

Adaxia



Manufacturing Light

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NOTES

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1 Adempiere Manufacturing Light

1.1 What is 'Adempiere Manufacturing Light'?

Adempiere Manufacturing Light is an Adempiere module developed by Adaxa to meet the needs of manufacturing organisations that do not have the present need or perhaps capability to implement a full MRP2 compliant production system.

The module is intended for organisations that are perhaps:

- migrating from a very primitive MRP system
- presently using a simple accounting system and lots spreadsheets
- do not have the internal skills to manage a full MRP2 manufacturing system.

The implementation of a full MRP2 system in such organisations as described above frequently does not lead to a successful outcome. Manufacturing Light is intended to provide the opportunity for a staged implementation and permit organisations to implement Adempiere now with a manufacturing system that meets present needs and skills and allows the opportunity to move to the full MRP2 based manufacturing capabilities of Adempiere at a time that suits their needs.

1.2 What kind of Organisations can use it?

Present users of the system (or its earlier versions) are engaged in manufacturing the following:

- forensic science instruments and liquid light guides
- atomic absorption spectrometers
- 'Masterbatch additive used for colouring or imparting other properties to plastics
- processed natural fibre products, developed from waste and by-products from the sugar, forestry and paper industries

1.3 What functionality is available in Manufacturing Light?

A comparison of the functionality in typical MRP2 systems with the functionality in Manufacturing Light is shown in the table below.

Function	MRP2	Manufacturing Light
Master production schedule (MPS)	✓	
Item master data (technical data)	✓	✓
Bill of materials (BOM) (technical data)	✓	✓
Production resources data (manufacturing technical data)	✓	✓
Inventories and orders (inventory control)	✓	✓
Purchasing management	✓	✓
Material requirements planning (MRP)	✓	✓ (1)
Shop floor control (SFC)	✓	
Capacity planning or capacity requirements planning (CRP)	✓	
Standard costing (cost control)	✓	✓
Cost reporting / management (cost control)	✓	✓
Business planning	✓	(3)
Lot traceability	✓	✓
Contract management	✓	(3)
Tool management	✓	
Engineering change control	✓	✓ (2)

Function	MRP2	Manufacturing Light
Quality Control	✓	✓
Configuration management	✓	✓ (2)
Shop floor data collection	✓	✓
Sales analysis and forecasting	✓	✓
Finite capacity scheduling (FCS)	✓	

Notes

- (1) Manufacturing Light does not provide time-phased planning of purchased or manufactured products.
- (2) Limited functionality.
- (3) Other parts of Adempiere may deal with these requirements.

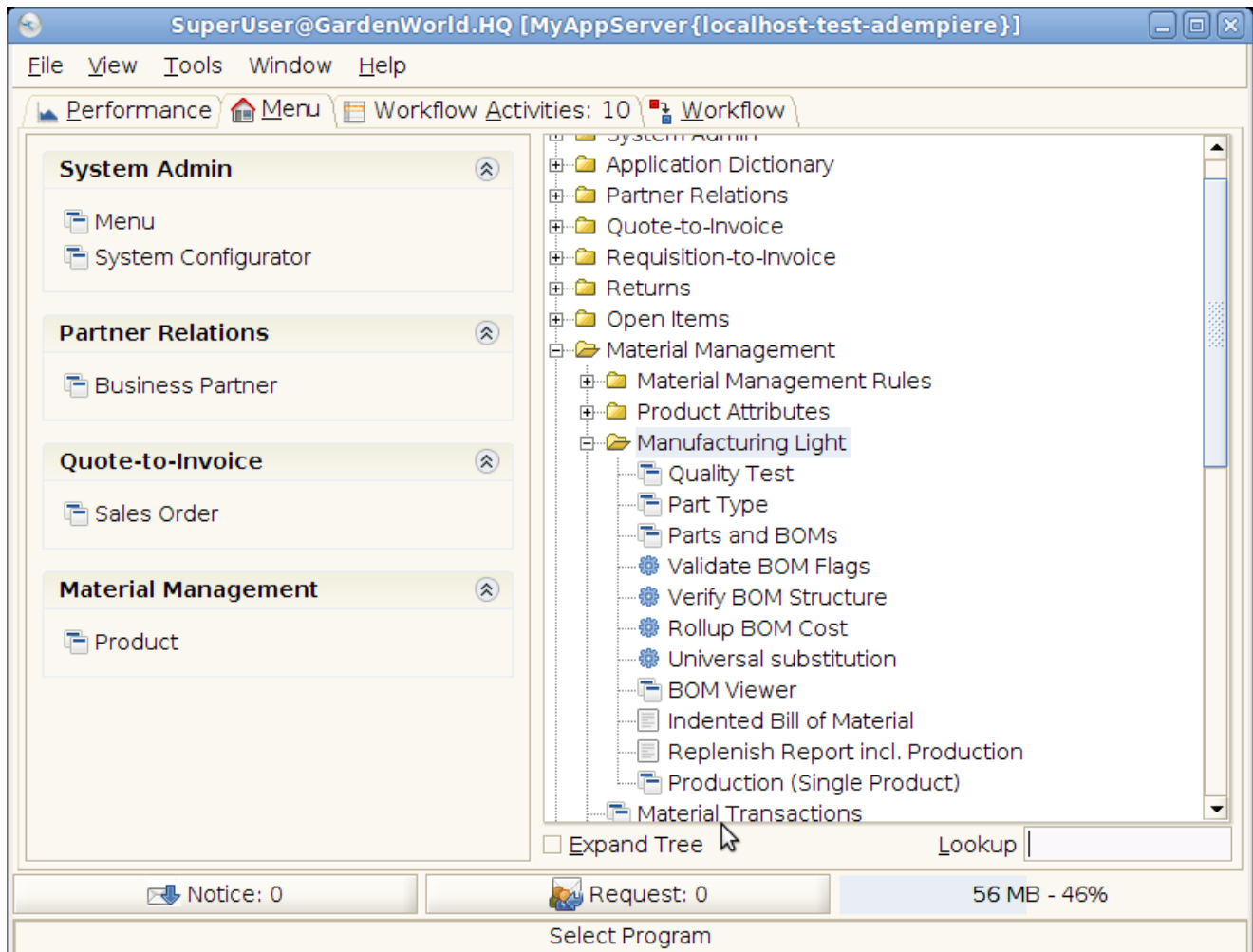
As can be seen from the table, Manufacturing Light does not attempt to deal with time phased activities. If you are replenishing materials based on usage and the normal min/max values used for purchasing replenishment the system can suggest replenishment orders necessary to satisfy those max/mins. If you need to manufacture 300 widgets and you have created Production Orders for that quantity, the system will tell you that you need to create the purchase orders for the materials necessary to make those production orders but it will not tell you that you can order some for delivery now and some for delivery in a month's time.

Many organisations find that they need to review the plans created by their production management systems because there are too many variables and changed circumstances to totally rely on system generated purchasing and scheduling. Such organisations may not find the loss of time phased ordering a major disadvantage.

Manufacturing Light uses Standard Costing for accounting purposes. Standard Adempiere functionality also allows the recording of ordering and purchase costing information on many other bases.

2 The Manufacturing Light Menu Items

The Adempiere Manufacturing Light module is installed by default under the Material Management section of the main menu.



There are presently 11 windows added to the standard Adempiere menu structure to address the Manufacturing Light requirements.

2.1 Quality Test

The Quality Test window displays the following:

The screenshot shows a web browser window titled "Quality Test Weight SuperUser@GardenWorld.GardenWorld Limited [MyAppsServer{loca...}]. The window contains a table with the following data:

Test	Client	Organisation	Active	Name	Description	Comment/Help
	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	Weight	Product weight	
Product	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	Density	Product Density	
	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	Length		
	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	Width		
	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	Height		

At the bottom of the window, there is a status bar that says "Navigate or Update record" and a page indicator "1/5".

This window allows the user to define Quality Control tests and associate them with products. The user can create a test with a description and instructions for performing the test in the Comment/Help field. These instructions will be visible in the Quality Control tab of the Production window for manufactured products (described below).

The screenshot shows the same web browser window, but now displaying a form for creating a new test. The form fields are as follows:

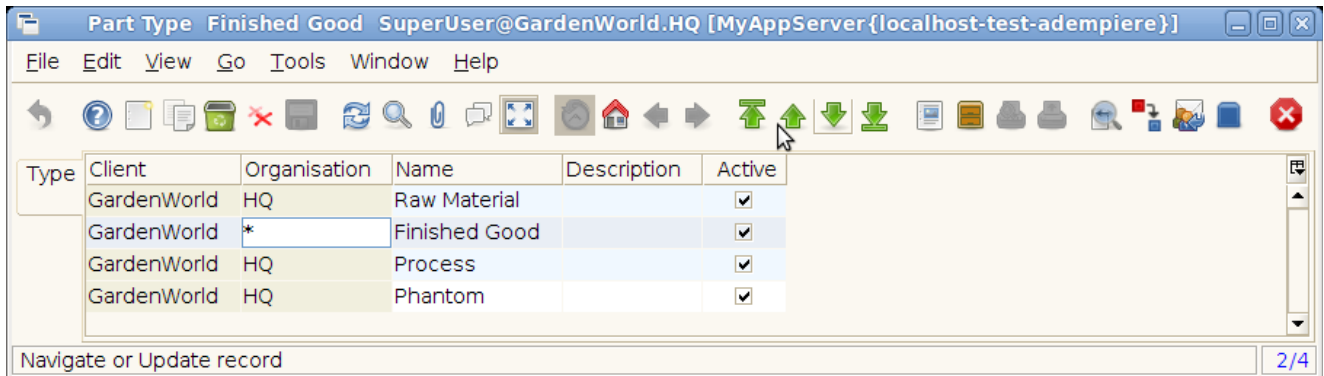
- Client:** GardenWorld
- Organisation:** GardenWorld Limited
- Quality Test:** Weight
- Product:** Table_Table
- Active:**
- Expected Result:** Range 60 kg - 63 kg

At the bottom of the window, the status bar says "Navigate or Update record" and the page indicator is "1/1".

In the Product tab you can then associate the test with the particular products to which it applies. For each product you can describe the expected test result required in order for the product to pass the QC test.

2.2 Part type

The Part Type window displays the following:



'Part Type' provides an additional means of categorising products (materials and finished goods) for reporting and analysis. The Part Type value for a particular product is selected in the Parts and BOMs window.

2.3 Parts and BOMs

The Parts and BOMs window has two tabs, the first displaying the 'parent' product and the second displaying the 'child' products and their quantities. Both raw materials and finished goods are represented as Products within Adempiere. The "Parts and BOMs" window displays Manufacturing Light specific information about each Product, including the Bill of Material setup for manufactured ones. Note that Manufacturing Light BOMs are stored independently of those created for the full MRP style manufacturing implementation and are limited to one BOM per Product.

2.3.1 Part Tab

The Part tab displays:

The screenshot shows the 'Part' configuration window in the Adaxa software. The window title is 'Parts and BOMS PatioSet Patio Furniture Set SuperUser@GardenWorld.HQ [MyAppServer{localhost-test-adempier...}]. The interface includes a menu bar (File, Edit, View, Go, Tools, Window, Help) and a toolbar with various icons. The main area is divided into several sections:

- Client:** GardenWorld
- Organisation:** *
- Search Key:** PatioSet
- Version No:** [Empty]
- Name:** Patio Furniture Set
- Description:** 1 table, 4 Chairs and 1 Sun Screen
- Comment/Help:** [Empty text area]
- Document Note:** [Empty text area]
- UPC/EAN:** [Empty]
- SKU:** [Empty]
- Active:**
- Product Category:** Patio
- Classification:** [Empty]
- Tax Category:** Standard
- UOM:** Each
- Product Type:** Item
- Weight:** 0.00
- Volume:** 0.00
- Stocked:**
- Manufactured:**
- Kanban controlled:**
- Part Type:** [Empty]
- Locator:** [Empty]
- Bill of Materials:** (with a 'Verify BOM' button)
- Verified:**
- Phantom:**
- Standard Cost:** 0.00
- Purchased:**
- Sold:**
- Discontinued:**
- Subscription Type:** [Empty]
- Exclude Auto Delivery:**
- Image URL:** [Empty]
- Description URL:** [Empty]
- Guarantee Days:** [Empty]
- Min Guarantee Days:** [Empty]
- Attribute Set:** [Empty]
- Attribute Set Instance:** [Empty]

At the bottom of the window, it says 'Data required' and '[1/4]'.

Most of the fields displayed here are standard Adempiere product fields, the following are the Manufacturing Light specific fields:

- **Manufactured:** if this flag is set then the replenishment process will create production orders for restocking this product, otherwise it will be purchased by default.
- **Kanban Controlled:** optional flag to indicate that stock levels for this product are controlled by Kanban rather than the replenishment process.
- **Part Type:** e.g. raw material, finished good etc. Used for grouping in reports, configured through the Part Type window.

- Phantom: this flag signals a BOM product that represents an intermediate assembly that is not generally stocked or manufactured. Phantom BOMs can be used to break up a large BOM into logical components, however when a Production for a finished good containing a phantom BOM is created, the components of the Phantom BOM will be included in the Production lines in place of the Phantom.
- Standard Cost: displays the product's current standard cost as set in the Cost window.

2.3.2 BOM Product Report:

Clicking the 'Report' toolbar button gives access to the Single Level BOM report. This displays information on the Bill of Materials for the selected product including its components and their Standard Costs.

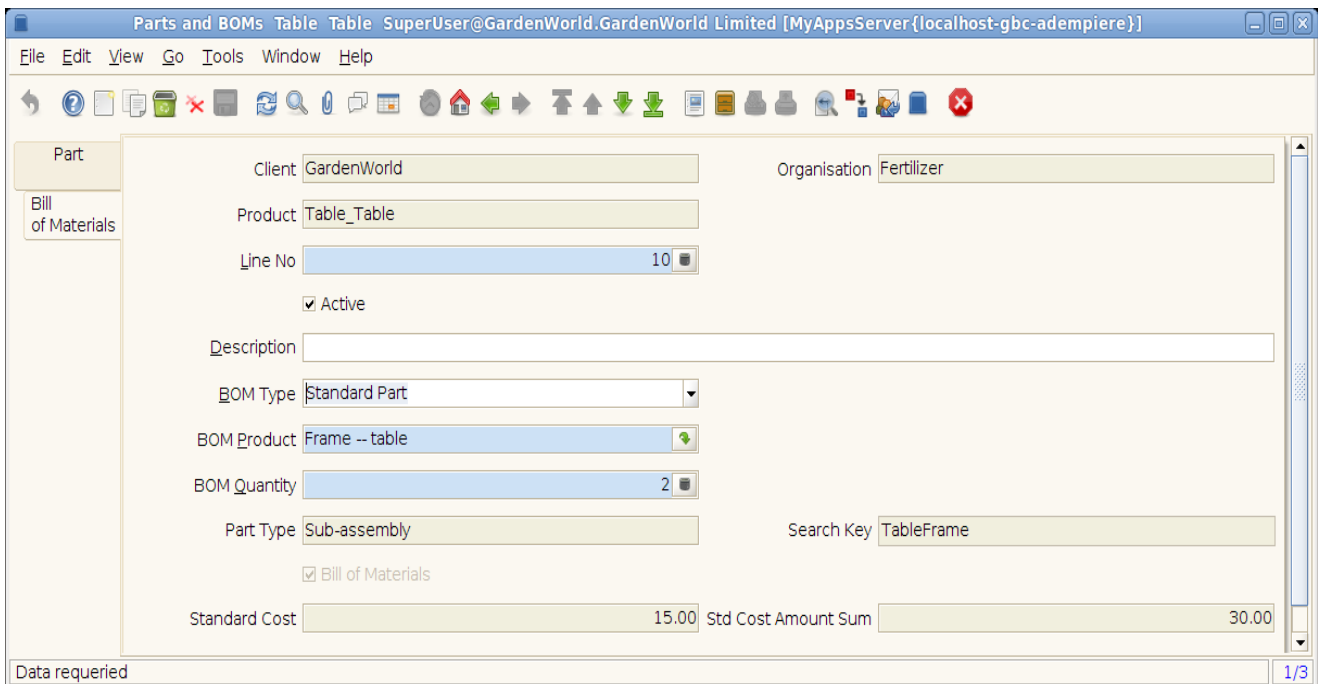
The screenshot shows a software window titled "Report: Single Level BOM SuperUser@GardenWorld.GardenWorld Limited [MyAppsServer{localhost-ç}]. The window has a menu bar (File, View, Go, Tools, Window, Help) and a toolbar with various icons. The main content area is titled "Single Level BOM" and displays the following information:

Part Number	Table	Bill of Materials	✓
Product Name	Table	BOM Verified	✗
Product Category	Standard	Manufactured	✓
Part Type	Finished Good	Purchased	✓
Unit of Measure	Each	Sold	✓
Standard Cost	45.00	Kanban Controlled	✗

Part Type	Line No	Part Number	BOM Product	Qty	Standard Cost	Extended
Raw Material	20	TableLeg	Leg - table	4	5.00	20.00
Raw Material	30	TableTop	Top - table	1	10.00	10.00
Raw Material						30.00
Sub-assembly	10	TableFrame	Frame -- table	2	15.00	30.00
Sub-assembly						30.00
Sum						60.00

The status bar at the bottom of the window indicates: "iso-a4 - 210.0x297.0 mm ((12.7,12.7)->(184.6,271.6)mm) - Landscape - Data Columns=26, Data Rows=1" and "Page 1 of 1".

2.3.3 Bill of Materials Tab



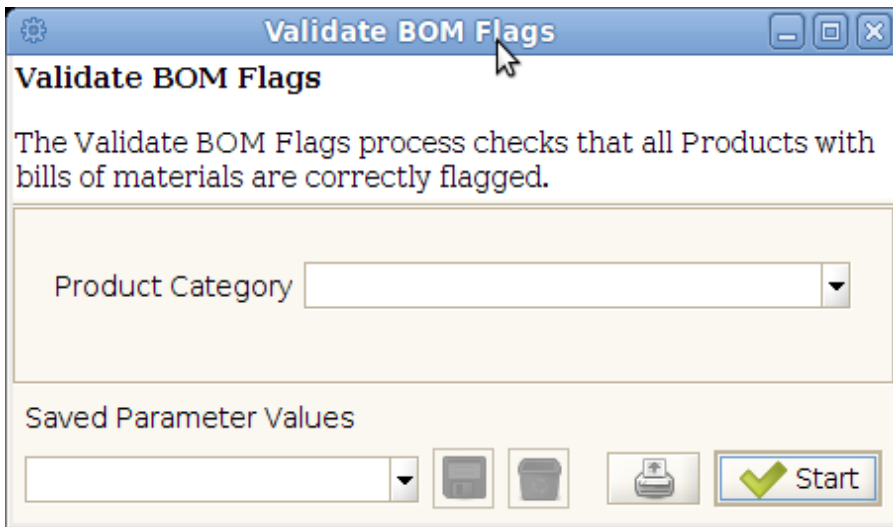
A **Bill of Materials** is created by adding components to the Product in the Bill of Materials tab. The component is entered in the "BOM Product" field and the quantity of the component required to produce a single unit of the finished product is entered in the "BOM Quantity" field. The BOM components will be ordered by their "Line No" in printing the Production worksheets.

In addition the following read-only fields provide details about the component product.

- Part Type: the component Part Type
- Search Key: the component Search Key
- Bill of Materials: is the component itself a BOM?
- Standard Cost: the standard cost of the component
- Std Cost Amount sum: the extended component cost (component Standard Cost x BOM Quantity)

2.4 Validate BOM Flags

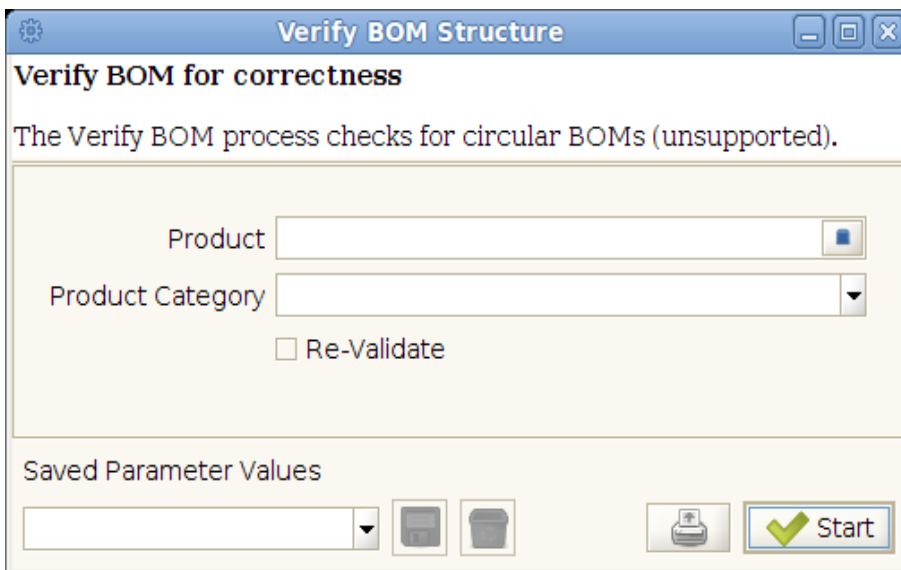
The Validate BOM Flags process displays as:



The process checks the "Bill of Materials" flag on all products (optionally restricted to a single Product Category) to ensure all Products that have BOM components defined are flagged as Bills and vice versa.

2.5 Verify BOM

The Verify BOM process displays as:

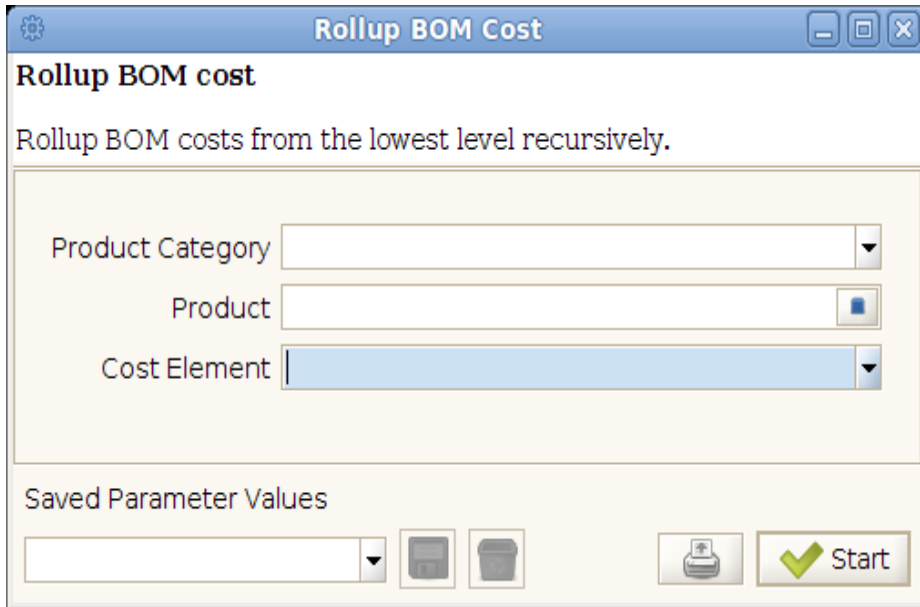


The process checks for circular references in BOM products, optionally restricted to a single Product or Product Category, setting the Verified flag on the Part if it passes. "Circular BOM" means where a Parent product's BOM contains another instance of the parent Product code at a lower level in the Parent products BOM tree. ['unsupported' means that circular BOMs are not allowed]

The "Re-validate" option re-checks the correctness of those Parent products already flagged as Verified.

2.6 Rollup BOM Cost

The Rollup BOM Cost process displays as:

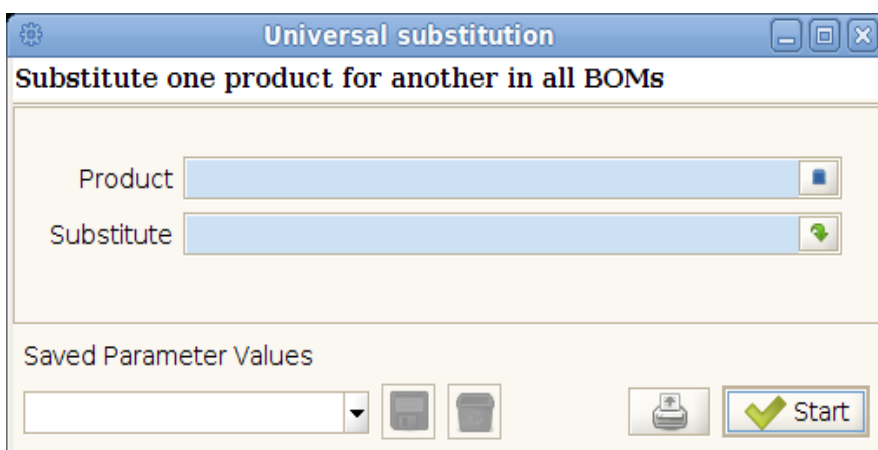


The process rolls up the component costs for each BOM product for the selected cost element and updates the cost record accordingly. The process iterates through all the Child products that make up a Parent product and updates the costs through the whole tree.

Note only Standard Cost elements are currently supported in Manufacturing Light.

2.7 BOM Product Substitute

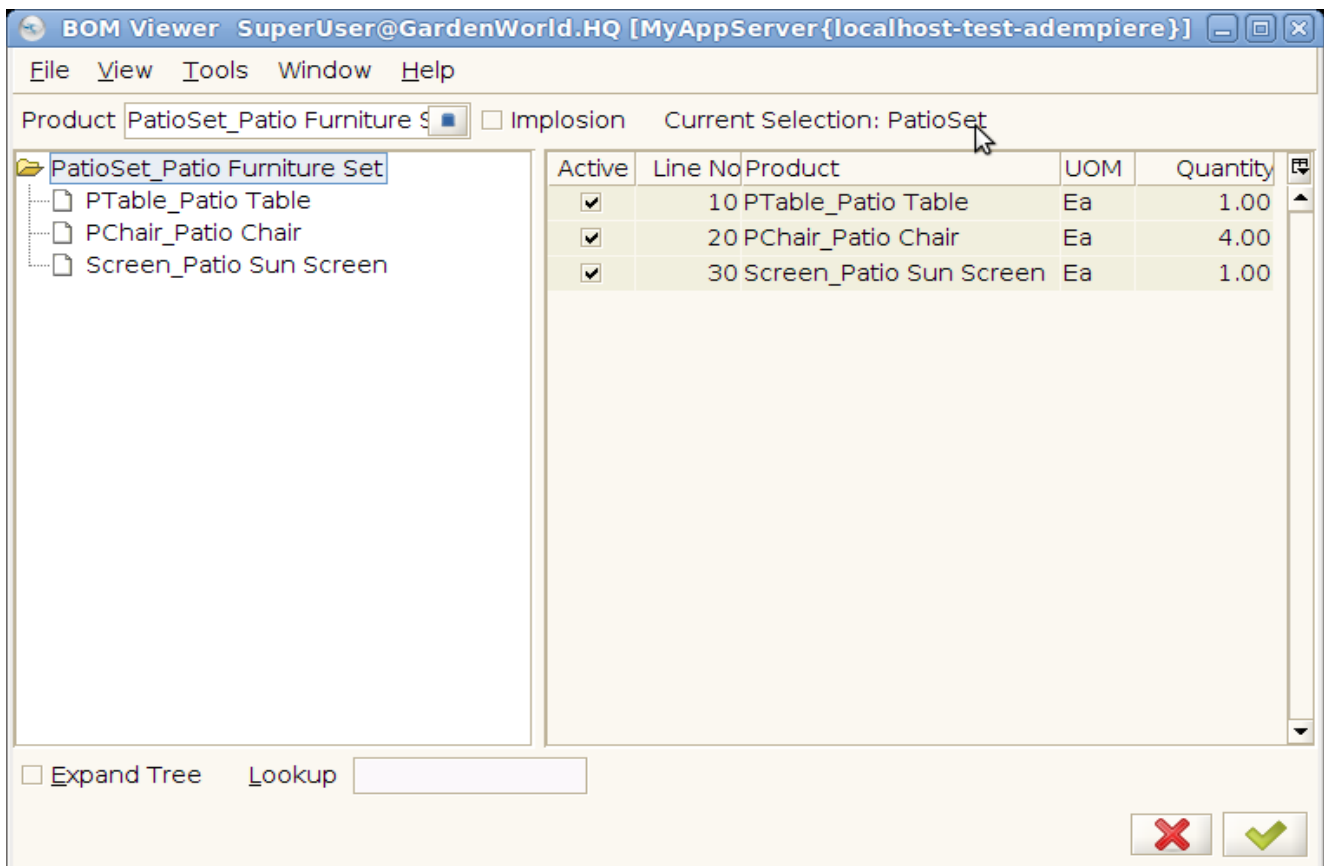
The process 'BOM Substitute' displays as:



The process replaces instances of the selected product with the specified substitute product in all Bill of Materials.

2.8 BOM Viewer

The BOM Viewer form displays as follows in the Java Swing desktop client:



The BOM Viewer allows a Product to be selected and then displays a tree view of either the Bill of Materials including all sub-assemblies of the selected product.

If the "Implosion" checkbox is selected, the form displays all the assemblies in which the selected component is used (also known as "Where Used" report). Right-clicking on an entry in the tree gives a menu allowing the BOM or Implosion for the selected item in the tree to be displayed.

The BOM Viewer is also available in the AJAX browser interface and looks slightly different. In the left hand pane the products are displayed together with the UOM like [Ea] and the quantity expressed in that UOM.

ADempiere Preference GBCAdmin Log Out

Menu (28) **BOM Viewer**

Product: 97-1471-00_ASSY, PCB LOOKER Where Used Selected Product: 97-1471-00

Active	Line No	Product	UOM	Quantity
<input checked="" type="checkbox"/>	100000	5321_ELECTRONICS - P.C.B. ASSEMBLY	h	0.0271
<input checked="" type="checkbox"/>	100100	02-0217-00_LABEL, PCB SERIAL NO., DAT-96-652-1 BRADY	Ea	1.00
<input checked="" type="checkbox"/>	100200	11-0045-00_OPTO ISOLATOR, OPB 804	Ea	1.00
<input checked="" type="checkbox"/>	100300	12-0015-00_RESISTOR, 150R 1/4W 1% METAL FILM	Ea	1.00
<input checked="" type="checkbox"/>	100400	17-0373-00_HEADER, IDC 3 WAY MLSS100-3-CB	Ea	1.00
<input checked="" type="checkbox"/>	100500	29-0008-09_PCB, LOOKER BOARD	Ea	1.00
<input checked="" type="checkbox"/>	200000	5321_ELECTRONICS - P.C.B. ASSEMBLY	h	0.0274

Expand Tree

2.9 Indented BOM Report

The Indented BOM Report displays as:

Report: Indented Bill of Material & Copy Record 21273128 SuperUser@GardenWorld.GardenWorld Limit

File View Go Tools Window Help

1 100% Indented Bill of Material & Copy Record 21273128 Summary

Garden Page 1 of 1

Indented Bill of Material

Parameter:

Cost Element = Standard Cost
 Product = Table_Table
 Accounting Schema = GardenWorld US/A/US Dollar

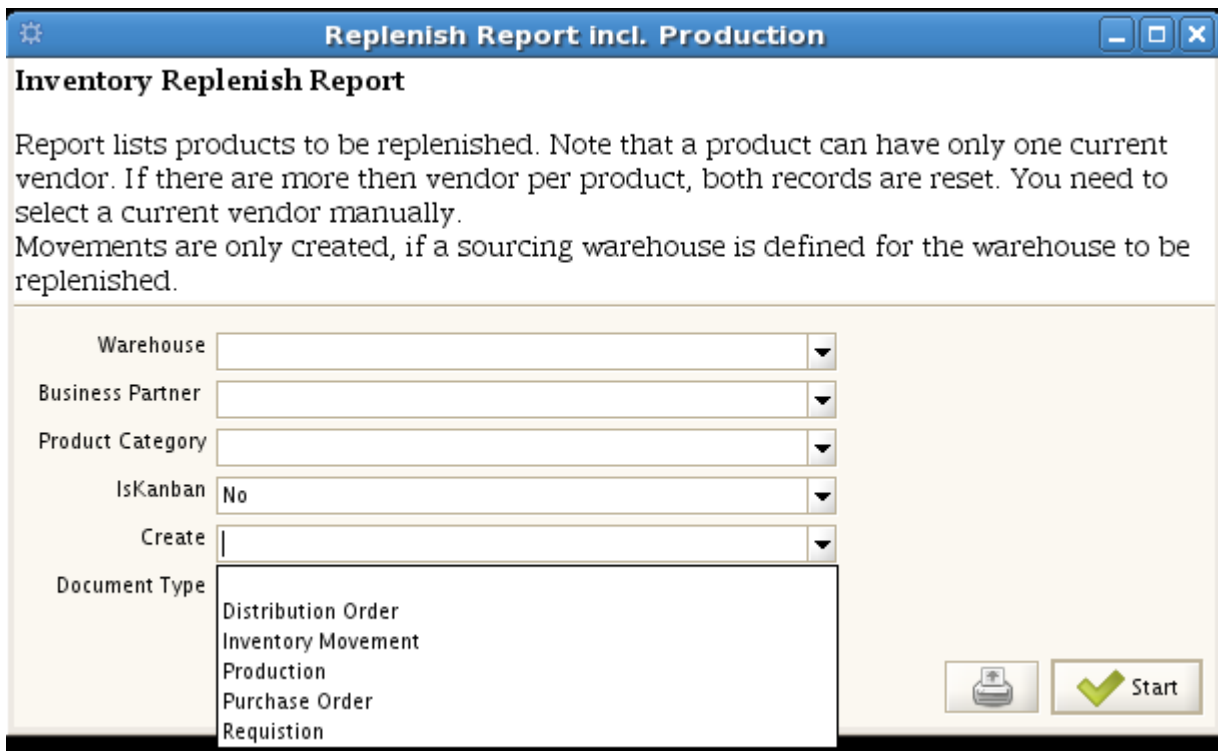
Levels	Product	BOM Qty	Tot. Qty	Cost	Cost LL	Ext. Cost	Fut. Cost	Fut. LL	Ext. Fut.
Table	Table	1	1	45.00	30.00	45.00	51.00	35.00	51.00
: TableFrame	Frame -- table	2	2	15.00	0.00	30.00	16.00	0.00	32.00
: tablescrew	screw - table	8	16	0.00	0.00	0.00	0.00	0.00	0.00
: tablewasher	washer - table	8	16	0.00	0.00	0.00	0.00	0.00	0.00
: TableLeg	Leg - table	4	4	5.00	5.00	20.00	6.00	6.00	24.00
: TableTop	Top - table	1	1	10.00	10.00	10.00	11.00	11.00	11.00

iso-a4 - 210.0x297.0 mm ((12.7,12.7)->(184.6,271.6)mm) - Landscape - Data Columns=-1, Data Rows=6 Page 1 of 1

This report outputs information for a Bill of Materials and all its sub assemblies, including cost information. The "Levels" column shows an indented listing of components. The "Cost" column shows the current standard cost of the line product, while "Cost LL" shows the rolled up costs of the material components of that line.

2.10 MRP and Replenishment

The Replenishment (incl Production) process displays as:



This process generates a report of products requiring restocking based on total availability and demand. Unlike the standard Adempiere Replenishment Report the 'stock availability' is calculated to include planned production and production requirements, based on Production Lines that have been created in Production Orders where the Production Order is not yet processed.

The following parameters filter the products that will be included in the replenishment:

- Business Partner: restrict to products for which the selected Business Partner is set as the "Current Vendor"
- Product Category: restrict replenishment to products in a particular category.

- Is Kanban: Selecting "No" will exclude products marked as Kanban, selecting "Yes" will include products flagged as "Kanban", leaving blank will include both Kanban and non-Kanban products.
- Create <document type>

The remaining parameters control the output of the process.

2.10.1 Basic Replenishment Report

As with the standard Adempiere replenishment choosing value in the "Create" field will automatically generate documents to fulfill the shortages identified in the report. Leaving the "Create" field as a null will generate a report of things requiring ordering/production as shown below:

Replenish Report incl. Production Page 1 of 4

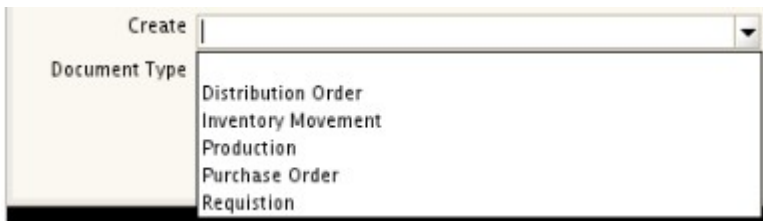
Parameter:
Warehouse = G

Business Partner	Product	To Order	On Hand	On Order	Reserved	Min Level	Min Qty	Pack Qty	Create
ARL	975-024000 - MAINS ENTRY-	4	2	0	0	4	4	1	
AST	19-0366-00 - CABLE, RIBBON 6	200	-1.05	0	0	0	200	1	
B. MOTION	61-0041-04 - BUSH, SINT	5	1	0	6	0	1	1	
C. ... ISSION	81-0402-01 - BODY,	5	-5	0	0	0	1	1	
DC ... IAR	51-0326-00 - PETP	1	-0.12	0	0	0	1	1	
ECONOMY .	965-006300 - PIN, DOWEL 3	1	2	0	3	0	1	1	
ELEM ... Y	12-1070-00 - RESISTOR, 1206	10	0	0	10	0	1	1	
FINEL... .. ING	01-0829-02 - BROCHURE, ICP	30	0	0	30	0	1	1	
FINELIP ... NG	01-0942-00 - INSERT, CD,	500	-8	0	8	0	500	1	
SCIENTIFIC	01-0966-01 - BROCHURE	20	0	0	20	0	1	1	

The report can be filtered to show either the manufactured items, the purchased items or both.

2.10.2 Document Types Created by Replenishment

As was shown in the screenshot above the following documents can be created from the Replenishment process.



Distribution Order

require example....

Inventory Movement

An inventory Movement is created if a Product is flagged as being replenished from another warehouse.

Production

please refer to section below for more details about Production Orders created by the process.

Purchase Order

The system will directly create Purchase Orders without going through the Requisition step detailed below.

Requisition

A requisition document is created in which quantities can be reviewed and amended. The standard Adempiere process "Create PO's from Requisition" will generate a Purchase order for each Vendor containing the lines of the requisition for products for which the Vendor is shown as the 'current supplier'.

2.11 Generating Production Orders for Components/Sub-Assemblies

The 'Manufacturing Light' version adds the option to to create "Production" in the Replenishment Report process as shown above. If selected, "Production Order" records will automatically be generated for any stock that requires replenishment that is flagged as "Manufactured". As this will generate additional demand for component parts it is necessary to re-run the Replenishment process multiple times until the lowest level of components have been reached. The process has required to be run up to 5 times in a system with BOMs nesting up to 15 levels deep. The first run took about 5 minutes and each subsequent run a lot less time. [rewriting this process so it is recursive is on the to-do list]

When creating Production from replenishment no Document Type is required

2.12 Production (Single Product)

This is the main window in Manufacturing Light where the production process is managed. The window displays and manages **Production Orders**. [the name of the window is easily changed to whatever is the required terminology in any site]

The reference to (Single Product) indicates that this window has been configured to operate in the manner that a single production order is for the production of a single 'made' product.

The system also supports the option of allowing a batch header to be created which has multiple Production Orders in the Batch.

In the Single Product window the displayed tabs are

Production - *Production Order for made product*

Production Lines - *Production Order Lines (ie the components of the BOM)*

QC Test - Quality Control records for the made product

In the multi product window it would display tabs for:

Production Batch

Production - Production Order for made product

Production Lines - Production Order Lines (ie the components of the BOM)

QC Test - Quality Control records for the made product

2.12.1 Production Tab

The screenshot displays the Adaxa software interface for a production document. The main window is titled 'Production (Single Product) 1000012 SuperUser@GardenWorld.GardenWorld Limited [MyAppsServer{localhost-gbc-ac}]. The interface is divided into several sections:

- Production Header:** Includes fields for Client (GardenWorld), Organisation (GardenWorld Limited), Document No (1000012), Description (Inventory Replenishment), and Date Promised.
- Production Line:** Includes fields for Product (Table), Locator (Default HQ Locator), and Production Quantity (0.00).
- Buttons:** 'Create Production Lines', 'Process Production', and 'Not Posted'.
- Reference Section:** Contains dropdown menus for Activity, Project, Campaign, Trx Organisation, User List 1, and User List 2.

The Production window displayed above has a two level structure of production header and Production Line.

The following fields define the Production document:

- Document No: automatically generated if left blank
- Date Promised: for scheduling purposes

- Movement Date: the date on which the production inventory movements will take place. Can be reset by "Process Production".
- Product: the finished good to be manufactured.
- Locator: the locator where the finished good will be created.
- Production Quantity: the quantity to make in the product's base unit of measure.
- Create Production Lines: create or recreate the production line details based on the product Bill of Materials.
- Process Production: completes the production, recording all the inventory movements relating to finished goods and component usage.

The reference section includes standard accounting schema element reference fields dependent on the accounting schema configuration.

2.12.2 Sales Order Line Related to a Production Order

The Production Order tab will display the Sales Order Line of a related sales order if the Production Order was created by clicking the "Create Production Order" button displayed on the sales order line after the Sales Order is completed.

2.12.3 Production Line Tab

Production (Single Product) 1000012 SuperUser@GardenWorld.GardenWorld Limited [MyAppsServer{localhost-gbc-ac...}]

File Edit View Go Tools Window Help

Client: GardenWorld Organisation: GardenWorld Limited

Production: 1000012

Line No: 110

Product: TableFrame_Frame -- table

End Product Attribute Set Instance: []

Active

Planned Quantity: 0.00 Quantity Used: 0.00

Locator: Store West

Description: []

Changes ignored 1/4

Additional Fields:

- End Product: identifies a line as being the finished product of the manufacturing process. Automatically set based on whether a production line has the same product and quantity sign as the header.
- Planned Qty: the standard quantity produced/used based on the Bill of Materials set at the time of the production line creation.
- Movement Qty: displayed only for the finished product lines, allows the quantity actually produced to be entered.
- Quantity Used: displayed only for component product lines, allows the quantity actually used to be entered (as a positive number).
- Purchase Order (if the line is for an outside process)

2.12.4 Outside Processes

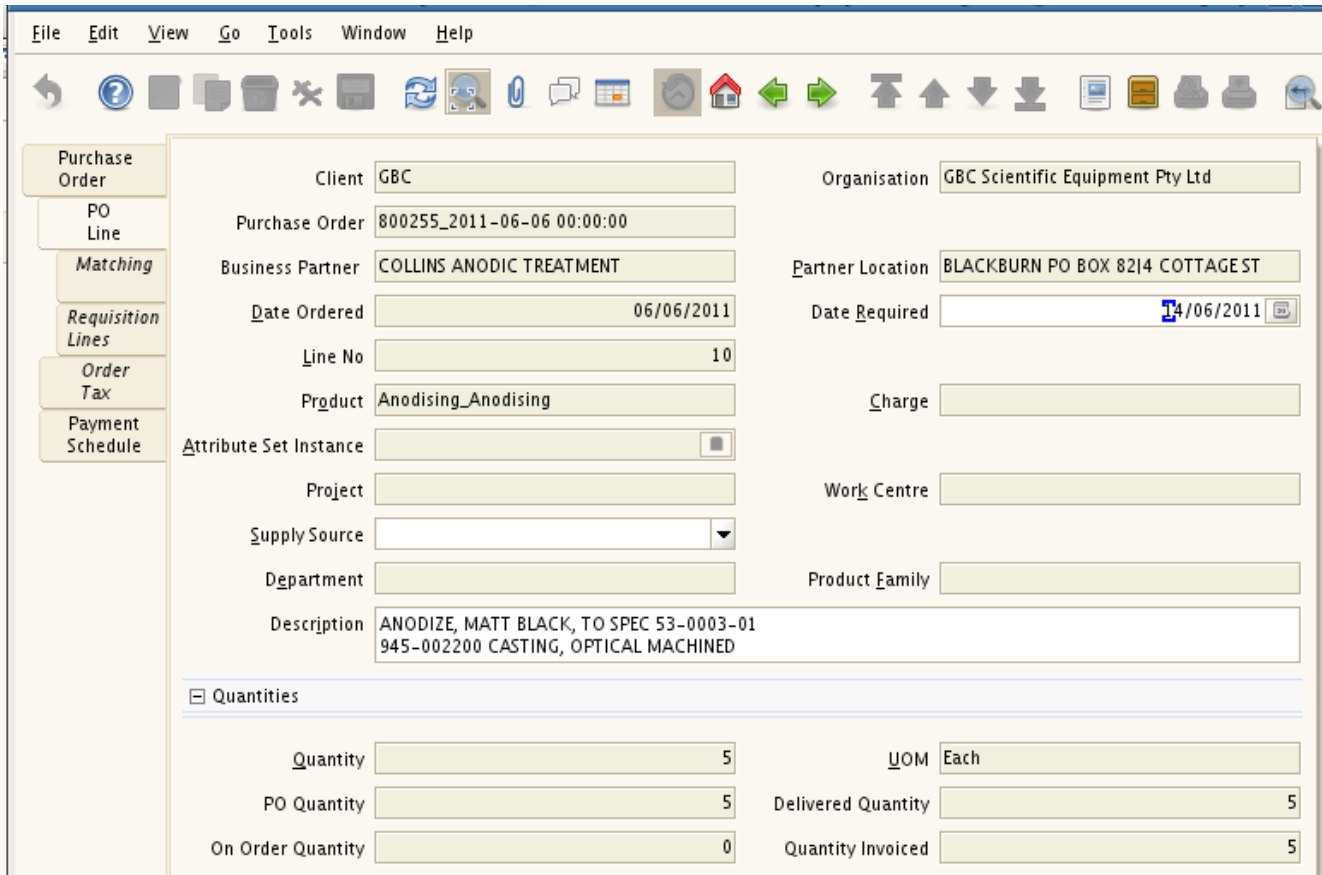
If a Production Line is for a product that is flagged as an "Outside Process" then a "Create Purchase Order" button will be displayed in the tab. The user can click the button to automatically generate the draft Purchase Order for completion by the Purchasing Department. The Order will be created to the Business Partner flagged as the 'Current Supplier' of the Product.

The screenshot shows a software window titled "Production (Single Product) 1000544 SuperUser@GBC.GBC Scientific Equipment Pty Ltd [19]". The interface includes a menu bar (File, Edit, View, Go, Tools, Window, Help) and a toolbar with various icons. The main form area is divided into sections:

- Production**: Client (GBC), Organisation (GBC Scientific Equipment Pty Ltd)
- Production Line**: Production (1000544), Line No (150), Product (Anodising_Anodising)
- Options: End Product, Active, Attribute Set Instance (dropdown)
- Quantities: Planned Quantity (33.10), Quantity Used (33.10), Available Quantity (99,999)
- Locator: GBC-0-0-0
- Description: (empty field)
- Buttons: "Production Create Purchase Order" (greyed out), "Order Line 800255 - 2011-05-05 00:00:00-10-Anodising"
- Context Menu: A right-click menu is open over the Order Line field, showing options: Zoom, ReQuery, Value Preference, Change Log.

The Production Line shown below shows the "Production Create Purchase Order" button greyed out as the relevant Purchase Order 800255 has already been created. The Zoom (to related document) field is displayed by right-clicking on the PO number. After selecting "Zoom", the Purchase Order is opened in its window at the

relevant purchase order line as below:



Client	GBC	Organisation	GBC Scientific Equipment Pty Ltd														
Purchase Order	800255_2011-06-06 00:00:00	Partner Location	BLACKBURN PO BOX 8214 COTTAGE ST														
Business Partner	COLLINS ANODIC TREATMENT	Date Required	14/06/2011														
Date Ordered	06/06/2011	Line No	10														
Product	Anodising_Anodising	Charge															
Attribute Set Instance		Work Centre															
Project		Product Family															
Supply Source		Description	ANODIZE, MATT BLACK, TO SPEC 53-0003-01 945-002200 CASTING, OPTICAL MACHINED														
Department		<table border="1"> <tr> <td colspan="2">Quantities</td> </tr> <tr> <td>Quantity</td> <td>5</td> </tr> <tr> <td>UOM</td> <td>Each</td> </tr> <tr> <td>PO Quantity</td> <td>5</td> </tr> <tr> <td>Delivered Quantity</td> <td>5</td> </tr> <tr> <td>On Order Quantity</td> <td>0</td> </tr> <tr> <td>Quantity Invoiced</td> <td>5</td> </tr> </table>		Quantities		Quantity	5	UOM	Each	PO Quantity	5	Delivered Quantity	5	On Order Quantity	0	Quantity Invoiced	5
Quantities																	
Quantity	5																
UOM	Each																
PO Quantity	5																
Delivered Quantity	5																
On Order Quantity	0																
Quantity Invoiced	5																

Note that all the information required by the outside processor is carried into the purchase order line from the BOM records.

2.12.5 Control of Items at Outside Processors

As shown in the screenshot above, the standard Purchase Order functionality displays on each purchase order line the qty ordered, qty delivered and qty invoiced. This can be used to manage components that are at outside processors. Alternatively the Outside Process can be set up as a single BOM and the underlying item can be 'moved' to an outside process warehouse (one for all suppliers or one for each), the manufacturing process can be 'completed' in the external warehouse and the product received back into the WIP warehouse.

2.12.6 QC Test Tab

The "QC Test" tab displays as follows:

Production	Client	Organisation	Active	Attribute Set Instance	Quality Test	Description	Expected Result	Result	QC Pass	Processed
	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	«101»_05/06/2011	Length		100cm		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Production Line	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	«101»_05/06/2011	Height		60cm		<input checked="" type="checkbox"/>	<input type="checkbox"/>
	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	«101»_05/06/2011	Weight	Product weight	Range 60 kg - 63 kg	60.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
QC Test	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	«101»_05/06/2011	Density	Product Density	10 kg/m3	10.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	GardenWorld	GardenWorld Limited	<input checked="" type="checkbox"/>	«101»_05/06/2011	Width		60cm		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Data requiered 1/5

The QC Test tab allows quality control test data to be manually recorded against each manufacturing run. The QC Test tab is only displayed for finished product lines in the Production Window. QC tests are linked to Attribute Set Instances (e.g. lot/serial numbers) and the QC tests for a particular production line are automatically generated when the attribute set instance is selected and saved on the production line. The Request also displays (as below) a "Status" field which is a user defined process of creating, processing and closing such Requests.

2.13 Engineering Change Management

2.13.1 The Requests Window

Change Requests are managed through Adempiere's standard "Requests" system. Requests are associated with a Request Type – in this example "ECN – Engineering Change Notice".

A Request is created by clicking "new record" in the Request Window, selecting Request Type of ECN (if there are other Request Types also in use), entering text in the "Summary" field and then assigning to a Representative and saving.

The Request then gets moved to the queue of the assignee who will receive a Notice.

Notice

Client	ADAXA Pty Ltd	Organization	HO
Message	Request Update	Created	18/11/2011 11:05:47
User/Contact	SuperUser		
Workflow Activity			
Table	R_Request_Request	Record ID	
Reference	Request Updated: 10000000		
Text Message	Updated By: SuperUser Created: 2011-11-18 10:51:13.0 Group: ./ -> ECN		
Description			
<input type="checkbox"/> Acknowledge	Delete Notices		

Navigate or Update record 10/10

The user can also optionally receive an email. The assignee will also receive a reminder if they are slow to action the Request. The Request will then be transferred to his/her manager if not acted on within the user-specified period.

The default Request Window displays as:

The screenshot displays the 'Request' window in a web browser. The window title is 'Request (all) 10000000 SuperUser@ADAXA Pty Ltd.HO [sjsworkstation{SJSWorkstation-xe-adempi...'. The interface includes a menu bar (File, Edit, View, Go, Tools, Window, Help) and a toolbar with various icons. On the left, there is a sidebar with buttons for 'Request', 'Updates', 'History', 'Update Notification', and 'Update Recipients'. The main content area is divided into several sections:

- Client Information:** Client: ADAXA Pty Ltd, Document No: 10000000, Request Type: ECN, Category: cat 1, Status: 4_4 ECN Applied, Priority: 4_4 ECN Applied, Summary: 1_1 New ECN, 2_2 ECN Review, 3_3 ECN Approve, 4_4 ECN Applied, Confidentiality: Internal, Source: [empty].
- Organization Information:** Organization: HO, Due type: Scheduled, Group: ECN, Related Request: [empty], Resglution: [empty], User Importance: Medium.
- Action Section:** Representative: Steven Sackett, Role: [empty], Date next action: 19/11/2011 0:00:00, Entry Confidentiality: Internal, Standard Response: [empty], Mail Template: [empty], Result: [empty].
- Product and Plan Information:** Product Used: [empty], Quantity Used: 0, Activity: [empty], Task Status: [empty], Start Plan: [empty], Start Date: 18/11/2011 10:51:14, Quantity Plan: 0, Complete Plan: [empty], Close Date: 18/11/2011 11:12:38.
- Reference Section:** Business Partner: Compiere, Inc, Project: 101_Adaxa Overheads, Order: [empty], Table: [empty], Product: ConsTech_Consulting Services-Technical, Shipment/Receipt: [empty], Lead: [empty], BPartner (Agent): [empty], Request Amount: 0.00, User/Contact: Jorg Janke, Asset: [empty], Invoice: [empty], Payment: [empty], RMA: [empty], Campaign: [empty], Sales Region: Victoria.

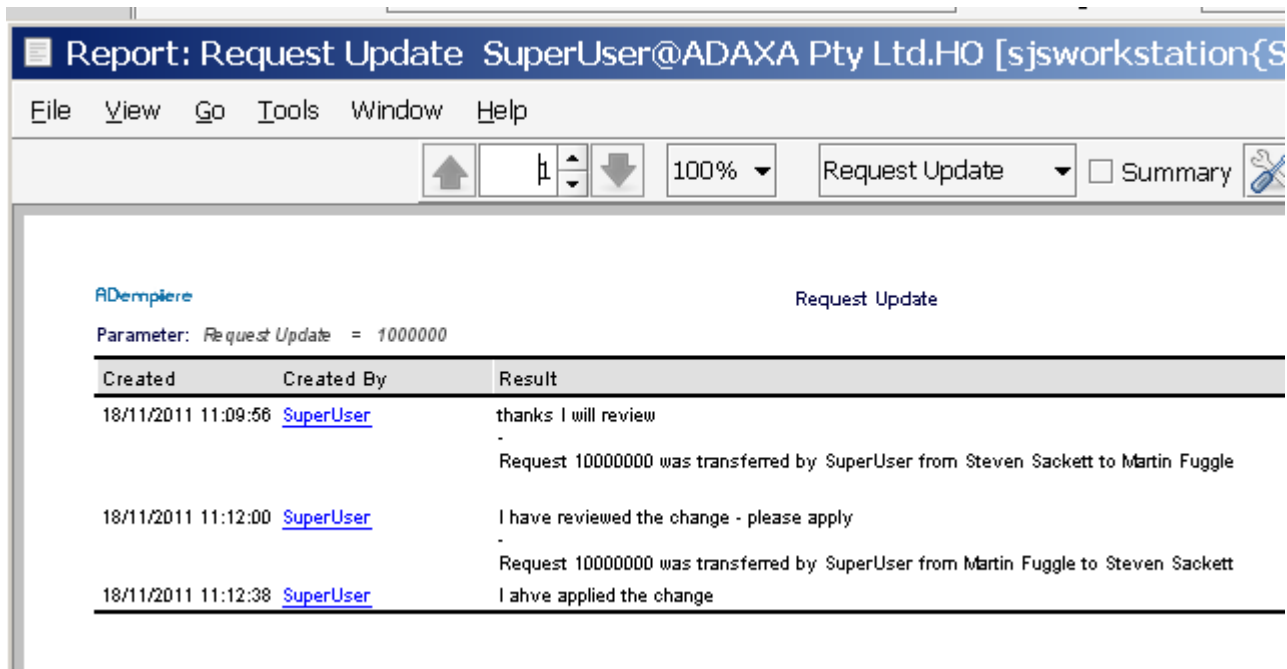
At the bottom left, it says 'Data requested' and at the bottom right, it shows '1/1'.

The Request can be associated with a Product, Business Partner, Order etc and will then be visible in the Product, Business Partner, Order window if that window is displaying the relevant record.

The example window screenshot above shows all the fields available in the Request window. Users normally untick a variety of fields that they don't wish to have displayed.

Information is entered at each stage of the Request processing in the Result field. As the Request goes through each stage of its processing and/or status change the relevant people are notified/emailed.

A report can be shown of each of the steps, who performed them and when. [in the example below all steps were created by the user 'SuperUser' rather than a real user]



Report: Request Update SuperUser@ADAXA Pty Ltd.HO [sjsworkstation{S...}

File View Go Tools Window Help

Request Update Summary

ADempiere Request Update

Parameter: Request Update = 1000000

Created	Created By	Result
18/11/2011 11:09:56	SuperUser	thanks I will review - Request 10000000 was transferred by SuperUser from Steven Sackett to Martin Fuggle
18/11/2011 11:12:00	SuperUser	I have reviewed the change - please apply - Request 10000000 was transferred by SuperUser from Martin Fuggle to Steven Sackett
18/11/2011 11:12:38	SuperUser	I ahve applied the change

The Requests functionality is far deeper than described about but a full exploration of the functionality is outside the intent of this HowTo guide.

2.13.2 Attached Documents and Drawings

Any documents or drawings that support the Request can be added to the Request by clicking on the paperclip attachment icon in the toolbar , uploading the file and saving.

2.14 Additional functions:

Two buttons have been added to the sales order line tab: "Create Production" and "Create Shipment". They create production/shipment records for the selected order line product and quantity.

3 Adaxa's Offices and Contacts

Information of a general nature about Adaxa and its services can be found at www.adaxa.com or obtained by sending an email to info@adaxa.com with a description of the information that you would like to receive. If you are an existing client and wish to initiate a request for software support please send an email to helpdesk@adaxa.com with as much detail as possible about the nature of your support request.

For all other information please contact the Adaxa office nearest to you.

3.1 Australia

Address: Level 1, 616 St Kilda Road, Melbourne, Victoria, 3101, Australia

Contacts: Office

- 1300 990 120 (Within Australia)
- +613 9510 4788 (Outside of Australia)

3.2 New Zealand

Address: 73 Boston Road, Mt Eden, Auckland, 1023, New Zealand

Contacts: Office

- 0800 232 922 (Within New Zealand)
- +649 9744 600 (Outside of New Zealand)

3.3 United States of America

Address: PO Box 6350 Oceanside, CA 92052-6350

Contact: Office

- 760.576.5115 Main
- 888.575.1489 Fax