

# *ERP2020 System Concepts & Architecture*

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- 1. What is the ERP2020 System?**
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  - 4. The structure of a typical ERP2020 System.**
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## What is the ERP2020™ System?

ERP2020 is a manufacturing shop floor control software system integrated with many other company management tools. The shop floor may be internal as in the case of a Semiconductor Wafer-Fabrication-facility, Assembly-facility, or Test-house (Outsource-service providers). The shop floor may also be external (virtual) as in the case of a Fabless Semiconductor company.

Used since 1990 as an in-house application, it became available for sale in 1999. Thoroughly tested in the real world, it is robust, reliable and easy to use. The current version of the ERP2020 system is the Semiconductor Industry's most advanced solution for traveler-based shop floor operations and company management. Apart from its commercial application, the ERP2020 is also being used as part of a University ERP curriculum.

In a single seamless application the ERP2020 system integrates Quality Control (QC), Customer Relationship Management (CRM), Vendor Relationship Management (VRM) and other financial aspects of a business with its factory operations.

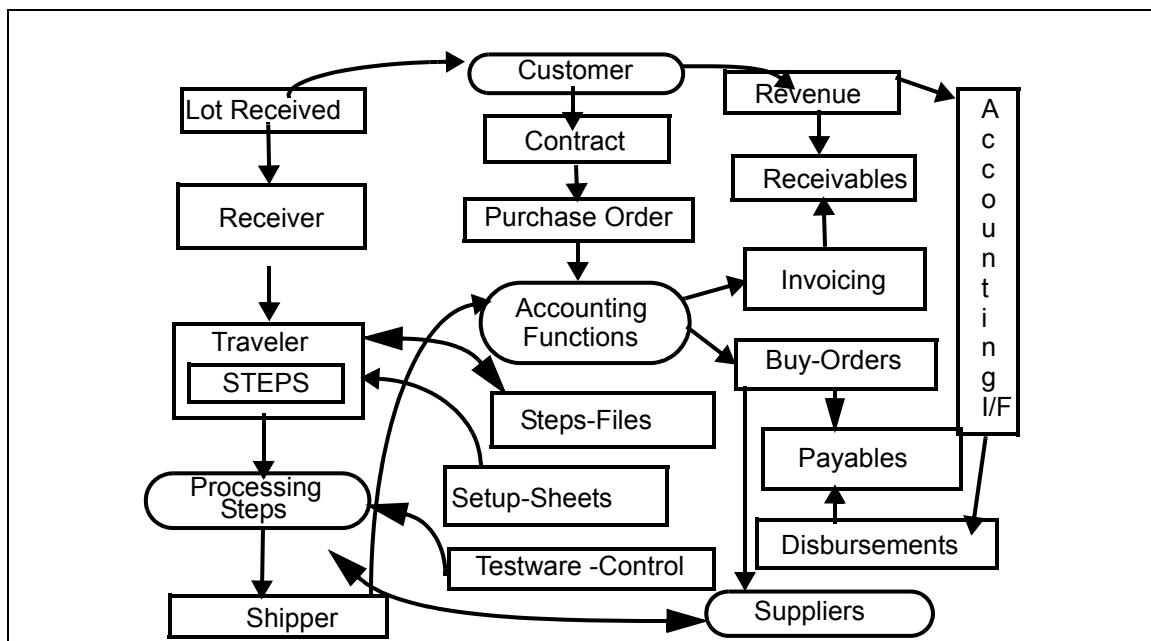


FIGURE 1.1

## Functions Integrated in the ERP2020™

### Key Features of the ERP2020™ System

- Highly integrated. By handling order entry and purchasing, shop floor and invoicing on one system, there is one reliable source for your data and there are no expensive data integration projects.
- The only system you need for the company. Provides both MES (Manufacturing Execution System) shop floor functions **and** functions normally found only in ERP (Enterprise Resource Planning) systems.
- Maintenance free, zero administration. The database used in ERP2020 requires little maintenance and does not require a specially trained DBA (Database Administrator)
- Low cost per transaction. Low system cost of ownership combined with scalability to large installations processing thousand of lots per day, results in low cost per transaction despite being feature-rich.
- Simple networking, easy to use and install. Requires minimal IT skills to install and maintain.
- Embedded quality controls and quality management tools. Tracks equipment calibration, operator training, and provides reports and summaries of data as well as providing process, Bill of Material (BOM), and material controls.
- ISO9002 facilitator. Nearly all aspects of ISO, QS, and QML audits, such as Quality Control Corrective Action Requests, approved vendors, and even quotations and pricing records are kept on the system with reports and summaries available.
- Time tested and reliable. Used by major test houses, assembly facilities, and fabless “manufacturers” around the world with extremely high customer satisfaction.
- Simple implementation. ERP2020 is pre-configured for Semiconductor Test, Assembly and Test, Fabless companies or any traveler-based manufacturing, built on a zero maintenance database and designed with intuitive menus. Typical training and implementation times are less than one month with low manpower requirements.

## How is the ERP2020™ System Organized?

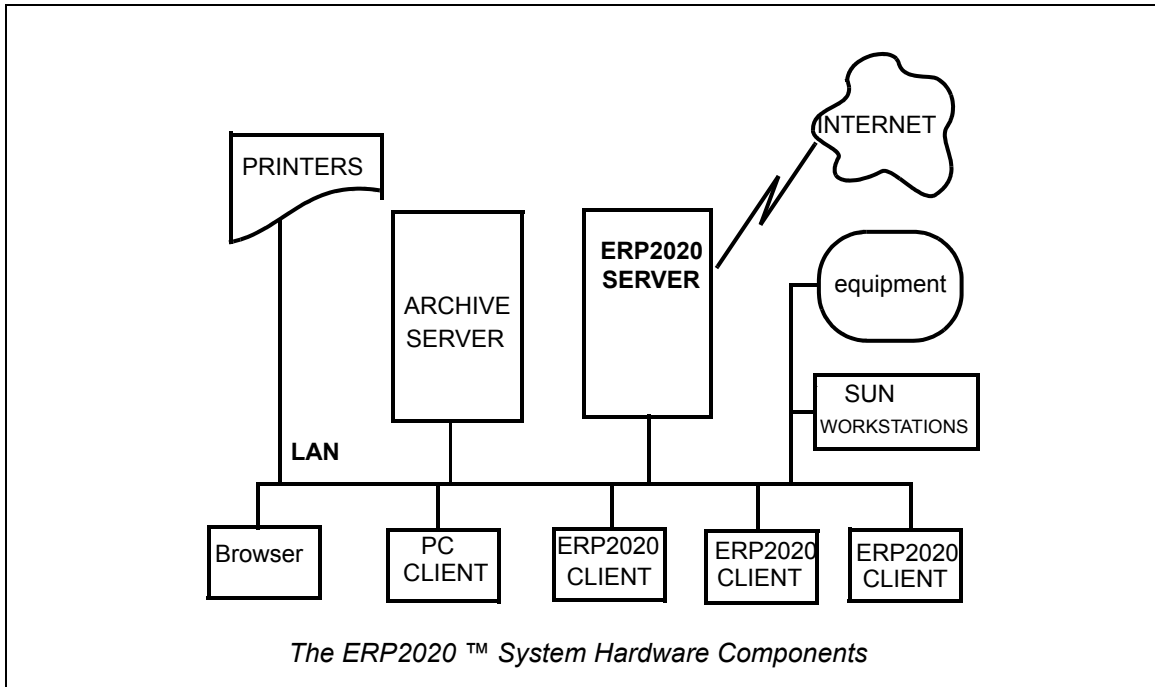


FIGURE 1.2

ERP2020 data and its accompanying structure file reside on a database server. The database technology used is 4D Inc's 4th Dimension based on Windows or MacOSX operating systems. ERP2020 is a multi-user, cross-platform system that integrates both Windows and MacOSX clients and also offers built-in Web-Server and web-services in a single package. The system offers 24/7 availability with real-time modification log-files, optional mirroring and replication. The ERP2020 database can also be replicated to a MYSQL or ORACLE database using the optional replication module.

The entire life cycle of a job, from quoting, to order entry, to shop floor, to shipping, to invoicing, to archiving, is controlled using the ERP2020 system. Through this life cycle, ERP2020 facilitates the following:

- a) Provides supporting documentation.
- b) Provides flow control and management tools.
- c) Provides progress monitoring & scheduling tools.
- d) Provides quality control & quality monitoring tools.
- e) Provides tools for measurement of quality and performance metrics.

Through this life-cycle, various departments (and indeed the customers and suppliers) will collaborate on the work-flow. The departments include:

Sales & Marketing

Accounting

Shipping and Receiving

Production Control

Inventory Control

Engineering Staff

QA

Manufacturing/Operations Floor

Because it is fully integrated, the ERP2020 system provides the means for this enterprise-wide collaboration. It is a REAL-TIME system. It expects all transactions to be logged in real-time and its reports are therefore always up-to-date. It cultivates accurate real-time data-entry by encouraging the practice of "say what you do" and "do what you say".

To facilitate real-time input the ERP2020 system provides bar-code printing and reading (for scanning operator badges, equipment ID and specifications, for example) and strives to minimize the quantity

and complexity of manual real-time data inputs by providing a heretofore unseen level of richness in the user interface.

All resources of the ERP2020 System are accessed through a single user interface. A main menu of all the application components and services appear when you launch the ERP2020 System.

## **The ERP2020™ System Menu Structure.**

The ERP2020 system uses a menu-driven structure, with no command line inputs necessary. All features of the ERP2020 System can be accessed from an initial menu, which is called the “Main Menu.” The “Main Menu” also launches function/department specific menus referred to as “new menus” which provide menu options pertaining to a particular function.

ERP2020’s menu structure is based on a tri-level hierarchy, so no function is more than two levels away from the main menu. The main menu (the first level) shows a menu bar, which is used to access various common functions of the ERP2020 system. On the main menu there is also the option to change to one of fifteen department/function specific menus (a “new menu”). Once selected, each one of the new menus changes the menu bar to show only the applicable functions. By using these function-specific menus, no tasks are ever more than one layer away from the options listed on the menu bar at the top of the screen. Function-specific menu bars make it intuitive and easy to find the correct function on the menu, which is particularly important for operators who access a limited set of functions.

The accessibility of menus by users is restricted by grouping users into functional groups. Groups and their membership (“users”) are discussed at the end of this chapter. An ERP2020 group typically mirrors the functions of a group in a company organization. For example, there is a group called “QA” which mirrors the functions of a QA department in an organization. Similarly there are other groups called “Accounting” “Shipping and Receiving” etc.

# ERP2020 MENUS

The section below lists the menus and their menu-items (sub-menus). A short note describes the action associated with each menu-item. Detailed information will be found in separate chapters that discuss each menu.

## Main Menu - Bar

Menu	Default Access	Configurable?	Comments
<b>File</b>			
ERP HELP	All_groups	Y	ERP2020 help pages.
Dashboard			Provides some commonly used utilities such as contact-search, switching the output of a report between a printer or PDF-based email.
Enable Menus			This menu enable all menus if they are locked via semaphores
Quit			Allows user to logout from 4D Client
<b>Edit</b>			OS Menu
<b>General</b>			
Show Calendar	All_groups	Y	Displays Enterprise-wide calendar of user-defined events.
User ID	All_groups	Y	Displays current user ID.
Change User	All_groups	Y	Allows the user to change current user ID
Change ERP Mailbox Password	All_groups	Y	Allows the user to change their mailbox password.
Next Receiver	All_groups	Y	Displays the next receiver number to be assigned.
Choose Site			This will allow the user to choose another division within the enterprise.
Register PDF			This menu will register the PDF writer with the ERP2020. The PDF writer is used by the ERP2020 to create PDF documents (instead of a hard-copy printouts for direct email from the system)
<b>Modify</b>			

<b>Menu</b>	<b>Default Access</b>	<b>Configurable?</b>	<b>Comments</b>
Record	Modifier	Y	Allows selected (via group-control) users to modify records
<b>Reports</b>			
Customer WIP Status			Creates Customer Status Reports for lots shipped and inventory at hand
Lot Planning Spreadsheet			Invokes the lot-planning Spreadsheet. Via this spreadsheet the user may probe and plan WIP (internal or external)
Lotsteps Spreadsheet			Allows the user to perform various queries and yield analysis on traveler-steps
Show Down Equipment			Displays the equipment status and repair log.
Quality Alert			Displays the Quality Bulletin Board.
Email Traveler	All_groups	Y	Allows a user to email a traveler.
<b><u>Manager</u></b>			
UPH Modelling.			Provides a model for calculating throughput based on execution and index times. Also provides unit-cost models based on variable line-costs, lot-size, and flow.
Sales by Customer	Staff	Y	Provides customer sales analysis on current WIP
Lot Recall	QA_Manager	Y	Allows the user to recall a lot. The recall may be time-based and/or based on tools, human-resources or raw-materials used.
FTP			Provides the user with a built-in FTP-client-facility to access other TCP/IP based devices.
<b>Operational Review</b>			
Yields	All_groups	Y	Plots Yield by day/device/customer/process
Cycle Times	All_groups	Y	Plots Cycle-time by day/device/customer/process.
Sales Via Division	PC	Y	Plots Jobs received, shipped, and invoiced by division
Hold Times	PC	Y	Plots Hold-Time by day/device/customer/process.
Quality	PC	Y	Plots Quality Data by Quality Mode (Incoming Quality, Outgoing quality etc.).
Operator & Machine Defects	PC	Y	Plots Quality Defects by resource (operator/equipment).
Daily Ins & Outs	All_groups	Y	Plots daily receipts and shipment of lots

<b>Menu</b>	<b>Default Access</b>	<b>Configurable?</b>	<b>Comments</b>
Logged Resource hours	PC	Y	Shows utilization of equipment over a period of time.
Binning Distribution	PC	Y	Graphic analysis of bin-distribution and process repeatability (via CPK analysis) by traveler step-type.
<b>New Menu</b>			Takes the user to specific departments
Floor			This menu facilitates the controlled implementation of a lot-traveler.
Testware Control	PC	Y	This menu is used to maintain Setup Sheets and control and catalog software and hardware tools
Accounting	Accounting	Y	This menu is used to access accounting (invoicing AR and Accounting Ledgers) menus.
Consulting & Hardware	PC	Y	This menu is used to create line-item work-orders
Housekeeping	Staff	Y	This menu is used to access Housekeeping Menus for DB administration
Customer's Menu			This menu is used by customer for access to the ERP2020, when the customer is accessing the ERP2020 Server via the rich-client instead of the Web-Browser
QA	QA	Y	This menu is used to access the Quality Assurance Menus.
Supplier Menu	Ship&Recv	Y	This menu is used to access supplier menus.
Sales & Quotes	Customer Service	Y	This menu is used to access sales and quotes menus
Buying	Buyers	Y	This menu is used to access purchasing menus
Ship--Receive--Make traveler	Ship&Recv	Y	This menu is used to access shipping, receiving, and Traveler creation menus.
Fabless menu	All_groups	Y	This menu provides an integrated menu-set to manage and control the manufacturing process of a Fabless company.
Inventory	Inventory_Control	Y	This menu provides an integrated menu-set to manage and review Inventory.
Personnel	Personnel	Y	This menu is used to access Human Resources Menus. (Employee records)
Browse Sales and Summary Archives	Accounting	Y	This menu is used to access historical sales summary data.

## FLOOR Menu - Bar

Menu	Default Access	Configurable?	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities.
Change User	All_groups	Y	Re-login as a different user
Update Resource Info			Refreshes floor-specific lists and variables. Normally not-used
Modify Employee Password			Allows a user to change their Employee Log-In password
Return to Main Menu	All_groups	Y	Returns the user to the main ERP2020 menu.
<b>Edit</b>			OS menu
<b>IN</b>			
Start STEP {Punch-in}			An operator on the floor uses this menu to “Punch-IN” (a traveler step). (Register the start of a traveler-step.)
<b>OUT</b>			
Done with STEP {Punch-out}			An operator on the floor uses this menu to “Punch-OUT” (a traveler step). (Register the completion of a traveler-step.)
<b>Traveler</b>			
Update QA Info	Ship&Recv	Y	Used to enter any QA (incoming or outgoing) information on the lot.
Update Traveler Info	Modifier	Y	Allows for viewing and modification of any or all traveler steps
Update Wafer Sort Bin Summary			Allows for viewing and modification of wafer sort binning information (on a per-wafer basis).
Print Traveler			Prints selected traveler.
Kitting	Inventory_Control	Y	Used to pull an item from inventory.
<b>SETUP SHEET</b>			
Display			Display setup sheets by customer/device-number.

Menu	Default Access	Configurable?	Comments
Print			Print setup sheets by customer/device-number.
<b>Resources</b>			
Schedule Time	PC	Y	Allows the user to schedule a human or material resource.
Show Floor Status			Displays the Status of equipment, as to whether it is operational, down, under-calibration, etc.
<b>LOT</b>			
Enter Engg hrs			Allows the user to enter an engineering hours expended on a specific traveler-step. Information is used for lot-traceability and billing purposes
Find via Containers			Allows the user to find a lot using its container-number.
HOLD LOT--ON and OFF			Allows the user to put a lot ON or OFF Hold.
Return Lot without Completion	Ship&Recv	Y	Allows a user to return a lot to the customer without completing the required processing (as detailed in the Lot traveler).
Planning			Launches the planning spreadsheet.
Consolidate Yield	PC	Y	Allows the user to consolidate the yield between an electrical-test step and a subsequent electrical rescreen step.
<b>Memo</b>			
Make a note...change STATUS			Manually update the status on a lot.
Help Notes			Used to assemble and catalog miscellaneous helpful notes.
Make Entry into Log Book			Make an entry into the supervisor's log-book
Read Log Book			Read the Supervisor's log-book.
Update LoGBook	QA_Manager	Y	Make a change into the supervisor's log-book
<b>Equipment</b>			
Log UP & Down			Log equipment up and/or down.

Menu	Default Access	Configurable?	Comments
Print Repair Request			Used to print the repair requested by the Equipment Operator
Show Down Equipment			Shows a spreadsheet for all down equipment.
Show Loading by Tools	PC	Y	Let's the user view all the tools and the loading of all the equipment.
Real Time Down-List			Shows equipment that is down. The display is refreshed automatically.
Spreadsheet			Gives the user the list of all the equipment, repair log, and the equipment down list.
Plot CPK			Enables the user to plot the process capability of each equipment in the database listing
<b>See Specs</b>			
Spec Index			Displays an Index for all the available specs.
Form Index			Displays an Index for all the available forms
<b>Help</b>			ERP2020 Help

## TESTWARE CONTROL - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides commonly used utilities
Change User	All_groups	Y	Allows the user to change the current user ID.
Return to main menu			Returns the user to the main ERP2020 menu
<b>Edit</b>			OS menu
<b>Setup sheets</b>			
Spreadsheet			Brings up spreadsheet to facilitate creation and/or modification of setup sheets.

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<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
<b>Binning Control</b>			
Add record			Allows a user to add a Binning-Control record. The Binning-Control record defines the bin-names for each of the 32-bins. These bin-names are specific to a test-program for a specific device.
Modify record			Allows a user to modify an existing Binning-Control record.
Spreadsheet			Brings up spreadsheet to facilitate creation and/or modification of
<b>Catalog</b>			
Add			Allows a user to catalog any item, media, books etc. The catalog-system assigns unique identifiers to every item and catalogs by type and storage-location. Barcoded-labels are also provided.
Show			This menu allows the user to browse the cataloged-items in a spreadsheet format.
<b>Help</b>			ERP2020 Help

## ACCOUNTING Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides commonly used utilities.
Show Real-Time receiving Window			Allows the user to view real-time snapshot of active jobs
Return to Main Menu	All_groups	Y	Returns the user to the ERP2020 Main Menu.
<b>Edit</b>			OS menu
<b>Invoice</b>			
Create Invoice	Accounting	Y	Allows the user to create an invoice for work completed.
Create Pricing Record			Allows the user to create pricing information record. Price -records are maintained by customer, device-number or device-family
Print Invoice			Prints an active invoice.
<b><u>Customers and POs.</u></b>			
New Customer	All_groups	Y	Used to enter a new customer in the Customer-Log
Enter New POs	All_groups	Y	Allows the user to enter a new Purchase Order, received from a customer
List Jobs Without POs			Lists current jobs which do not have POs.
PO Spreadsheet	All_groups	Y	Allows the user to browse, modify, and manage purchase-orders
PO-Item-Unit Price Spread-sheet			Allows the user to browse, modify, and manage unit price associated with line-items of a purchase-order
PO line-items Spread-sheet			Allows the user to browse, and manage line-items associated with purchase-orders
<b>SpreadSheets</b>			
Accounting	All_groups	Y	Provides a comprehensive spreadsheet interface to manage the invoicing of all jobs
Planning			Provides an accounting user, access to the Lot-Planning spreadsheet

Menu	Default Access	Configurable	Comments
Unit Price			Provides spreadsheet interface to the Unit-Pricing data
<b>Time Billing</b>			
Create Time Billing invoice			Allows the user to create time billing invoices for human or material (equipment) resources.
Schedule Time	PC	Y	Allows user to schedule time on any “schedulable” resource. (Human or equipment-resource)
Close Time-Slips			Deletes time-billing and scheduling entries in the Resource-Calendar table, after they have been invoiced.
<b>Asset List</b>			
Print {export}	All_groups	Y	This menu will allow the user to print the asset list.
Add Asset manually			This menu will allow the user to manually add an asset to Asset list. (Legacy data)
Spreadsheet	All_groups	Y	This menu provides a spreadsheet interface to browse and manage the Asset list.
<b>Receivables</b>			
Print Aging	All_groups	Y	Prints an active accounts-receivable aging-report for one, or all customers
Receivable Spreadsheet	All_groups	Y	This menu provides a spreadsheet interface to browse receivables, receivable aged over time period (in days), payments and credit memos issued to customer
Enter Payment	All_groups	Y	Used to enter customer payments (cash-receipts/deposit slips)
Make Credit memo	All_groups	Y	Allows the user to create a credit or debit memo against an invoice
Deposit Slip Spreadsheet	All_groups	Y	This menu provides a spreadsheet interface to browse the payments received from the customer
Credit Memo Spreadsheet	All_groups	Y	This menu provides a spreadsheet interface to browse Credit Memos issued to the customer
Make No-Invoice Deposit	All_groups	Y	Allows the user to deposit payments received, such as refunds, rebates etc. which have no corresponding invoices
<b>GL Accounts</b>			
Add Account	All_groups	Y	Allows the user to add a GL account.
Modify Account	All_groups	Y	Allows the user to modify an already existing GL account.

Menu	Default Access	Configurable	Comments
Accounts & Posting Spreadsheet	All_groups	Y	Allows the user to create and post GL entries. Print Income Statements & Balance-Sheets.
Print list			Allows the user to print the GL Accounts list.
General Journal Spreadsheet	All_groups	Y	This menu provides a spreadsheet interface to browse General Ledger and General Journal entries.
Add Adjusting Entry	All_groups	Y	Allows user to create adjusting entries.
<b>Bank</b>			
Show Accounts	All_groups	Y	Allows the user to see the balances in the bank-accounts
Create Accounts	All_groups	Y	Allows the user to create a record of each bank account.
Modify Accounts	All_groups	Y	Allows the user to modify existing bank account information.
Show Cash flow			Allows the user to reconcile all the cash disbursements.
Inter-account transfer	All_groups	Y	Allows the user to keep a record of transfer funds through different accounts
<b>RMA</b>			
Issue {process}			This option allows a user to Start a RMA process and issue a RMA number
Process			This option processes an Issued RMA ticket
<b>Help</b>			ERP2020 help

## Consulting and Hardware Menu - Bar

Menu	Default Access	Configurable	Comments
<b><u>File</u></b>			
Dashboard			Provides some commonly used utilities
Change User	All_groups	Y	Allows the user to change current user ID
Return to Main Menu	All_groups	Y	Returns the user to the main ERP2020 menu

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
<b>Edit</b>			OS menu
<b>Order</b>			
Login			Login new Hardware order
Modify			Modifies existing Hardware order
Spreadsheet			A quick view of all the Hardware orders
<b><u>Packing Slip</u></b>			
Create			Creates packing slip for Hardware order
Print			Prints packing slip for Hardware order
<b>Work Order</b>			
Print			Prints copy of work order
<b><u>Project</u></b>			
Schedule			Provides ability to schedule an order and create GANTT charts
Planning			Provides a spreadsheet-interface to browse and manage WIP data

## HOUSEKEEPING Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities.
Update data file on server	All_groups	Y	Allows the administrator to update a data-file following a structure upgrade.
Change User	All_groups	Y	Login as a different user.
Re- Index			Allows the administrator to re-create index tables for a data-base.
Change Customer name	All_groups	Y	Allows a user to change a Customer's name across all tables.
Modify HK record	All_groups	Y	Modify Company Constants (Data such as company-name, address etc.)
Modify Policy records	All_groups	Y	Modify Policy records. Policy records contain default terms and conditions for a company quote, default-terms and conditions for a company quotation, etc.
Get Structure	All_groups	Y	This menu allows the user to browse the data-base structure of the ERP2020.
Clear Semaphores			Clear Semaphores that may not have been cleared because of an abnormal exit by a client.
Delete icons on 4D Server win 4D			Lets the administrator delete all the 4D icons from the WIN4DX and MAC4DX folders.
All files in Read/Write mode	All_groups	Y	Lets the administrator put all the tables to read-write mode. Change of status applies to the current session only.
RETURN TO MAIN MENU	All_groups	Y	Returns the user to the main ERP2020 menu.
<b>Archive</b>			
Automatic Archiving			Allows the administrator to initiate second level archiving export via client logged on archive server
All closed Jobs	all groups	Y	Allows the administrator to archive all posted invoices (closed jobs) for a specific month.
One Posted Invoice Only			Allows the administrator to archive a specific invoice (closed job) only.

Menu	Default Access	Configurable	Comments
Restore from file	All_groups	Y	Allows the administrator to import data exported to a file by the active WIP ERP2020 server.
Restore Selectively	All_groups	Y	Read archives from an external file into the ARCHIVE database.
UnArchive One	All_groups	Y	Allows the user to remove an archived invoice from Archives to an active status.
Show Archived Invoice	All_groups	Y	Allows the user to print an archived invoice.
<b>Export</b>			
Dialog	All_groups	Y	Provides the administrator with various export facilities.
Show User-export template	All_groups	Y	Lets the user browse all the templates for scheduled FTP exports.
Add User-Export Template	Administrators	Y	Allows the user to create User-templates for export of selected data from the ERP2020 to a remote FTP host.
Modify User-Export Template	Administrators	Y	Allows the user to modify user-templates in the ERP2020 system or test the export-process.
Start Stored Procedures	Administrators	Y	Starts the stored procedure for scheduled FTP exports.
<b>List</b>			
List Management	Administrators	Y	Allows the administrator to manage Database lists
View Saved List	Administrators	Y	Allows the administrator to view saved lists
Refresh Automatic Lists	Administrators	Y	Allows the administrator to update the dynamic lists
<b>Edit Access</b>			
Manage Users and Groups	Administrators	Y	-Add a user to any group. -Add a user to a specific group.
Create Division Admin			Lets the user Create new divisions.
Change User Password	Administrators	Y	Allows the user to change the password

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
Add to User-Attribute Record	Administrators	Y	Lets the user create the attribute records.
Modify User Attribute Record	Administrators	Y	Lets the user modify/change/delete the existing attribute records.
Save User Group in Data File	Administrators	Y	This will save the users and groups in to the data file. This is done immediately before upgrading the structure for ERP2020
Load User Group in Data File	Administrators	Y	This will load back all the Users and Groups in to the data file. This is done immediately after upgrading the structure for ERP2020
Print Group Membership	Administrators	Y	Documents the users and groups configured to access the data-base
Users Spreadsheet			This spreadsheet will allow viewing and deleting user records
<b>Miscellaneous</b>			
Add Super Reports	Administrators	Y	This allows the user to create user-definable custom reports.
Modify Super Reports	Administrators	Y	Allows the user to modify the existing "Super Reports".
Browse MiscData Records			Allow the user to view various DB parameters
Maintain Misc-Data Records			Used to customize various DB parameters
Request License	all_groups	Y	The administrator may use this menu to request a valid license from ERP2020.com
Update Mirror			
<b>Pictures</b>			
Add Picture to Datafile	Administrators	Y	Allows the user to add the Company logo to be printed on Invoices, POs, Travelers, and other documents.
Modify Picture	Administrators	Y	Allows the user to modify the existing Picture/logo in the database
Get logo from picture	Administrators	Y	This will get the Logo from the picture. This is done immediately after upgrading to a new version of the ERP2020 system.
<b>Customize</b>			

Menu	Default Access	Configurable	Comments
Step template & Binning distribution	Administrators	Y	Allows the administrator to configure and customize the step templates used for the construction of Travelers
Update Traveler Layout Pixels	Administrators	Y	This menu allows the administrator to automatically re-assign the pixel-size of all layouts for all Template Definition records
Print Sample Traveler Printout	Administrators	Y	Allows the user to print a sample of the detailed-traveler.
Employee Certification	Administrators	Y	Allows the administrator to define the categories of Employee Certification.
Create Codes	Administrators	Y	This menu-item allows the administrator to create user-specific code definitions. These codes are used for categorization such as categorization of “down” equipment.
Modify Codes	Administrators	Y	This menu-item allows the administrator to modify user-specific code definitions
Add Area	Administrators	Y	This menu-item allows the administrator to add Areas (WIP) used during travelers processing
Modify AreaS	Administrators	Y	This will allow the user to modify an existing Area
Add Currency definition Record	Administrators	Y	Lets the administrator define the multiple currencies that will be used in the ERP2020
Update Currency Records	Administrators	Y	Allows the user to create place-holders for multiple-currency records in a multiple currency system
Add Sales Tax Record			Allows user to create sales tax record defining the rate and agency charging the sales-tax
Modify Sales Tax Record			Allows user to modify a sales-tax record
Set Client Time-out			Allows the user to change the time-out parameter.
<b>Containers</b>			
Create Lot Container	Administrators	Y	Add a container in which a lot may temporarily reside during processing.
Modify Lot Container	Administrators	Y	This will allow the user to change/delete/modify an existing Lot Container.
Print Lot Container	Administrators	Y	This will allow the user to Print the Container List.

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
<b>ERP2020 Mail</b>			Allows the user to access the ERP2020 (internal) emails.
Read ERP2020 mail			
Send messages to all clients			
<b>Replication</b>			
Force Master			
Force Slave			
Turn on rep process			
<b>Web Services</b>			
Get from ERP2020 Slave Server			Used to establish a remote WEB-Service connection with a remote MASTER or SLAVE server.
Update on ERP2020 Master Server			Used to establish a remote WEB-Service connection with a remote MASTER or SLAVE server.

## Quality Assurance Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities such as contact-search, switching the output of a report between a printer or PDF-based email.
Return to Main Menu			Returns the user to the main ERP2020 menu.
<b>Employees</b>			
Display Employees			<ul style="list-style-type: none"> <li>- Provides a list of all employees entered in the employee-resource list.</li> <li>- The list is printable and also shows the employees list via employee certification.</li> </ul>
Spreadsheet	QA	Y	Provides a spreadsheet view, and update-facility for employee records.
Add new Employee's record	QA	Y	Allows for adding a new employee to the employees resource list.
<b>Equipment</b>			
Add New Equipment to List	QA	Y	Allows for adding a new piece of equipment to the equipment resource list.
Display Equipment List			<ul style="list-style-type: none"> <li>- Provides a list of all equipment entered in the equipment-resource list.</li> <li>- The list is printable and also shows the calibration status of the equipment.</li> </ul>

Menu	Default Access	Configurable	Comments
Update Equipment Record	QA	Y	- Allows for modification of an equipment record. - This record includes equipment SPC data.
Plot CPK			Provides a SPC plot of equipment data
Spreadsheet			Provides a spreadsheet type window to review equipment uptime, repair logs etc.
Print sorted list	QA_Manager	Y	
<b>Calibration</b>			
Calibration Overdue			Provides a list of equipment for which the calibration is overdue
Upcoming Cal			Provides a list of equipment requiring calibration within 30 days of the current date
NPU List			Provides a list of equipment that is classified by QA as "NOT FOR PRODUCTION USE"
Update Calibration data	QA	Y	- Allows for entry of calibration data for a specific equipment. - This record includes equipment SPC data
Print Cal Stickers on 8 x 11	QA	Y	Provides calibration-stickers on an 8 x 11 label-sheet.
Print Cal Stickers (label)	QA	Y	Provides calibration-stickers on a label printer.
Print Multiple Cal Stickers (label)	QA	Y	Allow user to batch-print calibration stickers
<b>QCARS</b>			
Review	All_groups	Y	Provides a spreadsheet type window to review and modify Quality Corrective Action Reports. See "Review" on page 8.34.
Issue Non Lot-specific QCAR			Provides a means to issue a non-lot-specific Quality Corrective Action Report. See "Create Non Lot Specific QCAR" on page 8.48.
<b>Doc Control</b>			
Show Spec Index			- Shows the Master Spec Index in a spreadsheet format. - Also allows for a means to browse the Specs.

Menu	Default Access	Configurable	Comments
Show Form Index			- Shows the Master Form Index in a spreadsheet format - Also allows for a means to browse the Forms
Add to Master Index	QA_Manager	Y	Means to add an entry to the Master Index
Revise Master Index	QA_Manager	Y	Means to Modify the Master Index
Print Master index			Means to print the Master Index
Print Operator Training			Print the employees training record and the due dates
Print Badges			Prints the badges for the Employees with the Certification dates and the retraining dates
Add Traveler Step Template	QA	Y	-Means to add a traveler step-template. -These templates are used in the drag & drop creation of Travelers
Modify Step Templates	QA	Y	Modify an existing traveler step-template
Print Steps Files			Prints the Steps-Files for physical archiving
Change BOM in all Steps Files			This menu-item allows QA to globally replace a BOM being referenced by Steps Files
<b>Quality</b>			
Management Review Book			Allows the user to browse and modify the documents related to the Quality Review
Add Management Review Record			Allows the user to create an entry in the Management-Review log
Modify Management Review Book	QA_Manager	Y	Allows the user to modify the management review book
<b>AVL</b>			
Add to AVL-- AML list	QA	Y	Add vendors / materials to Approved Vendor/Material List.
Modify AVL/ AML List	QA_Manager	Y	Displays a listing of disqualified vendors.
Show Disqualified Vendors			Modify vendor/ material in Approved Vendor/material List.

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
Add Supplier	QA	Y	Allows the user to add suppliers to the Supplier (Vendor) list.
Modify Supplier status	QA_Manager	Y	Allows a user to change a status of a Supplier (Vendor)
AML Spreadsheet			Allows for the browsing, modification, and management of AML and AVL lists
<b>Device table</b>			
Add Device			Allows users to add information on a device and its details
Modify Device			Allow users to modify information on a device and its details.
<b>Help</b>			Shows ERP2020 help

## SALES & QUOTATION Menu - Bar

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
<b>File</b>			
Dashboard			Provides some commonly used utilities
Return to Main Menu	All_groups	Y	Returns the user to the main ERP2020 menu
Quit			Allows the user to log off the ERP2020 system
<b>Print</b>			
Quote on Blank Paper			Prints selected quotations on blank paper.
Quote on Pre-printed logo			Prints selected quotations on the Company letterhead format.
Print Policy			Prints standard policy
Print Service Pricing			Prints service price listing
<b>Contacts</b>			

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
Add To List			Add a new contact in the data-base
SpreadSheet			Display and manage Contacts via an inter-active spread-sheet.
<b>Quote</b>			
Create			Create a new quotation
Modify	Staff	Y	Modify an existing quotation
Merge and Send Document			Send mail-merge letter to a selected customer
SpreadSheet	All_groups	Y	Display and manage Quotations via an inter-active spread-sheet
Email			Direct email of quotes
<b>Reports</b>			
Print Customer List	Staff	Y	This will print the customer List
Active customer Geography	Designer	Y	This is a designer Function
<b>Products</b>			
Add To List	Staff	Y	Add a product to the products (for sale) list
Print Product Pricing	Staff	Y	Print pricing list for products-for-sale list
Working Menu	Staff	Y	Provides convenient window for viewing and modifying Products-for-Sale List
Modify Pricing			Modify pricing on a specific part
<b>Service</b>			
Add to service pricing	Staff	Y	Allows the user access to Pricing for the Services Offered.
Modify Pricing	Staff	Y	Allows the user to modify/change the Pricing record
<b>Mail Merge</b>			
Create New document	Customer Service	Y	Create Text template for mail-merge letters
Display document			Show mail-merge text templates
Modify document			Modify mail-merge text

Menu	Default Access	Configurable	Comments
<b>Forecast</b>			
Spreadsheet			This menu item launches a multi-purpose spread-sheet that allows the user to browse and (with sufficient privileges) modify Sales and Marketing forecast data. In addition, the user may create place-holders for the forecast entries, perform variance analysis on Marketing vs. Sales Forecast, Marketing Forecast, vs. Actual Builds, and Build vs. actual Ships. The user may also transpose a forecast quantity for a given month to a forecast entry into the Sales-Order (a.k.a. as PO_Items) table to subsequently start a Build Job
<b>Help</b>			ERP2020 help

## SUPPLIER Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities
Return to Main Menu	All_groups	Y	Returns the user to the main ERP2020 menu
<b>Print</b>			
Print Packing Slip			Prints packing slip to a supplier
<b>Supplier</b>			
Show Approved Suppliers			Shows listing of suppliers:
Show Supplier by product			
Shows Suppliers by service			
Add	QA	Y	Allows the user to add a supplier to the supplier list

Menu	Default Access	Configurable	Comments
Modify	QA_Manager	Y	Allows the user to modify a supplier file
<b>Subcontractor</b>			
Ship Lot to SUB	Ship&Recv	Y	Ship a lot from ERP2020 to a subcontractor for partial processing
Receive Lot from SUB	Ship&Recv	Y	Receive a lot from a subcontractor back into the ERP2020.
Create Lot for SUB	Ship&Recv	Y	Create a lot to be sent to a subcontractor for processing.
<b>Sub-status</b>			
Status & Planning			Planning Window for subcontracted lots
<b>Quality</b>			
Incoming Inspection			Enables entry of Quality Defect for a subcontracted lot.
<b>Plots</b>			
Quality Plot			Plots Quality by SUB
Cycle Time Plot			Plots Cycle-times by SUB
<b>Help</b>			Help Menu

## BUYING Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities
Real time Auto-Buy Item Window			Provides a real time window showing the automatic generation of sub-contract purchase activity
Return to Main Menu	All_groups	Y	Allows user to return to the main menu.

Menu	Default Access	Configurable	Comments
Refresh variables			
<b>Buy Orders</b>			
Create	All_groups	Y	Allows the user to create a purchase order for services and/or materials
Print			Prints a purchase order
Browse	All_groups	Y	Allows the user to view purchase orders, either per customer, not invoiced, not paid, or per interval
Modify	All_groups	Y	Allows the user to modify an already entered Buy Order
Spreadsheet with Item Details			Allows the user to view and edit a Buy Order in a spreadsheet
Spreadsheet Condensed			A condensed view of all the Buy Orders without individual Buy Items
<b>Payables</b>			
Selection	All_groups	Y	Allows the user to enter vendor invoices per purchase order to enable payment processing
Spreadsheet	All_groups	Y	Allows the user to view items to be paid, payable aging, display items where a discount was taken or missed
<b>Checks</b>			
Check Run for Payables	All_groups	Y	Allows the user to print check(s) to pay item(s) marked "OK to pay"
Single Check	All_groups	Y	Allows the user to print a check to pay item(s) of a Buy Order
Partial Payment	All_groups	Y	Allows the user to print a check to partially pay item(s) of a Buy Order
Spreadsheet	All_groups	Y	Allows the user to view the check register
<b>Supplier</b>			
Add to List			Allows the user to add a new supplier into the supplier list
Spreadsheet			Allows the user to view Suppliers in a spreadsheet format
Modify			Allows the user to modify an existing vendor
Print Supplier list			Allows the user to print the supplier list
<b>Auto Buy Item</b>			
Show			Shows the automatic Buy items generated

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
<b>Inventory</b>			
Add History item to list			Allows the user to manually add the inventory items that were not procured via the ERP2020
See Stock & Standard cost			Allows the user to view the inventory
<b><u>Management</u></b>			
Add BO Approver1			Allows the CFO to add a Buy-Order approver (level1) and the approver's authorization limit per Buy-Order
Modify BO Approver1			Allows the CFO to modify/change/delete a Buy-Order approver (level1) and the approver's authorization limit per Buy-Order
Add BO Approver2			Allows the CFO to add a Buy-Order approver (level2) and the approver's authorization limit per Buy-Order
Modify BO Approver2			Allows the CFO to modify/change/delete a Buy-Order approver (level2) and the approver's authorization limit per Buy-Order
<b>Help</b>			ERP2020 Help

## Fables Menu - Bar

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
<b>File</b>			
Dashboard			Provides some commonly used utilities
Return to Main Menu	All_groups	Y	Returns the user to the ERP2020 main menu
<b>Supplier</b>			
Show Approved Suppliers			Shows listing of suppliers
Show Supplier by product			Shows listing of Suppliers by the products they offer.

Menu	Default Access	Configurable	Comments
Show Supplier by Service			Shows listing of Suppliers by the services they offer.
Add	QA	Y	Allows the user to add a supplier to the supplier list.
Modify	QA_Manager	Y	Allows the user to modify a supplier file
<b>Demand &amp; Supply</b>			
Demand Spreadsheet			Invokes a spreadsheet that allows the user to manage the supply and demand of products based on forecast-demand and bookings.
Rolling Status			Provides a rolling status by day or week of WIP, inventory, and orders.
<b>Lot Movement</b>			
Ship lot to sub	Ship&Recv	Y	Allows the user to ship a lot to a sub-contractor
Receive from Sub	Ship&Recv	Y	Allows the user to receive a lot back from a sub-contractor
Create lot for sub			Allows the user to create a new lot for a sub-contractor
Punch In Traveler			In the absence of a “link” to the sub-con a user may initiate a punch-in (“move”) of a lot to a new step of the lot-traveler
Punch Out Traveler			In the absence of a “link” to the sub-con a user may punch-out (“move”) of a lot to the next step of the lot-traveler
Move lot to next stage			Allows the user to move a lot to next stage or next sub-contractor as it transforms from wafers to packages to finished goods.
Print Packing Slip for Suppliers			Allows a user to print a packing slip for the supplier.
<b>Sub Status</b>			
Packing-List Spread Sheet			Provides a snap-shot of sub-status via a spreadsheet interface
Integrated Spread Sheet			Invokes the lot-planning spreadsheet which allows the user to track lots in WIP and Finished goods along with purchasing data and authorizations
<b>Quality</b>			

Menu	Default Access	Configurable	Comments
Incoming Inspection			Allows the user to manage the quality inspection of an incoming lot.
<b>Plots</b>			
Quality			Plots Quality data by Supplier
Cycle time			Plots Cycle-time data by Supplier
<b>Build- Card</b>			The build-card (or Bill of Routing) is a recipe that defines where and how to build the product. The “where” defines the sub-contractor and the “how” defines the traveler steps to be followed by each sub-contractor when they receive the job. The build-card also contains planned (projected) cycle times and yields for each stage. A build-card may also be considered as a super-traveler that defines all the manufacturing stages of a product, referencing any “intermediate” part-number(s), suppliers, cost data, and the build-instructions (from the associated travelers).
Display Card			User can use this menu item to view a Build-cards
Create Card			Allows the user to create a Build-Card
Modify Card			This option allows a user to modify an existing build-card
<b>Inventory</b>			
Pulls			Allows the user to review all pulls from inventory by part, customer, and/or time period
See stock			Allows the user to review inventory data.
<b>Products</b>			
Add to list	Staff	Y	Allows the user to add an end-product or intermediate product to the list.
Print Product Pricing	Staff	Y	Allows the user to print the suggested product pricing

Menu	Default Access	Configurable	Comments
Spread Sheet	Staff	Y	Provides the user with a spreadsheet environment to view product information
Modify List			Allows the user to modify the product list
Status Report			Prints a status report via product. Status includes WIP
<b>Forecast</b>			
Review			This menu item launches a multi-purpose spread-sheet that allows the user to browse and (with sufficient privileges) modify Sales and Marketing forecast data. In addition, the user may create place-holders for the forecast entries, perform variance analysis on Marketing vs. Sales Forecast, Marketing Forecast, vs. Actual Builds, and Build vs. actual Ships. The user may also transpose a forecast quantity for a given month to a forecast entry into the Sales-Order (a.k.a. as PO_Items) table to subsequently start a Build Job

## Shipping & Receiving Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities
Show Real Time Receiving Window			Lists all active jobs without a customer purchase order, but can also display other filters, notably jobs received on the current day
Return to Main Menu	All_groups	Y	Returns the user to the ERP2020 main menu
<b>Receive</b>			
Lots for Processing			This allows the user to receive a lot for processing
Build Order			Used to receive a job that does not require a traveler
<b>Shipping</b>			

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
Ship Lots Processed			Allows the user to ship the Lot which has already been processed.
Update Freight Info			Add freight info to a shipper
Shipping Labels			Allows the user to customize and print the shipping labels.
Create Consolidated Shipper			Allows the user to create a consolidated packing-list of all processed lots that are being consolidated for shipment.
<b>Ordered Material</b>			
Receive			Allows the user to acknowledge receipt of items ordered via the ERP2020 purchasing process
<b>Print</b>			
Print Receiver			Allows the user to print the receiver
Internal Build Request			Allows the user to print the Internal Build request
Detailed Traveler			Allows the user to print a traveler in detailed format
Condensed Traveler			Allows the user to print the Condensed Traveler
Lot Shipper			Allows the user to print the Lot Shipper
Consolidated Shipper			Allows the user to print the Consolidated Shipper.
<b>Traveler</b>			
Create Traveler by Job			Allows the user to create a traveler by job. This Menu automatically creates the same traveler steps as defined for one lot to all the lots in the Job.
Create Traveler by Lot	PC	Y	Allows the user to create a traveler by Lot. This menu is to create traveler steps for an individual lot.
Create Steps File	PC	Y	Allows the user to create traveler steps that are used very often so that it may not be typed every time the user receives a lot.
Modify Steps File	PC	Y	Allows the user to change/modify/delete the steps file

Menu	Default Access	Configurable	Comments
<b>Planning</b>			
Window			Allows the user to view all the lots received and modify, change, and / or view the reports to each lot.
<b>Help</b>			ERP2020 help

## Inventory Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities
Return to main menu	All_groups	Y	Returns the user to the main ERP2020 menu
<b>Stock</b>			
Spreadsheet			Allows the user to see the inventory stock
Manually Add			Allows the user to manually add the Inventory
Snapshot			Quick View of the inventory Stock
Update Parts Data			Used to update statistical data on inventory parts
Set Minimum Levels & Standard Costs	Staff	Y	Lets the user review the statistical data on parts ordered. Also allows setting of the minimum-inventory-levels requirement and standard-cost per part.
<b>Kitting</b>			
By Job	Inventory_control	Y	Allows the user to pull (kit) inventory-stock by Job. This facility is in addition to inventory pull facilitated via the BOM facility provided in the lot-traveler
<b>Pulls</b>			
Review			Allows the user to review all the parts that were pulled out from the inventory

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
<b>BOM</b>			
Add	Inventory_Control	Y	Allows the user to add Bill Of Material (BOM).
Modify via Spreadsheet	Inventory_Control	Y	Allows the user to change/modify the existing BOMs via a spreadsheet interface.
Browse via spreadsheet			Allows the user to browse BOMs via a spreadsheet interface.
<b>Box Stock</b>			
Pull From Box Stock			Lets the user pull the item from the Box Stock
Create Packing Slip			Allows the user to ship-out the job created with lots that were pulled from box-stock to the customer or its designee as defined in the purchase-order.
Modify Box-Stock Pull Job	All_groups	Y	Allows the user to modify a Box-Stock-Pull-Job
Lots Spreadsheet			Invokes a spreadsheet that provided the user with the facility to browse lots in box-stock
Jobs Spreadsheet			Spreadsheet allows the user to query the status of Box-Stock Pull-Jobs
<b>MRP</b>			
Spreadsheet			Spreadsheet allows the user to view raw-materials available in the inventory via demand or raw-materials required via forecast spreadsheet
<b>Help</b>			ERP2020 Help

## Personnel Menu - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities
Return to Main Menu	All_groups	Y	Returns the user to the main ERP2020 menu
<b>Personnel</b>			
Spreadsheet	Personnel	Y	A quick view of employees record
Modify Employees Record			Used to modify/change/delete the existing Employees Record
<b>Help</b>			ERP2020 Help

## Browse Sales Summary and Archives - Bar

Menu	Default Access	Configurable	Comments
<b>File</b>			
Dashboard			Provides some commonly used utilities
Return to Main Menu	All_groups	Y	Returns the user to the main ERP2020 menu
<b>Sales Analysis</b>			
Graph by Qty & Process			This allows the user to view sales-history in graphical format.
Print Sales by Customer			This allows the user to view sales-history by customer
Customer Ranking			This allows the user to view historical sales by month
<b>Find In Archive</b>			

<b>Menu</b>	<b>Default Access</b>	<b>Configurable</b>	<b>Comments</b>
Invoices via PO			Allows the user to Find the archived invoices via PO.
<b>Help</b>			ERP2020 Help

## Security: USERS and GROUPS

ERP2020 comes with the following generic groups that mirror the functions of their name-sake departments in an organization. Menu authorization is via group. For example, the accounting menus are accessible only by the accounting group. The QA menus are accessible by the QA group, etc. The administrator may at any time create a new group, create new users, and change the group membership. Specific named users (E.G. JSMITH) can easily be created with the varying access-rights by the administrator. For shared terminals, such as on the shop floor, another layer of employee passwords may be invoked before an operator can access certain menus. The list below shows the default pre-configured groups and users.

### Membership: **GROUPS**

Group **ACCOUNTING** Membership:

- Administrator
- A/CUSER1
- A/CUSER2

Group **SHIP&RECV** Membership:

- Administrator
- S/RUSER1
- S/RUSER2
- Managers
- P/CUSER1
- P/CUSER2
- Modifier2
- Modifier1
- QA MANAGER
- Service

Group **VISUAL** Membership:

- Administrator
- V/IUSER1
- V/IUSER2
- Managers
- P/CUSER1
- P/CUSER2
- *Modifier*
- S/RUSER1

Group **QA** Membership:

- Administrator
- QA
- QA MANAGER

Group **PC** Membership:

- Administrator
- P/CUSER1
- P/CUSER2
- Managers
- QA MANAGER
- A/CUSER1

Group **Scheduler** Membership:

- Administrator
- Scheduler2
- Scheduler1
- A/CUSER1
- A/CUSER2
- V/IUSER1
- V/IUSER2
- S/RUSER1
- S/RUSER2
- Managers
- P/CUSER1
- P/CUSER2

Group **Modifier** Membership:

- Administrator
- Modifier1
- Modifier2
- Modifier3

Group **STAFF** Membership:

- Administrator
- Managers

Group **Customers** Membership:  
(no pre-configured users)

Group **Customer Service** Membership:

- Administrator
- Service
- Managers
- P/CUSER1
- P/CUSER2
- QA MANAGER

Group **QA\_Manager** Membership:

- QA MANAGER
- Administrator

Group **SU** Membership:

- Administrator

Group **Buyers** Membership:

- Administrator
- Buyer

has default membership in the following groups

### **Users by Groups**

User **Designer** has default membership in the following groups:

- ACCOUNTING
- SHIP&RECV
- VISUAL
- QA
- PC
- Scheduler
- Modifier
- STAFF
- DESIGNER
- Customer Service
- QA\_Manager
- SU

User **Administrator** has default membership in the following groups:

- ACCOUNTING
- SHIP&RECV
- VISUAL
- QA
- PC
- Scheduler
- Modifier
- STAFF
- DESIGNER
- Customer Service
- QA\_Manager
- SU
- Buyers

User **S/RUSER1** has default membership in the following groups:

- SHIP&RECV
- VISUAL
- Scheduler

User **S/RUSER2** has default membership in the following groups:

- SHIP&RECV
- Scheduler

User **A/CUSER1** has default membership in the following groups:

- ACCOUNTING
- PC
- Scheduler

User **A/CUSER2** has default membership in the following groups:

- ACCOUNTING
- Scheduler

has default membership in the following groups

User **V/IUSER1** has default membership in the following groups:

- VISUAL
- Scheduler

User **V/IUSER2** has default membership in the following groups:

- VISUAL
- Scheduler

User **P/CUSER1** has default membership in the following groups:

- SHIP&RECV
- VISUAL
- PC
- Scheduler
- Customer Service

User **P/CUSER2** has default membership in the following groups:

- SHIP&RECV
- VISUAL
- PC
- Scheduler
- Customer Service

User **Scheduler1** has default membership in the following groups:

- Scheduler

User **Scheduler2** has default membership in the following groups:

- Scheduler

User **Modifier1** has default membership in the following groups:

- SHIP&RECV
- Modifier

User **Managers** has default membership in the following groups:

- SHIP&RECV
- VISUAL
- PC
- Scheduler
- STAFF
- Customer Service

User **QA** has default membership in the following groups:

- QA

User **QA MANAGER** has default membership in the following groups:

- SHIP&RECV
- QA
- PC

- Customer Service
- QA\_Manager

User **Service** has default membership in the following groups:

- SHIP&RECV
- Customer Service

User **Modifier2** has default membership in the following groups:

- SHIP&RECV
- Modifier

User **Modifier3** has default membership in the following groups:

- Modifier

User **Buyer1** has default membership in the following groups:

- Buyers

**ERP2020 user-interface notes:**

The ERP2020 is meant to be used as a **real-time** system as opposed to a batch-entry system. The User-Interface is designed to make data-entry accurate, minimal, easy and intuitive. To this end, the ERP2020 provides hundreds of data-entry forms, each designed to best suit the needs of the specific information being solicited. The form-submission is validated for data integrity and completeness. Data integrity is further assured by (when possible), providing the user with type-ahead lists or scroll-boxes for choice selection. Date-and time fields are automatically populated with the current date and time values to minimize unnecessary typing.

Some other conventions that provide a consistency in the interface are noted hereunder.

Form-fields that provide information and require no data-entry are shown in a yellow background.

Files that require data to be entered are shown in a green back-ground.

Any fields that merit special alert conditions are displayed in a red foreground or red background color.

Choice fields are displayed in a light-blue background.

**Date Entry Short-cuts**

Date fields (given the varying regional formats), may be consistently updated using single key-strokes:

Key-Stroke	Date-Value
` "T"	for (T)oday
"M"	for first date of (M)onth
"H"	for last day of mont(H)
"W"	for first day of (W)eek (Assume Sunday)
"K"	for last day of wee(K) (Assume Saturday)
"Y"	for first day of (Y)ear
"R"	for last day of yea(R)

**TABLE 1.**

“+”	for tomorrow
“-”	for yesterday
“U”	for Reset
Up-Arrow	Increment current value and stay in field so that date may be progressively increased
Down-Arrow	Decrement current value and stay in field so that date may be progressively decreased

**TABLE 1.**

Note: For additional information, please visit ERP2020 website at [www.erp2020.com /support](http://www.erp2020.com/support).

