despatch cycle for customers who accept periodic deliveries.
- Accounting Cycle Calendar: Marks the beginning of each accounting month. Companies which account on a 4-5-4 week quarterly calendar, or other non-standard periods throughout the financial year, can obtain reports using records for the range of dates relative to their accounting periods.

Company Profile

SEQOS provides, within the basic system architecture, a comprehensive range of multiple company interactions, which are particularly useful to geographically dispersed companies and to third-party warehouse operators.

- Multi-Client Server: A server in a single warehouse (or a central server) may be configured to control multiple companies within the same warehouse or in many warehouses.
- Companies' Reporting Consolidation: Each company within the system may have its own product table, orders and business rules and other parameters, as if running on a dedicated server, but since the shared data for every company across all warehouses is stored in shared databases, enquiries about any system details can be initiated from any warehouse within the system, subject to system control of individual users' system accesses.
- Companies' Unique IDs: Each company's delivery and postal addresses can be automatically printed on supplier and customer documentation.

Currency

The international installation base of SEQOS has afforded ample opportunities to develop multiple currency support.

- Multiple Currencies & Symbols are fully supported.
- Currency Conversion Table, with data entered by the System Administrator or other authorised user.
- Automatic Conversions: Money amounts are automatically converted to other currencies in reports and screen listings according to the entered exchange rate effective for the day of the transaction.
- Multiple Exchange Rates across different currencies are supported.

Customer

Customer tables include the following.

- Contact Details. Separate addresses for "delivery to" address, "ship via" address and "postal" address. Contact details include fax and email.
- Customer Login ID & Password: Authority to log on SEQOS Web page through the Internet to view customer's orders and delivery details.
- Delivery Lead Time Days: Calculate required despatch date from expected delivery date. Accounts for weekends and public holidays.
- Delivery Schedules & Timeslot Receipt Bookings. Days per week, weeks per month using the Despatch Cycle Date Calendar.
- Time-slot booking at customer's receiving dock.
- Additional company-specific user-defined fields can be configured by the System Administrator.
- Defaults for other order processing flags are filed in the Customer Table and are listed in the Order Detail section.
- Documentation printed for the customer, e.g., contents labels, is printed in the customer's specified language.

Mainframe Interface

SEQOS features extensive options for various data interface and import/export functions.

- Field Mapping. The System Administrator can define field mapping for importing data to SEQOS and exporting data to an external system.
- Multiple warehouses and companies can be separately processed or combined into single files.
- Import and export transaction files are captured in the Communications Log register, together with the results of the processing.
- Value of each inbound transaction can be obtained by drill down to data field level.
- Print or copy an Interface Batch's contents.
- Multi-language support for description fields in interface. Import and export data can be mapped to user-defined fields when standard field does not exist in SEQOS tables, e.g., a new field can be defined by the System Administrator for the customer table and data can be imported to that field and exported later.
- Import and export transactions are processed in date and time sequence.
- Define from alternatives when the import interface is run.
 - Triggered by an external event, e.g., writing into a named pipe.
 - Poll for inbound file based on a configurable period.
 - Manually run.
- Acknowledgement file or error file may be transmitted back, configurable by transaction type with configurable format and fields.
- Define when the export interface is run.

- Triggered by a SEQOS event, e.g., receipt, stock adjustment, pick confirmation, pack confirmation despatch confirmation including electronic advanced shipping notification to recipient, proof of delivery, order modification cancellation, uncancellation.
- Manually run.
- Run within end-of-day processing, e.g., daily stock listing.
- Run within end-of-week processing.
- Run within end-of-month processing.
- Run within end-of-accounting-period processing.
- Acknowledgement or error files generated by the remote machine can be processed to automatically update the Interface Communications Log file.
 - If there is no acknowledgement after a specified period of time, the original file is automatically retransmitted. The period to wait and the number of retries are both configurable.

International Settings

SEQOS is currently in use in a number of countries and in several different language environments. SEQOS is available in English, Traditional Chinese, Simplified Chinese and Thai and Korean. Other languages are being implemented when required by clients.

- User logs onto the preferred language. The currently displayed language can be changed at any time via the hot key.
 - Reports can print in a specific language. Customer despatch documentation can automatically print in the customer's preferred language.
- Date format specific to the country.
 - Support for Buddhist Era (e.g., Thai year 2543 = Julian 2000).
 - Support for Taiwan date (e.g., Taiwan year 89 = Julian 2000).
 - Support for various formats (e.g., month/day/year).
 - Support for different epochs, e.g., two-digit years greater than xx80 are 1981-1999, less than xx80 are 2000+.
 - The currently displayed format can be changed at any time via the hot key.
- Default currency when logging in The default currency for screen displays and reports can subsequently be changed at any time via the hot key. Values are automatically converted using the most up-to-date information in the exchange rate table.

Product Buyers

The details of a company's buyer or purchaser officer for each product can be maintained. Reorder reports can be directed to the appropriate product owner, i.e. buyer or purchasing officer.

Printers

Powerful printer management tools provide SEQOS users with full control of Printer output at every stage of a job's progress.

- Printer Control Table to configure attributes of UNIX and Windows printers.
- Redirect to another printer, output to a printer that is being serviced or is offline.
- Double-byte character support.
- Cancel print jobs.
- Label Control Register to configure Label Formats to be used according to transaction type (e.g., picking label, packing contents label) and other criteria; and when the label should be printed.

Products

SEQOS Product Module enables the smallest detail of product attributes to be precisely defined. SEQOS terminology conventionally names batches of "product" as "stock".

- On receipt of each batch of product into the warehouse, a unique barcode identification label is attached to each stock conveyance (e.g. pallet, or other storage container), unless a suitable label is already attached. This label references the full description of the conveyance's dimensions and its contents in the system file and remains with the batch of stock until it is exhausted. The following information is included in the filed batch description.
 - Warehouse shelf life of each batch of product is ascertained on receipt into warehouse, by calculating the "expiry date from the manufacture date" or the "manufacture date from the expiry date".
 - Separate warehouse shelf life to calculate when the stock expires in the warehouse, i.e., the last date that the stock may be despatched so that there is a calculated amount of time for the stock to be sold after receipt by the consignee before the stock's real shelf life expires.
 - Hazardous Goods (including UN hazardous goods code).
 - Dangerous Goods code and specified packaging to be used.
 - Fragile Indicator.
 - Additional company-specific user-defined fields can be configured by the System Administrator.
- Block Stack Storage. The number of pallets of a product to be stored at each location can be accurately calculated using the specified maximum block stack height of the product.
- Serial Number Tracking. Serial numbers can be captured when receiving stock and/or despatching stock and when moving part of the stock internally in the warehouse. Serial numbers may be embedded to any depth, i.e. serially numbered products within other discretely serially numbered products, ad infinitum.

Multiple serial numbers can be recorded against each item. Different items identified by serial numbers can be grouped together and assigned a unique group code for easy referencing.

- Templates for sorting the serial numbers (e.g., vehicle license plates) can be configured. Ranges of serial numbers with omissions can be entered, instead of each number being individually scanned or entered.
- Cycle Count Scheduling Products may belong to a cycle count group or be scheduled to be counted periodically.
- Each batch of product can be separately configured to capture any or all of the following: Style, Colour, Size, Batch or Lot Number, Expiry Date, Manufacture Date, Serial Numbers.
- Reorder Stock thresholds and Reorder report.
- Rounding to Pack Size Flag to round ordered quantity to pack size while picking, e.g., there may be twelve items per pack and a customer orders ten. If the flag is set for this function, SEQOS will require picking of one pack of twelve units.
- Back Order Option If stock for a product is not available, the product may be automatically backordered, providing that the customer flag or order header flag is also configured for this function.
- Crossdock Option: When stock is received for a product for which there are outstanding orders, the receiver is directed to move the total ordered quantity to the configured crossdock location so that it may be immediately picked, rather than be putaway to stock storage or used to replenish a picking location.
- Order quantity limitations, by customer or by customer group:
 - Restrict ordering of the product by customer or customer group.
 - Obsolete product which cannot be received.
- Returns. Allow/deny customer returns of the product.
- Real-time summary data of stock on hand, pending receipts, actual receipts, ordered, picked. Drill down.
- Preference tables:
 - Which locations are to be used for storing stock.
 - Separate table for locations to search to pick stock depending on the product or product group.
- Units of measure conversion. No limitation on table size.
 - Specify when fractions of a unit of measure are allowed, e.g., cable lengths and liquid volumes.
 - Weight, length, width, height and volume specified by individual unit of measure.
 - EAN by unit of measure.
 - Non-standard units of measure can be converted during receiving.
- Product kits (or Bill of Materials). Nested kits. When a kitted product is ordered, the system verifies that the correct components in the kit are available in stock for picking, otherwise the kit is not picked, i.e., partial kits will not be picked.
- Pricing.
 - Sell price by Product by Customer (or customer group or company).
 - Cost price by Product by Supplier (or company).

- Cost price by Product by Manufacturer (or company).
- Prices for individual order line items can be set overriding the system price table.
- Sell price for customer (and customer group) prices. Tax table and discount table. Discounts are configured for ranges of quantities.
- Substitute product. If stock for an ordered product is not available, a previously selected substitute product can be picked in its place. A conversion can also be configured, e.g., if a 100g product is not available, then 2x50g substitute product may be picked instead. The substitute product may be a completely different product, not simply a different size of the same product. Nested substitution is supported.
- Mapped Products:
 - Map supplier product numbering to warehouse and/or company product.
 - Map manufacturer numbering to warehouse and/or company product.
 - Map customer product numbering (or customer group) to warehouse/company product.
 - Alternate product numbering mapped internally.
- Repack product conversion.
- Hit Rate (number of times that each product was picked) is calculated and stored daily. Location putaway rules can be based on the hit rate. E.g., if the hit rate is within a specified range, received stock will be directed to specified stock storage locations, typically high and low throughput areas.

Security

Security in SEQOS is paramount. The system's basic design includes extensive protections against abuse or unauthorized access to information.

- Different menus with different security levels and multi-language terminology can be configured by the System Administrator.
- Each field on each screen may also impose separate security levels.
- Employee / User Logon Table with password.
 - Users may change their own password.
 - Each user may be allocated by warehouse management to have any number of levels of security or belong to any number of warehouse functional groups.
 - Each user may be allocated to a different menu group, each with a customised menu.
 - Permitted warehouse equipment (MHE) authorisation.
 - Restricted access to specific warehouse(s) and company(s).
 - Credit authorisation limit for customer order entry.
 - Debit authorisation limit for purchase order entry.
 - Timeout. When the user leaves the screen or RF terminal unattended for a selected period of time, the device will timeout, corresponding to pressing the ESC key multiple times or closing the window or terminating the session.
- Audit Trail is automatic for every warehouse transaction, secured against change. Includes:

- User ID, date and time of change, original and new value.
- Manually entered changes to the various configuration tables.
- Accessible only to staff authorised by System Administrator.

Supplier

- Lead time from ordering stock from the supplier until it may be expected at the warehouse.
- Reordering on supplier can be generated from reorder reports available to the appropriate product owner, i.e. buyer or purchasing officer.

Warehouse

Integration of all SEQOS modules on a single server across an organisation, provides for seamless interchange of data between individuals and warehouse divisions while maintaining any required separation and confidentiality of (third-party) clients, companies, warehouses, companies within warehouses, etc. Distributed processing can possess other advantages, but is not necessary to achieve the objectives of data separation and confidentiality.

- A central computer server may be configured to control multiple warehouses for a company (or multiple warehouses for multiple companies), e.g. a server in City A may control warehouses in City B, City C, City D, etc..
- The warehouse time zone table can be configured to adjust the date and time of transactions in one warehouse to the local time zone of another warehouse, e.g. a transaction on a database located in Sydney occurring at 1500 hrs in Sydney can display and record as 1300 hrs. in Perth. Configuration also includes automatically adjusting times for different daylight saving zones.
- The originating warehouse delivery and postal addresses can be printed on supplier and customer documentation.
 - At a lower level, each stock record may have an "owner" such as a business group. Customer orders can be directed to pick stock belonging to a particular "owner" or group.

Stock Returns

Handling complex Customer Stock Returns can be a challenge for any warehouse management. SEQOS simplifies the process through a fully integrated "Stock Returns" module.

- Default receiving location and default stock status for returns.
 - Returned stock can be isolated in a separate stock storage location so that the returned stock can be checked for saleability prior to being made available for picking or other disposition.
 - Returned stock is accepted into the system by reapplying to the returned stock the stock ID under

which the stock was originally despatched, and serial numbers if applicable, if original data has not been purged. Invoice numbers and picking history can be used for sophisticated searches to establish the original stock ID if not provided with returned stock.

- Configuration parameters available are similar to those described in the Receiving section.

End-of-Day

SEQOS' comprehensive End-of-Day Module enables the System Administrator to automate this important process and to eliminate reliance on operators' manual intervention.

- Configure Reports to run automatically daily, weekly, monthly or end-of-accounting period.
- Data Archiving and Purging at end-of-week.

The system can still be used normally while end-of-day is running.

System Maintenance

SEQOS sophisticated System Maintenance Module is fully configured to provide maximum reliability and minimum downtime.

Fully Automated Backup Capabilities:

- Backup scripts can be run from the SEQOS menu.
 - Alternately, automatic backups can be scheduled using *cron* on UNIX or Scheduled Tasks on Windows®.

Dual Tracking / Mirrored system. A separate server can be configured as the backup to the main server:

- As each transaction is updated on the live server, the updated record is automatically copied to the backup server. In the event of a total hardware failure of the system server, processing can resume on the backup server at the last completed transaction without needing to manually roll back entries such as partly picked orders.

Audit tracking system changes:

- All stock adjustments are recorded in the Stock Adjustment Audit Trail with the date and time, the user, reason code, reference and other stock ID data.
- Changes to configuration tables are recorded in a separate audit trail by date and time and user.
- View by database or date and time of change.

Complete Diagnostics Tools:

- Carousel diagnostics.
- Pick to light diagnostics.
- Monitor user operations. SPY on a user workstation.

Database Usage. Real-time database usage monitor.

Receiving

In conjunction with the Putaway Module, the Receiving Module in SEQOS is feature-rich.

Purchase orders can be separated from delivery receipts or can be the same record, i.e., the purchase order number may be the same or different from the delivery receipt number.

Stock is labelled with a unique number (stock ID) when it is received. The stock ID relates to the unit of measure at receipt, e.g., pallet, carryall, and contains completely detailed data about the stock.

- The stock ID is used to reference the stock throughout its life in the warehouse since all data about the stock attaches to that particular stock through the stock ID.
- The stock ID is recorded in the customer order when the stock is picked for despatch.
- The barcode on the stock ID label is scanned by the RF terminal to ensure that the correct stock is putaway, replenished, picked and packed.
- Split delivery. Line items or part quantities for line items may be received on separate deliveries.
- Receive products using different units of measure.
- Timeslot Booking at receiving dock. Periodic Booking schedule for deliveries that occur on a regular basis. Advanced shipping notification.
- Special Instructions for processing and handling the stock.
- Print checking document (without quantities) so that the quantities can be written and checked on a workstation away from the receiving dock.
- Separate default location for crossdock and non-crossdock.
- Separate default stock status when blind receiving so that the stock can be checked before being available for picking.
- Under-delivery and over-delivery tolerances with warning or error issued to receiving clerk at header or line item levels.
- Not-before and not-after dates to accept deliveries at header or line item levels.
- Separate delivery date for each line item.
- Prompts in header record can be individually enabled or disabled for input. Similarly for prompts at item level.
- Record invoice details while receiving. The "receiving value" of each item of stock can be calculated to five decimal places of a cent and used for extension of stock values at stocktakes by individual items of stock.
- Receiving using SSCC barcode on RF terminal and on a workstation terminal.
- Receive pre-addressed packages so that the packages can be cross docked.
- Receive multiple products on multiple pallets and track the pallets throughout the warehouse.
- Pallet Control Register to audit incoming and outgoing pallets, containers or other shipper types by brand or owner.
- Generate putaway request at the time of receiving.
- Print putaway report for manual putaway or add putaway request to RF queue.
- Alert operator if the product is out of stock at the time of receipt and there are outstanding orders for the product.

- Automatically apportion stock to customer orders when receiving.
- Receipt corrections. Returns to supplier.

Putaway

The Putaway Module in SEQOS has all the features of the Picking Module, from the point of view of the receiver.

A putaway location is automatically assigned when stock is received. It could be:

- Directly to "Crossdock" location if the product is configured for cross docking and there are outstanding orders to be picked.
- Directly to replenish a picking location due to the stock level having fallen below replenishment level at the location.
- Suitable storage location using the product and location storage attributes.
- Recommended location can be overridden by putaway operator, providing the storage rules at the new location are not violated.
- Automatically entered to the RF queue if configured.
- Putaway can be manually generated and printed by matching stock at specified locations for installations that do not use RF terminals.

Storage & Picking

With virtually unlimited options for customising the operation of stock storage locations and picking areas, SEQOS provides the most powerful on the market for this critical aspect of warehouse operation.

Restrictions can be imposed at every stock storage location on mixing expiry dates, receive dates, batches (lot numbers, style, colour, size, products).

- Restricted stock status at location, e.g., a picking location might only contain saleable stock and a quarantine location might only contain quarantined stock.
- Restricted access to warehouse equipment (MHE), e.g., forklift-accessible locations.
- Staging locations where stock must be transferred to a different type of equipment, e.g. Decombi crane transferring to forklift.
- Storage groups for products , e.g., Chiller Area, Dangerous Goods Area.
- Location dimensions and weight restrictions. Location group weight restriction for maximum floor load.
- Last-In-First-Out storage for drive-in and block stack racking.
- System generated or manually entered check digit (1-4 characters and numbers). In a paper-based system, the check digit is written on the stock movement or picking document, then keyed at the workstation to verify the correct location for the stock movement or pick.
- Replenishment levels. Multiple products and multiple styles/colours/sizes can be stored at a single location each with its own replenishment requirements.

- Products may be configured at multiple locations for replenishment. One location may be configured for picking units for a product, another for carton picks and another for pallet picks. This is useful for replenishing one location while picking from another.
- Graphic display of stock replenishment requirements, stock levels, dimensions and location usage.
- Configure optimum picking path sequence or by shortest route XYZ-vector. Separate path sequence for stocktake counting.
- Unit of measure for picking , e.g., carton pick only.
- Configure pick-to-light systems and multiple carousels. Configure replenishment and picking. Control simultaneous or sequential pick light display.
- Pick multiple orders simultaneously into chutes or carousels or pick-to-light systems.
- Additional company-specific user-defined fields.
- A table of ranges of locations can be created so that similar attributes for the range can be applied. E.g., AA0101-AA1105 with 01-11 incrementing by 2 (i.e., 01, 03, 05, 07, 09, 11) and 01-05 incrementing by 1 can be created.
- Location labels with barcodes and replenishment products. Define how numbers and characters in the location ID are separated when printing on location labels.
- Recommended combined locations report. Find locations with similar stock attributes and recommend stock combining strategies for consolidation into a single location to free up other locations.

Picking

Order Processing Attributes.

- Customer reference number separate from order number.
- Charge to account separate from customer number.
- Special one-off delivery address.
- Preferred location areas to from which to pick stock by individual order.
- Stock status to pick (e.g., quarantined, or rejected stock can be picked to return to a supplier).
- Prioritise orders.
- Reserve stock within a number of days of the despatch date.
- Ration shortages between orders according to priority.
- Pick orders and hold before the due despatch date.
- Hold orders from picking that have not passed credit check.
- Reject or hold orders that cannot be picked in full.
- Crossdock when stock is received for outstanding orders, the receiver can be instructed to move the appropriate quantity to the crossdock for the outstanding orders before the remainder is putaway or replenished into picking locations.
- Reminder to book timeslot in customer's dock.
- Group orders in a hierarchy, e.g., for projects.
- All statuses for processing an order can be selected in the order selection criteria screen and are displayed in order enquiry screens. Templates for commonly used selection criteria can be saved.

- Pick, pack and despatch parts of orders without closing the entire order. Unpick parts of orders.
- Short pick and despatch order when insufficient stock available, then put remainder on back order according to product back order flag.
- Manually confirm picking of batches of orders.
- Cancel selection of orders. Uncancel selection of orders.
- Batch multiple orders into a single order, then split again upon pick confirmation. A batched order can also be downloaded as part of generic interface, picked as a single order and the picks assigned to the individual component orders.
- Picking instructions at order header level and by individual line item. End of Picking instructions.
- Picking Lists for multiple orders. Split picking list by picking area for multiple pickers.
- Pick single products (or product list or group) across multiple orders e.g., pick a pallet of product to multiple orders. Enquire by product (or product list or group).
- Replenish while picking. Determine replenishment requirement for orders before stock level reaches replenishment level.
- Pick to extensive optional criteria.
- Pick directly into despatch shipper.
- Pick to conveyance, e.g., tote.
- Assign relative shipper numbers to line items in orders before, during or after picking.
- Pick style/colour/size.
- Confirm picking correct batch / lot number by scanning stock ID.
- Pick serial number range, e.g., specific vehicle license plates.
- Flag to not split a line item into multiple stock ID picks, e.g., when picking cables by lengths.
- Download or enter during order creation a specific stock ID to pick.
- Pick stock other than the recommended stock, providing that it fulfils customer order rules. The occurrences of these picks can be printed on the Swapped Stock ID's report.
- Option to display stock not ordered or zero picks to all orders on a picking line, i.e., if a picking order does not include an order for a product that is stored at a normally picked location, then the picker is prompted to pick zero. This can be useful when picking products against multiple orders that are laid out in a specified sequence, to ensure that the picker has not simply bypassed the location.
- Short picks entered by the picker are flagged for investigation. (The system will not send a picker to a location unless there is sufficient stock to meet the order quantity. Ergo, if the system indicates that there is sufficient quantity at the location, then it should be there to be picked).
- Picking productivity on RF terminals is measured. Productivity report shows percentage time that the picker was productive and the picker's hit and pick rates.
- Automatically print despatch labels and documentation when picking complete or defer printing until the packing phase.

- Prices of goods picked for orders are stored in an account for the customer. Payments by the customer into the account can be entered.
- Pallet report. Pallets or other equipment lent to the customer when an order is despatched is maintained in an account. When the equipment is returned, it can be entered against that customer.
- Proof of delivery. Customer receipt of goods confirmation and discrepancies can be entered and reports printed.
- Change order statuses for reprocessing or rebatching.
- Product throughput Report to rank products by picking activity to assist with location layout.
- Sales Analysis Report showing cost and sell prices for items picked, not picked, on back order.
- Orders downloaded/entered too late for despatch by comparing the download/entry date and due despatch date.
- Unfinished Orders report.

Replenishment

SEQOS Replenishment Module, to automatically replenish stock at picking locations, integrates seamlessly with Receiving and Putaway to eliminate costly errors and stock shortages.

- Replenishment calculation is real-time and is updated as stock levels change at locations.
- Replenishment data is accessible on RF terminals.
- Automatically entered to RF Queue if configured.
- Replenishment can be manually generated and printed for installations without RF for:
 - Orders waiting to be picked.
 - Urgent replenishment level.
 - Normal replenishment level.
 - Top up locations to their maximum holding stock.

Packing

SEQOS Packing Module has extensive tools to simplify and increase the accuracy of the packing line activity.

- Print checking document without quantities to manually verify that the correct quantities have been picked.
- Line items that have been packed are assigned a shipper number and attached to a consignment for a customer.
- Shippers can record relevant data down to style/colour/size/batch/expiry date for each product that is packed.
- Line items from different orders for the same customer can be packed into the same shipper.
- The consignment can be marked for the customer's usual delivery address or a one-off special delivery address.
- Picked items can be packed into different sized shippers according to the shipper type. The weight and volume are separately configurable for accurate despatch order weight and volume calculation.
- Dangerous and hazardous goods are highlighted for special handling.

- Pallet control register to audit incoming and outgoing pallets or shipper types by brand or owner.
- Multiple users can pack shippers into the same consignment simultaneously. A user can return to the same packing session or a nominated session after exiting the application.
- Shippers can be consolidated into master shippers. Those master shippers can be consolidated to higher levels without restricting the number of levels in the hierarchy.
- Automatically prompt to print shipper contents and/or packing list.

Loading & Despatch

As with all SEQOS Modules, "Load Allocation and Despatch" is fully integrated and updates all data in other relevant modules in real time.

- Configure despatch dock for orders. When picked or packed, the picker is instructed to move the order to the appropriate despatch dock.
- Automatically calculate or manually enter weights and volumes for carrier documentation and load allocation.
- Build a manifest of consignments and shippers. Provision is made in the manifest to store vehicle license plate, driver, checker, and seal number. (The seal number is a uniquely numbered lightweight metal strip lock which is applied to the locks of the truck trailer. Access to the contents of the trailer requires destruction of the seal. Detects load-tampering.)
- Automatically or prompt operator to print manifest, consignment note and/or other despatch documentation. (See note below re Transdata.)
- Separate consignment note format and numbering and EDI format per carrier.
- Record the actual date and time the vehicle leaves the warehouse site.
 - When the manifest is printed, transaction can be optionally sent to the TransSend despatch system to book and despatch for delivery to the customer. Further TransSend product information at www.transdata.com.au or email to enquiry@seqos.com.

Load Planning

- Orders selected using the standard order selection criteria.
 - Orders can then be selected from the resulting list and batched into single orders for picking.
 - When the picking is complete, the confirmed quantities are then split back to the original orders.
- Vehicle type with weight and volume maxima.
- Restricted vehicle types for customers with restricted access to their docks.
- Fleet availability for each carrier.
- Alternate vehicle usage when usual available vehicles are full.
- Run Number by customer.
- Loading / Drop-Off sequence by customer.

- Map ranges of postcodes (zip codes) to delivery zones.

Reporting

SEQOS powerful reporting tools lie at the heart of its ability to satisfy management information needs quickly, efficiently and in detail. Extensive reporting is available as follows:

- Selection Criteria screens display when searching for stock, receipts and customer orders to match records according to specific criteria. Lists, ranges and wildcards (e.g., lists of products) may be entered into fields to match multiple selections.
- For users familiar with SQL syntax, SQL can be entered at selection criteria screens after pressing F2.
- All reports can be viewed on the screen before printing.
- When reports are printed via SEQOS Client, each report page is automatically scaled to fit on the available paper size, e.g., A4 size on office-style laser printers.
 - Default printer may be configured for each report.
 - Some reports offer default configuration depending on criteria, e.g., picking line or delivery zone, packing workstation.
 - Configured printer redirection when a printer is offline.
- Report Wizard (Data Export).
 - Select type of data to extract from internal predefined types including stock listing, stock history, receipts, orders. No knowledge of database relationships is required.
 - Select fields to extract.
 - Standard selection criteria screens are used to match records to be extracted. Predefined criteria may be saved with the report when it is created.
 - Sort and format extracted data.
 - Subtotals and totals.
 - Export to database, Windows clipboard or label printing.
- Ad Hoc Report Writer (currently in use, but will be superseded by the Report Wizard in most cases).
 - Extract data from any field in any database.
 - Enter conditions to match records.
 - Set prompts for the user to enter values to be matched in the conditions when the report is run.
 - Cross reference related databases using keys from current database (relational database) and additional conditions and criteria.
 - Sort on extracted data (including subfields) prior to formatting.
 - Format extracted fields into columns with headings.
 - Choose when a line is printed: always or if a field is zero or non-zero.
 - Perform calculations on values in columns and put results in other columns.
 - Sub totals and totals when a field value in a column changes.
- Export report to a database, Windows® clipboard or label printing.
- ODBC
 - Extract data from any field in any database.

- Relational database support.
 - Level 1 compliant except that fields cannot be updated.
- The extracts that are generated by the generic interface will be available as separate tables that can be generated by the ODBC driver later in 2002.
- Warehouse Monitor
- General purpose utility that draws histogram graphs of recorded data. That data currently includes outstanding and daily totals of RF queued transactions by priority by picking line for:
 - Putaway.
 - Replenishment.
 - Urgent replenishment.
 - Replenishment for order picking.
 - Picking.
 - Cycle counting.
- Separate displayed graphs that group picking lines into the higher levels in the hierarchy up to a total warehouse view.
 - Histogram graphs are also available that display totals for each of the above transactions on an hourly basis for the past four days for daily comparisons.
 - Colours used for histogram bars may be customised by the administrator.
- Standard Built-In Stock Reports Most reports allow for a selection of stock records using the Stock Selection Criteria screen.
 - Allocated Products Report. Prints information about the selected stock records allocated to putaway, replenishment or picking with the destination location or order number respectively and the quantity.
 - Combine Locations Recommendation. Recommends how stock can be merged from multiple locations into a single location without violating the storage rules, to compact location usage.
 - Location Count Check Report. Locations can be configured so that after a number of visits, the RF operator is required to count the remaining stock at the location. If the counted quantity is incorrect after the second attempt, then the user, counted quantity and actual quantity are stored and can be printed using this report.
 - Products With No Replenishment Location (No selection criteria). Lists all products that are not configured for replenishment in a location together with their current stock-on-hand quantity.
 - Product Recall Report. Useful if a particular batch of a product is to be recalled from customers and warehouse storage. Report includes order number and customer number or location respectively, and quantity and other stock record fields.
 - Product Recall Report. Useful if a particular batch of a product is to be recalled from customers and warehouse storage. Report includes order number and customer number or location respectively, and quantity and other stock record fields.
 - Snapshot Location Report. Summary information is provided for each product including movements, adjustments, daily stock-on-hand quantity, storage volume used in picking and non-picking areas and percentage of total warehouse.

- **Stock Expired Report.** Typically, the expiry date would be entered into the stock selection criteria screen to match stock that has expired or is about to expire. Apart from other fields, the report lists the manufacture and expiry dates and the stock status. Stock that has expired according to the warehouse expiry date cannot be picked.
- **Stock On Hand by Location.** The format of this report is appropriate when the selected records are sorted by location sequence. Columns can be switched on or off by the user before printing the report. Apart from various fields from the stock record, some location fields are also printed including vehicle access, last-in-first-out sequence (for drive-in racking) and weight information.
- **Stock On Hand by Product.** The format of this report is appropriate when the selected records are sorted by product sequence. Columns can be switched on or off by the user before printing the report. Apart from various fields from the stock record, some information about the product itself is also printed including reordering information, available quantity, cost, sell and profit, and serial numbers ranges.
- **Stock On Hold Report.** The report is divided into sections. Each section is for a separate stock status using the selected stock records.
- **Standard Built-In Reports for Receipts and Customer Returns.** Most reports allow for a selection of receipt (or customer return) records using the Receipt Selection Criteria screen.
 - **Receiving Products by Product, Receipt or Supplier.** Various formats and sort sequences can be accessed, depending on the type of report selected.
 - **Goods Return Pick-up List.** A separate report for each customer. Lists the products and quantity to be picked up from the customer for return to the warehouse.
 - **Customer Returns Report.** Similar to receiving reports except that the headings are for customer returns.
- **Standard Built-In Reports for Customer Orders.** Most reports allow for a selection of customer order records using the Order Selection Criteria screen.
 - **Daily Orders Report.** This report is a useful tool for planning labour for a day's picks. The report lists the urgent and non-urgent orders, orders' total pieces and pieces per order for each picking line.
 - **Finished Pieces Totals Report.** Summarises selected orders by finish pick date, delivery zone and picking line, listing orders, pieces, picks, cartons and weight.
 - **Full Items Listing Report.** Sorts all products for all selected orders and displays order header information including picking status and customer details, and item details including prices, quantities and stock ID information.
 - **Listing of Swapped Stock ID's.** While picking, the most appropriate stock ID is recommended for picking. The picker can override the recommendation providing that the override does not violate any rules. To record for reporting the changed stock ID that is picked, a parameter must be set to minimise processing of the large volume of tracking data which may be generated.
 - **Order Information Report.** There are five sections in this report which can be enabled or disabled.
 - Outstanding orders (orders not completed picking) showing orders, pieces and hits.
 - Finished orders sorted by manifest date showing pieces and hits ordered and picked, number of shippers, number of orders invoiced, number consigned and pieces, hits and shippers manifested.
 - Finished orders sorted by finish date showing the same information as the report sorted by manifest date.
 - All orders sorted by despatch date showing pieces, hits and finished orders.
 - Work in progress (orders currently being picked) showing number of orders in each status; received, labelled, started picking, finished picking with percentages for comparison. Each section of the report separates the orders by picking line and has a line for totals.
 - **Order Throughput Report.** The report is particularly useful for rebalancing a picking line, i.e., moving high throughput products to the more accessible parts of the picking line. Each line displays the average and peak throughputs for the date range and the number of days the stock would be available for orders based on the throughput figures.
 - **Orders Late for Despatch.** Lists order header summary information including despatch date, delivery date and order download date. The report is useful for detecting a timing problem with order download from a host system.
 - **Picking Activity Report.** Lists the quantity, picker, and time taken to pick each order.
 - **Productivity Report.** For each picker, the orders are listed with information about quantities picked and the time take to pick the order.
 - **RF Productivity Report** This report is divided into three sections.
 - RF Picking.
 - RF stock movements; Putaway, Replenishment and Relocation.
 - Station Picking.
 - Within each section, the user's name is listed with the available hours (total time the user was logged on), productive hours (total time the user was actually using the system), waiting time, percentage comparison and calculated effective transaction rate. For the Picking section, the number of orders, hits, pieces and new shippers is also shown.
 - **Sales Analysis Report.** Shows cost, gross sales and net sales for each of: orders not finished, picked lines, zero picks on back order, zero picks not on back order. The report shows the amount of revenues and lost revenues.
 - **Unfinished Orders Report.** It is useful to run this report before closing off despatch for the day to determine if there are any orders that should be despatched but have not been fully picked.

RF Terminals

With extensive support for numerous brands and models of RF terminals, SEQOS offers range and versatility critical to modern warehouse management.

- Task Queue. The task queue automatically directs the RF operator to the next transaction depending on priority. Different transaction types can be enabled separately by picking line.
- Transaction types include:
 - Putaway. Automatically created when stock is received.
 - Replenishment. Automatically created when stock level falls below replenishment level or when orders are released for picking.
 - Picking. Automatically created when orders are released for picking. Orders can also be automatically released for picking when stock is received.
 - Cycle counting. Automatically created when stock is selected for cycle counting or stocktake.
- Modules supported by RF terminal interface:
 - Receiving including all receipt header prompts, pre-addressed packages, receiving multiple products onto pallets (or other shippers or conveyances) and cross docking.
 - Putaway.
 - Relocation.
 - Replenishment including replenishment into carousels.
 - Picking including multi-order picking, picking out of and into carousels.
 - Packing.
 - Despatch including consolidation and load allocation.
 - Manifest and Consignment Note Printing.
 - Stock Enquiries.
 - Stock Adjustments.
 - Cycle Counting and Stocktake.
- Access to each module can be controlled by security levels.
- The layout of screens can be modified by the System Administrator.

Liability Disclaimer

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Acknowledgements

The rights and interests of all other parties in the various proprietary products and services mentioned in this publication are fully acknowledged.

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