

Getting Started
Fourth Shift Release 8.00

Fourth Shift Help
Release 8.00

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Getting Started with Fourth Shift Solution

"A journey of a thousand miles must begin with a single step." - Lao-Tzu

Although your new Fourth Shift enterprise system may seem at least a thousand miles away, your journey actually began with your first contact. With this guide as the next step, you will begin to discover more about the Fourth Shift product.

Fourth Shift is not merely a modular enterprise software system that helps your business manage its critical manufacturing and financial information. It will open your business to tremendous opportunities to connect and integrate business functional areas, actually improving your processes and giving your company a real competitive edge. It will help you manage and master the changes that inevitably challenge and push your company to its limits. Most of all, it will provide you with the security of knowing that your company's information lifeblood is managed by the premier enterprise software system in its class.

About This Manual

This **Getting Started** manual summarizes and describes the ways in which the Fourth Shift solution will help your business run more effectively. Reading this manual will help you envision how you will achieve your business goals using the Fourth Shift solution.

This manual also introduces you to a number of important concepts by:

- explaining the underlying technology that drives the system, including the database and network configurations
- charting the flow of information through typical manufacturing and financial business processes using Fourth Shift modules and complementary applications
- illustrating how Fourth Shift's communication-centric architecture automatically shares information between functional areas and enables effective communication between users
- acquainting you with the many helpful resources available to you before, during, and after implementation

Details on all of these concepts are available in other manuals.

Solutions for Your Entire Business

Fourth Shift products, services, and complementary applications work together to meet the wide, ever-changing variety of needs of today's dynamic manufacturing companies. The Fourth Shift solution reaches across all the functional areas of your business to support and improve your existing business processes.

The Fourth Shift enterprise solution allows you to pick and choose the modules and complementary applications that best fit your needs. For more information, see [Running Your Business with Fourth Shift](#) in this manual.

Customer Operations Solutions

- **Order Entry** and **Advanced Price Book** manage customer order entry and tracking
- **Sales Order Processing** and **Rules-Based Pricing** support high-speed order entry and configurable pricing models
- **Custom Products Manufacturing** improves customer order processing for make-to-order, configure-to-order and engineer-to-order products
- Customer relationship management system improves help desk and customer support teams track calls regarding product questions, repair or replacements
- Rules-based configurators automatically convert customer specifications into manufacturing specifications
- Sales automation tools help sales staff manage their pipeline and convert quotes to sales

Planning and Scheduling Solutions

- **Material Requirements Planning** helps minimize your investment in inventory and increase inventory turns
- Recommended actions are communicated automatically to buyers and planners
- Advanced planning and scheduling systems provide interactive, real time scheduling power that adjusts the master schedule based on shop floor conditions

Product Definition Solutions

- **Bill of Material** defines products and processes comprehensively
- **Engineering** manages product engineering information and changes from design through manufacture
- **Co-Products Manufacturing** manages co-product relationships for scheduling and costing purposes
- **Manufacturing Analysis** evaluates impact of evolving bills of material
- **Product Costing** ensures accurate product costs at both parent and component levels
- Formula management and regulatory compliance solutions manage resources, formulas and nutritional labeling

Vendor Operations Solutions

- **Purchasing** streamlines the purchasing process, simplifies buying decisions, manages contracts and analyzes vendor performance
- **Approved Vendor Sourcing** helps buyers quickly and economically select the best vendor for specific requirements

Manufacturing Operations Solutions

- **Manufacturing Order Management** manages manufacturing process to enhance the cost-effectiveness of your production planning, scheduling and inventory tracking
- **Repetitive Manufacturing** supports backflushing of material and resources in orderless manufacturing environments
- **Shop Floor Tracking and Reporting** helps shop managers accurately execute the manufacturing plan, prioritize orders and analyze the effects of schedule changes
- Paperless manufacturing solutions deliver accurate information electronically to all production employees

Inventory Management Solutions

- **Inventory Control** helps reduce lost or delayed revenue and manufacturing costs by keeping inventory low and increasing control over raw materials and finished goods
- **Shipping** prepares, records and tracks customer order shipments and generates external documents
- **Lot Trace/Serialization** helps heavily regulated industries track details about product components both upward and downward
- **Visibar** uses bar code readers to automate data collection and improves speed and accuracy

Supply Chain Management and Electronic Commerce Solutions

- **Electronic Data Interchange** automates the exchange of purchasing, invoicing and shipping information between trading partners
- **Net UI** allows remote users to access Fourth Shift functionality from anywhere in the world using the Internet, intranet, or dial-up modem connection

System Administration Solutions

- **System Control** acts as an engine to integrate all Fourth Shift modules and manages audit trails, text messages and system security
- Data import and SQL export features share data between Fourth Shift and other systems
- Microsoft SQL Server database engine
- Extensible architecture allows you to interface Fourth Shift with popular office productivity applications or other specialized applications

Financial Management Solutions

- Integration between manufacturing and financial modules enables real-time, accurate financial feedback on operations and tighter control of assets
- **Accounts Payable** and **Accounts Receivable** streamline processing of invoices and payments and helps to optimize cash flow
- **General Ledger** classifies and summarizes the financial results of all business transactions
- **Cash Management** manages your cash position and enables rapid bank reconciliations
- **Multi-Currency** enables companies with a global presence to manage orders and receipts in foreign currencies and keep track of exchange rate variances
- Ledgersoft tools help you track cash flow, collections, and asset depreciation and dispositions
- Electronic forms eliminate the high cost of preprinted forms for external documents such as checks, invoices and credit memos
- Payroll and human resources solutions collect employee time information and interface Fourth Shift data to popular payroll packages and services

Management Decision Support Solutions

- **Operations Performance** tracks system communication factors and provides performance measurements
- **Management Reports** generates reports supporting materials management
- **Sales Analysis** helps manage cash flow and gross profit by reviewing gross margins by customer or item
- Forecasting management solutions forecast demand or product use using sophisticated statistical methodologies
- Message analysis solutions monitor and control action message communication

Implementing Your Fourth Shift System

Rapid implementation is a Fourth Shift hallmark. Following a time-tested implementation methodology, your new system will be up and running fast to provide a swift return on your investment. Fourth Shift implementation consultants combine a proven six-phase implementation blueprint with solid software migration tools to help you achieve a smooth transition to your new system.

A typical Fourth Shift implementation successfully completes the following six phases in three to six months:

- **Organize**—Create your implementation plan and assemble your implementation team.
- **Define**—Identify the nature and scope of the specific solution that is right for your business.
- **Develop**—Deploy the software, load your data and build the solution.
- **Pilot**—Test, train and practice; refine your business processes.
- **Cut-over**—The moment of truth, where the vision of the solution becomes a reality; followed by well-deserved congratulatory celebrations.
- **Improvement**—Fine-tune and expand the system in production, train new users, and reap the benefits of your new Fourth Shift system.

Fourth Shift offers a wide variety of resources to assist you during implementation, including workshops, computer-based learning, and specialized technical and integration services.

Resources for Implementation and Beyond

Our company considers itself a partner in your company's success and demonstrates its commitment by continually offering new and better ways to support its products and customers. We provide a wealth of resources to assist you before, during and after your implementation.

Detailed Implementation Checksheets and Tips

The process of loading your existing data into a new system can seem overwhelming. Detailed roadmaps to the data loading process appear in the *Installing Fourth Shift for SQL Server* manual. This manual also includes a comprehensive section on building your implementation plan. For more information, see the "Implementation Planning" topic.

Additionally, each module manual provides detailed steps for first-time loading of data into a module. You may find these sections useful when adding modules to an existing Fourth Shift system.

Specialized Technical and Integration Services

We can provide skilled experts to help you optimize your network configuration. From analysis of your local-area networks (LANs) to fine-tuning wide-area networks (WANs), support and service from technical staff is available to you on-site, over the telephone, or at remote plant locations.

Additionally, Fourth Shift Consulting can help you maximize the strengths of Fourth Shift with other technologies to deliver unique solutions for every business. From EDI to barcoding to web-based solutions, Fourth Shift consultants can create efficiencies for your company.

Site Procedures

The Site Help feature allows your organization to integrate its specific procedures for using Fourth Shift into the help system. Bringing your procedures online eliminates the need to search through stacks of paper to find descriptions of the special ways your company uses Fourth Shift.

Site Help is available at two levels: general and screen-specific.

- General site help provides an opportunity for you to display a centralized cross-referenced collection of procedures for using the system.
- Screen-specific site help provides an opportunity to display procedural information related to specific screens or tasks.

For more information, see "Customizing Site Help" in the **System Administration** manual.

Support Services

Support Services specialists provide you with a variety of ways to keep your system running smoothly. Questions are always targeted to a trained specialist so you won't have to help a technician learn the application. Support incidents are also prioritized by severity, so you can be assured you will receive immediate attention if your system requires it. The Support Services group also maintains a knowledge base on the Customer Home website for easy access to information and software downloads.

User Groups

The Fourth Shift user community is active and well-connected. The Fourth Shift User Conference is an annual convention in the fall where Fourth Shift employees and customers come together to train and share information on the Fourth Shift product.

Business System Review

Once you have used Fourth Shift software for more than a year, you may elect to undergo a **Business System Review**. This review will help to determine if there are greater efficiencies you can derive from Fourth Shift's deep functionality.

The review consists of a detailed business audit of your financial and manufacturing operations. This includes in-depth interviews with users from each functional area - from sales order processing through shipping - along with an examination of executive-level requirements. This analysis results in a report that may recommend specific actions to improve your system's operational effectiveness.

Getting the Latest Fourth Shift News

As a Fourth Shift customer, you will receive regular communications containing product and company information. These communications take many forms, including:

- A monthly newsletter is sent to all subscribers and contains product tips and update information. To subscribe, contact your account manager.
- The Fourth Shift Customer Home website contains a wealth of information on Fourth Shift events and products, providing details on specific software capabilities, a calendar of events, and examples of Fourth Shift success stories. It is also the main stop for all your support and training needs including the Knowledge Base, Support Incident System, WebTutors, and training class registration.

Using Help

Our commitment is to provide comprehensive and detailed user documentation for all of our products. Fourth Shift's documentation solution allows users to:

- get quick, accurate, context-sensitive information about screens and fields
- navigate or search through help for related topics
- print the entire manual or print selected pages of help from the printable help

These help resources are invaluable to you as you develop your implementation plan, research the features of the system, and use the software before and after cut-over.

Reference Manuals

Reference manuals are system-wide resources for users, administrators and application developers. The information provided in reference manuals generally does not relate to the use of a specific module; rather it relates to the use of the system as a whole.

The following manuals describe system-wide features.

Reference Manual Name	Description
Getting Started	Introduces the Fourth Shift solution and provides an overview of the system features and architecture
Installing and Implementing Fourth Shift for SQL Server	Contains detailed step-by-step instructions for software installation and configuration and database conversion
System Administration	Day-to-day operations handbook for Fourth Shift system administrators
SQL Server Administration and Utilities	Day-to-day operations handbook for database administrators
My Fourth Shift Workplace Connectivity Toolkit	Background information on installing, maintaining, tuning and customizing a My Fourth Shift Workplace web site
Release Notes Release Instructions	Describes feature enhancements made in the current software release and lists upgrade instructions

In addition, the following reference manuals are valuable resources when you are looking for detailed information about the operation of the Fourth Shift system:

Reference Manual Name	Description
Administration Reference (part of the System Administration manual)	Contains information about file layouts, configuration variables and financial calculations
Data Import Dictionary	Provides the transaction record layouts used by the data import features in the System Control (SYSM) Module
Data Import Macro Basics	Describes the commands and techniques used to create custom macros for specialized transactions
FSTABLES Reference Guide	Lists the tables and fields used when querying Fourth Shift data
Utilities and Tools	Describes the use of system-wide administrative utilities

Introducing Fourth Shift Technology

Fourth Shift has both a client and server software solution and thin client options that provide the stability, flexibility, and scalability you should expect from an enterprise system. It also offers an open architecture designed to allow it to integrate smoothly into your existing information technology environment.

This section introduces the technology that supports the Fourth Shift system.

The Fourth Shift Database

The foundation of the Fourth Shift system is the **database**, which stores your business information and makes it available to your users as needed. Fourth Shift's architecture makes this centralized data available to users who connect to the server over a network. This architecture allows people throughout your company to share the most up-to-date manufacturing and accounting information. Implementing this system allows many people to use your system simultaneously while, at the same time, protecting the integrity of your company's production database.

Fourth Shift is offered on the Microsoft SQL Server database engine.

To review the engines supported to manage your database, refer to the Fourth Shift Compatibility Guide available on the Fourth Shift website.

ODBC and SQL Support

Both databases support Microsoft's Open Database Connectivity (ODBC) standard protocol and the SQL client for data access. Fourth Shift supports ODBC natively through the Fourth Shift Client Only ODBC Driver and the Fourth Shift Client-Server ODBC Driver. It also uses the SQL Server ODBC Driver with the SQL Server database management system.

Supplemental Databases

All of the Fourth Shift module applications, either directly or indirectly, store and use data in the Fourth Shift database. Some modules and features also use supplemental databases to store additional information.

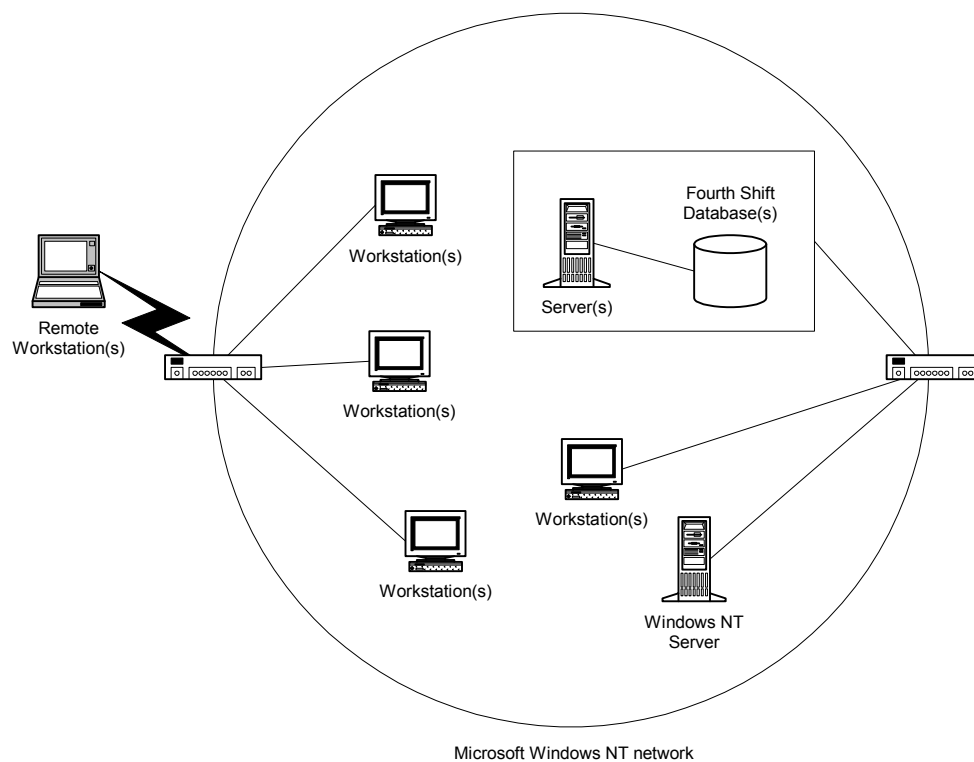
Network Configuration

Fourth Shift is a three-tiered client/server software system. This means that the system's responsibilities, such as data storage, processing, and presentation, are typically distributed over more than one computer. Because of this, the network configuration of the Fourth Shift system is critical to its success.

Anatomy of a Client/Server System

The network configuration for your enterprise should meet your company's unique needs. Because of this, no two network configurations are alike. The Fourth Shift client/server system is flexible enough to fit smoothly and snugly into existing networks, supporting you as you grow.

Although client/server network configurations are dynamic and diverse, each one contains some standard components, as shown in the following illustration.



- The **Fourth Shift database(s)** and database engine can be installed on any supported server inside your network configuration. Database manager processes must be running in order for users to access the system.
- **Server(s)** run the Fourth Shift applications and communicate directly with the database(s).
- The **Windows Server** must run the Fourth Shift **lockserver**. The lockserver is a service that manages network file locking and system licenses. It must be running at all times in order to access the database.
- Users operate Fourth Shift programs on client **workstations** which are connected to servers.
- Optionally, users operate Fourth Shift programs on **remote workstations** connected to servers via the Internet.

Software and Hardware Requirements

Because of the wide variety of supported network configurations and the rapidity of progressive change in the computer hardware and peripherals industry, it is impossible to make generalized recommendations about hardware used with Fourth Shift. Like any software system, Fourth Shift performance is directly related to the bandwidth and power of the computers used to run it. Consult with your account representative to determine the most appropriate hardware for your needs and your network.

Using the Net UI Configuration

The Net UI configuration is an optional Fourth Shift module that allows you to attach remote workstations to your Fourth Shift system. The remote workstations communicate with Fourth Shift using TCP/IP, over an intranet or the Internet.

Preparing Your Network

Before you begin installing and deploying Fourth Shift, there are several steps you should take to prepare your network and ensure a smooth beginning to your implementation. See "Before You Install" in the **Installing and Implementing Fourth Shift** manual for details.

Fourth Shift System Administration

In order to keep your Fourth Shift system running smoothly, it is important to assign system administration responsibilities to a specific person or persons. Your system administrator(s) should be actively involved in your Fourth Shift implementation to ensure that the system is configured for easy maintenance.

Fourth Shift provides a tremendous amount of support and guidance for system administrators, including:

- **System Administration** manual that comprehensively covers fundamental administrative functions and provides reference information
- a System Administration section in the manual for each database type, that describes the administration requirements of the module
- a **Utilities and Tools** manual that describes the use of common administrative utilities
- customer support via telephone, email, or online support incident reporting as well as comprehensive online knowledge base
- technical services consulting for special circumstances

Your Fourth Shift system administrator should be familiar with your network configuration and client/server operating systems.

System administrators can assume a wide variety of responsibilities, depending on the needs of your business. However, there are a number of critical functions that most companies entrust solely to their system administrators. These functions include creating and executing batch processes, overseeing general system configuration issues, security management, maintaining the Fourth Shift database, and managing the processes that support data connectivity.

Batch Processing

Manufacturing and financial transactions are at the heart of any enterprise system like Fourth Shift. The strength of a system lies in the way it uses its processing power to enable users to analyze and act on the data it stores; in other words, how well it *turns data into information*.

For Fourth Shift, much of this processing power is wielded by **batch processes** that you can create and customize. A batch process is a sequence of **tasks** that perform specific operations. Generally, tasks are not static operations; most allow you to sharpen the focus of the task by specifying **parameter values**.

Batch process tasks quickly and efficiently review and act on your entire set of data. For example, Fourth Shift tasks are used to:

- generate management reports for analysis, such as account aging reports or operations performance reports
- analyze and evaluate operational data to communicate follow-up recommendations to customer service representatives, buyers and planners, helping them manage change
- generate and print or email external documents such as invoices, or purchase orders
- communicate the financial impact of manufacturing transactions to the general ledger
- create and analyze your material requirements plan
- import data from an external source or export data to another application

Some batch processes are run periodically (nightly, monthly, annually) while others are run only when needed. Your business requirements will dictate how and when your company's batch processes should be executed.

For details on creating and executing batch processes, including a complete list of available tasks, see "Batch Processing" in the **System Administration** manual.

Configuring the System

Like most software programs, Fourth Shift can be configured to operate in specific ways to match the needs or preferences of your company. Your system-wide preferences, called **configuration variables**, are stored in a text file named FS.CFG. This file supplies information to the system about specific configuration choices.

Two supplemental configuration files, LOCALFS.CFG and FSMSS.INI, are also used to store preferences for individual workstations. The settings in these files take priority over the values defined in the FS.CFG file.

When you install the Fourth Shift software, a standard set of required configuration variables and settings, with default values, are created. As you work with your system, you may find that you need to adjust the behavior of your system to improve performance or customize some characteristics. For example, specific Fourth Shift configuration variables and settings:

- specify the directory in which certain types of files are installed and run
- enable or disable selected features, such as the screen timeout feature, for the entire system

For details on using configuration variables to customize your system, see "Configuration Overview" in the **System Administration** manual.

Database Basics

Periodic database maintenance operations, including backing up the database and purging outdated information, are critical responsibilities of your system administrator. Some basic database administration may include the following:

- Study the documentation provided by Microsoft—familiarize yourself with SQL Server Books Online.
- Consider training or coursework in administering SQL Server databases or building applications using SQL Server. While this is not required to operate the system, it will help you derive the greatest benefit from the features of the database.
- See the **SQL Server Administration and Utilities** manual provided with the Fourth Shift system for details on database maintenance, utilities, backup and recovery.

Data Connectivity

Fourth Shift has a robust data import and data export capability that allows you to move data in and out of the system with ease. Fourth Shift can import data from a variety of delimited text file formats, and can export data for immediate use with popular applications such as Microsoft Excel and Microsoft Access. These features help you use external data and external applications to derive added value from your investment in Fourth Shift.

Importing Data

Fourth Shift's data import feature automates the process of updating the Fourth Shift database from other applications, other computer systems, or even remote sites while enforcing existing business rules. You can also use data import features to interface Fourth Shift in *real time* with an automated data collection system such as a bar code reader.

Additionally, importing data from an existing enterprise system can greatly simplify your implementation process by eliminating the need to rekey your business data. Fourth Shift can read data files generated by most mainframe and PC-based applications.

The import process relies on **macros**, sequences of instructions that emulate keystrokes. Each module includes a set of standard macros that playback transactions on Fourth Shift screens. Each of these macros can be customized for your own use, or used as the basis for new macros. In addition, some modules, such as the Sales Order Processing (SOPM) and Engineering (ENGM) Modules, use a supplemental import method. For more information, see "Using the Data Import Features" in the **System Control** manual.

Fourth Shift's import macros are meticulously documented to facilitate macro troubleshooting and customization.

- For details on the standard Fourth Shift import macros, see the **Data Import Dictionary** manual.
- For information about customizing or writing import macros, see the **Data Import Macro Basics** manual.
- For information about the SDK for importing, see the **Fourth Shift Transactional Interface Module** (FSTI) manual.

Exporting Data

SQL Server's data export feature enables you to move information easily from the Fourth Shift database into popular desktop applications, so you can design effective presentations and make better decisions. It allows you to integrate *best of breed* analytical and office productivity applications with your Fourth Shift enterprise system.

The Foundation Business Views expose every field in the database for all your reporting needs. More information can be found in the **Fourth Shift Foundation Business Views** manual.

Automated Data Collection

To simplify warehouse management and other transactionally intensive business functions, many companies are turning to automated data collection technologies like bar code readers and serial devices such as digital scales, relays, and vertical carousels. These devices help you gain better

control over these important functions, as well as improving the integrity of the data and increasing productivity.

Fourth Shift supports automated data collection through Visibar, an application that interfaces most wired or radio frequency (RF) collection terminals directly with Fourth Shift. Visibar is flexible and customizable, and helps automate such high throughput tasks as inventory moves and adjustments, receipts, issues, reverses, and shipments.

For more information on incorporating Visibar into your Fourth Shift system, contact your account representative.

Electronic Data Interchange

Many companies rely on electronic data interchange (EDI) technology to automate communication with their vendors, carriers and customers. EDI allows trading partners to exchange business data up and down the supply chain, with little or no manual intervention.

Fourth Shift supports EDI through two modules: the Electronic Data Interchange (EDIM) and EDI Services (EDSM) Modules. The integrated interface provides technical links between Fourth Shift and a third-party EDI translator, Sterling Software's Gentran: Director Professional Pro. It is designed for use with transactions defined by the ANSI X12 standard, and conforms to the international standards EDIFACT, ODETTE and UCS.

For details on using Fourth Shift's EDI features, see the **Electronic Data Interchange** or **EDI Services** manuals. Specialized EDI consulting services tailored for your company's unique needs are also available through the Fourth Shift EDI Consulting group.

Module Communication

Fourth Shift is built on a modular architecture, meaning that functionality is segmented into distinct units. Each of these units, or **modules**, is responsible for collecting or generating a specific type of business data. For more information on the available Fourth Shift modules, see the [Modules](#) section in this manual.

Information is shared between manufacturing and financial modules by means of a module communication process.

Note: For both real-time and batch processing, we are using <filename> to indicate that you can use any name for your external files as long as they have the .FIL extension. They will be renamed to <filename>.OLD if they are successfully processed by APMQ/ARMQ/GLMQ; or to <filename>.MC, if the transactions process failed.

Cross-functional Integration

The module communication process allows information to be shared among independent business processes. Financial functions such as accounts receivable, accounts payable and general ledger are fully integrated with the wide variety of operational manufacturing functions.

Financial transactions are automatically created as a result of operational activities. These transactions are communicated, using MODCOM * files, to the modules supporting the appropriate financial functions.

For detailed information about transaction processing, see "Module Communication" in the **System Administration** manual.

Running Your Business with Fourth Shift

Fourth Shift is a complete manufacturing information system offering a broad range of functionality to the critical pulse points of your total enterprise. Whether you are a make-to-stock, make-to-order, engineer-to-order, discrete, or repetitive manufacturer, Fourth Shift has a proven track record of helping companies like yours achieve goals such as:

- increasing on-time delivery rates
- increasing annual inventory turns
- increasing finished product first pass quality yield
- increasing annual revenue per employee and plant-level return on investment
- improving profitability and cash flow
- decreasing manufacturing costs and cycle times
- decreasing customer order lead times and customer reject rates
- streamlining manufacturing processes and reducing scrap/rework as a percentage of annual revenue
- accelerating order processing and improving customer satisfaction

This section describes how Fourth Shift manages and integrates your manufacturing and financial information to help your business operate more smoothly and effectively.

Working with Fourth Shift

Once your Fourth Shift system is in production, users will keep your business running by entering, maintaining and acting on business information. Fourth Shift is easy to learn and is supported by extensive help and documentation. Novice users can be productive immediately, while power users can enjoy the system's flexibility and a broad range of customization options.

Most users will work primarily with the main Fourth Shift program, which is also called **Fourth Shift**. This program provides access to most of the basic manufacturing and financial modules used to run your business. However, some users, including those who use the Sales Order Processing and Engineering modules, will work with other module-specific programs in conjunction with the main Fourth Shift program.

Fourth Shift Screens

Fourth Shift **screens** help you carry out specific business functions, such as creating purchase orders, constructing bills of material, or applying cash receipts. Use them to enter, edit, delete or review business data.

Each screen has a unique four-character **Function Code** used to identify and display the screen. Typically, Function Codes are easy-to-remember abbreviations for the name of the screen. For example, the Function Code for the Vendor Master screen is **VEND**.

Screen Types

Different types of screens offer different types of functionality. For example:

- **task** screens—let you set up or execute batch processes
- **scrolling lines** screens—display lists of data that you can scroll or page through
- **windows**—display detailed information related to the screen you are viewing, but are not accessed directly by a Function Code
- **menu** screens—list a set of related screens and allow you to transport to each one

For more information on screens, Function Codes, and screen types, see "Modules and Screens" in the **Fourth Shift Basics** manual.

Using the Program

The main Fourth Shift program was designed so that new users can be productive quickly after learning just a few basic concepts. Fourth Shift features many characteristics common to Microsoft Windows-based programs, including pull-down and pop-up menus, toolbars, and context-sensitive help.

The Fourth Shift Basics manual contains detailed instructions for using the main Fourth Shift program, including how to:

- move between screens
- enter, edit, and view business data
- customize the way the program works to fit your individual preferences
- access the many different kinds of help that are available

Note: For more information, see "Using Fourth Shift" in the **Fourth Shift Basics** manual.

Using Net UI

The Net UI (NUIM) Module is an optional configuration that allows remote workstations to use Fourth Shift on a wide area network, or even over an intranet or the Internet. Generally, all of the Fourth Shift program features are available through Net UI, but module-specific programs are not.

There are a few slight differences in program operation if you use Net UI. For details, see "Using Net UI" in the **Fourth Shift Basics** manual.

Generating Reports and External Documents

One of the most important functions of an enterprise system is report generation. Fourth Shift generates reports in a number of different ways, including:

- directly from a Fourth Shift screen or application
- as the output of a batch process task
- in a batch mode without running Fourth Shift

In most cases, reports can either be printed automatically or saved as a file. Print Preview is also available for most reports.

In addition, Fourth Shift generates external documents such as invoices, checks, packing lists, and bills of lading. These documents may be printed on preprinted forms, or may be printed on plain paper using a customized report template. When a customer or vendor is setup for it, email-enabled external document reports can be printed and/or sent as an attachment to an email during a batch run.

For more information on Fourth Shift's reporting features, see the System Administration help.

Securing the System

Fourth Shift is designed to allow many users to access and update data at the same time. It also allows each organization to define which types of data each user can view or modify.

User Validation

Each Fourth Shift user should be assigned a unique User Id and Password to access the system. When the user signs onto the system, the User Id and Password are validated before the user can access a menu, screen or other feature.

User Ids and passwords are defined using the PASS (Password Maintenance) screen. Users can change their own password on this screen, but cannot view the passwords of other users.

See PASS in the System Control manual for further information on authentication modes.

Access Codes

Users are granted or denied access to individual screens or features by way of an **access code**. An access code is a single-character identifier used to determine whether a user may access a feature.

Users do not enter their access codes during the sign-on process. Instead, you can think of access codes as establishing "security categories" for both users and function codes. When a user signs on, Fourth Shift compares the user's access codes to the access codes for the installed function codes. Only the function codes whose access codes match those of the user are displayed in the menus.

Access codes are assigned to users and function codes by a system administrator using the PASS (Password Maintenance) and FCMT (Function Code Maintenance) screens.

- Each user may be assigned multiple access codes. Additionally, screen may be assigned to multiple screens.
- A special unlimited access code, the asterisk (*) character, can be assigned to both function codes and users.
 - If a function code has an asterisk as its access code, it can be accessed by all users. Generally, only menu screens should be assigned an asterisk as an access code.
 - Similarly, if a user has an asterisk as his or her access code, he or she can access all function codes. Generally, only your IS manager(s) or lead administrator should be assigned an asterisk as an access code.

Inquiry Screens

Many frequently used maintenance screens have *inquiry-only* counterparts. These inquiry screens display the same information as the maintenance screens, but cannot be used to edit or update data. This feature allows you to provide read-only access to data for one group of users while providing updatable access to data for another group.

Inquiry screens are available for frequently accessed screens such as the Item Master, Customer Master, Location Master, Manufacturing Order, and Bill of Material screens.

Access Code Example

The following example shows how access codes could be used to define system access for functional groups. In this example, the listed access code is assigned to both the listed users and listed function codes.

Access Code	Description	Assigned to Users	Assigned to Function Codes
*	Unlimited access	IS manager and lead administrator only	Menu screens
1	Inquiry-only access	John, Sara, Brett, Susan	Inquiry screens
8	Batch processing access	System administrators, John	Batch processing screens (BSET and BEXE)
A	Accounting	John, Susan	Screens used by individuals in accounting roles
M	Materials Management	Sara	Screens used by individuals in materials management roles
S	Stockroom	Brett	Screens used by individuals in stocking or warehousing roles
9	Administration	System administrators	Screens that are accessed only by system administrators

In this example, John would be assigned the access codes A81 and would be allowed to access:

- Screens used by individuals in accounting roles
- Inquiry screens
- Batch processing screens (BSET and BEXE)
- Any screen, such as a menu screen, that has an asterisk (*) as its access code

Module-Specific Security Considerations

Many modules have specific security considerations that should be taken into account when defining levels of user access and authorization. For more information, see the *System Administration* section for each module.

Sales Order Processing

The Sales Order Processing (SOPM) module employs a supplemental security system, managed through a module-specific Security application. This provides more flexibility and a more precise level of user permissions for the features in the module. The SOPM module allows you to define groups of users and assign permissions to the groups down to the field level. Fields can be hidden or changed to display only.

Each user Id and password is established on PASS for SOPM users. Then user security can be assigned specific security rights in SOPM. For more information, see "Security" in the **Sales Order Processing** manual.

Engineering Module (ENGM)

The Engineering (ENGM) module also uses additional levels of security that augment a user's standard access codes. This rule-based security system allows system administrators to limit access to application features based on a user's job function.

Modules and Features Not Subject to Application Security

Some modules and features that have separate user interfaces are secured by the operating system, directory structure or database.

- The Sales Analysis (SAAM) module console can be secured so that only authorized users can access it. The reports generated in Reporting Services are secured by the IIS address of the RDL report.
- The SQL Server Report Configurator Utility can be secured by the directory structure, so that only the administrator can access it.
- Verify the login method for each module in your system to determine the security required.

Manufacturing Process Flow

Customer Order Entry

The customer order entry function is primarily supported by the following screens and features:

Screen	Description
COMT (Customer Order)	Create new customer orders for standard and custom product orders. Verify the availability of ordered items prior to making shipment promises using the available-to-promise capability.
Customer Order (Sales Order Processing Module)	Use the related SOPM module applications if you are using this module for order entry processing.
OPSL (Option Selection) CPMT (Custom Product Maintenance)	Configure a custom product during order entry.

Master Scheduling and Forecasting

The master scheduling and forecasting functions are primarily supported by the following screens and features:

Screen	Description
FCST (Forecast)	Enter your sales forecast in units and value by date. Forecasts can be defined at any level in the product structure.
MSMT (Master Schedule Maintenance)	Enter your master production schedule and production plan.
Forecast Management System	Fine-tune sales and demand forecasts using statistical methodologies.

Planning Function

The planning function is primarily supported by the following screens and features:

Screen	Description
PLNG (MRP Planning)	Create the manufacturing plan based on inputs of the master schedule, sales forecasts, inventory status, open orders and bills of material. Generate action messages based on time-phased net requirements.
PREV (Period Review)	Generate action messages for item replenishment based on order point calculations, as well as messages related to order follow-up and past-due orders.
SREV (Shipping Review)	Review customer orders and generate action messages such as those pertaining to credit warning, order release, order rescheduling and shipping.

Order Action

The order action function is primarily supported by the following screens:

Screen	Description
MOAN (Planner Action)	Recommend planner actions. Messages appearing on this screen recommend actions to accomplish the plan, which can be analyzed and modified directly on the screen.
POAN or POAS (Buyer Action)	Recommend purchasing actions. Messages appearing on these screens pertain to buy or subcontracted items needed for the manufacturing plan.
COAN (Customer Order Action)	Recommend customer service representative actions. Messages appearing on this screen involve credit warnings, order picking and follow-up.
STAD or STID (Stockroom Action)	Recommend shipping actions. Messages appearing on these screens involve recommended actions for the shipment of customer orders.

For more information about the action messages that appear on these screens, see [Communicating Through Action Messages](#) in this manual.

Material Control

The material control function is primarily supported by the following screens:

Screen	Description
PICK (Picklist)	Issue materials supplied to a vendor for a purchase order.
PORV (PO Receipt/ Reverse /Return)	Identify the purchase order line item being received and enter receipt activity, return activity and credit information.
MORV (MO Receipt/ Reverse)	Identify the manufacturing order line item being received and enter receipt activity into the system.
CORV (CO Receipt/ Reverse)	Report the completion of a custom product order and receive by-products and returned tools related to the order.
PICK (Picklist)	Fill customer orders. Print a picklist and then enter actual staged quantities.
SHIP (Ship)	Package items and record shipments against customer orders. Produce external documents such as packing lists, box labels and Federal Express Airbills.
LMST (Lot Master)	Track lot-traced items through the manufacturing process and assign serial numbers to items at the time of shipment.

Manufacturing Function

The manufacturing function is primarily supported by the following screens:

Screen	Description
MOMT (Manufacturing Order)	Create new manufacturing orders and rework orders, or modify existing orders. Release orders opened by the MOAN (Planner Action) screen.
ITMB (Item Master)	Define the characteristics of each unique end-product, assembly, component, material, tool, reference item or resource center involved in your manufacturing process.
BILL (Bill of Material)	Define your product structure; build bills of material and bills of resources by assigning components to parent items.
Product Definition (Engineering Module)	Use the related ENGM module applications for sophisticated product definition features.
CPMT (Custom Product Maintenance)	Directly define the components of a custom product. For a custom product, the customer order acts as the manufacturing order.
PICK (Picklist)	Print a picklist with the quantity and location of available components, enter the actual quantity of each component issued to production and modify the order-dependent bill of material when issuing components.

Vendor Operations

The vendor operations function is primarily supported by the following screens and features:

Screen	Description
POMT (Purchase Order)	Create new purchase orders or modify line items on existing orders. Release orders that have been opened on the POAN/POAS (Buyer Action) screens.
VEND or VEID (Vendor Master)	Record and maintain information about suppliers of purchased items, including addresses, accounting contacts and standard terms.
VCOT (Vendor Contact Detail)	Maintain information about specific contacts associated with a vendor.

Customer Operations

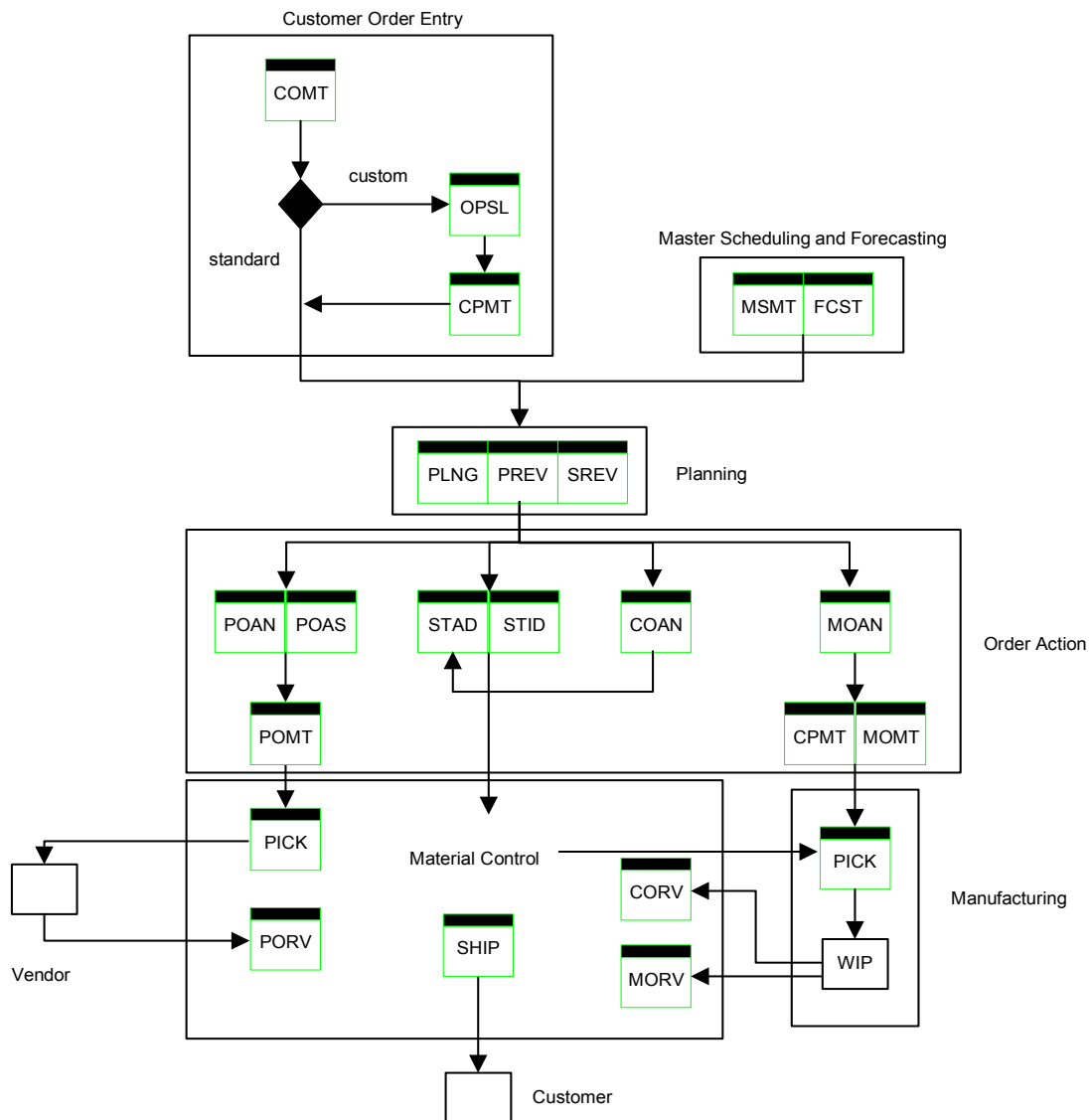
The customer operations function is primarily supported by the following screens and features:

Screen	Description
CUST or CUID (Customer Master)	Record and maintain information about customers, including addresses, accounting contacts and standard terms.
Customer application (Sales Order Processing Module)	Use the related SOPM module applications if you are using this module for order entry processing.

CCOT (Customer Contact)	Maintain information about specific contacts associated with a customer.
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Manufacturing Process using Fourth Shift Screens

Using Fourth Shift screens and tasks, a typical manufacturing process flow could look similar to the example shown in the following illustration.



Financial Process Flow

The financial functions of invoicing, accounts receivable, accounts payable and general ledger are fully integrated with the manufacturing function.

Invoicing

The invoicing function is primarily supported by the following screens:

Screen	Function
IVMQ (Invoice Module Communication)	Generate invoices or credit memos from shipping transactions.
IVRE (Accounts Receivable Recurring Invoice)	Create default information for recurring monthly billing.
IVRC (A/R Invoice Creation)	Create pre-printed invoice from recurring invoice definitions.
IVRV (Invoice Review)	Approve invoices from all sources for printing.
IVIE (Invoice Entry and Maintenance)	View and update invoices and credit memos created by shipments, manually, or based on recurring invoices before they are printed. - You can also approve or unapproved the document for printing. - New manual documents can also be created on this screen in pre-printed, or printed status. - After printing, documents can be reviewed, placed on hold, or canceled if not yet paid. - Documents created manually or from a recurring invoice can also be updated until the invoice is paid. Note: Based on the AR configuration settings (ARCF) you may or may not be able to modify all information on printed, unpaid invoices and credit memos created from shipment activity.
IVPR (Invoice Printing)	Print or email invoices and credit memos, update G/L and customer balances.
IVEX (Invoice Printing Export)	Generate invoice and credit memo information files, update G/L and customer balances.

Accounts Receivable

The accounts receivable function is primarily supported by the following screens and features:

Screen	Function
ARCD (A/R Cash Deposits)	Enter customer payments.
ARCR (A/R Cash/Credit Memo Application)	Apply payments and credit memos to specific invoices or aged balance categories.
G/L Distribution	Distribute the cash receipt amounts to appropriate general ledger accounts.
ARSC (A/R Service Charges)	Create service charge invoices for a specified statement cycle.
ARST (A/R Statement Printing)	Print or email customer statements for a user-specified statement cycle.
ARBS (A/R Statement Export)	Generate customer statement information files.
Cash Collection Assistant	Track customer collections contacts.

Accounts Payable

The accounts payable function is primarily supported by the following screens:

Screen	Function
APMQ (A/P Module Communication)	Read the communication file of purchasing transactions so they can be used in the Accounts Payable (APSM) Module.
APIE (A/P Invoice Entry)	Enter invoices and debit memos into the system to reconcile purchase order receipts with invoices. Purchasing receipts are listed by purchase order.
APIT (Accounts Payable Invoice Template)	Create AP Invoice template definitions.
APRE	Create AP Recurring Invoice definitions to be created each month.
APIC	Generates invoices from AP Recurring Invoice information. GL and Vendor information is updated when the AP invoice is created by the APIC task.

Screen	Function
APID (A/P Invoice Distribution)	Reconcile invoices to purchase order line items and calculate purchase order/invoice variances. - Create non-item invoices from AP Invoice template information. - Review and update unpaid invoices created manually, based on templates, or automatically generated from AP Recurring Invoice definitions.
G/L Distribution	Distribute invoice and payment amounts to appropriate general ledger accounts.
A/P 1099 DISTRIBUTION	Record 1099 invoice and payment information.
APRQ (A/P Cash Requirements/Payment Approval)	Determine the cash required for outstanding invoices and approve payments to vendors.
APCW (A/P Payment Processing)	Generate payments. GL and Vendor information is updated automatically when the payment is processed.

General Ledger

The general ledger function is primarily supported by the following screens:

Screen	Function
GLMQ (G/L Module Communication)	Create batches of financial transactions that result from business activities in manufacturing modules or external transactions generated outside the system.
GLSS (G/L Batch Submission Status)	Review all batches and submit them for posting.
GLAU (G/L Account Update)	Post batches to the general ledger.

Communicating Through Action Messages

Fourth Shift continuously monitors various inventory and order status conditions to alert users to actions that should be taken. These **action messages** are communicated to users electronically on **action screens**. Action messages are the focal point of activity for planners, buyers and customer service representatives.

Action messages and action screens help you to accomplish your manufacturing plan by ensuring smooth workflow processes. Whenever changes in demand or supply occur, the people who need to know about them are alerted immediately. This helps your organization manage the changes that might otherwise drag down your workflow processes.

Depending on which modules are installed in your system, several action screens are available.

Action Screen	Module
MOAN (Planner Action)	Manufacturing Order Management (MOMM)
POAN or POAS (Buyer Action)	Purchasing (PURM)
COAN (Customer Order Action)	Order Entry (CUSM) Sales Order Processing (SOPM)
STAD or STID (Stockroom Action)	Shipping (SHPM)
CCAN (Cost Control Action)	Product Costing (PRCM) (actual costing systems only)

The POAN and POAS screens show the same action messages, filtered by either item (POAN) or vendor (POAS). Similarly, the STAD and STID screens show the same action messages, filtered by either date (STAD) or customer (STID).

System-wide preferences and settings for action messages can be specified using the MSCF (Message Configuration) screen in the System Control (SYSM) module. For example, you can use the MSCF screen to filter specific messages.

Action Message Codes

Each action message is represented by a three-letter code. Some messages recommend actions, while others inform users of rule-based changes that have been made automatically.

Action message codes may appear on the following action screens:

Planner Action Messages (MOAN Screen)

Message Code	Description
ATP	Available to promise over-consumed
BIL	Bill changes have occurred
CAN	Cancel existing order
CLO	Order closure requested or suggested
CMS	Consume master schedule
IPP	Increase production plan—additive customer order
MOP	Insufficient supply
MSO	Master schedule over-consumed
OBS	Supply order exists for obsolete item
OPD	Order is past due—reschedule/expedite
OPQ	Order point quantity reached
PHO	Insufficient supply
PMO	Manufacturing order should be printed
RCO	Release customer order for manufacture
REL	Order due for release
ROT	Review order type; MB code changed; review firm planned orders
SCH	Reschedule existing order
SCQ	Reschedule quantity down

Planner action messages are generated by:

- system-generated transactions
- PLNG (MRP Planning) task in the Material Requirements Planning (MRPM) Module
- PREV (Period Review) task in the Manufacturing Order Management (MOMM) Module

For more information, including recommended responses to each of these action messages, see "MOAN (Planner Action)" in the **Manufacturing Order Management** manual.

Buyer Action Messages (POAN/POAS Screens)

Message Code	Description
ATP	Available to promise over-consumed
BIL	Bill changes have occurred
CAN	Cancel existing order
CCL	Contract closure requested
CLO	Order closure requested or suggested
CLX	Contract limits exceeded
CRL	Contract due for release
CRV	Contract review
IBQ	Increase blanket order quantity
MOP	Insufficient supply
OBS	Supply order exists for obsolete item
OFR	Order follow-up required
OPD	Order is past due—reschedule/expedite
OPQ	Order point quantity reached
PHO	Insufficient supply
PLF	Reschedule planned order from planning fence
PPL	Print picklist
PPO	Purchase order should be printed or emailed
REL	Order due for release
ROT	Review order type; MB code changed; review firm planned orders
RPO	Order non-stock material/outside operation
RPS	Reverse performance statistics
SCB	Reschedule blanket order
SCH	Reschedule existing order
SCQ	Reschedule quantity down
UBF	Unreleased blanket schedule within blanket fence

Buyer action messages are generated by:

- system-generated transactions
- PLNG (MRP Planning) task in the Material Requirements Planning (MRPM) Module
- PREV (Period Review) task in the Manufacturing Order Management (MOMM) Module

For more information, including recommended responses to each of these action messages, see "POAN (Buyer Action)" in the **Purchasing** manual.

Customer Order Action Messages (COAN Screen)

Message Code	Description
ACK	Print or email the order acknowledgment
CLO	Order closure requested or suggested
CRH	Order on credit hold
CRW	Credit limit exceeded
OPD	Order is past due—reschedule/expedite
PIK	Pick customer order (only if SHPM is not installed)
PPL	Print picklist
REL	Order due for release
SCH	Reschedule existing order

Customer order action messages are generated by:

- system-generated transactions
- SREV (Shipping Order Review) task in the Order Entry (CUSM) and Sales Order Processing (SOPM) Modules

For more information, including recommended responses to each of these action messages, see "COAN (Customer Order Action)" in the **Order Entry** manual or "COAN (Customer Order Action)" in the **Sales Order Processing** manual.

Stockroom Action Messages (STAD/STID Screens)

Message Code	Description
PIK	Pick customer order
SHP	Order picked—not shipped

Stockroom action messages are generated by:

- system-generated transactions
- SREV (Shipping Order Review) task in the Order Entry (CUSM) and Sales Order Processing (SOPM) Modules

For more information, including recommended responses to each of these action messages, see "STAD (Stockroom Action)" in the **Shipping** manual.

Cost Control Action Messages (CCAN Screen)

Message Code	Description
CSQ	Changed to Status 5
CST	Ready for review
CSY	Costs within tolerance
CSZ	Costs not within tolerance

Cost control action messages are generated by:

- CSTU (Actual Cost Update) in the Product Costing (PRCM) Module

For more information, including recommended responses to each of these action messages, see "CCAN (Cost Control Action)" in the **Product Costing** manual.

Action Message Sources

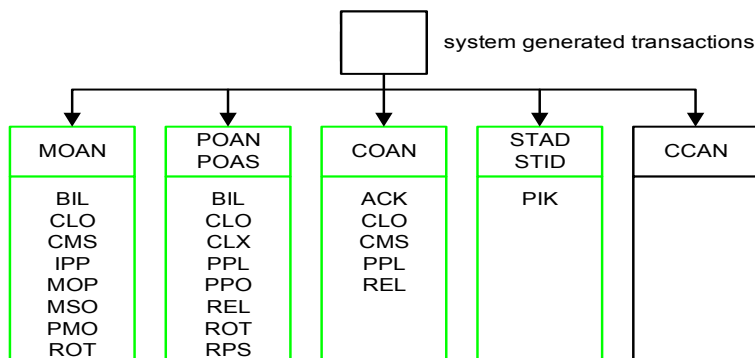
Action messages may be generated from various sources, depending on which modules are installed in your system, as shown in the following illustrations.

The sources are:

- System-generated transactions
- PLNG (MRP Planning) task in the Material Requirements Planning (MRPM) Module
- PREV (Period Review) task in the Manufacturing Order Management (MOMM) Module
- SREV (Shipping Order Review) task in the Order Entry (CUSM) and Sales Order Processing (SOPM) Modules
- CSTU (Actual Cost Update) in the Product Costing (PRCM) Module

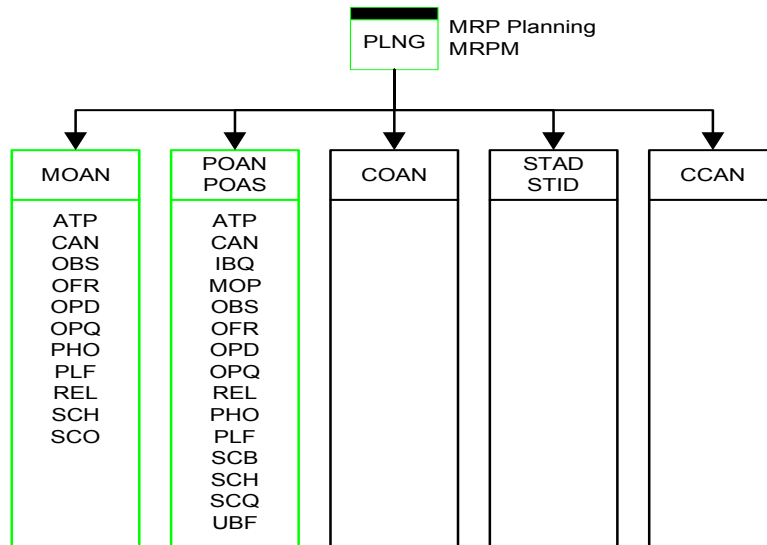
System-generated Transactions

Standard Fourth Shift transaction processing generates action messages for the MOAN, POAN/POAS, COAN, and STAD/STID screens.



PLNG (MRP Planning)

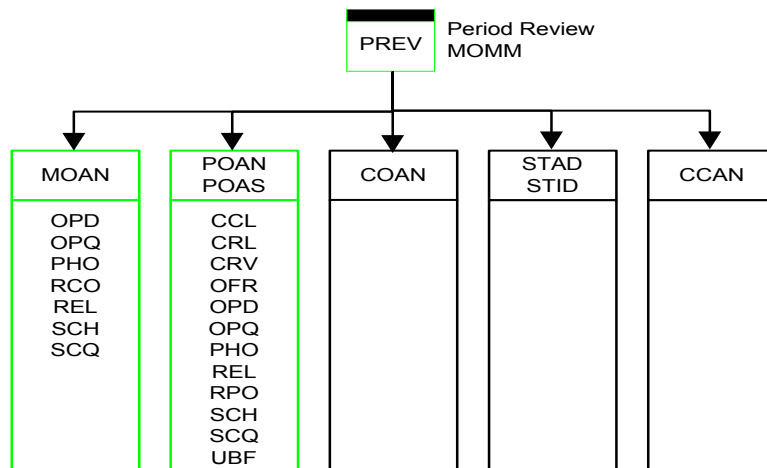
The PLNG (MRP Planning) task in the Material Requirements Planning (MRPM) Module generates action messages for the MOAN and POAN/POAS screens.



Note: If the MRPM Module is installed in your system, you should run the PLNG task before you run the PREV task. The PREV task creates time-related exception messages based on the updated plan created by MRP.

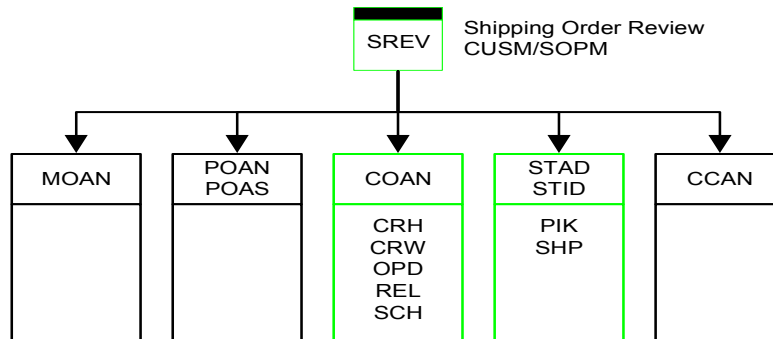
PREV (Period Review)

The PREV (Period Review) task in the Manufacturing Order Management (MOMM) Module generates action messages for the MOAN and POAN/POAS screens.



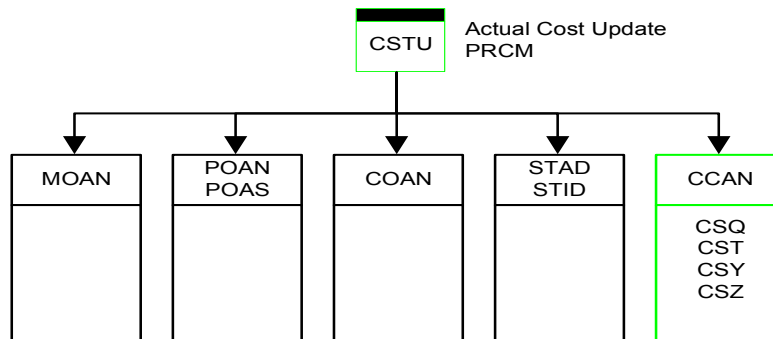
SREV (Shipping Order Review)

The SREV (Shipping Order Review) task in the Order Entry (CUSM) and Sales Order Processing (SOPM) Modules generates action messages for the COAN and STAD/STID screens,.



CSTU (Actual Cost Update)

The CSTU (Actual Cost Update) task in the Product Costing (PRCM) Module generates action messages for the CCAN screen.



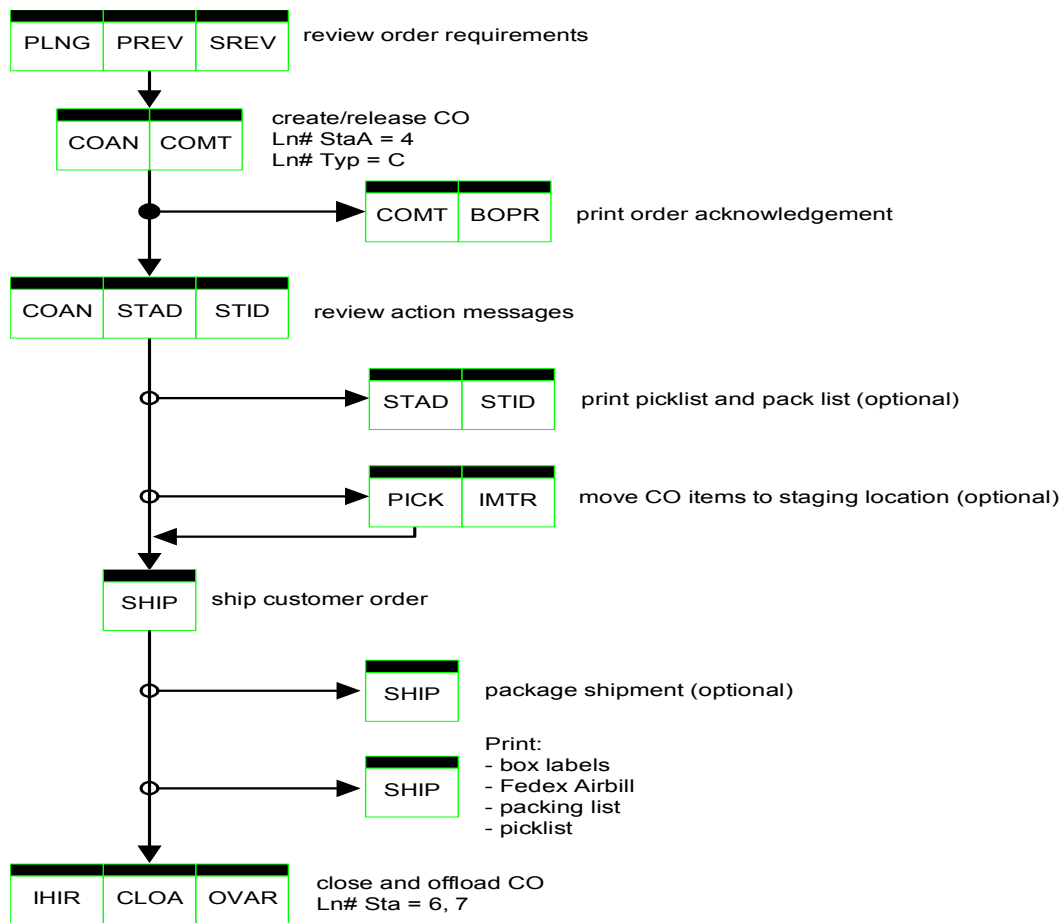
Typical Workflows

The diagrams in this section show how Fourth Shift features can be used to support the typical workflows of your business.

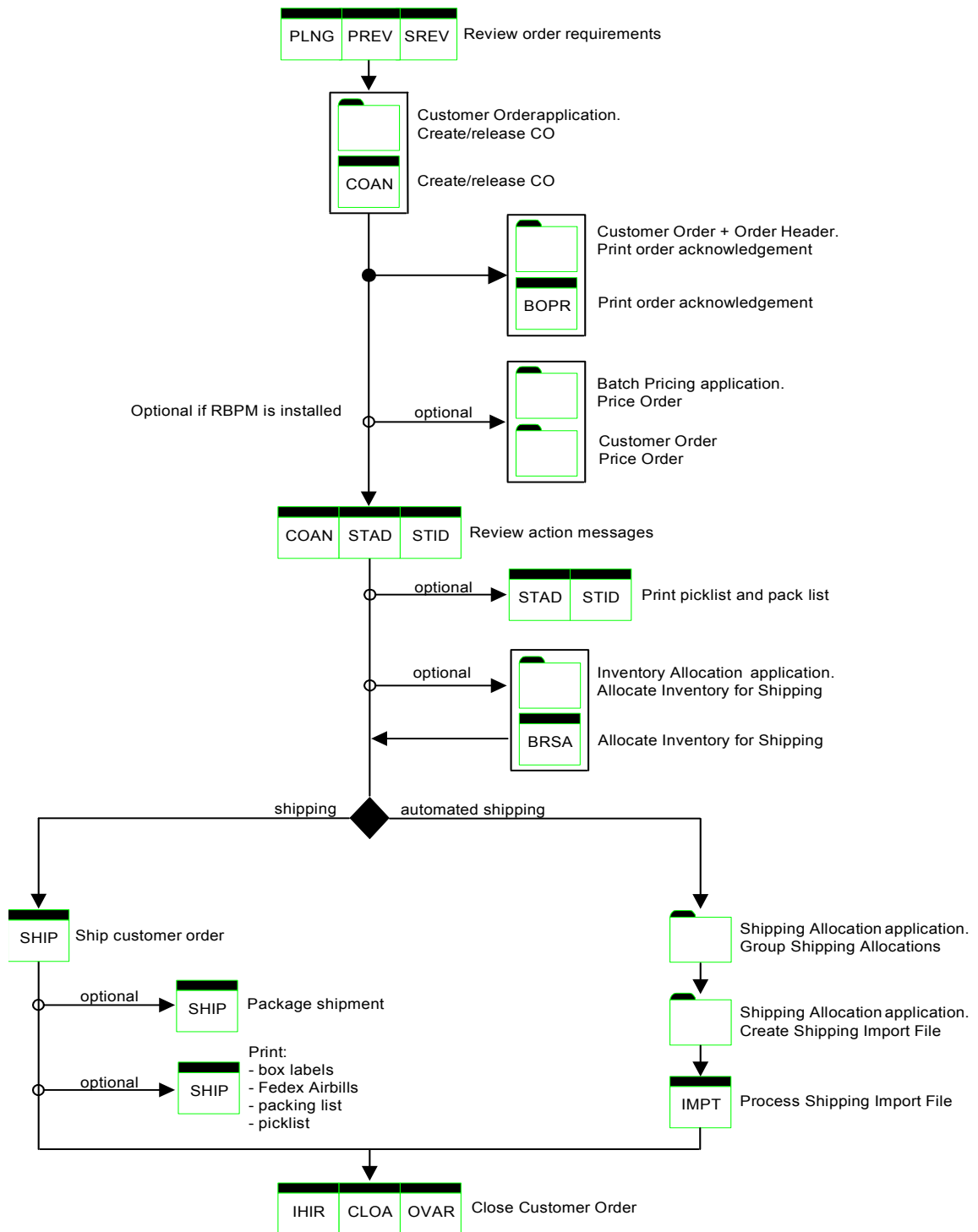
Customer Operations Workflows

- [Customer Order Processing: Using the Order Entry \(CUSM\) Module](#)
- [Customer Order Processing: Using the Sales Order Processing \(SOPM\) Module](#)
- [Customer Order Processing: Using the Sales Order Processing \(SOPM\) Module with the Custom Products feature](#)

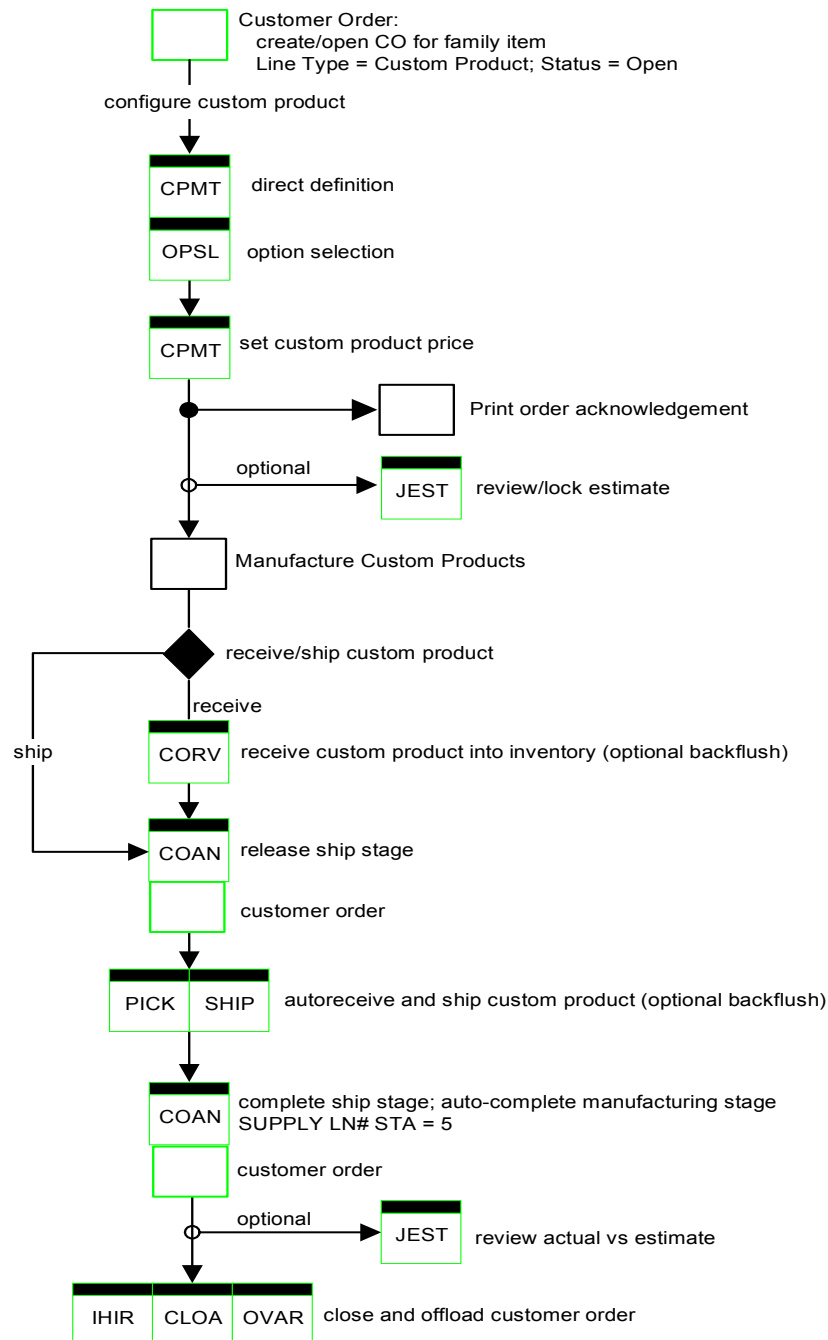
Customer Order Processing: Using the Order Entry (CUSM) Module



Customer Order Processing: Using the Sales Order Processing (SOPM) Module



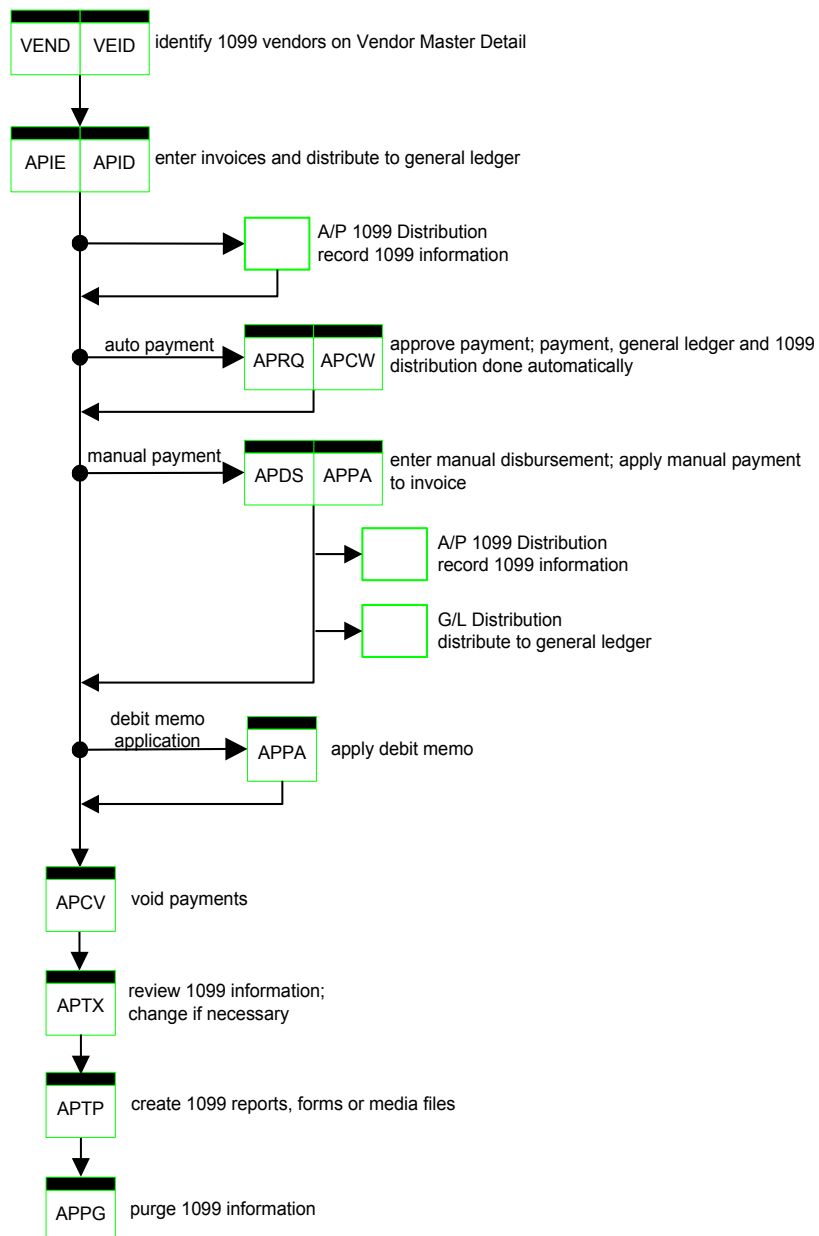
Customer Order Processing: Using the Sales Order Processing (SOPM) Module with the Custom Products feature



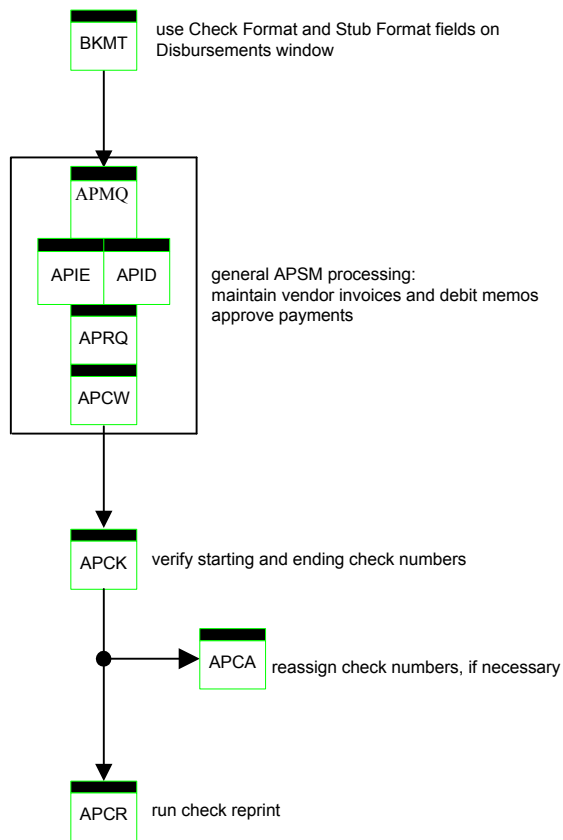
Financial Management Workflows

- [Accounts Payable: 1099 processing](#)
- Accounts Payable: check reprinting process
- [Accounts Payable: daily processing](#)
- [Accounts Payable: debit memo processing](#)
- [Accounts Payable: manually-generated disbursements](#)
- [Accounts Payable: non-invoice disbursements](#)
- [Accounts Payable: system-generated disbursements](#)
- [Accounts Receivable: daily processing](#)
- [Accounts Receivable: invoice processing](#)
- Cash Management processing
- [Consolidation: load processing](#)
- [Consolidation: unload processing](#)
- [General Ledger: account update activities](#)
- General Ledger: account restructuring process
- General Ledger: account update activities
- [Period-End Close: processing](#)
- Period-End Close: review drill down
- [Year-End Close: fiscal year-end processing](#)
- [Year-End Close: other processing](#)

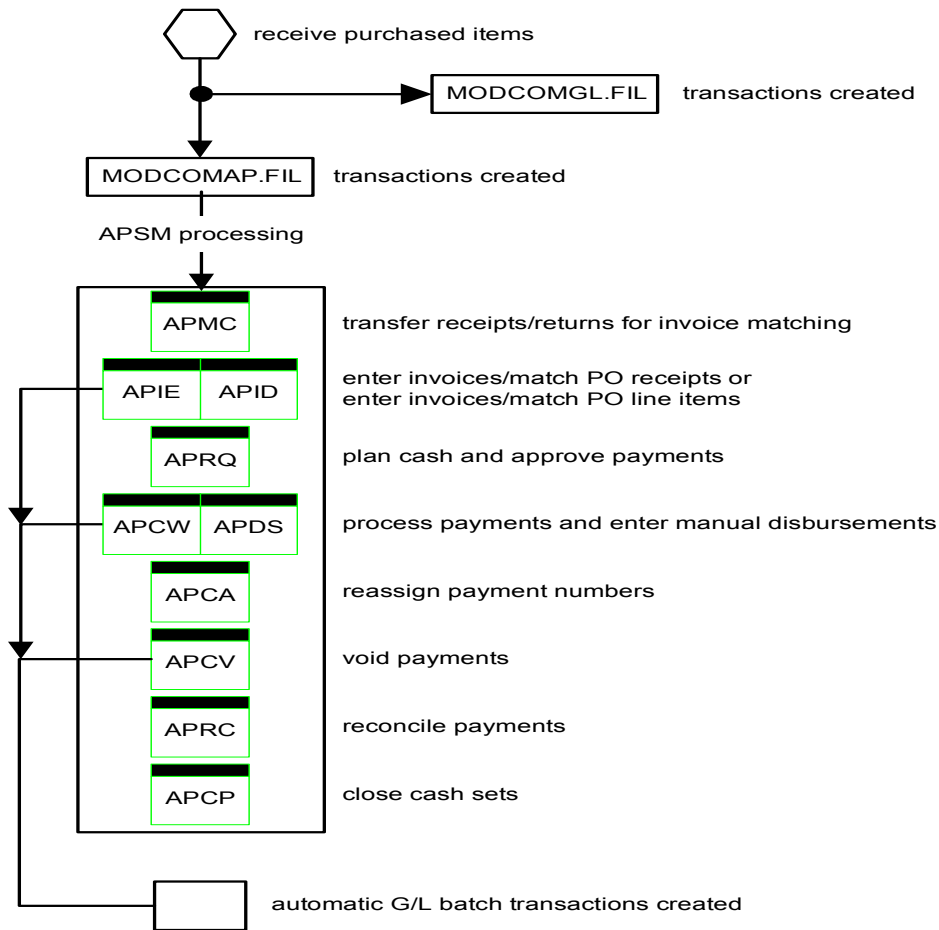
Accounts Payable: 1099 processing



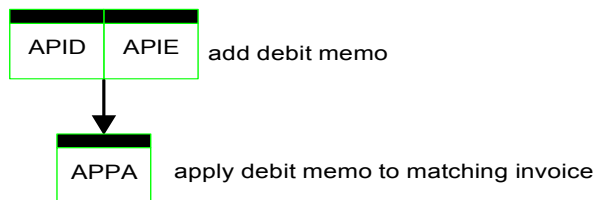
Accounts Payable: payment processing



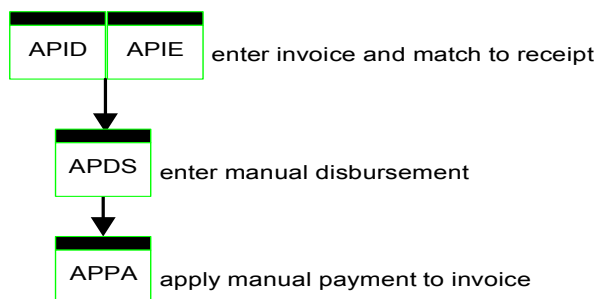
Accounts Payable: daily processing

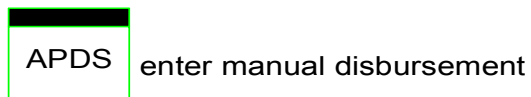
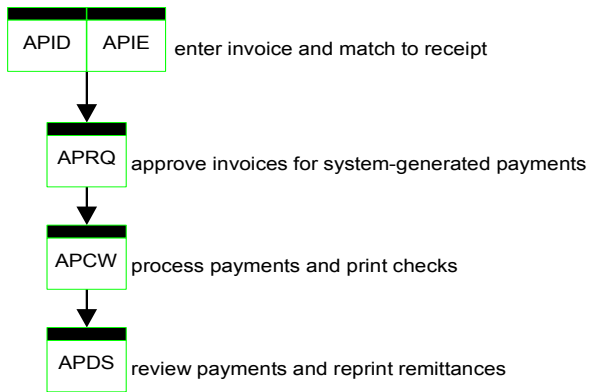


Accounts Payable: debit memo processing

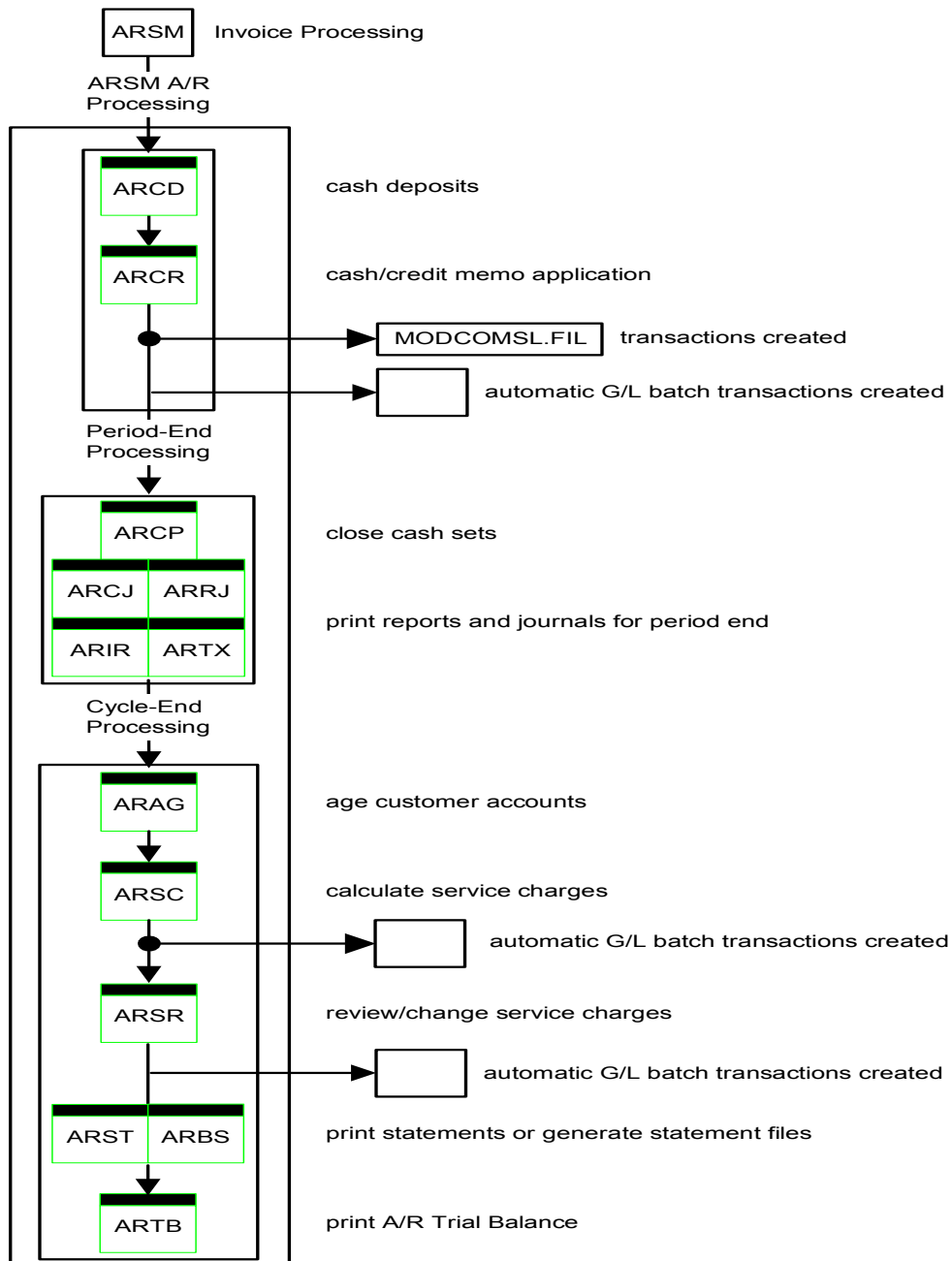


Accounts Payable: manually-generated disbursements

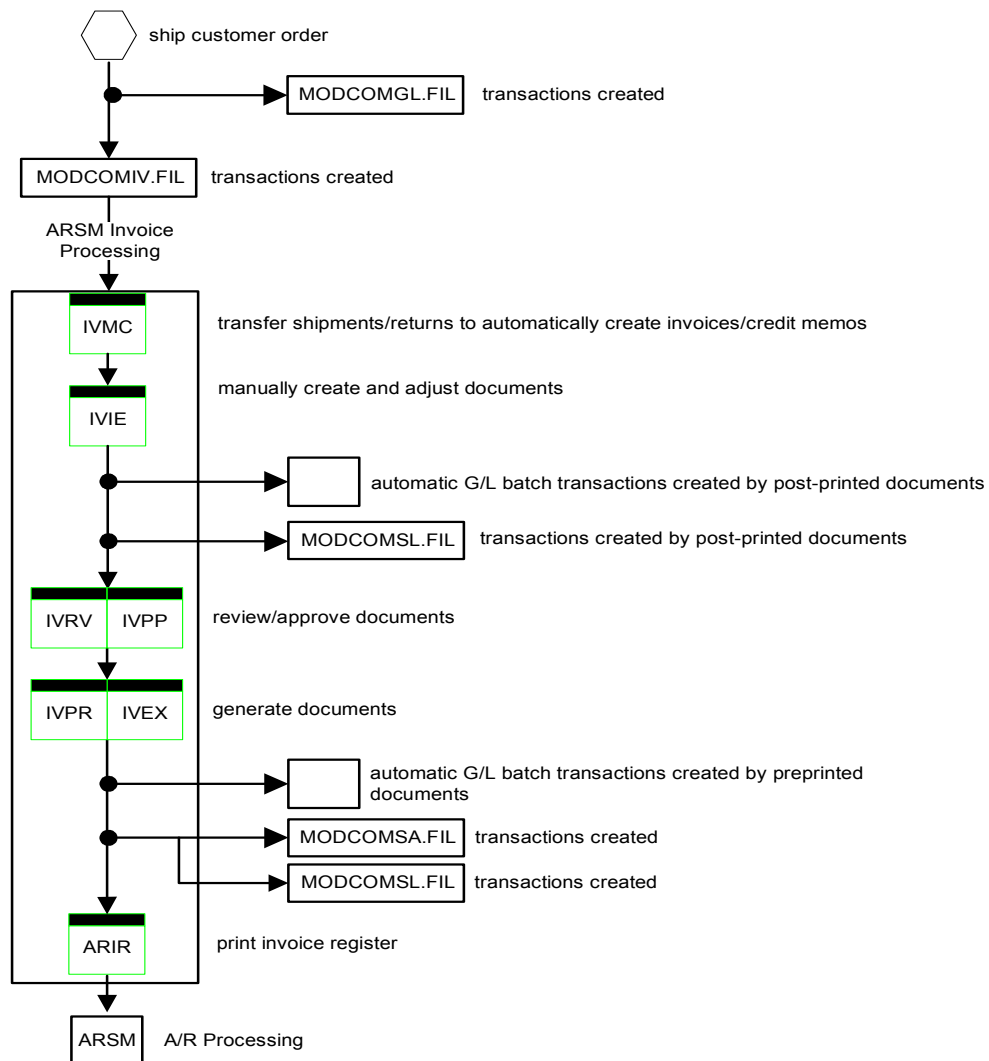


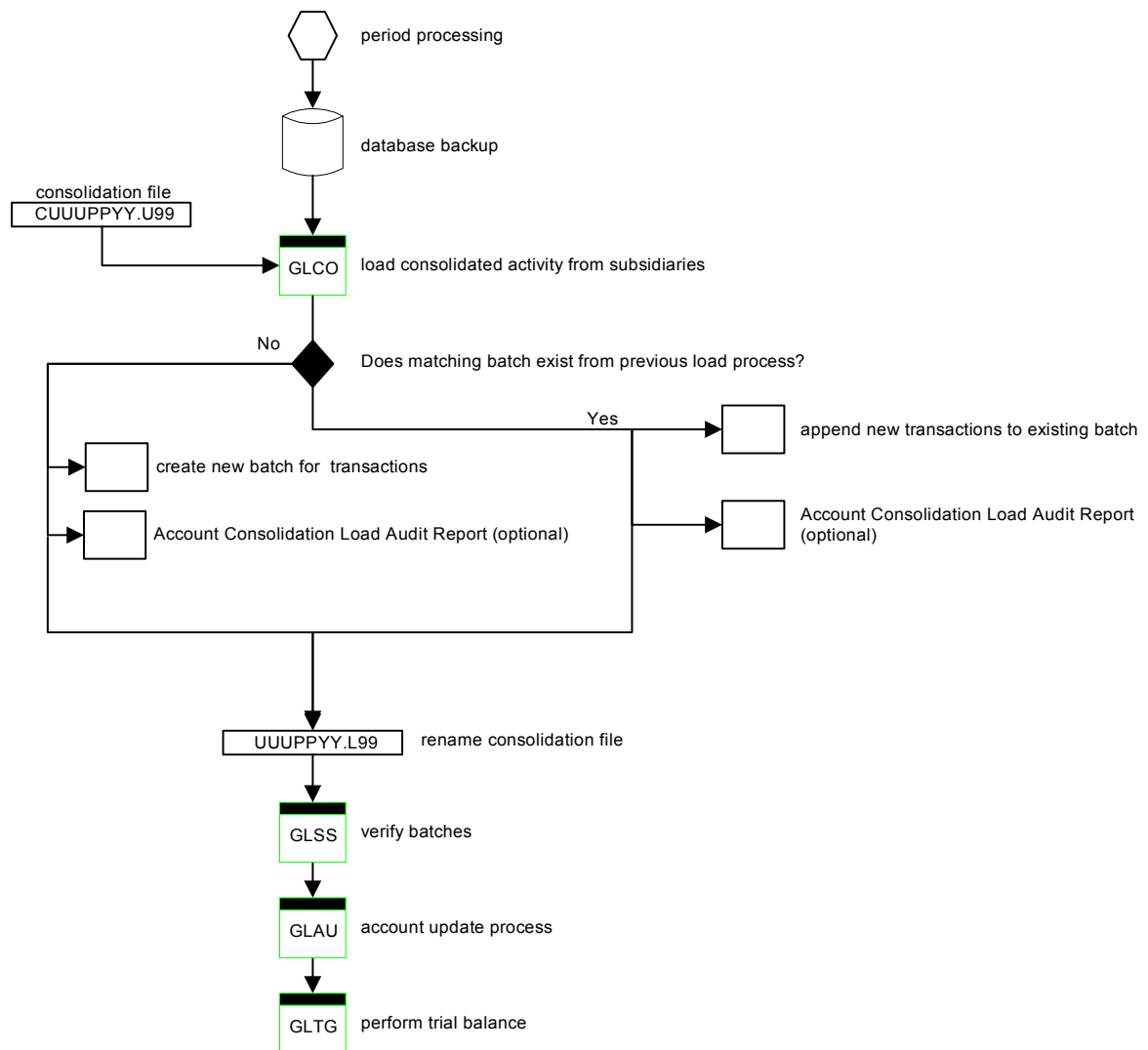
Accounts Payable: non-invoice disbursements**Accounts Payable: system-generated disbursements**

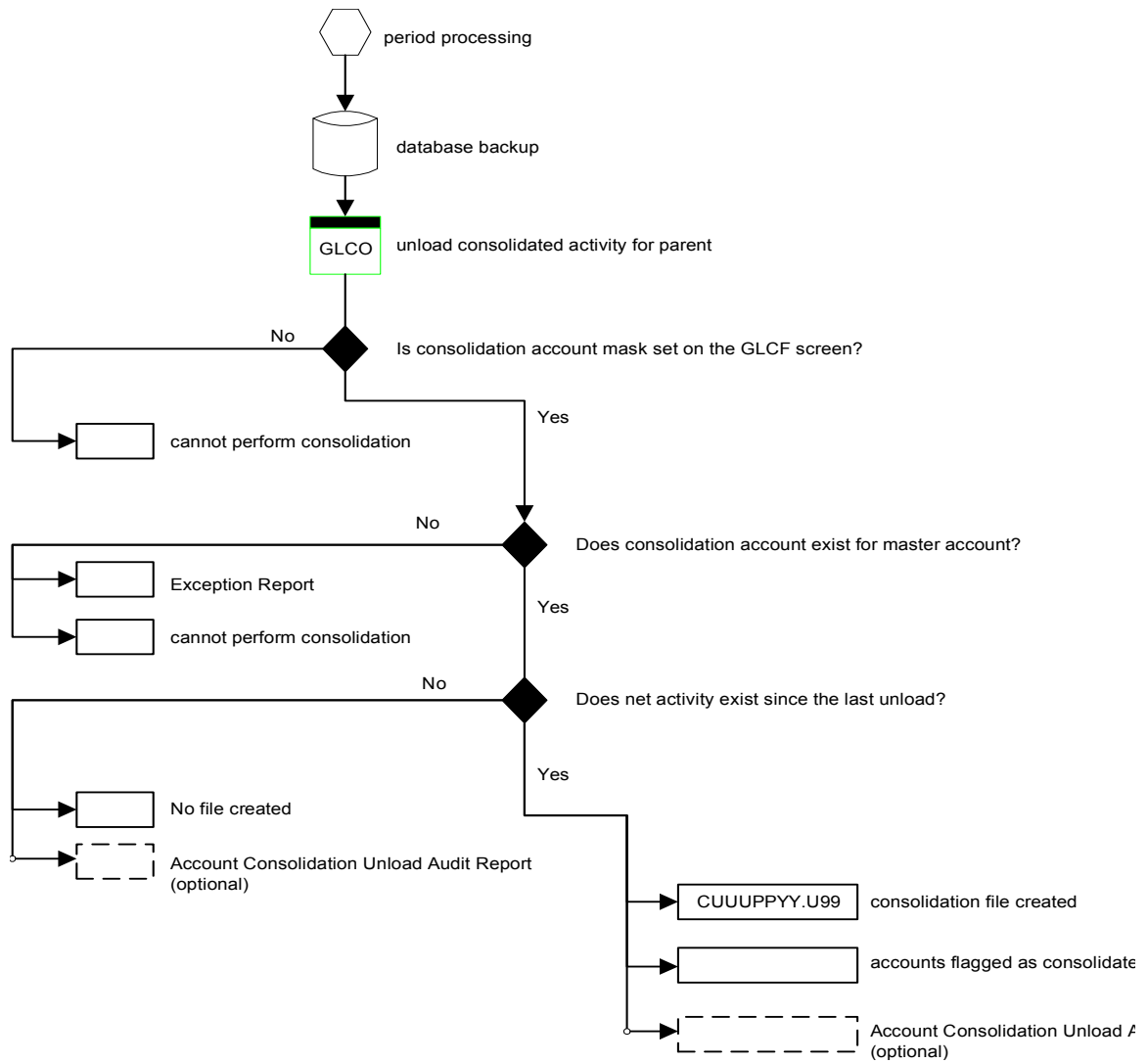
Accounts Receivable: daily processing



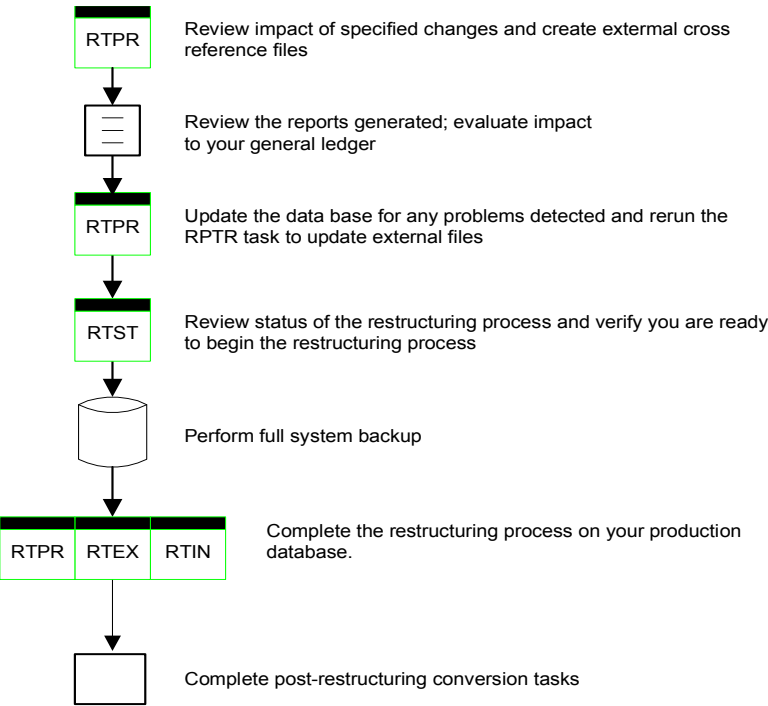
Accounts Receivable: invoice processing

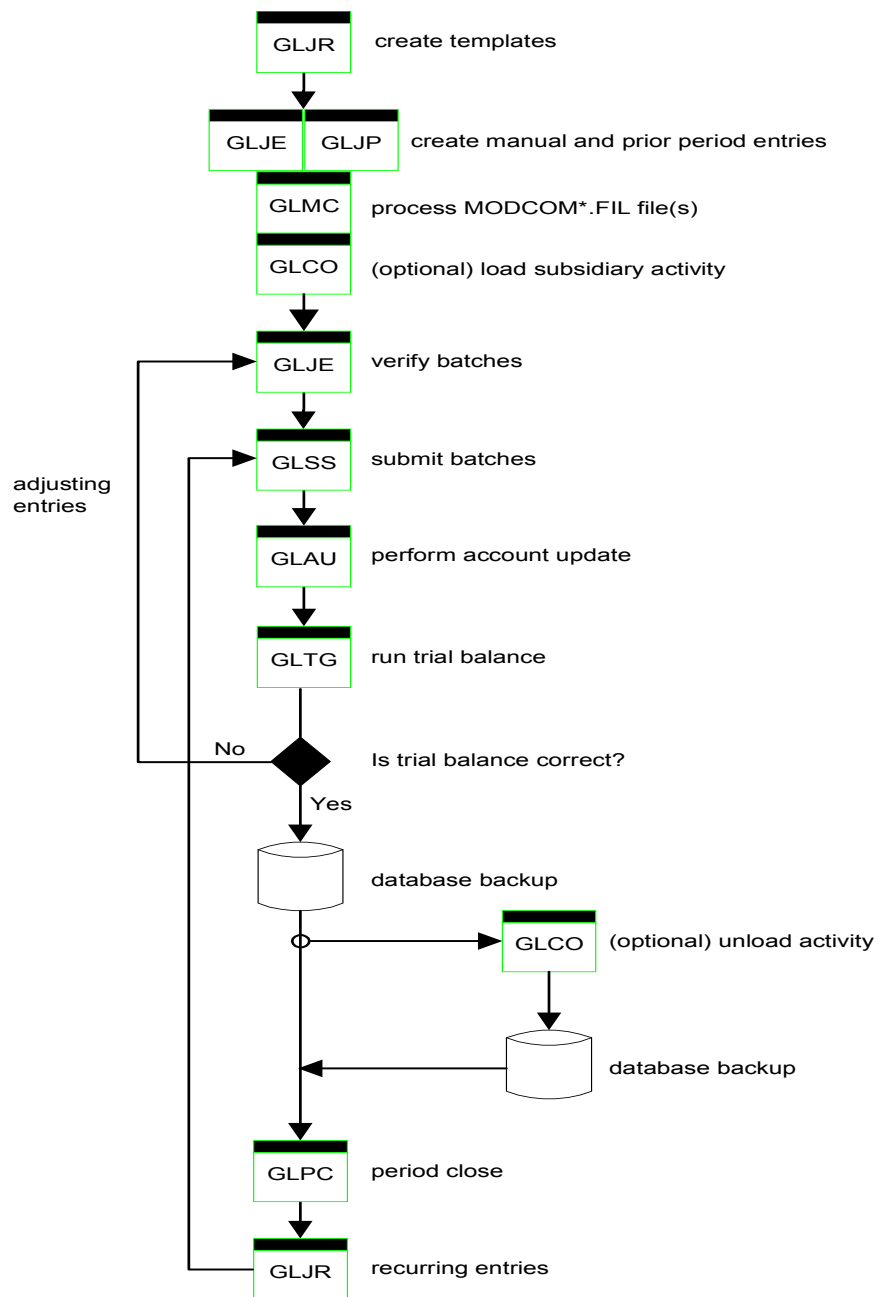


Consolidation: load processing

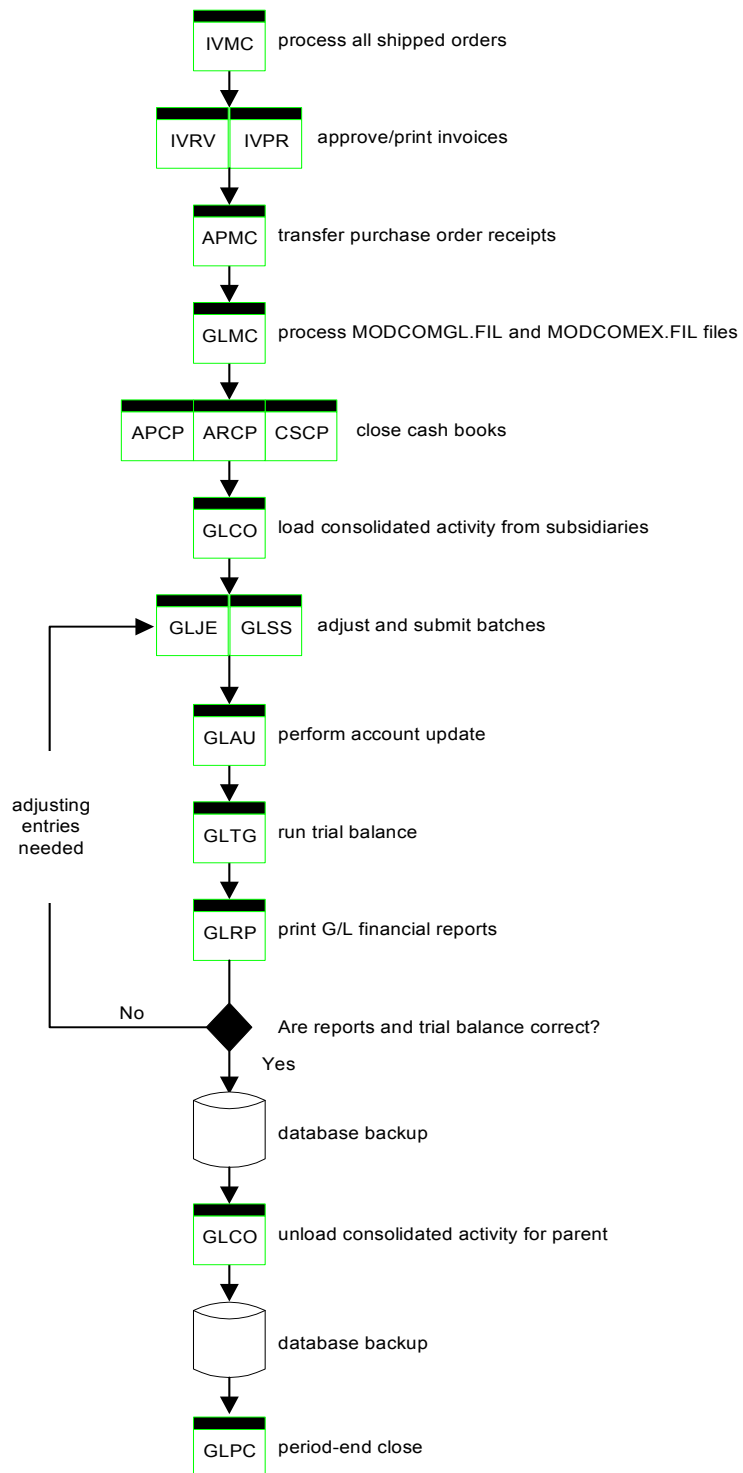
Consolidation: unload processing

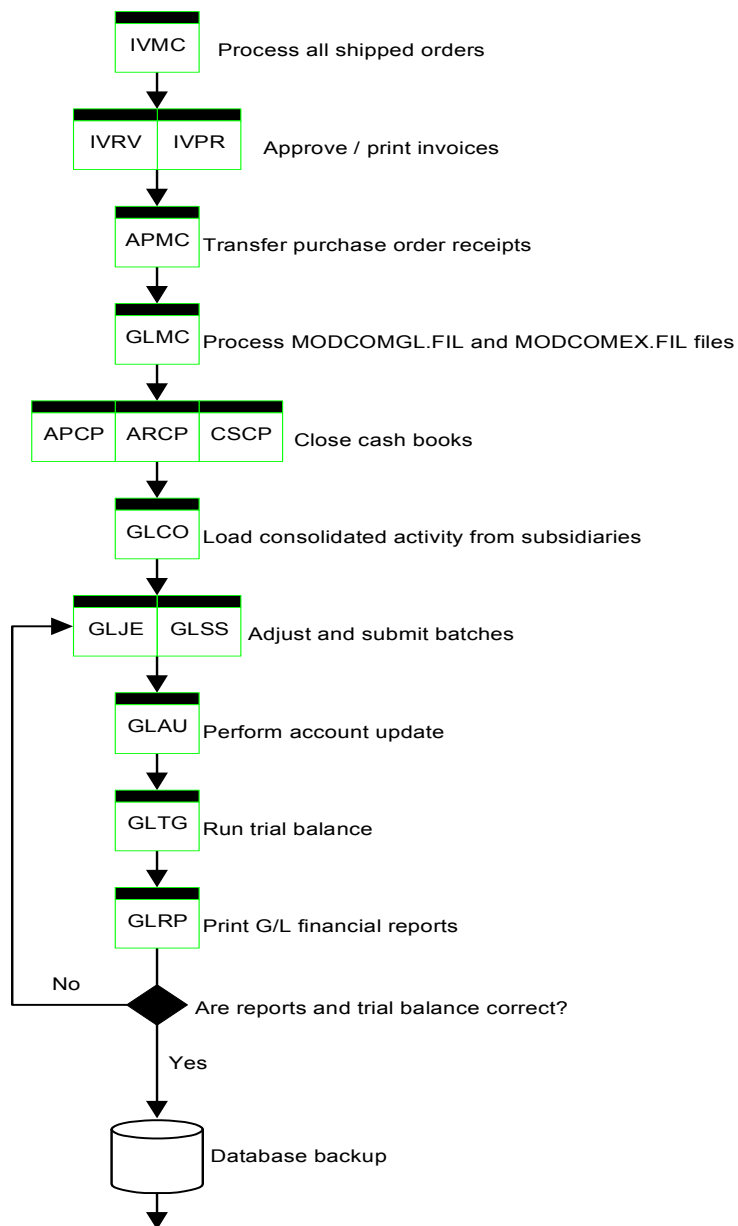
Consolidation: unload processing (*continued*)



General Ledger: account update activities

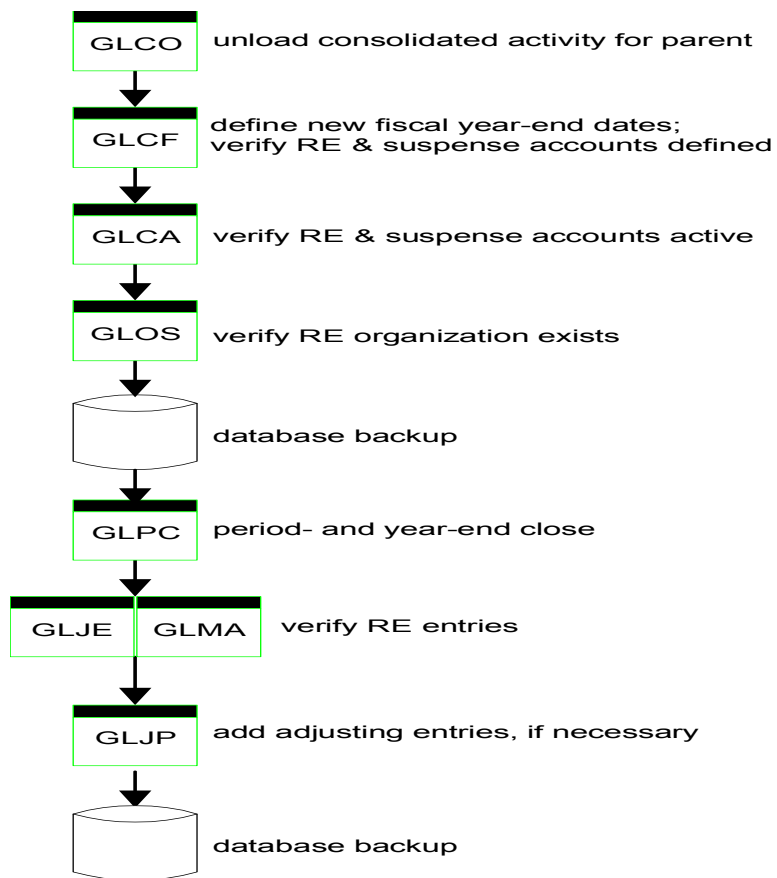
Period-End Close: processing



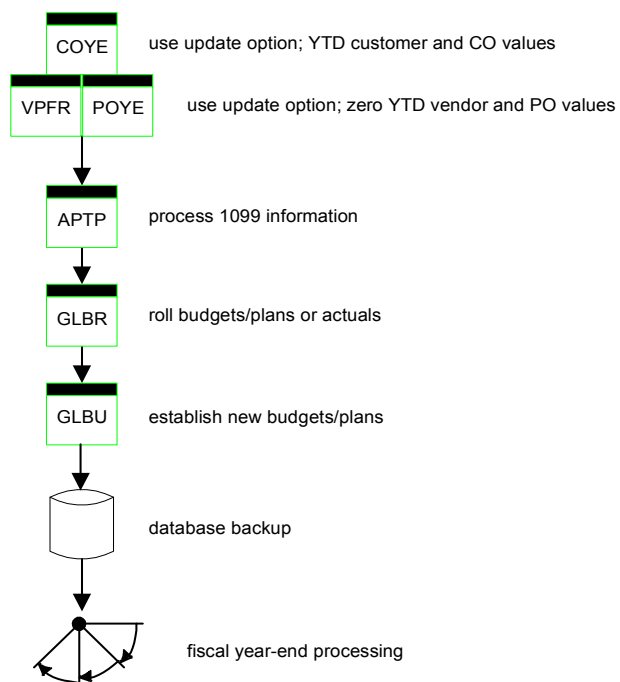
Year-End Close: fiscal year-end processing

(Year-End Close: fiscal year-end processing continued on the next page.)

(Year-End Close: fiscal year-end processing continued)



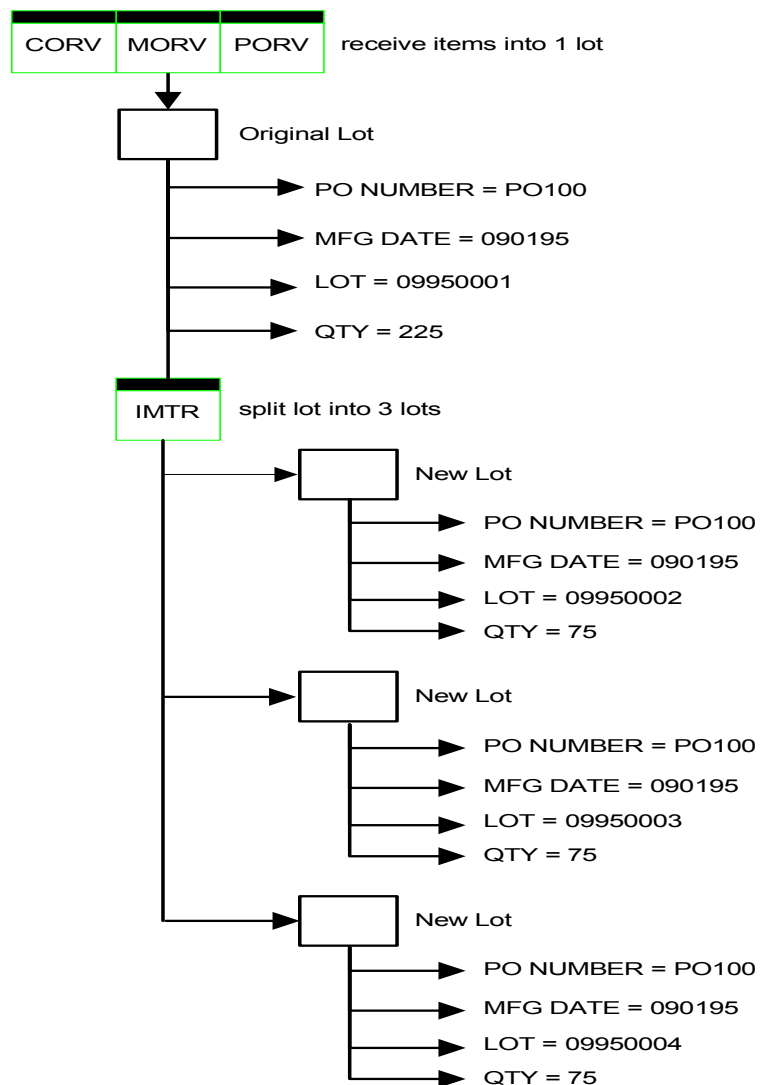
Year-End Close: other processing

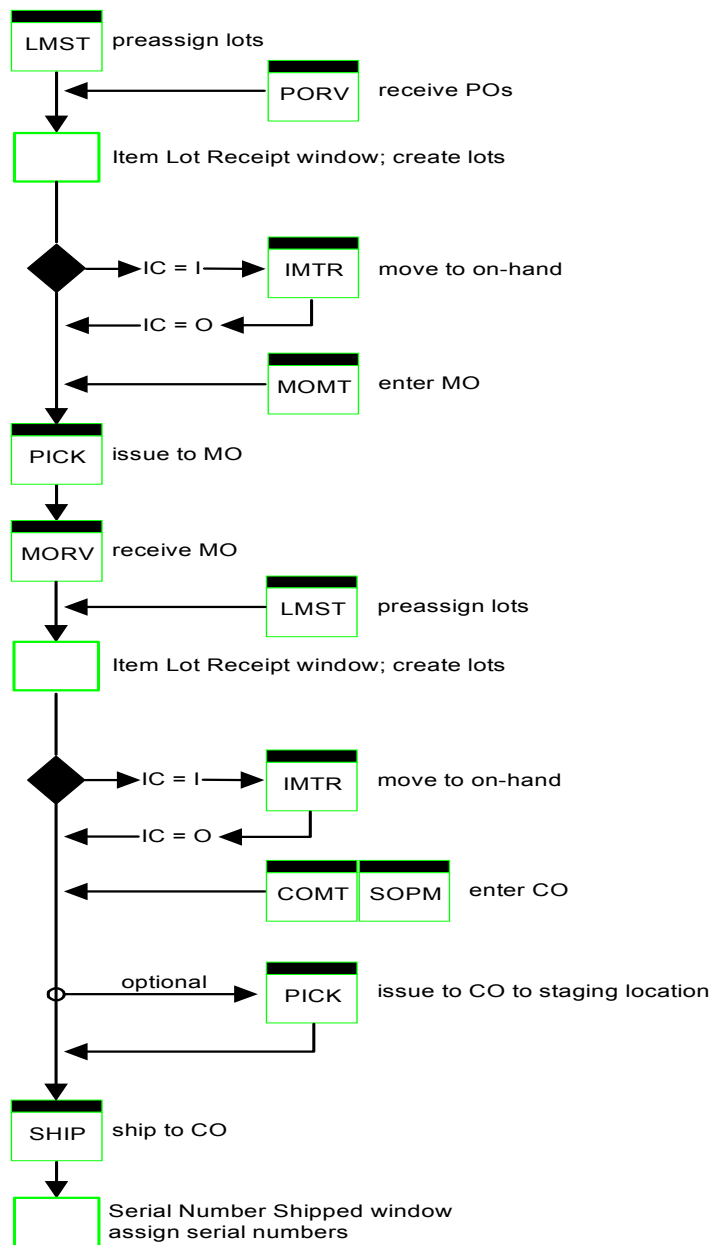


Inventory Management Workflows

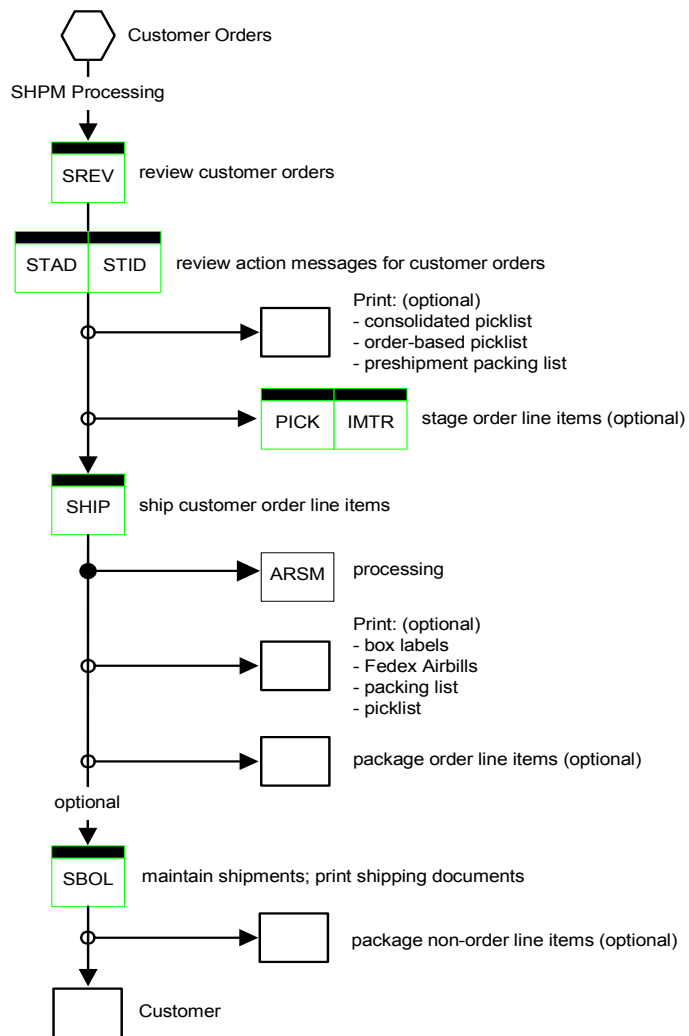
- [Lot Trace/Serialization: lot split process](#)
- [Lot Trace/Serialization: normal processing](#)
- [Shipment Process](#)

Lot Trace/Serialization: lot split process



Lot Trace/Serialization: normal processing

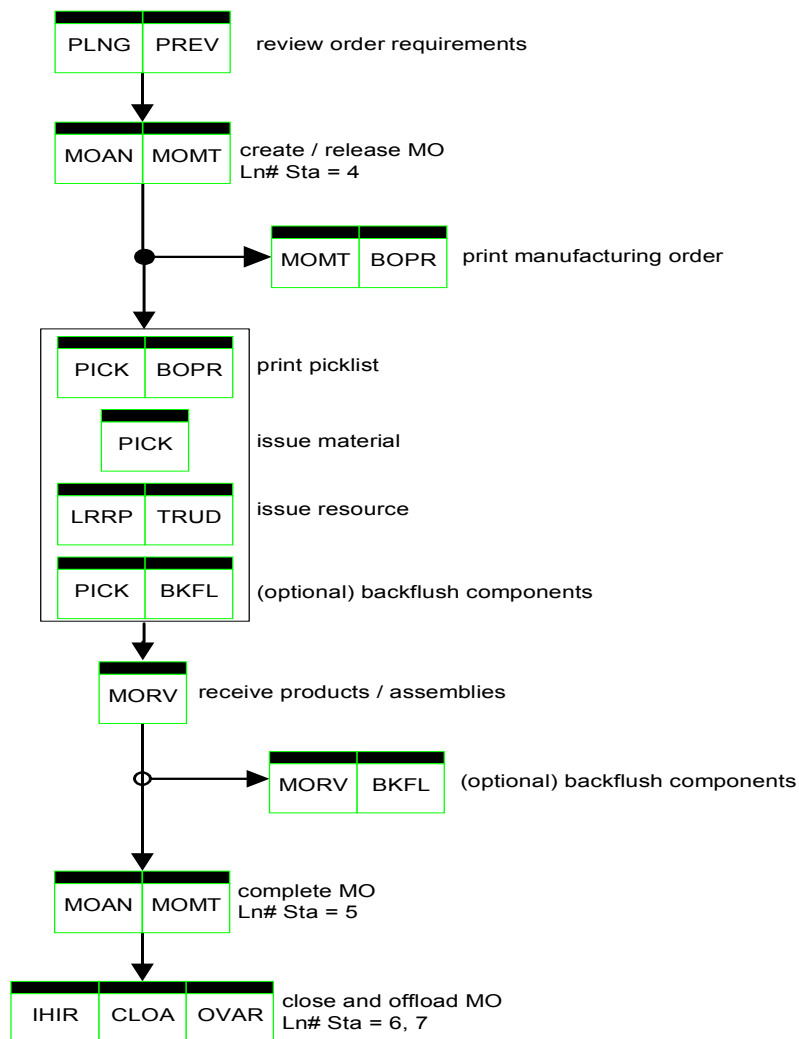
Shipment Process

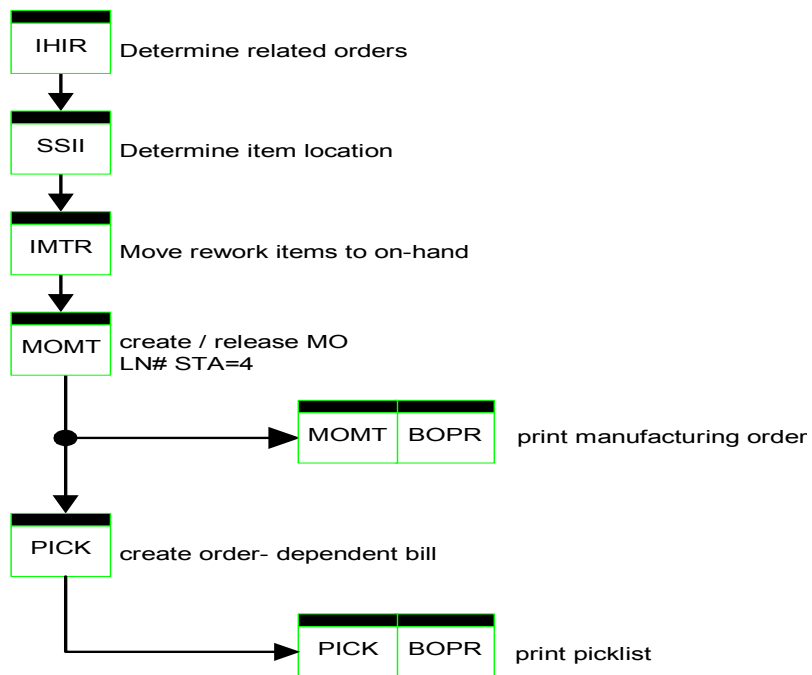


Manufacturing Operations Workflows

- Custom Products Order Processing: Using the Order Entry (CUSM) Module
- [Manufacturing Order: normal processing](#)
- [Manufacturing Order: rework orders process](#)

Manufacturing Order: normal processing

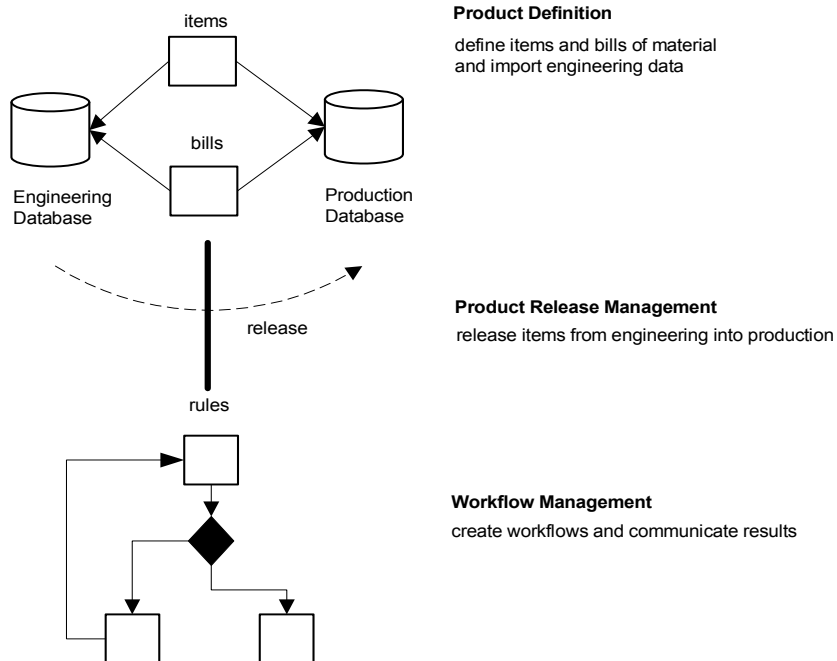


Manufacturing Order: rework orders process

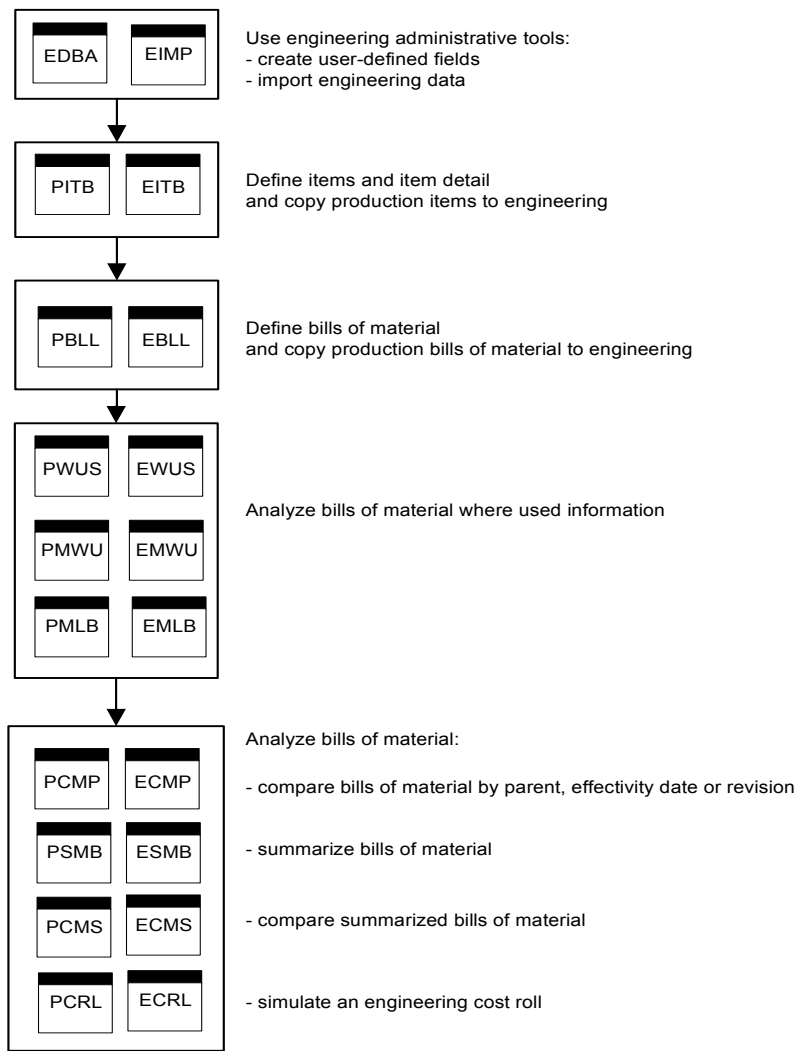
Product Definition Workflows

- [Engineering Module flow](#)
- [Engineering Product Definition flow](#)
- [Engineering Product Release Management flow](#)
- [Engineering Workflow Management flow](#)

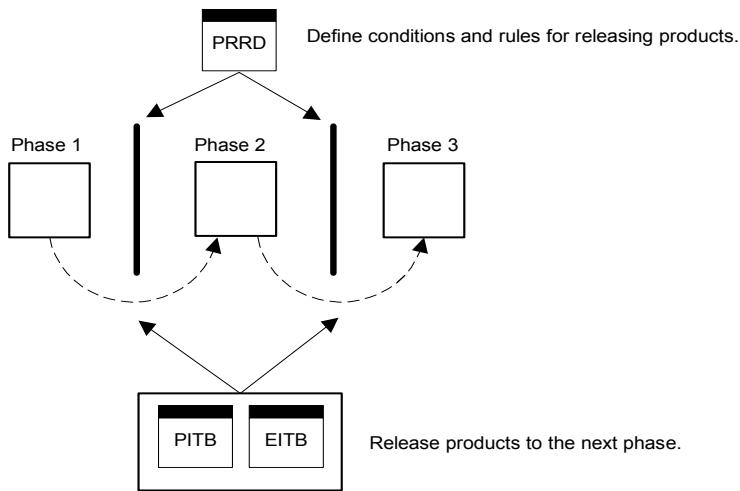
Engineering Module flow



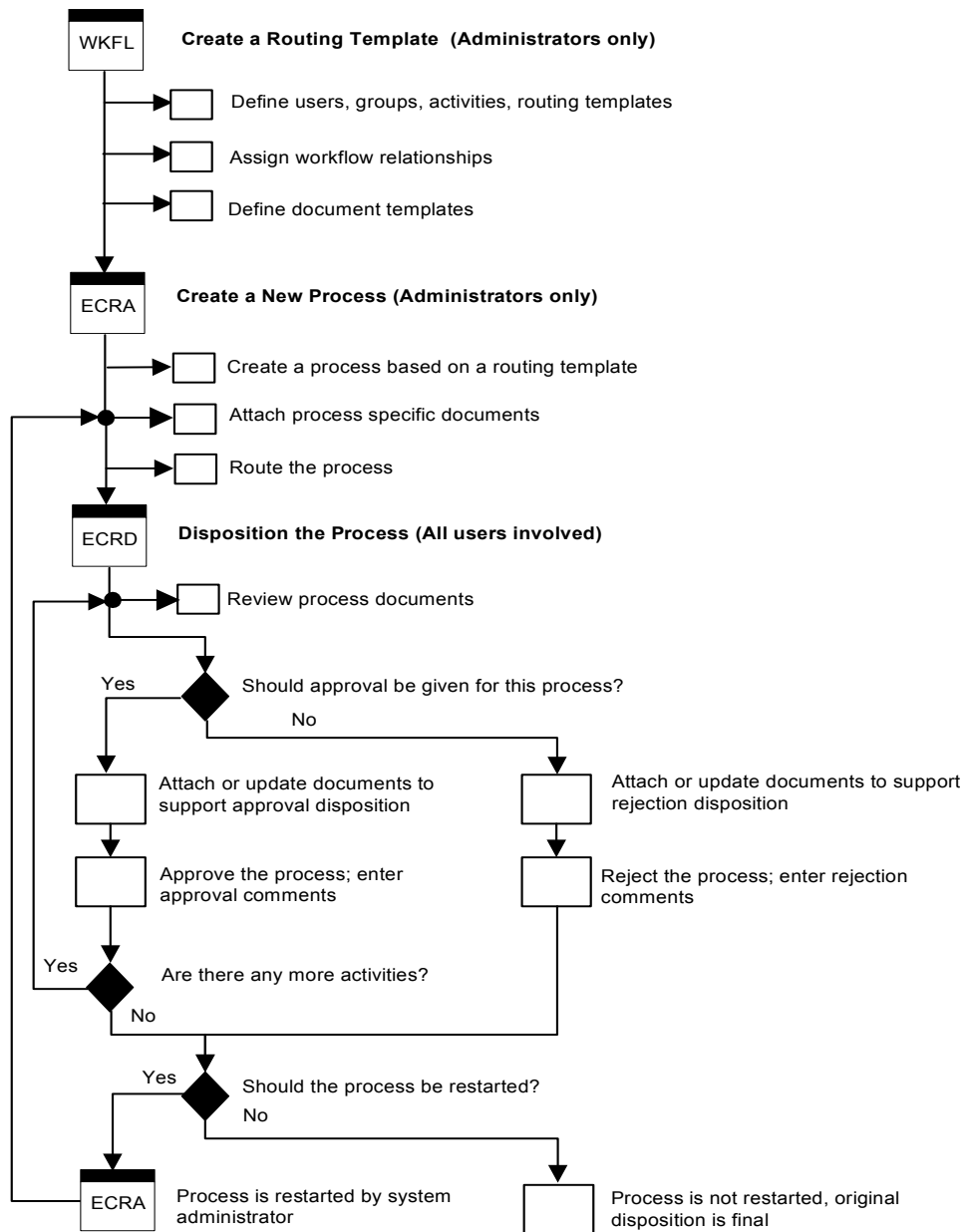
Engineering Product Definition flow



Engineering Product Release Management flow



Engineering Workflow Management flow



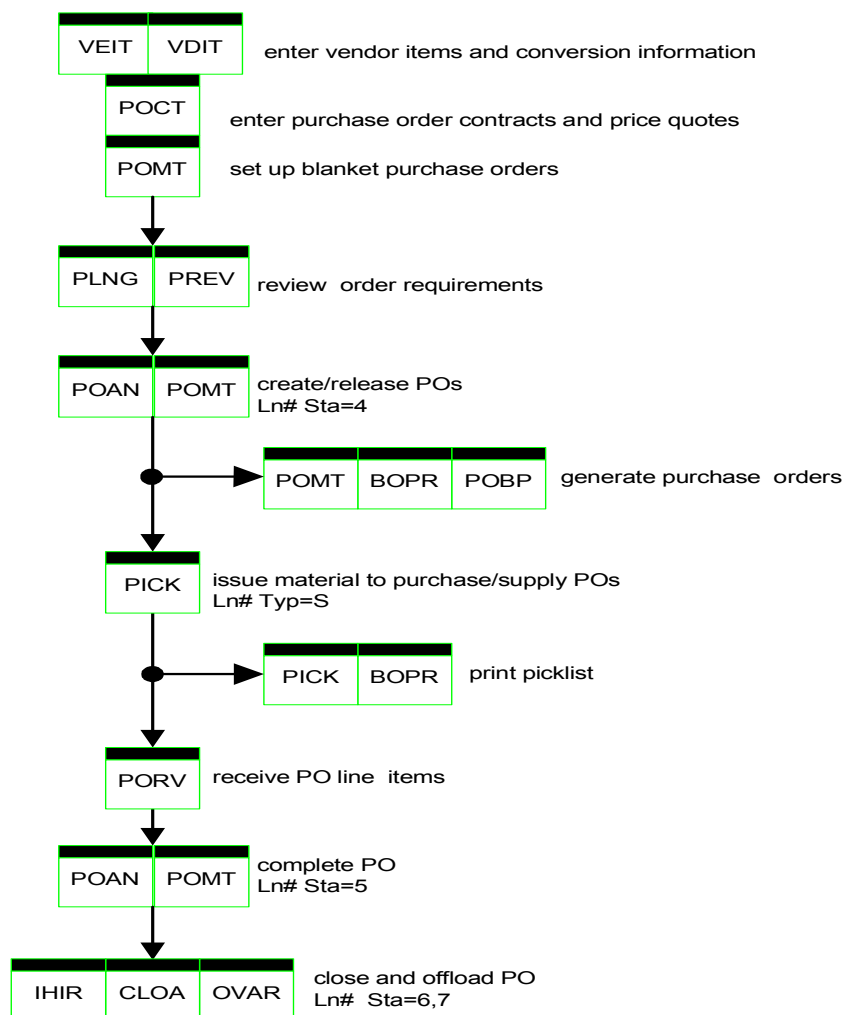
Supply Chain Management and Electronic Commerce Workflows

- EDI Services: information flow
- EDI Transactions: inbound
- EDI Transactions: outbound
- EDI Transactions: using the Sales Order Processing (SOPM) Module

Vendor Operations Workflows

- Purchase Order Processing

Purchase Order Processing



Modules

The Fourth Shift system is divided into a number of specific application modules. This architecture allows you to design your system to meet your specific business needs.

Module Descriptions

The Fourth Shift system includes modules that support a broad range of business functionality, including:

- [Customer Operations Modules](#)
- [Financial Management Modules](#)
- [Inventory Management Modules](#)
- [Management Decision Support Modules](#)
- [Manufacturing Operations Modules](#)
- [Product Definition Modules](#)
- [Supply Chain Management and Electronic Commerce Modules](#)
- [System Administration and Interface Modules](#)
- [Vendor Operations Modules](#)

Each Fourth Shift module has a unique four-character identifier. Modules are frequently referred to by this identifier in help and documentation files.

Customer Operations Modules

Module	Identifier	Description
Order Entry	CUSM	Supports entering, tracking and analysis of customer orders; provides easy access to customer-specific sales information, price quotes, credit status, and online available-to-promise values
Sales Order Processing	SOPM	Supports high-speed customer order entry with real-time verification of shipment promise dates, credit checks, and prices; an alternative to the CUSM (Order Entry) Module
Advanced Price Book	APBM	Provides interactive access to price information when entering customer orders; supplements the CUSM (Order Entry) Module
Rules-Based Pricing	RBPM	Enables development and testing of pricing models to be applied interactively to customer orders; supplements the SOPM (Sales Order Processing) Module

Financial Management Modules

Module	Identifier	Description
General Ledger	GLSM	Classifies and summarizes the financial results of transactions created throughout the Fourth Shift system; provides a comprehensive analysis of your company's financial position, provides audit trails and generates financial reports
Accounts Payable	APSM	Supports supplier invoice processing from invoice entry and payment approval to check printing and reconciliation
Accounts Receivable	ARSM	Supports customer invoice and payment processing and tracks current and aged receivables
Cash Management	CSHM	Manages cash receipts and disbursements; supports rapid bank reconciliation and cash position management
Multi-Currency Management	MCMM	Supports multi-currency transactions and management of exchange rate variances; enhances functionality of other Fourth Shift modules
Payroll Connection	PYCM	Automatically transfers payroll information to the General Ledger (GLSM) Module from the ADP PC/Payroll service
G/L Restructuring	RTSM	Enables modifications to global master account setup information including master account mask, consolidation account mask or consolidation unit number
Intrastat Reporting Module	ISTM	Records inventory transactions for reporting of Intrastat information in the European community.

Inventory Management Modules

Module	Identifier	Description
Inventory Control	INVM	Defines and manages all items and components used to manufacture your company's products; provides information on item planning and costing, inventory valuation and material stock status
Shipping	SHPM	Supports preparation, recording and tracking of customer order shipments; automates shipment and packaging processing and generates external documents
Lot Trace/ Serialization	LOTM	Supports tracking of lot-traced items throughout the manufacturing process; enhances functionality of other Fourth Shift modules

Management Decision Support Modules

Module	Identifier	Description
Management Reports	MGRM	Generates reports supporting materials management, including the inventory control, production control and purchasing functions
Sales Analysis	SAAM	Supports detailed analysis of bookings, sales, invoices, shipments and gross margins
Operations Performance	OPFM	Tracks critical system communication factors and provides performance measurements to help make purchasing more efficient, reduce inventory and improve customer service

Manufacturing Operations Modules

Module	Identifier	Description
Manufacturing Order Management	MOMM	Supports entering, tracking and analysis of manufacturing orders; allows planners to check component availability, pick material and calculate material usage variances
Material Requirements Planning	MRPM	Calculates and maintains an optimized manufacturing plan (MRP) based on the master production schedule, sales forecasts, inventory status, open orders and bills of material; supports both master scheduling and capacity requirements planning
Custom Products Manufacturing	CPMM	Supports management of make-to-order and engineer-to-order products; allows you to estimate and track job costs, schedule production, control inventory and purchasing, manage job configurations and improve customer order processing
Shop Floor Tracking and Reporting	SFRM	Provides interactive tools for planning and controlling production activity; allows you to create workcenter calendars, plan capacity, schedule standard products, perform dispatching, track order status and costs, follow-up on material shortages and generate shop forms
Repetitive Manufacturing	RPTM	Supports material scheduling and control with minimal paperwork flows; performs repetitive production scheduling, tracks inventory transferred to floor stock locations, and handles a variety of backflushing methods

Product Definition Modules

Module	Identifier	Description
Bill of Material	BILM	Maintains product structure information for the materials, resources, tools and reference items used in the manufacture of your products; improves efficiency in engineering, scheduling and inventory control functions
Engineering	ENGW	Manages product engineering information and changes from design through manufacture; reduces the cost of product changes, reduces time to market and manages information flow from design to manufacture
Product Costing	PRCM	Provides costing information at both the parent and component item levels; ensures accurate product costs, simulates the cost impact of material and labor cost changes, and projects future costs for planning and budgeting
Manufacturing Analysis	MMAM	Enables you to analyze the impact of evolving bills of material; helps reduce product lead times and associated inventory, manage engineering changes, track product revisions, and minimize phase-out costs
Co-Products Manufacturing	COPM	Manages co-product relationships for scheduling and costing purposes; enhances functionality of other Fourth Shift modules

Supply Chain Management and Electronic Commerce Modules

Module	Identifier	Description
Electronic Data Interchange	EDIM	Automates the exchange of purchasing, invoicing and shipping information between trading partners and integrates this data with Fourth Shift using international data transmission standards
EDI Services	EDSM	Integrates EDI and Advance Ship Notice barcode scanning capabilities for customer order and shipping information into the Electronic Data Interchange (EDIM) Module

System Administration and Interface Modules

Module	Identifier	Description
System Control	SYSM	Establishes and maintains your system configuration, including tax information, security and accounting standards; provides data import and export capabilities that share business data with other applications
Net UI	NUIM	Thin client configuration that dramatically enhances network performance and reduces operating costs; may be deployed on local area networks, wide area networks, or remote connections using telephone lines or the Internet
CIM Customizer	CSTM	Provides tools to integrate Fourth Shift with other applications; supports development of tools and utilities that promote productivity and efficiency
Fourth Shift Transactional Interface	FSTM	Provides application programming interfaces to the Fourth Shift database, allowing you to update the database without using any Fourth Shift user interfaces
Screen Customizer	SCRM	Supports customizing field label names to more closely match industry-specific terminology or company processes

Vendor Operations Modules

Module	Identifier	Description
Purchasing	PURM	Supports purchase order creation and management and vendor analysis; simplifies buying decisions and improves control over receiving activity

Module Prerequisites

Most modules need other modules in order to operate correctly. The prerequisites for each module are listed below. For detailed installation instructions, see the corresponding help topics in the **Installing and Implementing Fourth Shift** manual.

Identifier	Module Name	Required Prereqs	Recommended
APBM	Advanced Price Book	CUSM	MCMM
APSM	Accounts Payable	GLSM	none
ARSM	Accounts Receivable	GLSM	none
BILM	Bill of Material	INVM	none
COPM	Co-Products Manufacturing	MOMM	PURM
CPMM	Custom Products Manufacturing	CUSM	APBM, BILM, INVM, MOMM, MRPM, PURM, SHPM, SOPM
CSHM	Cash Management	GLSM	APSM, ARSM, MCMM
CSTM	CIM Customizer	SYSM	none
CUSM	Order Entry	MOMM	APBM, MRPM, PURM, SHPM,
EDIM	Electronic Data Interchange	MOMM	ARSM, CUSM, MRPM, PURM, SHPM
EDSM	EDI Services	EDIM	ARSM, CUSM, MRPM, PURM, SHPM
ENGM	Engineering	SYSM, BILM	none
FSTM	Fourth Shift Transactional Interface	SYSM	none
GLSM	General Ledger	SYSM	none
INVM	Inventory Control	SYSM	none
LOTM	Lot Trace/Serialization	INVM	SHPM
MCMM	Multi-Currency Management	SYSM	none
MGRM	Management Reports	SYSM	Report Dependent
MMAM	Manufacturing Analysis	INVM, BILM	none
MOMM	Manufacturing Order Management	BILM	none
MRPM	Material Requirements Planning	MOMM	none
NUIM	Net UI	SYSM	none
OPFM	Operations Performance	MRPM, CUSM	none
PRCM	Product Costing	INVM	none
PURM	Purchasing	MOMM	CPMM, MRPM
PYCM	Payroll Connection	GLSM	none
RBPM	Rules Based Pricing	SOPM, GLSM	none

Identifier	Module Name	Required Prereqs	Recommended
RPTM	Repetitive Manufacturing	MOMM	none
RTSM	G/L Restructuring	GLSM	none
SAAM	Sales Analysis	SYSM	ARSM, CUSM, INVM, SHPM
SCRM	Screen Customizer	SYSM	none
SFRM	Shop Floor Tracking and Reporting	MRPM, PRCM	CPMM, CUSM, PURM
SHPM	Shipping	CUSM	MRPM
SOPM	Sales Order Processing	SYSM	CUSM
SYSM	System Control	Mandatory	

Extending Your System with Complementary Applications

The Fourth Shift manufacturing software solution goes beyond the Fourth Shift product itself. To offer broader and deeper functionality that supports specialized business needs we have a number of complementary applications with the Fourth Shift system. The **Compatibility Guide**, which is available on the Customer Home website, is updated with information about supported versions for complementary applications. Information about other applications and third-party products available for use with Fourth Shift can be found on the Products page of the Customer Home website.

Customizing the Fourth Shift System

As this document discusses, the Fourth Shift system was designed to support the fundamental business functions required by a typical manufacturing enterprise. In the real world, though, every enterprise has unique needs, requirements or characteristics. The *one-size-fits-all* approach doesn't always fulfill all of these special needs.

If you find yourself with a special situation requiring some level of customization, you have several alternatives.

Configuration Options

Investigate the configuration options provided with the standard Fourth Shift product. In many cases, altering or adding a configuration variable can address a specific issue. Additionally, the main Fourth Shift program contains numerous user preference options that allow individual users to work with the program more productively.

For more information, see:

- [Configuring the System](#) in the [Introducing Fourth Shift Technology](#) section of this manual for an introduction to configuration files and variables
- "Configuration Variables" in the **System Administration** manual for a complete list of configuration variables available in the system
- "Changing the Look and Feel" in the **Fourth Shift Basics** manual for information on altering the way the main Fourth Shift program looks and works

Screen Customizer (SCRM) Module

If you need to modify the presentation of screens in the main Fourth Shift program, consider implementing the Screen Customizer (SCRM) Module. This module allows you to change field labels, hide fields, and alter the way field data values are displayed. You can make screen customizations available to individual users, workgroups, or your entire enterprise.

For more information, see "Using Screen Customizer" in the **Fourth Shift Basics** manual.

CIM Customizer (CSTM) Module

If you need to integrate external applications with Fourth Shift to improve user productivity, consider implementing the CIM Customizer (CSTM) Module. This module allows you to access commercially available Windows-based and MS-DOS-based programs, including custom software, without leaving the Fourth Shift system.

You can use CIM Customizer to access product information, CAD drawings or your ISO 9000 procedures. You can also use CIM Customizer to pass data in real time between Fourth Shift and external applications. CIM Customizer allows you to increase user efficiency by automating routine or repetitive tasks and processes. For more information, see the **CIM Customizer** manual.

Custom Software Services

You may determine that your business needs cannot be met using features of the standard Fourth Shift product or complementary products. Should this happen, you may want to consider having additional custom software developed specifically for your company. The Fourth Shift Custom Software Services (CSS) group can assist you in developing solutions to unique business needs. Fourth Shift custom software developers have an extensive understanding of manufacturing and industry requirements, and of the programming and design structure of Fourth Shift.

The Custom Software Services group can develop CIM Customizer, Microsoft Office, Visual Basic or C++ based applications to meet specific requirements, such as:

- Solutions for custom invoice printing, such as shipment-based invoicing or delayed invoicing
- Special inventory usage and sales analysis requirements
- On-line customer order hard allocations
- Labor reporting and physical inventory systems

The Custom Software Services group can assist you in creating or modifying reports throughout the system, if needed. For more information, contact your account representative.

Documents that Use Preprinted Forms

Several documents generated by Fourth Shift are formatted to be printed on special preprinted forms. The presentation of these documents, which are primarily intended for external use, may be important to your organization.

Paper forms that fit the document format may be purchased through your account representative. If you are using preprinted forms, most of these reports support an alignment test which ensures the paper has been properly fed into the printer.

Note: You are not required to use preprinted forms. Optionally, you can customize the report template used for printing external documents, and print them on plain paper. Some external reports support automatic email of documents. For more information on customizing report templates, see the system administration module for your database type.

Details about the documents that can use preprinted forms are listed below.

Document	Printed From Screen/Task
Bill of Lading Uses the Uniform, Straight Non-Negotiable Bill of Lading form to present totals grouped by NMFC item, sub-class and packaging type and shipment totals based on accumulated weight, volume and piece amounts. Preprinted forms are not available for the VICS Standard Bill of Lading.	SBOL (Bill of Lading)
Check and Check Voucher Negotiable checks are printed using the APCW (A/P Payment Processing) screen. The check voucher identifies each invoice and debit memo included in the check amount.	APCW (A/P Payment Processing) APCR (A/P Check Reprint)
Customer Statement Lists open accounts receivable for customers.	ARST (A/R Statement Printing)
Invoice and Credit Memo Invoice lists detail for customer orders; credit memo lists customer returns and other credits.	IVPR (Invoice Printing) IVRR (Invoice Reprinting)
Order Acknowledgement Lists customer order detail.	COMT (Customer Order) for individual order BOPR (Batch Order Print) for multiple orders
Purchase Order Lists purchase order detail.	POMT (Purchase Order) for individual order BOPR (Batch Order Print) for multiple orders
Shipping Invoice Summary Provides all the information on the Shipping Summary, but also includes extended price information. A summary page, printed after all shipment detail, includes shipment and freight amounts in local and foreign currency, if applicable.	SBOL (Bill of Lading)
Shipping Summary Provides consolidated information for the shipment. Commodity, packaging, order quantities and overall transportation information are included.	SBOL (Bill of Lading)